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Wednesday
April 22, 2015
9:00 AM-6:00 PM

Seminar 01 9:00 AM-6:00 PM

NIH MHEALTH TRAINING INSTITUTE

Wendy Nilsen, PhD[1], Donna Spruijt-Metz, MFA, PhD[2], Predrag Klasnja, PhD[3], Santosh Kumar, William T. Riley, PhD[1]

[1]National Institutes of Health, Bethesda, MD; [2]Center for Economic and Social Research, University of Southern California, Los Angeles, CA; [3]University of Michigan, Ann Arbor, MI

The NIH will host a NIH mHealth Training Institute as a satellite meeting for the Society for Behavioral Medicine's 36th Annual Meeting. The mHealth Institute is designed to provide behavioral and social scientists tools to successfully add mobile health technologies to their research in a collaborative team environment with mentorship from leaders in the fields of engineering, medicine and the behavioral and social sciences. The one-day Institute provides participants with an overview of the central multidisciplinary aspects of mobile and wireless research. The training will follow a project form conception through analysis led by a panel of experts. Participants will be involved in didactic sessions targeting major cross-cutting research issues and interdisciplinary team exercises developing a mHealth research project. Using mobile technologies to more rapidly and accurately assess and modify behavior, biological states and contextual variables has great potential to transform health research. Recent advances in mobile technologies and the ubiquitous nature of these technologies in daily life (e.g., smart phones, sensors) have created opportunities for behavioral and social sciences research applications that were not previously possible (e.g., simultaneously assessing behavioral, physiological, and psychological states in the real world and in real-time). The use of mobile technology affords numerous methodological advantages over traditional methods, including reduced memory bias, the ability to capture time-intensive longitudinal data, date- and time-stamped data, and the potential for personalizing information in real-time. However, challenges in mobile health (or mHealth) research exist. Importantly, much of the work being done in mHealth arises from single disciplines without integration of the behavioral, social sciences and clinical research fields. Without integration, mobile technologies will not be maximally effective. The NIH mHealth Training Institute addresses these scientific silos by bring together scientists from diverse fields to enhance the quality of mHealth research.

CORRESPONDING AUTHOR: Wendy Nilsen, PhD, National Institutes of Health, Bethesda, MD, 20892; nilsenwj@od.nih.gov; Donna Spruijt-Metz, MFA, PhD, Center for Economic and Social Research, University of Southern California, Los Angeles, CA, 90004; dmetz@usc.edu; Predrag Klasnja, PhD, University of Michigan, Ann Arbor, MI, 48109; klasnja@umich.edu; Santosh Kumar; santosh.kumar@memphis.edu; William T. Riley, PhD, National Institutes of Health, Bethesda, MD, 20892; wiriley@mail.nih.gov

Wednesday
April 22, 2015
12:00 PM-6:00 PM

Seminar 02 12:00 PM-6:00 PM

NIH GRANTWRITING WORKSHOP

Wendy Nilsen, PhD[1], Michael Stirrat, PhD[1], Audie A. Atienza, PhD[2], William Elwood, PhD, Stacey Fitzsimmons, PhD[3], Karina W. Davidson, PhD[4], Francis J. Keefe, PhD[5], Donna Spruijt-Metz, MFA, PhD[6]

[1]National Institutes of Health, Bethesda, MD; [2]National Cancer Institute, Science of Research and Technology Branch, Bethesda, MD; [3]Center for Scientific Review; [4]Columbia University; [5]Duke University Medical Center, Durham, NC; [6]Center for Economic and Social Research, University of Southern California, Los Angeles, CA

NIH Grant Writing Seminar for Early Career Researchers

This seminar will provide investigators who are new to the National Institutes of Health (NIH) grant application process with information and advice on writing a successful application for NIH funding. The format will include didactic presentations, question and answer sessions, a "mock" review, guidance on interpreting summary statements, and small group discussion. NIH scientists who oversee programs of research will describe current funding opportunities, grant mechanisms, policies, procedures, and steps in the grant submission process. An NIH review officer will discuss review procedures and considerations, and senior investigators will provide their perspectives on writing a successful application. Ample time will be provided for questions regarding programmatic, review and grantsmanship aspects of the NIH funding process. In addition, experiential and small-group activities will deepen participants' knowledge of the grant writing process and provide more tailored information and feedback. A "mock" review session will be conducted to demonstrate the roles and interactions among various participants in a study section, including the NIH review officer, review group Chair and assigned reviewers. Participants will also be asked to submit in advance a 1-2 page synopsis of the research aims, hypotheses, and methods for an application they are considering submitting, and/or specific questions they may have regarding the grant writing and review process. These will be discussed in small groups led by NIH staff and senior investigators, allowing participants to receive detailed feedback and advice to enhance the quality of their future grant submissions.

CORRESPONDING AUTHOR: Michael Stirrat, PhD, National Institutes of Health, Bethesda, MD, 20582; stirrattm@mail.nih.gov; Audie A. Atienza, PhD, National Cancer Institute, Science of Research and Technology Branch, Bethesda, MD, 20892; atienzaa@mailnih.gov; William Elwood, PhD; NIH; Stacey Fitzsimmons, PhD, Center for Scientific Review; stacey.Fitzsimmons@nih.gov; Karina W. Davidson, PhD, Columbia University; kd2124@columbia.edu; Francis J. Keefe, PhD, Duke University Medical Center, Durham, NC, 27710; francis.keefe@duke.edu; Donna Spruijt-Metz, MFA, PhD, Center for Economic and Social Research, University of Southern California, Los Angeles, CA, 90004; dmetz@usc.edu

Seminar 03 12:00 PM-6:00 PM

BEHAVIORAL SELF MANAGEMENT OF RECURRENT HEADACHE: IMPLICATIONS FOR CLINICAL PRACTICE

Donald B. Penzien, PhD[1], Megan Bennett. Irby, MS, MS[2], Donald D. McGeary, PhD, ABPP[3]

[1]Wake Forest School of Medicine, Winston Salem, NC; [2]Wake Forest University School of Medicine, Winston Salem, NC; [3]University of Texas Health Science Center at San Antonio, San Antonio, TX

The principles and techniques of biobehavioral headache management are well established and enjoy excellent empirical support. Yet, management of migraine and tension-type headache can prove challenging even for experienced clinicians. The many advances in head pain management include revision of headache diagnostic nosology, new approved pharmacologic and non-pharmacologic headache interventions, and revision of guidelines for behavioral headache research by the American Headache Society. These advances will help behavioral clinicians assist patients to understand and manage refractory headache.
This seminar is intermediate to advanced in scope, applied in focus, and designed to present clinical issues in biobehavioral headache management and foster discussion. Format is lecture/discussion with case-based learning and participant interaction. A slide-based overview of current issues in headache assessment and treatment grounded upon relevant empirical literature lays the foundation for case-based discussion of issues in treatment planning and clinical decision making. Case material will include a combination of illustrative cases prepared by seminar leaders and material provided by seminar participants. Topics addressed will include: headache pathogenesis, diagnosis, active collaboration with physicians, behavioral factors in headache, addressing co-morbid psychopathologies, risk factors for refractory headache, medication overuse, efficacy of drug and nondrug therapies, cost-effective behavioral strategies, headache management guidelines, and the new behavioral clinical trials guidelines for headache. Ample materials available for download include: structured *Diagnostic Interview for Headache, Headache Patient Information Form*, *Headache Self-Monitoring Form,* selected pertinent reviews and chapters, treatment and clinical trials research guidelines, materials for patients, and scripts and audio for Progressive Relaxation Training Program for headache.

CORRESPONDING AUTHORS: Megan Bennett. Irby, MS, MS, Wake Forest University School of Medicine, Winston Salem, NC, 27127; mirby@wakehealth.edu; Donald D. McGeary, PhD, ABPP, University of Texas Health Science Center at San Antonio, San Antonio, TX, 78229; mcgeary@uthscsa.edu

Wednesday
April 22, 2015
9:00 AM-2:45 PM

Seminar 04 9:00 AM-2:45 PM

ADVANCING THE STATE OF THE SCIENCE FOR EVALUATING THE BEHAVIORAL HEALTH EFFECTS OF LAWS

Scott Burris, JD[1], Jennifer Ibrahim, PhD, MPH, MA[2], Sara J. Knight, PhD[3]

[1]Temple Law School, Philadelphia, PA; [2]Temple University, Philadelphia, PA; [3]Department of Veterans Affairs, Veterans Health Administration, Woodside, CA

Legal intervention has been an important part of promoting healthier behavior since the 1960s. From smoking through obesity to health care delivery, law has been both deliberately and inadvertently a major behavioral driver. In some topical domains, public health law research exhibits a generally high level of methodological rigor and policy impact. Nonetheless, social and behavioral researchers face new challenges in methods and research topics. This panel aims to address both. Drawing upon a new methods textbook, *Public Health Law Research: Theory and Methods,* Burris and Ibrahim highlight two key elements of effective public health law research methods: accurate measurement of law, and using theory and causal modeling to better conceptualize and design legal evaluation studies. The discussion will also explore how researchers and interventionists can use law to scale up behavioral medicine interventions that have been shown to work on the individual or small group level. This one-day workshop will include hands-on training in measuring law, using PHLR's LawAtlas software, and exercises to conceptualize and model the behavioral impact of laws and the use of behavioral theory in policy development and legal evaluation.
Public Health Law Research is a national program of the Robert Wood Johnson Foundation, dedicated to funding and otherwise faciliating scientific evaluation of the health effects of laws and legal practices.

CORRESPONDING AUTHORS: Scott Burris, JD, Temple Law School, Philadelphia, PA, 19122; burris@temple.edu; Jennifer Ibrahim, PhD, MPH, MA, Temple University, Philadelphia, PA, 19122; jennifer.ibrahim@temple.edu; Sara J. Knight, PhD, Department of Veterans Affairs, Veterans Health Administration, Woodside, CA, 94062; sara.knight@ucsf.edu

Seminar 06 9:00 AM-11:45 AM

DESIGN AND ANALYTIC APPROACHES TO IMPROVING THE INTERNAL VALIDITY OF NON-RANDOMIZED STUDIES

Matthew L. Maciejewski, PhD

Durham VA Center for Innovation and Duke University Medical Center, Durham, NC

Non-randomized studies are essential in behavioral medicine for (1) developing an evidence base to inform randomized behavioral intervention studies and (2) evaluating the effectiveness of interventions when randomization is neither ethical nor feasible. To develop non-randomized studies as researchers, and fairly critique them as grant and manuscript reviewers, there is a need to understand the internal validity threats that are relevant in the absence of randomization and the strategies can be employed to reduce these threats. The purpose of this seminar is to provide an overview of study design, measurement strategies, and statistical methods to increase the rigor of non-randomized studies. The presenter will present an overview of strong quasi-experimental designs, alternative approaches to defining treatment and control cohorts, covariate adjustment, and measurement strategies to reduce confounding. Finally, faculty will provide an overview of statistical methods that can be used to reduce imbalance between groups in observed confounders (propensity score analysis) or unobserved confounders (instrumental variables analysis) and review the assumptions underlying these methods to enable appropriate application. The design, measurement and analytic principles will be illustrated through review of peer-reviewed literature. Participants who attend the seminar will understand steps that need to be taken by researchers to minimize internal validity threats in non-randomized studies. Time will be reserved for open discussion of how the concepts presented can be applied in the research of seminar attendees. Attendees will be provided with a handout with the PowerPoint slides and a list of methodological references as well as examples from the literature.

CORRESPONDING AUTHOR: Matthew L. Maciejewski, PhD, Durham VA Center for Innovation and Duke University Medical Center, Durham, NC, 27705; mlm34@duke.edu

Seminar 07 9:00 AM-11:45 AM

RETENTION STRATEGIES FOR RANDOMIZED TRIALS: STATE OF THE SCIENCE, INNOVATION, AND IMPLEMENTATION

Michaela Kiernan, PhD[1], Susan D. Brown, PhD[2]

[1]Stanford Prevention Research Center, Stanford, CA; [2]Kaiser Permanente Northern California, Oakland, CA

Retention is fundamentally important for the successful execution of behavioral randomized trials both for internal and external validity. Yet, the empirical literature regarding retention strategies is sparse leaving investigators to grapple with implementation without a strong evidence base. This interactive seminar will address this dilemma in three parts. In the first part, presenters will provide a concise review of (a) the primarily descriptive literature on retention strategies; (b) a recent meta-analysis comprised of the existing experimental studies testing extrinsic motivators such as financial incentives and study reminders; and (c) an emerging literature regarding the development of assessment tools to measure patient perceptions of the research process. In the second part, the presenters will describe and demonstrate an innovative approach to retention—conducting interactive group-based orientation sessions prior to trial enrollment. These sessions use motivational interviewing techniques to address ambivalence about making behavior changes and/or joining a trial. Informed by a community-based participatory research perspective in which participants are considered partners in research, these orientation sessions also include a mini-methods module designed to enhance participants' understanding and value of the methodological rationale of retention independent of their own experience—i.e., that a 'true picture' of trial outcomes is preferred even if the trial does not 'work' or individual participants are not successful. Seminar presenters will conduct a mock orientation session to demonstrate the variety of techniques and group processes used. In the third part of the seminar, presenters will facilitate small- and large-group discussions in which attendees will identify 2-3 retention strategies potentially applicable to their own research, problem solve anticipated barriers, and leave prepared to implement these strategies in their own trials.

CORRESPONDING AUTHORS: Michaela Kiernan, PhD, Stanford Prevention Research Center, Stanford, CA, 94305; mkiernan@stanford.edu; Susan D. Brown, PhD, Kaiser Permanente Northern California, Oakland, CA, 94612; susan.d.brown@kp.org

Seminar 08 9:00 AM-11:45 AM

"BIBLIOTHERAPY: HEALING ONE TEXT AT A TIME

Lisa A. Keenan, PhD[1], Kenneth Sroka, PhD[2], Koreena Linkowski

[1]Erie County Medical Center Corporation, Buffalo, NY; [2]ECMC, West Seneca, NY

<p>Interest in bibliotherapy, or "the reading cure", has spawned numerous reading clubs internationally using reading and art as part of the rehabilitation process for survivors of injury and illness. With the development of e-readers and other technology, texts and literature are more readily available to the community. It is well-documented in literature that mental, social, and cognitive deficits are often persistent areas of concern for survivors of brain injury (reduced empathy, poor perspective taking, concrete thinking, impaired information processing) as well as those diagnosed with PTSD. Also, chronic pain conditions restrict individuals' interactions and activities, and reactionary mood disturbances often develop. Traditional programs attempt to target these deficits, but are limited and often structured in approach, reducing participant motivation. Collaboration with physical rehabilitation medicine and behavioral health services has shown to offer benefits to quality of life and symptom reduction. In July 2012, a pilot project was started at the Erie County Medical Center Corporation in Buffalo, New York to study the effectiveness of reading clubs for continued recovery of ABI survivors and individuals with chronic pain and disability. The project has proven a cost effective, sustainable treatment approach. This interdisciplinary seminar will include qualitative data delineating the impact of the pilot program. It will also provide detailed information on the development, mission statement, recruitment, reading selection, and documentation procedures for successful implementation of these collaborative programs in various settings. Open discussion will address other creative approaches to symptom management in chronic illness targeting dynamic, proactive program development for behavioral health in medical settings.</p>

CORRESPONDING AUTHOR: Kenneth Sroka, PhD, ECMC, West Seneca, NY, 14224; srokak@canisius.edu

Seminar 09 9:00 AM-11:45 AM

ISSUES IN DESIGN AND CONDUCT OF RANDOMIZED BEHAVIORAL CLINICAL TRIALS

Peter G. Kaufman, PhD[1], Lynda H. Powell, PhD, MEd[2], Kenneth E. Freedland, PhD[3]

[1]National Heart Lung & Blood Institute, Bethesda, MD; [2]Rush University Medical Center, Chicago, IL; [3]Washington University School of Medicine, St Louis, MO

In this workshop we will discuss several principal challenges in the design of clinical trials. Popular targets for multi-level interventions can include biological response, social connections, provider behavior, health care system factors, community resources, and/or the physical environment. This poses unique challenges posed for recruitment, randomization, unit of analysis, and treatment contamination. The results of behavioral intervention trials depend to a considerable extent on the nature of the selected comparators. A growing empirical literature on the effects of different control groups on behavioral trial outcomes will be discussed. Finally, many conditions and diseases can affect numerous behavioral and biological parameters. Selecting appropriate, informative outcomes from among many has important implications for the interpretation of the effectiveness of the delivered intervention.

CORRESPONDING AUTHORS: Peter G. Kaufman, PhD, National Heart Lung kaufmannp@nhlbi.nih.gov; Lynda H. Powell, PhD, MEd, Rush University Medical Center, Chicago, IL, 60612; lpowell@rush.edu; Kenneth E. Freedland, PhD, Washington University School of Medicine, St Louis, MO, 63108; freedlak@bmc.wustl.edu

Wednesday
April 22, 2015
3:15 PM-6:00 PM

Seminar 10 3:15 PM-6:00 PM

HOW TO WRITE A SUCCESSFUL NIH CAREER DEVELOPMENT (K) AND NRSA FELLOWSHIP (F) AWARD

Mark H. Roltsch, PhD

St. Mary's University, San Antonio, TX

One of the greatest challenges in establishing an academic career is bridging the gap between the beginning stages of such a career as a doctoral student, post-doc, or fellow and the subsequent one as a scientist able to contribute to his/her scientific/clinical area. This gap has been well recognized by both the NIH and by national (and local) scientific organizations and funding mechanisms and policies have been established to facilitate this transition. This workshop will help fellows and young investigators understand the different K and F award grant mechanisms and will propose strategies to optimize chances of funding, in order to successfully complete the challenging transition to established investigator. This workshop is very timely for both trainees interested in submitting an application and for potential mentors. Dr. Mark Roltsch, a former NHLBI Program Officer and Scientific Review Officer, who has led and organized over 80 peer review study sections, created this workshop to share his insight of years of career development awards review experience and program management as well as his knowledge of the internal workings of NIH grants with young investigators in an effort to enhance the attendees knowledge of what is need to write a successful career development grant and how to avoid some common pitfalls. Attendees should leave the workshop with a clear direction and timeline of what they need to accomplish to submit K or F award application. Attendees will also work on developing their specific aims and receive guidance on how to write the various sections of these award mechanisms. This is a interactive workshop. Bring you laptop, grant proposal ideas, questions, and expect to do some writing.

Seminar 11 3:15 PM-6:00 PM

BEHAVIORAL SLEEP MEDICINE FROM RESEARCH TO PRACTICE

Kelly Baron, PhD, MPH, CBSM[1], Michelle Drerup, PsyD, C.BSM[2], Daniel J. Taylor, PhD, CBSM[3]

[1]Feinberg School of Medicine, Northwestern University, Chicago, IL; [2]Cleveland Clinic, Cleveland, OH; [3]University of North Texas, Denton, TX

An estimated 70 million Americans suffer from sleep/wake disorders including insomnia, circadian rhythm disorders and obstructive sleep apnea. Behavioral sleep medicine is a quickly growing field of behavioral medicine that focuses on understanding the psychological and behavioral aspects of normal and disordered sleep as well as behavioral interventions to improve sleep. In this workshop, experts in the field of behavioral sleep medicine will provide a basic overview of some important areas of behavioral sleep medicine. Presenters will focus on theory driven interventions and clinically relevant research. We will begin by providing an overview of sleep and circadian rhythm assessment. Next, we will present data and theories linking sleep with other key health behaviors, including diet and exercise. The second half of the workshop will focus on insomnia assessment and treatment. This section will demonstrate the epidemiologic links between insomnia, mental and physical healthy. We will also present research about the clinical management of insomnia using cognitive behavioral therapy for insomnia (CBT-I). We will present data relevant to a stepped care model in a large healthcare system. As a result of this workshop, participants will have an introduction to both the research and practice in the field of behavioral sleep medicine.

CORRESPONDING AUTHORS: Michelle Drerup, PsyD, C.BSM, Cleveland Clinic, Cleveland, OH, 44195; drerupm@ccf.org; Daniel J. Taylor, PhD, CBSM, University of North Texas, Denton, TX, 76201; daniel.taylor@unt.edu

Wednesday
April 22, 2015
6:00 PM-7:00 PM

6:00 PM-7:00 PM

WHAT IS ALL THE TWEETING ABOUT? ANALYSIS OF THE SBM CONFERENCE HASHTAGS #SBM2013 AND #SBM2014

Sherry L. Pagoto, PhD[1], Rashelle B. Hayes, PhD[2], Kristin L. Schneider, PhD[3], Christine May, MA[4], Jacey Keeney, BA, BS[5], Lenel Reuther, MS[6], Daniel Kern, BA[7], Rui S. Xiao, MD, MPH[1], Molly E. Waring, PhD[1]

[1]University of Massachusetts Medical School, Worcester, MA; [2]UMASS Medical School, Worcester, MA; [3]Rosalind Franklin University of Medicine & Science, North Chicago, IL; [4]Case Western Reserve University, Cleveland Heights, OH; [5]Rosalind Franklin University of Medicine and Science, Arlington Heights, IL; [6]Rosalind Franklin University, North Chicago, IL; [7]Rosalind Franklin University of Medicine and Science, River Grove, IL

With over 500 million users, Twitter has been adopted as an educational tool in academia to bring discussions from the classroom and conference halls to a wider audience on the internet. Professional organizations and/or conference attendees assign hashtags, a word or phrase preceded by the # sign, to a conference meeting to allow conference-related conversations to be searchable on Twitter. We examined the use of SBM conference hashtags for the 2013 and 2014 conferences (#sbm2013 and #sbm2014, respectively). We used Symplur.com, a website that provides full transcripts of hashtag tweets and analytics of those tweets as part of an initiative called the Healthcare Hashtag Project, to access all tweets that included #sbm2013 and #sbm2014 occurring from 2 weeks before to 2 weeks after each conference. Symplur also provided a conservative reach of these tweets because direct retweets were not included in their data. SBM provided the number of annual conference attendees. We conducted a qualitative content analysis of a random subsample of 300 (15%) tweets to categorize the tweet content and type of tweet. The 2013 and 2014 conferences were attended by 1,861 and 1,690, respectively. The hashtag for the 2013 conference, #sbm2013, was contained in 773 tweets by 149 accounts (median tweets per account: 1; inter-quartile range [IQR]: 1-4; max: 74 tweets), with a conservative reach of 2,035,194 accounts. The 2014 hashtag, #sbm2014, was included in 1215 tweets by 248 accounts (median tweet per account: 1; IQR: 1-5; max: 91 tweets), with a conservative reach of 1, 594,288 accounts. Half of all tweets (54%) were original tweets, 36% were retweets (using RT, not direct retweets), and 10% were interactions. Tweets fell into 4 categories. Over half were about science at or relevant to the conference (56%), while others were promoting a specific session at the conference (12%), were professional networking (11%), or reporting the user's overall conference experience (14%). Use of the SBM conference hashtag increased from 2013 to 2014, both in number of accounts tweeting and total number of tweets. While only a minority of conference attendees tweeted with the conference hashtag, they extended the audience of the conference to millions of Twitter users.

CORRESPONDING AUTHOR: Sherry L. Pagoto, PhD, University of Massachusetts Medical School, Worcester, MA, 01655; sherry.pagoto@umassmed.ed

6:00 PM-7:00 PM A001

A LONGITUDINAL TEST OF THE COMPREHENSIVE INDOOR TANNING EXPECTATIONS SCALE: THE ROLE OF AFFECT

Jessica G. Myrick, PhD[1], Seth M. Noar, PhD[2], Dannielle Kelley, MPH[3], Alexandra Zeitany, B.S.[3], Brenda Morales-Pico, B.S.[3], Nancy Thomas, MD, PhD[4]

[1]Indiana University, Bloomington, IN; [2]UNC Chapel Hill, Chapel Hill, NC; [3]University of North Carolina at Chapel Hill, Chapel Hill, NC; [4]University of North Carolina at Chapel Hill, Bloomington, NC

Background: While rates of many cancers are declining, skin cancer rates are rising. This increase is partly tied to indoor tanning, a popular behavior associated with skin cancer. In an effort to better understand the motivations behind indoor tanning (i.e., outcome expectations), we recently developed the Comprehensive Indoor Tanning Expectations (CITE) scale. In the current study, we examine longitudinal associations of CITE beliefs with indoor tanning behavior.Methods: We conducted surveys with sorority members at a large public university and a mid-sized private university in the Southeastern United States. Surveys were conducted at two time points - six months apart (total N=553).Results: The CITE scale demonstrated strong test-retest reliability. Positive expectations ranged from .55 - .73 (mean = .65 across subscales). Negative expectations ranged from .41 to .70 (mean = .56 across subscales). Also, all positive outcome expectations subscales were positively correlated with Time 2 indoor tanning behavior, while all negative outcome expectations were negatively correlated. Hierarchical logistic regression analyses (treating behavior as a dichotomous variable with none versus any indoor tanning at Time 2) revealed three CITE subscales were significantly associated with Time 2 indoor tanning behavior Participants who believed that indoor tanning improved their mood and would lead to social approval were significantly ($p < .001$) more likely to tan than those who did not hold those beliefs. Furthermore, participants who believed that indoor tanning would lead to psychological or physical discomfort (e.g., worry over the cost, claustrophobia) were significantly ($p < .001$) less likely to tan than participants who did not endorse those beliefs.Conclusions: The CITE scale is a valid and reliabletool for assessing motivations for indoor tanning behavior. Affective beliefs are important for understanding why young women tan indoors. Knowing the psychological bases for this behavior can inform theoretically-driven interventions and anti-tanning message development.

CORRESPONDING AUTHOR: Seth M. Noar, PhD, UNC Chapel Hill, Chapel Hill, NC, 27599; noar@email.unc.edu

6:00 PM-7:00 PM A002

A MOBILE AND NURSE FOLLOW-UP INTERVENTION TO STRENGTHEN PATIENTS' TRANSITION FROM HOSPITAL TO HOME

Kuang-Yi Wen, PhD[1], Kenneth Patrick, MD[2], Allura LeBlanc, Julie Murray, Ning Gong, Michael Korostelev, Li Bai, Delinda Pendleton, Robert Back

[1]Cancer Prevention and Control/Fox Chase Cancer Center, Philadelphia, PA; [2]Fox Chase Cancer Center, Philadelphia, PA

The transition from hospital to home is a vulnerable time particularly for cancer patients, as they face new self-management responsibilities in a new setting. These challenges leave patients at risk for adverse drug events, a known and often preventable cause of hospital readmissions. Improving the quality of transitional care through multidisciplinary cooperation is critical for reducing hospital readmissions rates. Text-based mobile health (mHealth) interventions represent a highly customizable and low-cost platform that can be integrated with a variety of discharge interventions to enhance transitional care. This study evaluates the acceptability and feasibility of an integrated 2-week patient medication and support intervention delivered via short message services and telephonic nurse follow-ups. Forty participants have been enrolled and received medication reminder texts the day post-discharge, were prompted to confirm receipt of medications reminder texts, completed a nurse follow-up call two days post-discharge, and received twice daily coping tip messages. Participants' mean age was 54 years with primarily white (75%) and equally male and female. 63% reported seeing clear benefits to receiving medication reminder texts and 37.5% reported that coping tip messages were very helpful. For those who could be reached for the nurse follow-up, all reported that the call was helpful and answered their questions. Duration, frequency, and timing of messages were all reported to be acceptable, but varied with patient preferences.This ongoing study demonstrates the feasibility of integrating text-based mobile health solutions and telephone nurse follow-up calls to enhance the delivery of transitional care in adult cancer patients with potentials to reduce health care costs related to hospital readmissions. Lessons learned and future directions will also be discussed.

CORRESPONDING AUTHOR: Kuang-Yi Wen, PhD, Cancer Prevention and Control/ Fox Chase Cancer Center, Philadelphia, PA, 19446; kuang-yi.wen@fccc.edu

6:00 PM-7:00 PM A003

A TEST OF THE IMPACT-ENGAGEMENT MODEL OF POST-TRAUMATIC GROWTH IN PATIENTS WITH OCULAR MELANOMA

Kate L. Herts, M.A., M.S.Ed., S.M., Joshua F. Wiley, C.Phil., Tara A. McCannel, MD, PhD, Annette L. Stanton, PhD

University of California, Los Angeles, CA

Post-traumatic growth (PTG) describes perceived growth attributed to a threatening event (e.g., increased appreciation for life after a cancer diagnosis). The impact-engagement model suggests that PTG occurs to the extent that the stressor carries high life impact and the person actively engages with the stressor. Indeed, research has demonstrated that greater perceived impact of and engagement with cancer through approach-oriented coping predict increases in PTG. However, reports of PTG may reflect avoidant coping for those with few intrapersonal resources to manage the illness. In these cases, PTG may be correlated with poorer adjustment. Ocular melanoma (OM) is a rare eye cancer that affects 5 persons per million. Little is known about factors that contribute to its psychosocial impact. The current study aims to address this limitation by testing 1) the impact-engagement model; and 2) a hypothesized interaction between avoidant coping and PTG as a predictor of Quality of Life (QoL) in a sample of adult OM patients. Consecutive OM patients were recruited upon referral to a specialty clinic. Coping (via the COPE) and disease impact (via the Brief Illness Perceptions Questionnaire) were measured at one week after diagnosis (T1; n = 86). PTG and QoL were measured at 3 months (T2; n = 81) and 12 months (T3; n = 72) after diagnosis. PTG was assessed via the Post Traumatic Growth Inventory. QoL was assessed via the SF-36 Physical (PCS) and Mental (MCS) Component Summary scores. Multiple regression analyses revealed that approach-oriented coping one week after OM diagnosis predicted T2 PTG ($b = 21.05$, $p < .01$), but not T3. In contrast to prior research, disease impact did not predict PTG. Avoidant coping did not interact with PTGChange (change score from T2 to T3) to predict T3 MCS, controlling for T2 MCS. However, there was a significant interaction between PTGChange and avoidant coping ($b = -.41$, $p < .05$) predicting T3 PCS, controlling for T2 PCS, such that at high levels of avoidant coping, increases in PTG were associated with decreases in physical QoL. Our results partially support the impact-engagement model, and suggest that in response to an OM diagnosis, interventions promoting approach-oriented coping and discouraging avoidant coping may enhance post-traumatic growth and physical QoL.

CORRESPONDING AUTHOR: Kate L. Herts, M.A., M.S.Ed., S.M., University of California, Los Angeles, CA, 90024; kate.herts@ucla.edu

6:00 PM-7:00 PM A004

ACCULTURATION AND COLORECTAL CANCER SCREENING AMONG LATINO MEN AGED 50 TO 75

Cynthia M. Mojica, PhD[1], Yuanyuan Liang, PhD[2], Deborah Parra-Medina, PhD[3]

[1]Institute for Health Promotion Research, The University of Texas Health Science Center at San Antonio, San Antonio, TX; [2]The University of Texas Health Science Center, San Antonio, TX; [3]Institute for Health Promotion Research, UTHSCSA, San Antonio, TX

Latino colorectal cancer screening rates are less than optimal (only 46.5% screened) compared to federal benchmarks (70.5%) and non-Hispanic Whites (60%). Latino men in particular have a 17% lower screening rate than non-Latino men. Acculturation, an adaptation process that entails assimilating or adapting to the main cultural group or assimilating/adapting to the main cultural group while maintaining attributes from one's own culture of origin, has been associated with low cancer screening rates. Yet research on acculturation and colorectal cancer screening has yielded inconsistent results. Acculturation was measured using the General Acculturation Index (GAI), capturing language (spoken and written), time spent in U.S., ethnic interaction, and ethnic pride. The GAI was calculated by summing scores to all five items and dividing by five. Analyses assessing acculturation and colorectal cancer screening behavior were conducted on 263 Latino men enrolled in an education plus navigation intervention designed to promote colorectal cancer screening (including no-cost colorectal cancer screening). About 52% of men had low acculturation, whereas 32% were considered highly acculturated or bicultural. Men were a mean age of 57 +5.3, uninsured (91%) and employed (57%) with an annual household income < $20,000 (77%). Most were born in Mexico (71%), speak Spanish (67%), and have < high school education (63%). Preliminary analyses suggest no association between colorectal cancer screening and the GAI or with four of the five individual items: language speak, language write, time spent in U.S., ethnic interaction. There was an association between ethnic pride and screening behavior: 72% of men screened reported feeling proud or very proud compared to 55% of non-screened men. Overall, 131 (49%) of enrolled men have received a colorectal cancer screening test. Of the remaining 132, 20 were lost-to-follow-up, 9 refused further follow-up, and the rest (n=103) reported scheduling conflicts on clinic days or have appointments pending. Our findings are consistent with other studies that report low colorectal cancer screening rates among Latino men. Although acculturation is not associated with screening behavior, additional research is needed to better understand the concept of ethnic pride on health-seeking behavior.

CORRESPONDING AUTHOR: Cynthia M. Mojica, PhD, Institute for Health Promotion Research, The University of Texas Health Science Center at San Antonio, San Antonio, TX, 78229; mojicac@uthscsa.edu

6:00 PM-7:00 PM A005

ADDRESSING BASIC NEEDS TO PROMOTE HEALTH: RESOLVING PROBLEMS AFFECTS USE OF CANCER CONTROL REFERRALS

Tess Thompson, MPH[1], Matthew Kreuter, PhD[2], Sonia Boyum, MA[2]

[1]Washington University in St. Louis, Webster Groves, MO; [2]Washington University, School of Social Work, St. Louis, MO

People in vulnerable populations have heightened needs for cancer control services. One advantage of integrating cancer risk assessment and referrals into social service assistance systems such as 2-1-1 is that such systems help callers resolve problems in other areas (e.g. housing). Callers to 2-1-1 in Missouri (N=1090) with at least one behavioral risk factor or cancer screening need were randomly assigned to one of three health referral interventions: verbal referrals to cancer control resources only, verbal referrals + a tailored mailed reminder, or verbal referrals + telephone health navigator. After one month, we assessed whether the non-health problems that prompted the 2-1-1 call had been resolved. Logistic regression estimated the overall and stratified effects of having the problem resolved and intervention type on calling a health referral. Callers were predominantly female (85%), had a high school education or less (61%); nearly half (47%) had incomes under $10,000. The most common service requests from 2-1-1 were for utility assistance (35%) and rent/mortgage assistance (12%). At follow-up, 38% of callers reported that all problems prompting their 2-1-1 call had been resolved, and 24% reported calling a health referral. Resolution of all problems prompting the initial call was associated with a higher odds of contacting a health referral compared to people whose problems were not resolved, but analyses stratified by intervention type showed that this difference was due solely to the effects of problem resolution in the health navigator group. Among callers assigned to work with health navigators, problem resolution was associated with greater odds of calling a health referral compared to people who did not have problems resolved (OR = 2.4, 95% CI 1.4-3.9). Multi-faceted interventions that help meet non-health-related needs and provide support in reaching health-related goals may promote health in vulnerable populations.

CORRESPONDING AUTHOR: Tess Thompson, MPH, Washington University in St. Louis, Webster Groves, MO, 63119; tessthompson@wustl.edu

6:00 PM-7:00 PM A006

AFRICAN AMERICAN BREAST CANCER SURVIVOR STORIES: TRIAL USAGE OF A CANCER-COMMUNICATION VIDEO PROGRAM

Donna B. Jeffe, PhD[1], Maria Pérez, MA[1], Yan Yan, MD, PhD[1], Julianne A. Sefko, MPH[1], Julie A. Margenthaler, MD[1], Balaji Golla, MS[2], Matthew W. Kreuter, PhD, MPH[3], Graham A. Colditz, MD, DrPH[4]

[1]Washington University School of Medicine, Saint Louis, MO; [2]Washington University in St Louis, George Warren Brown School of Social Work, Saint Louis, MO; [3]Washington University in St Louis, George Warren Brown School of Social Work, St Louis, MO; [4]Washington University in St. Louis, School of Medicine, St. Louis, MO

For a 2-year randomized controlled trial, we developed a technologically innovative, culturally tailored, interactive cancer-communication intervention for African American breast cancer patients using videos of African American survivor stories loaded on a touch-screen computer. In the intervention arm, 107 patients (76% early-stage; mean age 56, range 39-78 years; 60% < $25,000 annual income) were trained (~10 minutes) to use the video program before taking it home for private viewing 3 times over the first year (~2 weeks each time). Patients completed phone interviews a mean 5 days from surgical post-op visit or start of neoadjuvant therapy before video exposure (T1), and after each exposure a mean 1-month (T2), 6- (T3) and 13- (T4) months after definitive surgical treatment, at which time we collected demographic and psychosocial data, their positive and negative emotional reactions to the stories (response options: 1=not at all to 5=extremely) and identification with and trust in storytellers as sources of cancer information (response options: 1=strongly disagree to 5=strongly agree). Higher scores indicate greater positive and negative emotional reactions to survivor stories and greater identification with and trust in the storytellers. The video program logged the number of actions taken during use (i.e., choosing videos) and minutes of use at each intervention session. Separate mixed models examined predictors of use of the video program across the 3 intervention sessions. Compared with the first session, patients interacted less with the program over time (i.e., logged an average of 65 and 71 fewer actions [F=28.92, $p < 0.0001$] and spent an average of 77 and 83 fewer minutes watching stories [F=33.84, $p < 0.0001$] at the second and third sessions, respectively). For each unit increase in trust, the average number of actions decreased by 26 (F=4.37, p=0.038) and the average number of minutes spent watching survivor stories decreased by 27 (F=4.13, p=0.044). Positive and negative emotional reactions and identification with storytellers after the first session as well as demographic and psychosocial variables at each interview did not predict video use. Video program use declined after the first exposure, with patients reporting higher trust in storytellers as sources of cancer information demonstrating lower engagement with the survivor stories over time.

CORRESPONDING AUTHOR: Donna B. Jeffe, PhD, Washington University School of Medicine, Saint Louis, MO, 63110; djeffe@dom.wustl.edu

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AGE-RELATED DIFFERENCES IN SYMPTOM BURDEN: OLDER ADULTS WITH DYSPNEA AND ADVANCED STAGE CANCER

Marie Flannery, PhD, RN, AOCN[1], Charles E. Heckler, PhD, MS[2], Charles Kamen, PhD, MPH[2], Mohamedtaki A. Tejani, MD[3], Tarit Banjerjee, MD[4], Benjamin Esparaz, MD[5], Jeffrey Giguere, MD[6], Min-Chun Chen, MD[7], Supriya Mohile, MDMS[2], Gary Morrow, PhD[2]

[1]University of Rochester, Fairport, NY; [2]University of Rochester, Rochester, NY; [3]University of Rochester Medical Center, Rochester, NY; [4]Wisconsin NCORP, Marshfield, WI; [5]Heartland NCORP, Decatur, IL; [6]NCORP of the Carolinas, Greenville, SC; [7]Northwest CCOP, Tacoma, WA

There is a widespread belief that older adults have fewer symptoms and a lower symptom burden from cancer and its treatments compared to younger patients. The purpose of this study was to examine the symptom burden of those age 65 and older compared to those under 65 in individuals with advanced stage cancer and dyspnea.382 patients (50.1% > age 65), with mixed cancer diagnosis (62% lung; 85% stage III or IV) and dyspnea (> grade2) receiving chemotherapy who participated in a large multisite clinical trial were included in this secondary analysis. Symptoms (fatigue, drowsiness, sleep disturbance, distress, pain, decreased appetite, trouble remembering) and interference (activity, walking, work, mood relationships, quality of life) were evaluated with the Clinical Symptom Inventory (CSI) (severity 0-10). A series of linear models were computed. The predictor variables were age group (>65 versusFor both age groups, > 90% reported fatigue, drowsiness and sleep disturbance; >50% reported distress, pain, decreased appetite, trouble remembering and nausea. There were no significant age differences for severity of fatigue and trouble remembering. For all other symptoms severity rating was lower in those >65 (p’s90% reporting interference in at least 3 areas. There were no significant differences in severity of interference with walking, work, or quality of life; for interference with activity, mood and relationships the severity rating was lower in those >65 (p’s

CORRESPONDING AUTHOR: Marie Flannery, PhD, RN, AOCN, University of Rochester, Fairport, NY, 14450; marie_flannery@urmc.rochester.edu

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AN EHEALTH PROGRAM TO INCREASE PHYSICAL ACTIVITY & HEALTHY EATING IN CANCER SURVIVORS: A PILOT STUDY

Paul Krebs, PhD[1], Jonathan Shtaynberger, MSCandidate[2], Michelle Iocolano, MA[3], Jamie Ostroff, PhD[4]

[1]NYU School of Medicine, New York, NY; [2]Columbia University School of Public Health, Brooklyn, NY; [3]Memorial Sloan Kettering Cancer Center, Flushing, NY; [4]Memorial Sloan Kettering Cancer Center, New York, NY

Objective: Maintaining a healthy lifestyle is associated with improved quality of life among cancer survivors, yet adherence to health behaviors in this population remains low. This pilot randomized controlled trial developed and tested tailored e-health program to increase in fruit and vegetable consumption and physical activity among older adult cancer survivors.Method: American Cancer Society guidelines for cancer survivors were translated into an interactive, tailored program that featured behavior change strategies such as education, modeling and goal setting. It was published in DVD format to maximize use by persons without internet access. At the time of their first Survivorship Clinic appointment, 86 patients with a history of breast or prostate cancer and at least 5 years from active treatment were randomized to receive either the e-health program (DVD) + provider advice or provider advice alone. Primary outcomes were self-reported fruit and vegetable consumption and weekly metabolic equivalent units (METs) at three months. Results: Participants were mostly female (96%) with a mean age of 59.8. The mean change in fruit and vegetable score was 0.10 (SD= 1.36) for the intervention group, compared to -0.10 (SD=1.14) for the control group. The mean change in METs was -3.41 (SD=22.07) for the intervention group vs. -1.03 (SD=21.01) for control. Among patients not at physical activity recommendations criteria at baseline, DVD users increased 6.22 (SD=16.30) METs while nonusers increased only 1.80 (SD=14.81).Conclusion: The pilot study was not designed detect statistical significance, yet suggests positive trends for healthy eating in the intervention group. While the control group increased physical activity more than the intervention, stratifying by baseline METs suggests that the e-health program helped to increase activity among those not meeting criteria at baseline and limit declines among those already at criteria. Effect sizes were consistent with clinically significant improvements. The tailored intervention shows promise as a strategy to increase health behaviors among adult cancer survivors.

CORRESPONDING AUTHOR: Paul Krebs, PhD, NYU School of Medicine, New York, NY, 10016; paul.krebs@nyumc.org

6:00 PM-7:00 PM A009

AN INVESTIGATION OF POPULATION HETEROGENEITY OF CANCER-RELATED FATIGUE IN BREAST CANCER PATIENTS

Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA[1], Ted C.T. Fong, MPhil[2], Irene K. M. Cheung, MSW[2]

[1]The University of Hong Kong, Hong Kong, China, Peoples Rep; [2]The University of Hong Kong, Hong Kong, Hong Kong

Background: Fatigue is one of the most prevalent and significant symptoms experienced by breast cancer patients. Cancer-related fatigue can result in difficulties for the patients in maintaining their prior level of physical functioning, thus affecting their daily life and work performance. The aim of the present study was to examine potential population heterogeneity in fatigue symptoms of breast cancer patients via mixture modeling.Methods: Participants were 197 Chinese female breast cancer patients (mean age = 49.4 years, *SD* = 8.0; average cancer duration = 23.1 months, *SD* = 7.5). They completed self-report measures on fatigue and cancer-related psychopathological states, namely, perceived stress, anxiety, depression, pain, sleep disturbance, and quality of life. Latent profile analysis and factor mixture analysis were carried out using Mplus 7 and the optimal number of latent classes was selected based on the Bayesian information criterion (BIC). The identified classes were validated by comparing their demographic, clinical, and symptomatic characteristics using a stepwise distal outcome approach.Results: The two-class, two-factor model fitted significantly better than the one-class, two-factor model ($p < .05$) and provided the best fit to the data in terms of a good BIC and high classification accuracy (entropy = .90). The exhausted class (N = 88, 44.7%) showed high levels of fatigue severity and interference. The restored class (N = 109, 55.3%) exhibited moderate severity and low interference. Compared to the restored class, the exhausted class reported significantly higher levels of perceived stress, anxiety, depression, pain, and sleep disturbance, and lower quality of life.Discussions: The present findings suggest the existence of two clinically distinct fatigue classes. The population heterogeneity in cancer-related fatigue and the psychopathological correlates provide important information in fostering quality care for different subgroups of patients.Acknowledgement: This study was supported by the General Research Fund, Research Grants Council (GRF/HKU745110H). We would like to thank Hong Kong Cancer Fund, Queen Mary Hospital, Pamela Youde Nethersole Eastern Hospital, and Dr. M.Y. Luk for their help in patient recruitment and all the patients who participated in the study.

CORRESPONDING AUTHOR: Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA, The University of Hong Kong, Hong Kong, 852; tinho@hku.hk

6:00 PM-7:00 PM A010

ANXIETY AND NEGATIVE MOOD FOLLOWING MAMMOGRAPHY SCREENING FOR BREAST CANCER

Sara N. Edmond, M.A.[1], Rebecca A. Shelby, PhD[2], Francis J. Keefe, PhD[2], Mary Scott Soo, MD[2], Celette Sugg Skinner, PhD[3], Gretchen Ahrendt, MD[4], Jessica Manculich, BS[5], Jules H. Sumkin, DO, FACR[6], Margarita Zuley, Dana H. Bovbjerg, PhD[7]

[1]University of Mississippi Medical Center / G.V. (Sonny) Montgomery VAMC, Jackson, MS; [2]Duke University Medical Center, Durham, NC; [3]Department of Clinical Sciences and Harold C. Simmons Cancer Center, UT Southwestern Medical Center, Dallas, TX, Dallas, TX; [4]Uinversity of Pittsburgh, Pittsburgh, PA; [5]University of Pittsburgh Cancer Institute, Pittsburgh, PA; [6]Magee-Womens Hospital, Pittsburgh, PA; [7]University of Pittsburgh, Pittsburgh, PA

Adherence to breast cancer screening recommendations is particularly important for women with a history of breast cancer. However, data suggest that breast cancer survivors' adherence to mammography screening guidelines diminishes over the years following treatment. As part of a larger program of research investigating effects of psychological distress on this adherence pattern, we examined predictors of post-mammogram anxiety and negative mood among breast cancer survivors returning for their first post-surgery surveillance mammogram (n=200) and in women without a cancer history (n=150). Women were on average 58.8 years old (SD=9.8), 67% were married, and 59% had a college degree. General anxiety, anticipatory mammography distress, and perceived risk of developing breast cancer were assessed prior to the mammogram. Post-mammogram, anxiety and negative mood were assessed along with pain and pain catastrophizing about mammography pain. Linear regression analyses found that pre-mammogram general anxiety was statistically related to post-mammogram anxiety in both women with a cancer history (β=0.23, p=0.02) and women without a cancer history (β=0.44, $p < 0.001$). Among survivors, higher perceived risk of cancer recurrence was also related to post-mammogram anxiety (β=0.13, p=0.04). Anticipatory mammography distress was related to post-mammogram negative mood in both women with a cancer history (β=0.31, p=0.001) and without a cancer history (β=-0.21, p=0.03), but in opposite directions. Among survivors, higher levels of pre-mammogram general anxiety (β=0.29, p=0.002) were also related to negative mood post-mammogram, while mammography pain catastrophizing (β=0.45, $p < 0.001$) was related to negative mood post-mammogram in women without cancer. These initial results from a larger program of research suggest that sources of psychological distress following a mammogram are multiple and complex. Several predictors of post-mammogram anxiety and negative mood appear to differ for breast cancer survivors. Understanding predictors of anxiety and negative mood post-mastectomy is important, as it can inform the types of interventions that may be most useful for improving women's experiences with mammography, which in turn may have beneficial effects on subsequent adherence to screening guidelines.

CORRESPONDING AUTHOR: Sara N. Edmond, M.A., University of Mississippi Medical Center / G.V. (Sonny) Montgomery VAMC, Jackson, MS, 39206; sara.edmond@duke.edu

6:00 PM-7:00 PM A011

ASSESSING FOR DEPRESSION IN OLDER ADULTS WITH CANCER: THE CESD-R

Rebecca Saracino, MA[1], Barry Rosenfeld, PhD[2], Christian Nelson, PhD[3]

[1]Memorial Sloan Kettering Cancer Center, Bronx, NY; [2]Fordham University, New York, NY; [3]Memorial Sloan Kettering Cancer Center, New York, NY

Background: Depression is a significant concern for both older adults and patients with cancer, yet identifying depression in these patients is difficult and often leads to under-recognition. To date, no measures of depression have been evaluated for use specifically with older adults with cancer. The Center for Epidemiological Studies Depression Scale – Revised (CESD-R) is commonly used to measure depressive symptomatology. Previous studies have independently identified the CESD-R as a viable option for use in cancer settings and with older adults. However, no research has explored the utility of the CESD-R for identifying depression specifically in older adults with cancer.Method: The present study included 202 geriatric cancer patients recruited from a large ambulatory care cancer center. Participants were age 70 and older, had a diagnosis of prostate or breast cancer, and were on active cancer treatment. Participants completed the Geriatric Depression Scale (GDS), Hospital Anxiety and Depression Scale (HADS-D), and the CESD-R. Research staff also interviewed patients with the depression module of the Structured Clinical Interview (SCID) of the DSM-IV. The psychometric properties of the CESD-R in this unique clinical sample were explored, including its factor structure and relationship to other measures.Results: The CESD-R demonstrated adequate internal consistency (Cronbach's alpha = .85) and significantly predicted a SCID diagnosis of MDD. Sensitivity and specificity of the CESD-R were .66 and .89, respectively. Correlations with the GDS and HADS-D were variable, as were item-level correlations between measures. Principle components factor analysis of identified a 5-factor structure, accounting for 67% of the variance in CESD-R scores.Conclusion: The CESD-R is a viable option for assessing depression in older adults with cancer, though not without limitations (i.e., low sensitivity). This is the first study to explore the factor structure of the CESD-R. Factors included depressed affect, concentration/agitation, hypersomnia/psychomotor retardation, restless sleep, and weight loss. Additional research should explore performance of individual items (e.g., IRT) in order to better understand their unique contributions to the phenomenology of depression in older adults with cancer.

CORRESPONDING AUTHOR: Rebecca Saracino, MA, Memorial Sloan Kettering Cancer Center, Bronx, NY, 10461; rjames11@fordham.edu

6:00 PM-7:00 PM A012

ASSESSING PATIENT EDUCATION AND COUNSELING NEEDS OF YOUNG WOMEN AT HIGH RISK FOR BREAST CANCER

Chalanda Evans, BA[1], Rachel Nusbaum, MS[2], Claudine Issacs, MD[1], Kenneth P. Tercyak, PhD[3], Suzanne C. O'Neill, PhD[1]

[1]Georgetown University, Washington, DC; [2]Genetic Counsleor, Gaithersburg, MD; [3]Georgetown University Medical Center, Lombardi Comprehensive Cancer Center, Washington, DC

Background: Young adult female relatives of *BRCA1/2* mutation carriers are at increased risk for hereditary breast-ovarian cancer (HBOC). Although these cancers tend to strike women early in life and in aggressive forms, screening guidelines do not begin until age 25. Young adult women receive mixed messages about whether, when, and how to pursue counseling and testing and the costs/benefits of early risk identification. Moreover, there are compelling psychosocial issues to consider, including family life and the emotional burden of testing. Model patient education and counseling protocols do not exist for these young women—leaving patients and providers struggling with complex HBOC risk management. Our study set out to assess the support and education needs surrounding this population to inform intervention delivery.Method: Our mixed-method project included semi-structured interviews with young adult female relatives of *BRCA1/2* carriers (M age=21) and N=12 HBOC genetic counselors, as well as behavioral assessments of cancer-related distress, relationship quality with their carrier relative, and psychoeducational needs of patients. Interviews were recorded, transcribed, and codes. A content analysis was then applied to the data to identify emergent themes and patterns.Results: Quantitative results revealed moderate levels of patient cancer-related distress (M=12.7, SD=8.4) and perceived cancer risk (M=4.5/7, equivalent to being "likely" to develop cancer). Distress was strongly associated with a poorer relationship with their carrier relative (r=.82, $p < .05$) and inversely related to perceived control (r=.89, $p < .01$) and satisfaction (r=.57, p=.15) in the way they learn about HBOC. Young women's qualitative responses converged with these findings. Predominant themes in counselor interviews included specific intervention techniques (N=14 segments), the role that family plays in women's testing motivations (N=9), the risk management options available to this population (N=9) and patients' level of distress, with uncertainty being a primary driver of this (N=7).Conclusion: Interventions for this population should include the familial nature of risk and communication and coping skills training targeted at the uncertainty faced by this population.

CORRESPONDING AUTHOR: Suzanne C. O'Neill, PhD, Georgetown University, Washington, DC, 20007; sco4@georgetown.edu

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ASSOCIATIONS BETWEEN WRITING ABOUT HEALTH BEHAVIORS AND HEALTH OUTCOMES IN KIDNEY CANCER PATIENTS

Kathrin Milbury, PhD[1], Erin Glaccum, BA[2], Hira Hussain, BA[2], Lorenzo Cohen, PhD[2]

[1]The University of Texas M D Anderson Cancer Center, Houston, TX; [2]The University of Texas MD Anderson Cancer Center, Houston, TX

Background: Although evidence points to poor diet and sedentary behaviors as risk factors for morbidity and mortality for those with cancer, less is known about health behaviors in patients with kidney cancer on active treatment. Thus, we examined associations between patient's spontaneous writings about their diet and exercise behaviors with health outcomes.Methods: The current data are part of a randomized controlled trial examining the benefits of expressive writing on quality of life (QOL). Participants completed measures of symptoms (MDASI), fatigue (BFI), sleep disturbances (PSQI), and QOL (SF-36). BMI and medical co-morbidities were extracted from medical records. We analyzed the samples of participants in the neutral writing control group who wrote for 20 min. on a specific health-related topic on 4 occasions. We focused on the sessions regarding dietary and exercise behaviors. We coded dietary patterns as either health-promoting (HP) or health-depleting (HD) and exercise behaviors based on frequency, duration, type as well as barriers and facilitators. Results: Participants (n=139; 86% male, mean age=57.6 years, 48% advanced disease) wrote most frequently about HP vegetables, HP meats/poultry, HD snacks/desserts, and HD grains with 81% of them mentioned HD grains at least once. There was a positive correlation between writing about HD grains and symptoms (r=0.25, p < 0.05) and fatigue (r=0.21, p < 0.05). BMI was positively correlated with HD snacks/desserts (r=0.22, p < 0.05). Participants exercised approximately 3 mi/wk before and 1.5 mi/wk after diagnosis; 78% wrote about facilitators (family and convenience); 84% wrote about barriers (busy schedule and surgery). Regarding exercise routine, 77% reported an aerobic exercise routine before and 49% after diagnosis, while only 31% reported muscle strengthening activities before and 19% after diagnosis. Exercise behaviors were associated with improved physical QOL (r=.24, p < 0.05) and fewer sleep disturbances (r=-.26p < 0.05). Those who reported less exercise behaviors were more likely to suffer from diabetes and cardiovascular disease (p < 0.1).Conclusions: Without specific writing prompts, patients on active treatment reported poor health behaviors. Interventions teaching patients how to successfully implement health behaviors while on active treatment may improve their QOL as well as transition into survivorship.

CORRESPONDING AUTHOR: Kathrin Milbury, PhD, The University of Texas M D Anderson Cancer Center, Houston, TX, 77030; kmilbury@mdanderson.org

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ASSOCIATIONS OF SPONTANEOUS SELF-AFFIRMATION AND OPTIMISM WITH HEALTH AMONG CANCER SURVIVORS

Jennifer M. Taber, PhD[1], William M. Klein, PhD[1], Rebecca A. Ferrer, PhD[1], Erin E. Kent, PhD[1], Peter R. Harris, PhD[2]

[1]National Cancer Institute, Bethesda, MD; [2]University of Sussex, Brighton, United Kingdom

Objective: To examine whether cancer survivors higher in spontaneous self-affirmation (SSA) and dispositional optimism report lower rates of cognitive impairment, better physical health, more positive affect, and greater health information seeking compared to cancer survivors lower in these traits.Methods: Cancer survivors (*n*=326) completed the Health Information National Trends Survey 2013, a national survey of U.S. adults. We examined self-reported measures of SSA, optimism, cognitive and physical impairment, affect, self-reported health status, and information seeking. Exploratory analyses tested whether any effects of SSA on outcomes were moderated by optimism, self-efficacy, time since diagnosis, gender and cancer site.Results: Survivors higher in SSA had lower likelihood of subjective cognitive impairment, greater happiness and hopefulness, and greater likelihood of seeking information about cancer. Optimism was associated with better outcomes on most indices. When SSA and optimism were simultaneously included in models that controlled for sociodemographic factors, SSA remained significantly associated only with greater hopefulness. All previously significant associations of optimism with outcomes remained significant, however. Exploratory analyses suggested that SSA was only associated with positive affect (e.g., happiness and hopefulness) and health information seeking among individuals low in self-efficacy for managing their health, and that SSA was associated with better health status only among individuals recently diagnosed with cancer.Conclusions: SSA and optimism may be associated with beneficial physical, mental, and cognitive health outcomes as well as greater information seeking among cancer survivors. Given the demonstrated potential of interventions to induce SSA, these findings represent important avenues for future research.

CORRESPONDING AUTHOR: Jennifer M. Taber, PhD, National Cancer Institute, Bethesda, MD, 20892; jennifer.taber@nih.gov

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ATTITUDES TOWARDS LUNG CANCER SCREENING AMONG HIGH-RISK AND HARD-TO-REACH COMMUNITIES

Samantha L. Quaife, MSc, Laura A. Marlow, PhD, Andy McEwen, PhD, Samuel M. Janes, PhD, Jane Wardle, PhD

University College London, London, United Kingdom

Background: Successful implementation of lung cancer screening depends on attracting the high-risk constituency, but they are notoriously hard to reach. Current smoking and low socioeconomic position are associated with lower uptake of all screening. We therefore explored attitudes towards lung cancer screening in socioeconomically deprived communities with high rates of heavy smoking in the UK.Methods: Community-based organisations and venues helped identify settings and strategies for recruitment in London, UK. Potential participants were approached directly or contacted by housing association mail-outs. Semi-structured interviews were carried out, transcribed verbatim, and analysed thematically.Results: Smokers and ex-smokers were interviewed (n=21, age: 47-73 years). Most had left school early or lived in very deprived areas of London (n=15). Support for screening was high in principle; with interviewees describing benefits of early detection in terms of prolonged lifespan and preparation before death. However, lung cancer was perceived to be an almost uncontrollable disease, and many respondents saw their risk as already very high (due to smoking and other causes like pollution), with a low chance of survival. Fear of a lung cancer diagnosis, the belief it is too late to be screened, and a preference not to know were all common barriers to screening. Difficult life circumstances and perceptions of smoking (i.e. personal identity, stigma) provided a broader context from which attitudes were derived.Conclusions: While many smokers believed that screening is in principle a good idea, attitudes towards participation were complex and often fatalistic. There is a need for careful and sensitive communication strategies about lung cancer screening in order to achieve equitable and informed uptake.

CORRESPONDING AUTHOR: Samantha L. Quaife, MSc, University College London, London, WC1E 6BT; samantha.quaife@ucl.ac.uk

6:00 PM-7:00 PM A016

BODY IMAGE CHANGES IN RURAL BREAST CANCER SURVIVORS AFTER A WEIGHT CONTROL TRIAL

Rebecca L. Hunter, MA[1], Christie Befort, PhD[2]

[1]VA Palo Alto Health Care System, San Jose, CA; [2]University of Kansas Medical Center, Kansas City, KS

Breast cancer treatments can have significant effects on a woman's body image due to the treatment itself or due to treatment-related side effects such as weight gain and an increase in menopause-related symptoms. This study evaluated changes in body image dimensions in breast cancer survivors after a weight loss intervention and predictors of those changes, including demographic, breast cancer treatment history, baseline quality of life (SF-12), and intervention-related (i.e., percent weight loss, physical activity change) variables. The Body Image and Relationships Scale (BIRS) assessed 6 dimensions of body image relevant for breast cancer survivors: changes in social activities due to treatment-related symptoms, energy and strength, discomfort/embarrassment due to treatment-related appearance changes, body integrity (feeling natural and whole), sense of control over health, and sexual attractiveness. Participants (n=128, age=58.5±7.8 years, time since treatment=3.7±2.5 years, baseline BMI=34.4±4.3 kg/m^2) lost an average of 13.6±5.7% of baseline weight during a 6-month group phone-based intervention. All 6 body image dimensions and total score improved upon completion of the weight loss intervention (all $p < .001$). Multiple linear regressions revealed that treatment-related variables predicted body integrity (t=-2.28, $p < .05$) and sexual attractiveness (t=4.07, $p < .001$). Specifically, women with mastectomies felt less natural/whole than women with lumpectomies, and women who had undergone treatment recently felt less sexually attractive. Quality of life predicted changes in total score (t=-2.36, $p < .05$), social activities (t=-2.19, $p < .05$), energy and strength (t=-2.52, $p < .05$), and sense of control (t=-2.19, $p < .05$). Age was the only significant demographic predictor, with older women experiencing more problems with energy and strength (t=-2.65, $p < .01$). Percent weight loss and physical activity were not significant predictors. Although the weight loss intervention had a significant impact on improvements in multiple dimensions of body image specific to breast cancer, weight loss and physical activity changes were less predictive of those improvements than treatment history and baseline quality of life.

CORRESPONDING AUTHOR: Rebecca L. Hunter, MA, VA Palo Alto Health Care System, San Jose, CA, 95128; beckyc@ku.edu

6:00 PM-7:00 PM A017

BRIEF, GROUP BEHAVIORAL TREATMENT FOR INSOMNIA IN A CANCER SURVIVORSHIP PROGRAM: DOES IT WORK?

Eric S. Zhou, PhD, Ann H. Partridge, MD, MPH, Christopher J. Recklitis, PhD, MPH

Dana-Farber Cancer Institute, Boston, MA

Background: Cognitive-behavioral treatment for insomnia (CBT-I) is highly effective, yet rarely available for cancer survivors even in centers delivering specialized cancer survivorship care. This is unfortunate because survivors are at elevated risk for insomnia, with as many as 65% reporting sleep dysfunction years after treatment. Barriers to delivering CBT-I in oncology settings include a lack of trained providers, treatment length and distance to cancer centers. To address these issues we adapted traditional 6-8 session, individual CBT-I and evaluated whether an abbreviated, group CBT-I intervention was acceptable and effective for cancer survivors.

Methods: 25 survivors (mean age=55.2 years; 92.0% female) enrolled in our 3-session CBT-I program delivered over 4 weeks. They were primarily breast (56.0%) and sarcoma (20.0%) survivors (mean years post-diagnosis=5.2; mean years post-treatment=3.6). The intervention emphasized sleep restriction and stimulus control, with brief discussions of cognitive factors related to insomnia and sleep hygiene. Participants completed sleep logs throughout, subjective measures of sleep at baseline and week 4, and program evaluations at week 4.

Results: 18 participants (72.0%) completed the program. Group improvements in sleep efficiency (74.9% to 87.2%), Pittsburgh Sleep Quality Index total (4.5 to 2.7) and Insomnia Severity Index total (5.3 to 4.8) were seen from pre to post-intervention (all ps $< .01$). Individually, 16 of 18 participants reported improved sleep efficiency post-intervention. All participants believed the program helped improve their understanding of insomnia and all but one reported overall satisfaction with the program. Only 1 in 3 had discussed their insomnia symptoms with medical providers in the prior year.

Conclusions/Implications: Pilot data indicate that a brief, group-based CBT-I intervention in a clinical oncology setting is both acceptable for survivors and effective in improving insomnia. There is a need to 1) increase awareness about the efficacy of behavioral treatments among both cancer survivors and oncology providers, 2) study the long-term impact of brief, group CBT-I on sleep function, and 3) evaluate whether eHealth delivery is feasible within this population.

CORRESPONDING AUTHOR: Eric S. Zhou, PhD, Dana-Farber Cancer Institute, Boston, MA, 02215; eric_zhou@dfci.harvard.edu

6:00 PM-7:00 PM A018

CANCER CONCERNS THROUGH STAGES OF SURVIVORSHIP: RESULTS FROM THE LIVESTRONG CANCER NAVIGATION STUDY

Bree Hemingway, MPH[1], Emily Eargle, MSSW[1], Linda Squiers, PhD[2], Carla Bann, PhD[3], Katherine Treiman, PhD, MPH[4], Janice P. Tzeng, MPH[5], Sarah R. Arvey, PhD[6], Ruth Rechis, PhD[1]

[1]LIVESTRONG Foundation, Austin, TX; [2]RTI International, Olney, MD; [3]RTI International, Research Triangle Park, NC; [4]RTI International, Rockville, MD; [5]RTI International, Los Angeles, CA; [6]LIVESTRONG Foundaion, Austin, TX

Introduction: With more than 13.7 million cancer survivors in the U.S., two-thirds of whom will live beyond five years post-treatment, creating programs to support survivors can be challenging as their needs evolve through each stage of survivorship. LIVESTRONG Cancer Navigation (LCN) offers services designed to address survivors' needs at all stages of the cancer experience. Survivors experience new challenges and concerns when they transition from treatment to post-treatment care. We present the results of a LCN research study to describe how clients' cancer concerns and needs vary depending on their stage of survivorship. Methods: In 2012, researchers studied LCN to determine how well the program enables cancer survivors to manage their health and practical concerns. Participants (n=1388) completed surveys at intake, two, and six weeks post-intake to measure quality of life outcomes including cancer-related concerns, self-efficacy and distress. The cancer concern score was calculated by adding the numeric value for two items that measured the negative affect of cancer concerns on a five point scale. Participants' needs were documented at intake and those who completed two or more surveys (63%) were included in the analytical sample (n=874) and were categorized into three groups: in treatment (60.9%), Results: At intake, participants 5+ years post-treatment reported significantly higher cancer concern score than participants who had completed treatment $p < .003$). Participants in treatment reported the most needs (6.6), followed by participants 5+ years post-treatment (6.3). Participants 5+ years post-treatment reported significantly lower self-efficacy than participants in treatment. Additional outcomes will be shared. Conclusion: Findings suggest that cancer concerns increase post-treatment, but self-efficacy to manage them decreases. Understanding the various challenges and type of support survivors need at all stages of survivorship can inform service design and delivery in clinical and community-based settings.

CORRESPONDING AUTHOR: Bree Hemingway, MPH, LIVESTRONG Foundation, Austin, TX, 78702; bree.hemingway@livestrong.org

6:00 PM-7:00 PM A019

CANCER FATALISM, INFORMATION SEEKING AND HEALTH LITERACY: A NATIONAL SURVEY OF AMERICAN ADULTS

Lindsay C. Kobayashi, MSc[1], Samuel G. Smith, PhD[2]

[1]University College London, London, United Kingdom; [2]Northwestern University, Chicago, IL

Low health literacy may impede cancer information seeking and be a source of negative attitudes towards cancer. We investigated the association between health literacy, fatalistic attitudes towards cancer, and cancer information seeking. Data were from the U.S. Health Information and National Trends Survey 4 Cycle 3 on American adults aged ≥ 18 with no previous cancer history (n=2676). Literacy was assessed using a brief version of the 'Newest Vital Sign' instrument. Three measures of cancer fatalism and one of cancer information seeking were recorded. Survey weights ensured representativeness of the American population aged ≥ 18 years. Overall, 33.5% of the population incorrectly answered 2/4 health literacy items, classifying them as having low health literacy. Low health literacy was associated with older age, less education, lower income, and being from an ethnic minority group (all $p < 0.001$). Endorsement for the fatalistic beliefs was common: *'It seems like everything causes cancer'* (66.4%), *'There's not much you can do to lower your chances of getting cancer'* (28.8%), and *'When I think about cancer, I automatically think about death'* (58.5%). Over half (52.9%) reported ever seeking information about cancer. In multivariable logistic regression controlling for age, sex, education, race, income, marital status, and family history of cancer, people with limited health literacy were more likely to agree you cannot prevent cancer (OR, 1.67; 95% CI, 1.16-2.38; p=0.006) and were more like to automatically associate cancer with death (OR, 1.37; 95% CI, 1.01-1.85; p=0.040). The likelihood of seeking cancer information was also lower among people with limited health literacy (OR, 0.70; 95% CI, 0.49-1.00, p=0.048). In a final model predicting cancer information seeking, there was no association with health literacy, but information seeking was less likely among those who agreed you cannot prevent cancer (OR, 0.62; 95% CI, 0.43, 0.91; p=0.014). There is a high prevalence of low health literacy in the US population and this may be an important determinant of negative beliefs about cancer, and proactive cancer information seeking. Addressing health literacy disparities may have important implications for cancer prevention and control.

CORRESPONDING AUTHOR: Samuel G. Smith, PhD, Northwestern University, Chicago, IL, 60611; samuel.smith@northwestern.edu

6:00 PM-7:00 PM A020

CANCER SURVIVORS AS ENGAGED PATIENTS: THE RELATIONSHIP BETWEEN CANCER HISTORY AND PATIENT ACTIVATION

Jennifer K. Bernat, PhD[1], Danielle Blanch-Hartigan, PhD, MPH[2]

[1]Indiana University, Indianapolis, IN; [2]Bentley University, Waltham, MA

Background: In 2014, there were approximately 14.5 million cancer survivors in America; many of whom experience physical, psychosocial, and economic sequelae. A central goal of survivorship research is to improve the quality of follow-up care as many survivors report feeling "lost" in the medical system after active treatment. Managing and coordinating follow-up care with multiple providers, and being knowledgeable of their cancer history often become the patients' responsibilities. Therefore, survivors may need to become more activated patients; however, there is lack of literature examining how a personal or family history of cancer is related to patient activation (PA).

Methods: For this analysis, we used data from the 2013 fielding of The Health Information National Trends Survey (HINTS), a nationally representative survey of how American adults acquire and use health information (N = 3185, response rate = 35.19%). Participants reported how often they engaged in 7 PA behaviors such as researching and taking information/lists into visits on a 4-point scale from *always* to *never*. This was averaged and median split into high and low PA. Results: 14.4% of the sample reported a personal history of cancer; 52.2% of the sample had a family-only history of cancer; and 33.4% had no cancer history. We ran fully adjusted, unweighted, logistic regression models to explore the relationship between cancer history and PA. Consistent with past research, female gender (OR=1.62, 95% CI 1.39 to 1.90), older age (OR=2.16, 95% CI 1.64 to 2.86), and college education (OR=1.52, 95% CI 1.11 to 2.08) predicted high PA. Controlling for demographic and clinical characteristics, survivors were more likely to report high PA compared to those with no cancer history (OR = 1.41, 95% CI 1.10 to 1.81). A family-only history of cancer was not associated with high PA. Conclusions: Future research should examine the mechanisms and motivations for this increased PA in cancer survivors. Given the difficulties survivors report when navigating complicated survivorship care, we should seek to understand not only the positive consequences of increased PA, but also potential increased burden to survivors.

CORRESPONDING AUTHOR: Jennifer K. Bernat, PhD, Indiana University, Indianapolis, IN, 46204; jbernat@iupui.edu

6:00 PM-7:00 PM A021

CANCER SURVIVORS' USE AND EXPECTATIONS OF HEALTH INFORMATION TECHNOLOGY (HIT): A QUALITATIVE STUDY

Ellen Beckjord, PhD, MPH[1], David Ahern, PhD[2], G. van Londen, MD[3], Alexandra Cardy, BS[3], Chantal Muse[4], Cheyanne Novich[5], Bradford Hesse, PhD[6]

[1]University of Pittsburgh Cancer Institute, Pittsburgh, PA; [2]Brigham and Women's Hospital, Boston, MA; [3]University of Pittsburgh, Pittsburgh, PA; [4]Duquesne University, Pittsburgh, PA; [5]Carlow University, Pittsburgh, PA; [6]National Cancer Institute, Rockville, MD

As the presence of HIT in cancer care grows, it is important to keep track of the expectations and use of HIT by people affected by cancer in order to design, develop, and implement HIT applications that best meet their needs. Surveys have been helpful in gauging HIT use and preferences, but qualitative approaches allow for a more nuanced investigation into this rapidly evolving field. We conducted two facilitated focus groups with a total of 13 cancer survivors in April 2014 (average age=69; 69% female; 77% Internet users). Discussions covered how survivors used technology during their experience with cancer; barriers encountered; expectations; and perspectives on "data donation." The qualitative analysis used an iterative approach guided by grounded theory and immersion-crystallization techniques. Four major themes emerged from the data: Information Seeking and Processing (e.g., the benefits and risks of information seeking and emotional consequences); Information Flow (e.g., information sharing with other survivors or researchers; care coordination; and interoperability); Technology for Patient Empowerment and Patient Activation (e.g., a sense of control and effects on patient-provider communication); and Caregiver Roles and Experiences. Overall, survivors used HIT in a variety of ways and were enthusiastic about the potential of HIT to improve the experiences of people affected by cancer, but noted challenges consistent with known issues (e.g., barriers to interoperability and lack of situational awareness in a care team even when they are all using the same electronic medical record). Participants expressed interest in the concept of data donation because they believed it could help others, but were less sure about how it would benefit them. Input from people affected by cancer about how they use and want to use HIT applications should be routinely collected and directly inform future development. (Funding: 8KL2TR000146-07, HHSN261201300427P).

CORRESPONDING AUTHOR: Ellen Beckjord, PhD, MPH, University of Pittsburgh Cancer Institute, Pittsburgh, PA, 15232; beckjorde@upmc.edu

6:00 PM-7:00 PM A022

CHILDHOOD CANCER SURVIVOR STUDY PARTICIPANTS' HEALTH INSURANCE COVERAGE EXPERIENCES

Elyse R. Park, PhD, MPH[1], Anne Kirchhoff, PhD, MPH[2], Giselle K. Perez, PhD[1], Wendy Leisenring, ScD[3], Joel Weissman, PhD[4], Karen Donelan, ScD[1], Kelly A. Hyland, B.A.[1], Gregory Armstrong, MD, MSCE[5], Leslie Robison, PhD[5], Karen A. Kuhlthau, PhD[1]

[1]Massachusetts General Hospital, Boston, MA; [2]Huntsman Cancer Institute, Salt Lake City, UT; [3]Fred Hutchinson Cancer Research Center, Seattle, WA; [4]Brigham and Women's Hospital, Boston, MA; [5]St. Jude Children's Research Hospital, Memphis, TN

Background. Advances in treatment and care have resulted in a growing population of adult survivors of childhood cancer who need ongoing medical surveillance. However, these survivors are at risk for being underinsured. We compared survivors' insurance coverage and coverage-related financial concerns related to care utilization to a sibling comparison group. Methods. Between 5/11-5/12 we surveyed a randomly-selected, age-stratified sample of 698 survivors and 210 siblings from the CCSS cohort. Weighting was utilized to simulate the age distribution of the original CCSS cohort; means and proportions were compared using t-test and chi-square statistics. Results. Survivors were 55% female and 30.3 mean years from diagnosis. 37.0% had leukemia, and 15.8% had a recurrence or subsequent malignancy. 10.2% of survivors and 7.8% of siblings were uninsured (p=0.31). 76.3% of survivors vs. 84.6% of siblings had employer-sponsored insurance, and 13.5% of survivors vs. 4.9% of siblings had Medicaid coverage (overall p=0.005). 15.4% of survivors vs. 1.6% of siblings had recently been denied insurance ($p < 0.001$). Survivors compared to siblings (16.4% vs. 9.1%; p=0.01), and uninsured survivors compared to insured survivors (33.9% vs. 15.5%; p=0.002), were more likely to spend >10% of their income on medical costs - a marker of underinsurance. Survivors were more likely to borrow money to pay medical expenses (17.3% vs. 9.0% siblings; p=0.002), withdraw money from savings to pay for medical expenses (32.7% vs. 26.3% siblings; p=0.05), and not fill a prescription due to cost (15.7% vs. 9.0% siblings; p=0.02). Uninsured survivors were more likely than insured survivors to borrow money to pay for medical expenses (33.9% vs. 15.5%; p=0.002), not fill a prescription due to cost (30.9% vs. 14.1%; p=0.005), and postpone preventive care due to cost (63.1% vs. 23.8%; $p < 0001$). Conclusions. Survivors and siblings had similar rates of coverage, yet differed by types of coverage and experiences obtaining coverage. Survivors in general, and uninsured survivors in particular, were more likely to experience financial burdens from medical care that affected their care utilization.

CORRESPONDING AUTHOR: Elyse R. Park, PhD, MPH, Massachusetts General Hospital, Boston, MA, 02114; epark@mgh.harvard.edu

CITATION POSTER

6:00 PM-7:00 PM A023

COGNITIVE AND BEHAVIORAL CHANGE IN RESPONSE TO A CELEBRITY'S HEALTH DISCLOSURE

Julia H. Drizin, BA[1], Sarah D. Mills, M.S.[2], Laura E. Barnes, PhD[3], Elizabeth A. Klonoff, PhD[1], Vanessa L. Malcarne, PhD[4], Allison A. Vaughn, PhD[1], Kristen J. Wells, PhD, MPH[1]

[1]San Diego State University, San Diego, CA; [2]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center, San Diego, CA; [3]University of Virginia, Charlottesville, VA; [4]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center; San Diego State University, San Diego, CA

Celebrities can influence the public's health-related attitudes and behaviors, in particular through acts of disclosure about their own health decisions. In May 2013, Angelina Jolie, an internationally known actress, director, and author, disclosed in a *New York Times* (NYT) op-ed her decision to undergo a preventative double mastectomy after learning that she carries the BRCA1 gene mutation. When the op-ed was published online, readers had the opportunity to provide comments on the NYT website for 3 days. This study presents a comprehensive content analysis of comments responding to the op-ed to examine people's changes in health-related cognitions and behaviors in response to Ms. Jolie's disclosure. All comments and sub-comments ($N = 1{,}353$) were analyzed using conventional content analysis conducted with Nvivo 10. With this approach, coding themes were created based on the data. Thirty-eight comments were made reflecting a cognitive change in response to the NYT op-ed, and 30 comments were made reflecting a behavioral change. Five themes regarding cognitive change were identified: 1) view of self ($n = 4$), 2) opinion of Jolie ?($n = 5$), 3) reassurance of past health decisions ($n = 8$), 4) increased awareness of medical options ($n = 9$), and 5) motivation to become more health-conscious ($n = 14$). Four themes regarding behavioral change were identified: 1) engaging in proactive behaviors ($n = 13$), 2) scheduling doctor appointments ($n = 8$), 3) discussing preventative healthcare with others ?($n = 3$), and 4) undergoing a preventative surgery ($n = 4$). Only a small proportion (5%) of commenters experienced a cognitive or behavioral change as a result of reading Angelina Jolie's op-ed. However Ms. Jolie's op-ed was widely publicized and discussed in a vast array of media outlets. Thus, these findings suggest that celebrity health-related disclosures have the potential to change the health cognitions and behaviors of a large number of people.

CORRESPONDING AUTHOR: Julia H. Drizin, BA, San Diego State University, San Diego, CA, 92120; juliadriz@hotmail.com

6:00 PM-7:00 PM A024

COGNITIVE BIAS MODIFICATION AND PHYSIOLOGICAL STRESS IN BREAST CANCER SURVIVORS

Geoffrey W. Corner, B.S.[1], Wendy G. Lichtenthal, PhD[2], Courtney Beard, PhD[3], Caraline Craig, B.A.[2], Raymond Baser, M.S.[2], Kailey E. Roberts, M.A.[2], Corinne Sweeney, M.A.[2], Yuelin Li, PhD[2], William Breitbart, MD[2], Malwina Tuman, M.A.[4], DuHamel Katherine, PhD[4]

[1]University of Southern California, Los Angeles, CA; [2]Memorial Sloan Kettering Cancer Center, New York, NY; [3]McLean Hospital, Harvard Medical School, Belmont, MA; [4]Memorial Sloan Kettering Cancer Center, New York, NY, Afghanistan

PurposeMany breast cancer survivors (BCS) experience intense and impairing fear related to their risk of cancer recurrence. Research has demonstrated that maladaptive anxiety like this is often maintained through cognitive biases, including disproportionately attending to aversive stimuli and interpreting ambiguous stimuli as threatening. Cognitive bias modification (CBM), or repeated practice on cognitive tasks, can reduce these biases.This randomized controlled trial examined the impact of a tailored CBM intervention for maladaptive recurrence-related anxiety in BCS, Attention and Interpretation Modification for Breast Cancer Survivors (AIM-BCS), on neuroendocrine functioning as demonstrated by cortisol levels, which indicate hypothalamic-pituitary-adrenal (HPA) axis activation and chronic physiological stress. MethodsEarly stage BCS with elevated recurrence-related concerns were enrolled in the study and randomly assigned to receive either AIM-BCS or a placebo control computer program. Participants provided saliva samples on 2-3 days pre- and post-intervention at awakening and bedtime. A measure of diurnal cortisol levels (area under the curve with respect to ground, AUC_G) was calculated from the cortisol present in each sample. Results Fifteen participants provided pre- and post-intervention saliva samples (n=72 observations). Utilizing a multivariate generalized estimating equation model to account for correlations between repeated assessments for each participant and control for relevant participant characteristics (i.e., fatigue- and sleep-related quality of life and stage of cancer for which they were treated), the treatment x time interaction was significantly associated with participants' diurnal cortisol levels (p=.02). Model-adjusted means show a post-intervention decrease in AUC_G for those receiving AIM-BCS (0.18 to 0.12 μg/dL) and an increase for those receiving the control intervention (0.19 to 0.24 μg/dL). ConclusionsThese preliminary results suggest that, relative to a control intervention, AIM-BCS reduces diurnal cortisol levels in BCS experiencing recurrence-related anxiety. Thus, this brief and tailored CBM intervention may reduce chronic physiological stress, which has implications for physical and immunological health.

CORRESPONDING AUTHOR: Geoffrey W. Corner, B.S., University of Southern California, Los Angeles, CA, 90027; gcorner@usc.edu

6:00 PM-7:00 PM A025

COGNITIVE PROBLEMS FOLLOWING STEM CELL TRANSPLANT: RELATIONSHIPS WITH SLEEP, DEPRESSION, AND FATIGUE

Stephen Ghazikhanian, Tamara Somers, PhD, Madeline O'Sullivan, Hannah Fisher, B.S., Sara Edmond, Rebecca Shelby, PhD

Duke University Medical Center, Durham, NC

Cognitive problems are among the most commonly reported symptoms following hematopoietic stem cell transplant (HSCT). Strong relationships have been found between cognitive problems and sleep problems, depression and fatigue in a number of chronic disease populations, but these relationships have received less attention in the context of HSCT. The current study examined the relationships between cognitive problems and sleep problems, depression and fatigue in HSCT patients who had returned home following transplant. Participants (n=101 autologous and n=29 allogeneic, mean age 58, 60% male, 80% white) completed measures of general cognitive problems (PROMIS Cognitive-General Concerns 8-item), sleep problems (MOS Sleep Scale), depression (PROMIS 6-item) and fatigue (PROMIS 6-item) at 3 months, 6 months, and 12 months post-transplant. Linear mixed modeling was conducted to examine the relative contributions of sleep problems, depression, and fatigue to cognitive problems. In multivariate analysis, greater depression (B=0.61, SE=0.11, p < .001), fatigue (B=0.27, SE=0.10, p=.01), and sleep problems (B=0.08, SE=0.03, p=.02) were all significantly related to greater cognitive problems. Analyses of specific sleep scales found that snoring, shortness of breath, and poorer sleep adequacy were significantly (p < 0.05) related to greater cognitive problems after accounting for depression and fatigue. In contrast, sleep disturbance, somnolence, and hours of sleep were no longer associated with cognitive problems when depression and fatigue were included in the analysis. These findings suggest that depression and fatigue uniquely contribute to cognitive problems. Also, there are a subset of sleep problems that are associated with cognitive problems even after accounting for the impact of depression and fatigue on sleep.

CORRESPONDING AUTHOR: Stephen Ghazikhanian, Duke University Medical Center, Durham, NC, 27705; seg33@duke.edu

6:00 PM-7:00 PM A026

COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) USE AMONG CANCER SURVIVORS

Satish Kedia, PhD[1], Siri Digney, MS[1], Hongmei Zhang, PhD[1], Meredith Ray, MS[2], Kenneth Ward, PhD[1], Raymond Osarogiagbon, MBBS[3]

[1]School of Public Health, University of Memphis, Memphis, TN; [2]University of South Carolina, Memphis, TN; [3]Baptist Cancer Center, Memphis, TN

Background: While Complementary and Alternative Medicine (CAM) use has been on the rise in the general population in the United States, its use is estimated to be even higher among cancer patients, upwards of 50%. The purpose of this study is to explore CAM use among cancer survivors based on the 2012 National Health Interview Survey (NHIS).
Methods: Secondary data analysis of the 2012 NHIS included descriptive statistics and logistical regressions for overall CAM use and specific CAMs as outcomes to identify the associations of demographic characteristics and potential confounders such as primary cancer site, symptoms of cancer, health status within the past 12 months, and status of a health care provider accounting for the independent variables. Results: One-third (n=840) of the 2, 605 cancer survivors included in this sample reported CAM use in the past 12 months. Race, gender, age, education level, socioeconomic status, certain cancer sites, healthcare provider, and certain symptoms were predictors of CAM use. Caucasians were significantly more likely to practice CAM than Hispanics, while no difference was found between Caucasians and African Americans. In addition, women, older cancer survivors, those with at least a college education, and those with higher socioeconomic status were all more likely to use CAM. Survivors of skin cancer or melanoma were more likely to practice CAM than survivors of other types of cancer, while survivors of uterine cancer were less likely to use CAM in this study sample. Cancer survivors who experienced pain or insomnia were more likely to use CAM than those who did not report these symptoms. Finally, having some type of health care provider was also associated with higher CAM use. Conclusions: CAM has gained increasing popularity, and its use is fairly widespread among cancer survivors. These findings from the 2012 NHIS show that the demographic, socioeconomic status and health-related characteristics may predict CAM use. Healthcare providers should be aware of and develop strategies to learn about their patients' CAM use to provide guidance on its arbitrary use of CAM to avoid possible counteraction and toxicity, and possibly, to benefit from certain CAM practices in conjunction with biomedical cancer treatment.

CORRESPONDING AUTHOR: Satish Kedia, PhD, School of Public Health, University of Memphis, Memphis, TN, 38138; skkedia@memphis.edu

6:00 PM-7:00 PM A027

ALCOHOL AND HYPERTENSION: IS THE ASSOCIATION DIFFERENT BY SEX?

Lina Vera, MD[1], Jhyld Camacho, MSc[2], Myriam Orostegui, MSc[3]

[1]Universidad Industrial de Santander, Floridablanca, Colombia; [2]Universidad Industrial de Santander, Giron, Colombia; [3]Universidad Industrial de Santander, Bucaramanga, Colombia

Introduction: Hypertension increases two times the risk of cardiovascular disease (CVD) and generates the greatest attributable risk for mortality. Alcohol consumption has been associated with hypertension. Quantifying alcohol consumption and determining its association with hypertension will help to improve prevention strategies and to give better advise to hypertensive patients, in this regard. Objective: To determine the association between alcohol consumption and hypertension in a Latin American population.
Methods: Cross sectional study nested in an ongoing cohort study about CVD (INEFAC). Sample size was 1,603 people. Alcohol consumption was measured using a food frequency questionnaire (FFQ) designed to this purpose. Hypertension was defined as having systolic blood pressure (SBP) ≥140 mmHg or diastolic blood pressure (DBP) ≥90 mmHg or taking antihypertensive medication. Data were analyzed using logistic regression.Results: Mean age was 42.69 years. Median of alcohol consumption was 2.55 grams/day and was statistically lower in women. Likelihood of been hypertensive was greater in men (OR=1.32, 95%CI=1.03-1.70; p=0.030) and also increased with family history (OR=2.21, 95CI%=1.53-3.19; p < 0.001). Prevalence of hypertension decreased as educational level increased (OR=0.14, 95%CI=0.07–0.28; p < 0.001). The final logistic regression included sex, age, marital status, occupation, smoking, physical activity, body mass index, family history of hypertension, and health status. Compared with non-consumption, moderate consumption of alcohol among women was associated with lower prevalence of hypertension (OR=0.52, 95%CI=0.33-0.83; p=0.006). In contrast, moderate consumption of alcohol increased the likelihood of been hypertensive among men (OR=2.18, 95%CI=1.53-3.12; p < 0.001).Conclusions: Contrary to what has been found in other populations, in this Latin American population, moderate alcohol consumption behaves as a protective factor for hypertension in women but not in men. It is necessary to conduct a cohort study in order to confirm these findings.

CORRESPONDING AUTHOR: Lina Vera, MD, Universidad Industrial de Santander, Floridablanca, 680001; limavera@uis.edu.co

6:00 PM-7:00 PM A028

AUTONOMIC NERVOUS SYSTEM DYSREGULATION AND COGNITIVE FUNCTIONING IN PATIENTS WITH HEART FAILURE

Emily C. Gathright, M.A.[1], Fawn A. Walter[2], Carly M. Goldstein, MA[3], Joel W. Hughes, PhD, FAACVPR[2], Joseph Redle, MD[4], John Gunstad, PhD[2]

[1]Kent State University, Stow, OH; [2]Kent State University, Kent, OH; [3]Warren Alpert Medical School of Brown University, Providence, RI; [4]Summa Health System, Akron, OH

Introduction: Cognitive impairment is common in heart failure (HF), but the underlying mechanisms are not well-understood. Altered autonomic nervous system (ANS) functioning typical of HF may contribute to cognitive impairment. In HF, the sympathetic nervous system is chronically activated and the parasympathetic nervous system is suppressed. Associations between ANS function and cognitive performance have been observed in healthy samples. No studies have examined the potential contribution of ANS dysfunction to cognitive impairment in HF.Purpose: To evaluate the relationship between cognitive performance and ANS function in HF patients.Methods: The sample consisted of 104 older adults with HF (69.02 ± 8.83 years of age, 67.3% male, 83.7% Caucasian). Participants completed neuropsychological tasks of attention, executive function, language, and memory. Pre-ejection period (PEP) and heart rate variability (HRV) were assessed using impedance cardiography. Hierarchical multiple linear regression was used to determine whether shorter PEP and greater HRV (low frequency, high frequency, and the low frequency to high frequency power ratio) explained variability in performance in each cognitive domain.Results: A trend was observed for the LF/HF ratio to predict executive function ($p = .05$). No other ANS variable was associated with cognitive function.Discussion: In HF, chronic alterations in ANS functioning may obscure the relationships between ANS indices and cognitive performance reported in healthy samples. Future studies with additional measures are needed to elucidate the relationship between ANS function and cognitive decline in HF patients.

CORRESPONDING AUTHOR: Emily C. Gathright, M.A., Kent State University, Stow, OH, 44224; egathrig@kent.edu

6:00 PM-7:00 PM A029

CARDIOVASCULAR REACTIVITY IN PTSD AND DEPRESSION: HEMODYNAMIC PATTERNING AND TASK DIFFERENCES

Jeffrey L. Kibler, PhD[1], Lydia Malcolm, M.S.[1], Mischa Tursich, PhD, LP[2], Mindy Ma, PhD[1], Rachel Greenbarg, M.S.[1], Steven N. Gold, PhD[1]

[1]Nova Southeastern University, Ft. Lauderdale, FL; [2]Mankato Clinic, St. Peter, MN

Cardiovascular reactivity (CVR) to stress has been implicated as a possible link between increased vulnerability for cardiovascular disease (CVD) and Posttraumatic Stress Disorder (PTSD). The overlap in PTSD and Depression symptoms has confounded the research on CVR. Women with PTSD are underrepresented in research on CVD mechanisms. The present study examined systolic and diastolic blood pressure (SBP and DBP), heart rate (HR), cardiac output (CO) and total peripheral resistance (TPR) reactivity in a sample of young civilian women (N=47) recruited into groups with PTSD (n=17), depression (n=12) and a no mental illness control group (n=18). Participants were between the ages of 19-49 ($M \pm SD = 29.89 \pm 7.33$), and breakdown of ethnicity was 56% Caucasian, 21% African American, 19% Hispanic, and 4% other; there were no significant group differences in age or ethnicity. A series of one-way MANOVA's were performed to assess group differences in CVR during speech preparation/delivery and math tasks. Univariate tests were conducted for significant main effects. Between-group effects were evidenced during speech preparation for DBP reactivity ($p < .05$), with less DBP reactivity for the PTSD group compared to the depression group ($p < .05$). Between-group effects for DBP (p < .05), CO and TPR (p < .01 respectively) reactivity were evidenced during speech delivery, with lower DBP reactivity for the PTSD group than the depression group (p < .05), higher CO reactivity for the PTSD group compared to the control group (p < .01), and lower TPR reactivity for the PTSD group compared to the depression group (p < .06) and control group (p < .01). These results provide preliminary evidence for a cardiac pattern of responding in PTSD. Potential theoretical explanations for the cardiac responsiveness, along with less blood pressure and TPR/vascular reactivity in our PTSD group, may include the association of specific PTSD symptoms/subtypes (such as arousal and dissociation) with CVR. The findings suggest multiple tasks and CVR measures are needed to assess patterns of reactivity that may be implicated in the development of CVD in women with PTSD.

CORRESPONDING AUTHOR: Jeffrey L. Kibler, PhD, Nova Southeastern University, Ft. Lauderdale, FL, 33314; kibler@nova.edu

6:00 PM-7:00 PM A030

CHANGES IN ILLNESS PERCEPTIONS AFTER COGNITIVE BEHAVIOR THERAPY IN DEPRESSED CARDIAC PATIENTS

Mariantonia Lemos, M.A.[1], Rebecca L. Reese, PhD[2], Kenneth E. Freedland, PhD[3], Brian C. Steinmeyer, M.S.[3], Robert M. Carney, PhD[3]

[1]Universidad de los Andes, Bogotá, Colombia; [2]VA Boston Healthcare System, Boston, MA; [3]Washington University School of Medicine, St Louis, MO

Background: Cognitive behavior therapy (CBT) is an efficacious treatment for depression, both in psychiatric patients and in patients with coronary heart disease (CHD). The objective of CBT is to improve depression by changing depressive cognitions and behaviors. This study evaluated whether negative illness perceptions also change during the course of CBT in depressed patients with CHD, and whether changes in illness perceptions predict depression outcomes.Methods: 157 patients with documented CHD and major depression were followed for four months and provided up to 12 sessions of CBT. In addition, 50 to 100 mg/day of sertraline was prescribed for participants who were not already taking an antidepressant at enrollment and who did not show at least 50% improvement over baseline on the Beck Depression Inventory (BDI-II) after 8 weeks of CBT. Beliefs about depression and its treatment were measured with a modified version of the Illness Perception Questionnaire-Revised.Results: Beliefs in personal control and in the efficacy of treatment, and perceived understanding of depression, increased over the course of CBT. In addition, patients rated their symptoms as being less chronic, more predictable, less problematic, and less distressing after treatment. The IPQ-R total score predicted the 16-week BDI-II score after adjusting for the baseline BDI-II score and antidepressant use (all p's < 0.001). Conclusions: CBT tends to modify patients' beliefs about depression. Favorable changes in illness beliefs predict better depression outcomes in patients with major depression and coronary heart disease.

CORRESPONDING AUTHOR: Mariantonia Lemos, M.A., Universidad de los Andes, Bogotá, 0; m.lemos70@uniandes.edu.co

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COMMUNITY HEALTH WORKERS AS EFFECTIVE PARTNERS IN LATINO CARDIOVASCULAR DISEASE PREVENTION

Robert Garcia, MPH, ATC[1], Rosa Barahona, BA[1], Chase Aframian[2], Lourdes Baezconde-Garbanati, PhD, MPH[1]

[1]Keck School of Medicine, University of Southern California, Los Angeles, CA; [2]University of Southern California, Los Angeles, CA

The US Latino population faces a high prevalence of cardiovascular disease risk factors such as diabetes, obesity, and hypertension. Latinos however, are less likely than non-Latino Whites to have access to a usual source of care where they can receive diagnostic tests and medical intervention. One promising method to deliver health interventions is through the use of Community Health Workers (CHW). In their collaboration with the Latino population the NHLBI created the Su Corazón, Su Vida curriculum, which is used in the current study. The program was delivered in 11 sessions to 734 community members in group settings by the CHW. The mean age for the participants was 42.9 yrs, and 85% were female. The majority of participants, 58%, had less than a high school education and only 13.2% had at least some college. Only 15.1% reported having full time employment while 42.9% were homemakers. Almost all of the participants, 99.5%, reported speaking Spanish at home. Among those measured at baseline 45.7% reported that their households consisted of 5 or more people. There were 13 CHWs who delivered the curriculum in Los Angeles and 12 in Kern County. The mean age of the CHWs was 47.1, and 96% were born in Latin America and had lived in the US an average of 19.79 years. The CHWs were also well experienced, with 88% having previous work as a CHW and 84% having prior NHLBI training. A structural model was constructed using 3 factors, Positive Health Habits (Eigen=3.47), Disease Risk Knowledge (Eigen=1.75), Personal Health History (Eigen=1.08). The final structural model had a moderate goodness of fit value of 2.27 times the degrees of freedom, c^2=118.42, df=52, p < 0.01, RMSEA=0.04 and CFI = 0.97. This study showed that when health knowledge about specific diseases or outcomes is delivered by CHW's health behaviors are influenced. Health interventions using CHWs have a lot of promise to improve the health of the Latino community in the US. With Latinos being the fastest growing population in the US, program planners will need to address their health needs with culturally appropriate methods. The current situation is leading to a public health crisis that could not only affect the Latino population but the US health infrastructure. Through the partnership with CHW's can be empowered to help prevent this crisis.

CORRESPONDING AUTHOR: Robert Garcia, MPH, ATC, Keck School of Medicine, University of Southern California, Los Angeles, CA, 90089; garc617@usc.edu

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AN EXAMINATION OF THE ASSOCIATION BETWEEN AUTONOMY SUPPORTIVE HEALTH CARE AND DIABETES SELF-CARE

Matthew Carle, MS, Robert Oster, PhD, Andrea Cherrington, MD, MPH

University of Alabama Birmingham, Birmingham, AL

Objective: Studies suggest that when health behaviors are autonomously motivated individuals are more likely maintain those behaviors over the long-term. We sought to assess the association between the degree to which patients' perceive their health care team as autonomy supportive (vs. controlling) and measures of diabetes self-care and glycemic control in a low income, African American population with type 2 diabetes.Methods: Patients were recruited from a safety-net clinic in Jefferson County, AL for a 6-month diabetes management intervention. Patients were included if they indentified as African American, were >19 years, not pregnant, had no history of end-stage medical conditions, and had poorly controlled type 2 diabetes (HbA1c >7.5%). Face to face questionnaires assessed medication adherence (modified 8-item Morisky scale) diabetes self-care (Toobert) and perceived health care provider support via a 6-item Health Care Climate Questionnaire (HCCQ) modified for diabetes management. Demographic information was collected along with physiologic measures.Results: Participants (n=119) had a mean age of 55yo (SD 8.4) as well as a mean HbA1c of 10.0% (SD 1.8). Out of all participants, 67% were female, and 81% had a HS degree, GED, or more. The HCCQ mean was 5.7 (SD 1.4). The Morisky medication adherence score was 6.0 (SD 1.9) suggesting moderate adherence on average. An association was found between autonomy-supportive care (HCCQ) and medication adherence (r = 0.273, p = 0.007), general diet (r=0.212, p=0.02) and exercise (r=0.217, p=0.02). There was no significant association between HCCQ and glycemic control (HgbA1c).Conclusion: In this sample of low income African American with diabetes, medication adherence, dietary behaviors and physical activity were positively associated with the degree to which patients' perceive their health care team as autonomy supportive. These findings are consistent with previous studies demonstrating that autonomous support correlates with better patient self-care outcomes.

CORRESPONDING AUTHOR: Matthew Carle, MS, University of Alabama Birmingham, Birmingham, AL, 35294; msc4705@uab.edu

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AN SDT MODEL TO PREDICT PHYSICAL ACTIVITY PRACTICE IN TYPE 2 DIABETES; MOTIVATION AS A MEDIATOR

Alexandre Castonguay, Paule Miquelon, PhD, Marianne Michaud

Université du Québec à Trois-Rivières, Trois-Rivières, PQ, Canada

Management of Type 2 diabetes (T2Db) includes, among other things, the regular practice of physical activity (PA) (Sigal et al., 2006). However, over 70% of people living with T2Db practice enough PA to meet expert recommendations (CDA, 2003). The objective of this study was to test a theoretical model that explains the frequency of PA in adults with T2Db through their motivation to practice PA and the factors that influence their motivation.It was proposed that: 1) satisfaction of psychological needs, decisional balance, feeling of self-efficacy vis-à-vis PA barriers and accessibility of facilities to practice PA would influence positively autonomous motivation (AM; PA is practiced for fun or according to a personal choice) toward PA practice, while physical symptoms associated with T2Db would influence it negatively; 2) AM would positively predict the frequency at which PA is practiced.A cross-sectional design was used to test these hypotheses. 313 people with T2Db (N = 159 women) with an average age of 58.18 years (SD = 5.88) participated in the study.The results of a structural equation modeling largely support the proposed hypotheses. AM was positively predicted by satisfaction of psychological needs (b = .38, $p < .001$), decisional balance (b = .11, $p < .05$) and feeling of self-efficacy (b = .27, $p < .001$). Inversely, AM was negatively predicted by physical symptoms associated with T2Db (b = -.13, $p < .01$). Finally, PA practice was positively predicted by accessibility of facilities to pratice PA (b = .24, $p < .001$), AM (b = .19, $p < .01$) and feeling of self-efficacy (b = .29, $p < .001$). This model shows satisfactory fit indices: chi-square, $p> .05$; RMSEA $< .05$; SRMR $< .08$; CFI$> .95$; TLI$> .95$ (Hu & Bentler, 1999).These results suggest that by working on the factors influencing AM, it is possible to increase AM and thereby, practice of PA among people with T2Db. Thus, AM should be considered in future studies on PA among people with the T2Db.

CORRESPONDING AUTHOR: Alexandre Castonguay, Université du Québec à Trois-Rivières, Trois-Rivières, PQ, G8Y7G1; castonal@uqtr.ca

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CONFLICT PREDICTS SELF-MANAGEMENT AND HBA1C IN PEDIATRIC TYPE1 DIABETES: 3-YEAR LONGITUDINAL STUDY

Bret Boyer, PhD[1], Kate G. Deatrich, MA, BCB[2], Tamara Miller, Psy.D.[2]

[1]Widener University, Philadelphia, PA; [2]Widener University, Chester, PA

The longitudinal study of variables predicting self-management and glycemic control as children with Type 1 Diabetes (T1D) develop independent self-management skills is still in its infancy. This study measured Parent-Child Conflict (Diabetes Independence and Conflict Scale) over T1D-management, T1D-related Illness Intrusiveness (II, Revised Illness Intrusiveness Scale-diabetes), self-management activity (Self-Care Inventory, SCI), and Glycemic control (HbA1c) for 123 children (aged 8-17) across 3 years (Y1, Y2, Y3). Hierarchical multiple regression, with SCI entered as the first variable, were applied to predict Y2 and Y3 SCI and HbA1c. Y1 predictors of Y2-SCI were SCI (.40, $p < .001$), conflict (-.24, $p < .03$), II (-.22, $P < .05$), and number of hypoglycemic episodes (.22, $p < .04$). Y3-SCI was predicted only by SCI (.32, $p < .002$) from Y2, but conflict (-.28, $p < .005$) was the only Y1 variable to predict SCI at Y3, without Y1-SCI contributing to prediction. Y1-conflict (.32, $p < .001$) and frequency of hypoglycemia at Y1 (-.26, $p < .007$) predicted Y2-HbA1c, with Y1-conflict accounting for more variance than Y1-SCI. Conflict at Y1 (.40, $p < .001$) and Y2 (.43, $p < .002$) were the only variables contributing to prediction of Y3-HbA1c, with SCI no longer contributing after conflict entered the equation. Data indicate that conflict is an important influence on subsequent self-management and HbA1c. The relationship of Y1-conflict to Y2-SCI and Y3-SCI, while SCI was the only Y2 variable to predict Y3-SCI, suggests that conflict may interfere with self-management at earlier stages in development of independent self-management, influencing self-management less once these behaviors are learned and patterns of self-management established. Conflict predicted subsequent HbA1c more strongly than did SCI, even though conflict did not predict SCI from Y2-Y3, questioning whether conflict impacted HbA1c via stress and sympathetic nervous system arousal, in addition to conflict impacting HbA1c via reducing effectiveness of self-management. II and frequency of hypoglycemia predicted subsequent SCI, although not HbA1c. Screening and intervention implications are discussed.

CORRESPONDING AUTHOR: Bret Boyer, PhD, Widener University, Philadelphia, PA, 19119; baboyer@mail.widener.edu

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CONTINUUM OF OBESITY AND DIET PERCEPTIONS IN NON-INSULIN USING ADULTS WITH TYPE 2 DIABETES

Stephanie R. McDonough, B.S., Holly Knight, M.A., Barbara Stetson, PhD, Sri Prakash Mokshagundam, MD

University of Louisville, Louisville, KY

Background: Exogenous insulin use is often a last step in diabetes management; many adults with type 2 diabetes (T2DM) rely on diet and lifestyle changes to manage their self-care. Obesity is the norm in T2DM and dietary practices are frequently examined across normal weight, overweight, and obese samples; however this approach limits understanding of the continuum of clinical obesity and its association with specific diet patterns. Despite awareness of the impact weight has on health outcomes, behavioral distinctions between obesity classifications (BMI Class I: 30-34.99; Class II: 35-39.99; Class III: ≥ 40) have not been widely explored in T2DM research or clinical practice. Aim: This study examines how perceived diet self-care practices, diet problems and barriers differ between obesity class in a sample of non-insulin using adults with T2DM. Method: Ss were 231 obese adults with T2DM (97.5% White, 54.2% female, M age = 50.8) attending a DM clinic (Obesity Class I N=118, Class II N=63, Class III N=50). 0% were Rx insulin; 86.9% were Rx diabetes oral agents. Ss completed validated self-report measures assessing diet self-care practices, perceived diet barriers and problems. Results: While overall dietary self-management practices did not differ between obesity class groups, differences in specific diet patterns and perceptions were found. Obesity class comparisons (ANOVA) found: Ss in Class II (p=.001) and Class III (p=.004) perceived more frequent diet barriers than those in Class I (Tukey's post-hoc). Nonparametric comparisons (Kruskal Wallis) indicated differences by obesity class in perceived eating problems due to negative mood (p=.001) and feeling discouraged about progress (p=.002) but not for feeling deprived. Conclusion: Findings highlight the importance of considering obesity level in T2DM diet management. Assessment of obesity as a general category may be insufficient in understanding the specific difficulties of diet self-care in T2DM. Clinicians should be cognizant that diet perceptions and challenges may differ by obesity class, potentially impeding maintenance of diet changes in those who need them most. Tailoring dietary support and recommendations based on obesity class may promote maintenance of diet self-care practices.

CORRESPONDING AUTHOR: Stephanie R. McDonough, B.S., University of Louisville, Louisville, KY, 40217; stephanie.mcdonough@louisville.edu

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DIABETES DISTRESS IS LINKED TO MATERNAL DEPRESSIVE SYMPTOMS AND ADOLESCENTS' GLYCEMIC CONTROL

Tamara Rumburg, BA, Jadienne Lord, BA, Meredith Gruhn, M.A., Sarah Jaser, PhD

Vanderbilt University, Nashville, TN

Mothers of youth with type 1 diabetes (T1D) experience increased levels of stress and depression, which can negatively impact youth's glycemic control. The concept of diabetes distress is gaining traction in the field as a correlate of psychosocial and health related outcomes, but has not been applied to mothers of youth with T1D, who share the burden of diabetes management. The aim of the current study was to examine how mothers' diabetes distress related to maternal depressive symptoms and adolescents' glycemic control (HbA1c). Participants were 66 mothers of youth ages 10 to 16 (*M*=13.6*,* 45% female) with a diagnosis of T1D for at least one year. Mothers completed a screening questionnaire consisting of demographic information, a measure of depressive symptoms (PHQ-9), and the Parent Diabetes Distress Scale (DDS-P). The DDS-P assesses diabetes-related worry and stress in parents of adolescents with diabetes; subscales include distress about self, distress about teen, and parent-teen relationship distress. HbA1c was obtained from adolescents' medical records. In our sample, 25% of mothers were above the clinical cutoff for diabetes distress (*M*=1.43, *SD*=6.85), and 47% were above the clinical cutoff for depressive symptoms (*M*=6.47, *SD*=6.85). Bivariate correlations revealed that diabetes distress was strongly related to depressive symptoms (*r*=.65, $p < .001$) but not HbA1c (*r*=.14, p=.27). The association between parent-teen relationship distress and HbA1c approached significance (*r*=.23, p=.06). For mothers of girls (but not boys), higher levels of maternal depressive symptoms were related to higher HbA1c (*r*=.67, $p < .001$). Depressive symptoms were also significantly related to HbA1c for mothers of 13-16 year olds (*r*=.39, p=.011) but not 10-12 year olds (*r*=.346, p=.124). In multivariate analyses, adjusting for child age and gender, maternal depressive symptoms were the only significant predictor of adolescents' glycemic control (β=.49, p=.005). Findings suggest that mothers' diabetes distress is strongly linked to depressive symptoms, which, in turn, have a negative impact on adolescents' glycemic control. Therefore, screening for and treating diabetes distress and maternal depressive symptoms may have a beneficial effect on both mothers and their adolescent children.

CORRESPONDING AUTHOR: Tamara Rumburg, BachelorsofArts, Vanderbilt University, Nashville, TN, 37235; tamara.m.rumburg@vanderbilt.edu

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DIABETES MHEALTH WITH ENHANCED CAREGIVER SUPPORT: INTERIM RESULTS OF A ONE-YEAR RCT

James E. Aikens, PhD[1], John Piette, PhD[2]

[1]University of Michigan, Ann Arbor, MI; [2]University of Michigan Medical School, Ann Arbor, MI

Objective: To report interim findings of a one year RCT of a mobile health (mHealth) diabetes self-care program that incorporates a patient-selected support person. Method: In this ongoing study, patients with poorly-controlled type 2 diabetes nominate a close friend or relative from outside their household ("CarePartner;" CP) to support their diabetes self-management prior to being randomized to 12 months of usual care alone versus combined with mHealth+CP. In the mHealth+CP arm: (1) patients receive weekly automated diabetes telemonitoring calls with problem-specific self-management education, (2) CPs receive weekly email updates on the patient with advice on self-care support, and (3) primary care teams receive notifications about potential medical problems. Glycemic control (HbA1c), diabetes distress, and self-management behaviors are being assessed at baseline, Month 6, month 12. Results: To date, 125 patients (approximately half of targeted final sample) have completed their Month 6 assessment (62 mHealth+CP, 63 usual care). Most are female (59%), 24% are of minority ethnicity, 46% have annual income < $15K yearly, 20% have >3 chronic conditions, and mean baseline HbA1c = 9.3 (SD: ± 1.7). Effect size analysis of Month 6 outcomes indicated that receiving mHealth+CP was associated with lower diabetes-related distress (Cohen's $d = 0.31$ SD units, $p = 0.043$). There were possible trends for higher medication adherence ($d = 0.34$, $p = 0.073$) and frequency of blood glucose testing ($d = 0.29$, $p = 0.062$). Month 6 HbA1c levels did not differ (9.1 ± 1.5 vs. 8.9% ± 1.7; $d = 0.13$, $p = 0.469$). Conclusions: Preliminary mid-study findings suggest that mHealth with intensified caregiver support reduces diabetes-related distress, and may also enhance key self-management behaviors. Additional time and/or strategies might be needed to improve glycemic control. Because this is the only mHealth intervention for any medical condition that incorporates a patient-selected support person, intensified research is warranted.

CORRESPONDING AUTHOR: James E. Aikens, PhD, University of Michigan, Ann Arbor, MI, 48103; aikensj@umich.edu

6:00 PM-7:00 PM A038

DIABETES REPORTING ACCURACY OF MEXICO-BORN VERSUS U.S.-BORN MEXICAN AMERICANS

Megan E. Douglas, M.S., Charles A. Guarnaccia, PhD

University of North Texas, Denton, TX

In order to better tailor treatment to specific populations, various disease mechanisms and factors which may contribute to health disparities among different racial/ethnic groups must be examined. Among Mexican American individuals, the higher rate of diabetes represents a significant contributor to overall poor health outcomes. The present study examined the self-report accuracy rate of having a diabetes diagnosis for Mexico-born (MB) versus U.S.-born (USB) Mexican American individuals using the 2007 – 2008 NHANES data set. Accuracy rate, sensitivity, specificity, precision and negative predictive value were calculated by comparing responses to the question "Other than during pregnancy, have you ever been told by a doctor or health care professional that you have diabetes or sugar diabetes?" to the gold standard HbA1c cut-score diabetic criteria of 6.5% or greater. A chi-square test of independence was run to compare the self-report and HbA1c responses for the MB and USB groups. Using these self-report and HbA1c methods; it was found to be significant for both the MB (X^2 (1, $N = 570$) = 188.78, $p < .001$) and USB groups (X^2 (1, $N = 413$) = 189.02, $p < .001$). Not surprisingly, results demonstrate that individuals who are classified as diabetic are much more likely to report having diabetes, however, the false negative rate (i.e. individuals who meet HbA1c diabetic criteria, but do not report a diabetes diagnosis) for the MB group (43.5%) was more than twice that of the USB group (19.6%). This suggests that Mexican-born Mexican American individuals have a greater need for lab-based diabetes screening.

CORRESPONDING AUTHOR: Megan E. Douglas, M.S., University of North Texas, Denton, TX, 76203; megandouglas@my.unt.edu

6:00 PM-7:00 PM A039

ETHNIC DIFFERENCES IN PSYCHOSOCIAL FACTORS, HBA1C AND BMI IN ADOLESCENTS WITH TYPE 1 DIABETES (T1D)

Georica Gholson, PhD, Robin Whittemore, PhD, APRN, FAAN, Margaret Grey, DrPH, RN, FAAN

Yale University School of Nursing, Orange, CT

Background: Type 1 diabetes (T1D) is a common chronic condition among children and adolescents that disproportionately affects white youth (prevalence rate 2.55 per 1000). Despite this, Black and Latino youth tend to have poorer glycemic control. Factors that contribute to poor glycemic control in Black and Latino youth are not well understood. Purpose: The purpose of this descriptive analysis was to determine whether racial/ethnic differences exist for diabetes-specific family conflict, collaboration with parents, perceived stress, responses to stress, self-management activities, HbA1c, and BMI. Methods: A cross-sectional study using baseline data from 297 adolescents with T1D enrolled in a multi-site, internet-based intervention was conducted. Adolescents [mean age = 12.29 ± 1.10; mean HbA1c = 8.31 ± 1.5; 55% female; white, non-Latino/Hispanic (n=203), white or Black, Latino/Hispanic (n=69), Black, non-Hispanic (n=25)] completed surveys on diabetes-specific psychosocial and behavioral factors. BMI and HbA1c data were collected from medical records. ANCOVA and regression analyses were conducted. Results: There were no significant differences between ethnic groups in diabetes-specific family conflict, collaboration with parents, responses to stress, self-management activities and BMI after controlling for age, gender, household income, duration of diabetes, and therapy type. Significant ethnic differences emerged for HbA1c and perceived stress. Black, non-Latino/Hispanics adolescents had significantly greater HbA1c levels than White or Black, Latino/Hispanic adolescents, [$F(2, 271) = 3.38$, $p < .05$]. Furthermore, Black, non-Latino/Hispanic adolescents reported higher perceived stress compared to the other ethnic groups [$F(2, 272) = 11.00$, $p < .001$]. Hierarchical regression analyses indicated that ethnic classification was associated with perceived stress ($\beta = 1.8$, $p < .005$), but not HbA1c ($\beta = .12$, $p > .05$). Conclusion: Our findings were consistent with previous evidence indicating that HbA1c levels vary between ethnic adolescent groups with T1D. Also, ethnic minority adolescents reported greater perceived stress. Given our results, perceived stress may moderate the relationship between race/ethnicity and HbA1c in adolescents with T1D. Further research is warranted.

CORRESPONDING AUTHOR: Georica Gholson, PhD, Yale University School of Nursing, Orange, CT, 06477; georica.gholson@yale.edu

6:00 PM-7:00 PM A040

ASTHMA VIDEO EDUCATION TOPIC PREFERENCES: A SURVEY OF YOUTH WITH ASTHMA AND THEIR CAREGIVERS

Lorie L. Geryk, PhD, MPH[1], Delesha M. Carpenter, PhD, MSPH[2], Courtney C. Arrindell[1], Adam J. Sage, MA[1], Susan J. Blalock, PhD, MPH[1], Tamera Coyne-Beasley, MD, MPH[3], Charles Lee, MD[4], Betsy L. Sleath, PhD[1]

[1]UNC Eshelman School of Pharmacy, Chapel Hill, NC; [2]UNC Eshelman School of Pharmacy, Ashville, NC; [3]UNC Division of General Pediatrics and Adolescent Medicine, Chapel Hill, NC; [4]Polyglot Systems, Inc., Morrisville, NC

Purpose: The topic of what content to include in asthma educational videos has rarely been examined from the perspectives of youth with asthma and their caregivers. This study explored demographic and clinical differences in the preferences of youth and their caregivers for video topics related to general asthma education and asthma self-management.Methods: Youth (n=83) ages 7–17 years with persistent asthma and their caregivers (n=83) were recruited at two pediatric practices in North Carolina through the Expanding Network for Latinos through Community Engagement network. As part of a larger randomized controlled trial, demographic and clinical information were collected during baseline interviews and interest in watching a short asthma video about 9 topics related to managing asthma, medication information, and how to talk to others about asthma were collected at follow-up.Results: Youth were primarily male (52%), non-White (62%), and between 7 – 11 years of age (61%). Caregivers primarily had high school education or less (66%), had Medicaid insurance (65%), and an income less than $30,000 (73%). Youth were most interested in the topic of how to deal with asthma triggers (90%), followed by how to keep asthma under control (87%) and tips for managing asthma when exercising or playing (87%) and least interested in learning about how to talk to their friends about asthma (40%). Caregivers were most interested in the following topics: learning about how to keep asthma under control (97%), how to deal with asthma triggers (95%), and differences between a rescue and controller medicine (93%). Parents and children were significantly discordant (where caregivers reported interest and youth did not) for two topics: the difference between a rescue and controller medicine ($P = 0.0046$) and how to talk to their friends about asthma ($P < 0.0001$).Conclusions: In our sample, youth with persistent asthma and their caregivers were strongly interested in receiving asthma self-management education via a brief asthma educational video. Because asthma education topic preferences varied between children and their caregivers, videos may need to be tailored. Future studies should incorporate youth and caregiver preferences in the design and development of asthma self-management videos.

CORRESPONDING AUTHOR: Lorie L. Geryk, PhD, MPH, UNC Eshelman School of Pharmacy, Chapel Hill, NC, 27599; llgeryk@email.unc.edu

6:00 PM-7:00 PM A041

FAMILY HEALTH HISTORY: ATTITUDE, SELF-EFFICACY, INTENTION, AND KNOWLEDGE IN TEXAS HEALTH EDUCATORS

Lei-Shih Chen, PhD, PT, CHES[1], Patricia Goodson, PhD, MA[1], Eunju Jung, PhD[1], Amber Muenzenberger, MS, CHES[1], Ming Li, MS[2], Lei Xu, PhD, MA[3], Divya Talwar, MPH, BDS[1]

[1]Texas A&M, College Station, TX; [2]University of Michigan, Ann Arbor, MI; [3]East Carolina University, Greenville, NC

Background: Family health history (FHH) plays a critical role in disease prevention and early diagnosis of genomic diseases. To increase awareness of FHH, leading health agencies, such as NIH, CDC, and the Office of the US Surgeon General have diligently promoted FHH initiatives and activities. As health educators educate general population—their attitudes, self-efficacy, intention, and knowledge regarding FHH might influence their practice. This study conducted a baseline survey to examine Texas health educators FHH practice statuses' and associated factors. Methods: A total of 315 Texas health educators holding MCHES/CHES designation completed the survey. We employed structural equation modeling to assess the theoretical relationships among the measures of attitudes, self-efficacy, intention, knowledge, and practice. Results: Average age of the participants was 36.9 years (SD=10.2). About half of the participants already implemented FHH in their practices—encouraging discussion of FHH with family (52.8%), recommending clients to consult FHH with their primary care providers (50.6%), and making FHH-based behavior change recommendations for clients (46.4%). Nevertheless, only 6% assisted clients to develop their FHH using Office of the US Surgeon General's "My Family Health Portrait Tool." Moreover, survey data fit well with our proposed theoretical framework. Attitudes, self-efficacy, intention, knowledge significantly predicted the practice, though, intention was most closely related (b=0.36). Conclusions: Our findings showed a need to improve practice of FHH for health educators in Texas. Furthermore, this study can serve as a pilot study to survey a nationwide sample of health educators in the U.S, based on our proposed theoretical framework.

CORRESPONDING AUTHOR: Divya Talwar, MPH, BDS, Texas A&M, College Station, TX, 77840; talwar@hlkn.tamu.edu

6:00 PM-7:00 PM A042

TRAIT EMPATHY, CURRENT STATE, AND PATIENT FACTORS INTERACTIVELY PREDICT MEDICAL COMPASSION

Nathan S. Consedine, PhD[1], Katherine A. Skinner, BSc[2], Antonio T. Fernando III, MD[2]

[1]The University of Auckland, Auckland, New Zealand; [2]University of Auckland, Auckland, New Zealand

Background: While providing medical care with compassion is expected by patients, legally required, and central to effective clinical care, sustaining compassion over time is difficult. Historically, a lack of compassion has been seen as reflecting compassion fatigue. The current study tested an alternate model in which physician traits, current states, and patient factors interactively influence medical compassion.

Method: 85 trainee physicians (66% female) were randomized to self-compassion, self-criticism, or control groups before reading 4 vignettes validated as depicting patients that (a) presented positively or negatively, and (b) were seen as more or less responsible for their condition. Participants made ratings of patient liking, desire to help, care, and closeness and completed a covert "donation" task. Mixed model ANCOVAs in which trait empathy and experimental condition served as between-person factors, patient presentation and responsibility as within-person factors, and social desirability as a covariate, tested effects.

Results: Negative patient presentation and/or greater patient responsibility predicted less care, closeness, liking and desire to help ($p < .01$), while trait physician empathy, in isolation, was a poor predictor. However, greater empathy reduced the effect of negative patient factors on ratings of patient care ($p < .01$), desire to help ($p < .01$), and liking ($p < .05$), while the self-compassion manipulation "levelled out" the effects of trait empathy on ratings of caring ($p < .05$) and desire to help ($p < .05$), differentially benefiting less empathic physicians. Among less empathic participants, self-criticism was associated with lower donation to AIDS patients.

Conclusions: In contrast to prevailing models, this study demonstrates that both self-reported ratings of care, desire to help, and closeness and actual behaviour (donations) were interactively predicted by physician traits, current states, and patient factors. The findings thus broaden our thinking regarding the origins of compassion and how to enhance it in clinical practice.

CORRESPONDING AUTHOR: Nathan S. Consedine, PhD, The University of Auckland, Auckland, 1142; n.consedine@auckland.ac.nz

6:00 PM-7:00 PM A043

ADAPTATION OF A SELF-IMPLEMENTED HIV TEST AMONG ADOLESCENT YOUTH IN TANZANIA

Cassidy Huun, BS[1], Joseph Catania, PhD[2], M. Margaret Dolcini, PhD[2]

[1]Oregon State University, Salem, OR; [2]Oregon State University, Corvallis, OR

HIV testing among high risk adolescents in Dar es Salaam, Tanzania is challenging due to poor access to test sites and AIDS-related social stigma. We adapted the *OraQuick HIV Test,* a self-implemented test (SIT), for low literacy youth with no internet access. To compensate for poor literacy, a picture instruction book was developed to illustrate each SIT procedure without using written language. Participants (15-18 years; N = 25) performed all SIT procedures (e.g., use of sample collection swab) under simulated conditions. Results showed that, overall, 4 of 5 testing procedures were correctly understood and performed by a majority of participants (60-80% correct/procedure). Males were slightly more accurate than females. Based on semi-structured interviews, suggestions for improving the picture instructions were identified. The results suggest that the adapted instructional method, replacing written and technological-based SIT instructions, has merit and warrants a second stage of development with the goal of further increasing SIT competency rates. Visual instructions for SIT have wide application in countries with high levels of illiteracy, low Internet coverage, and poor access to HIV test sites.

CORRESPONDING AUTHOR: Cassidy Huun, HonorsBachelorofScienceand InternationalDegree(tobeawarded12/2014), Oregon State University, Salem, OR, 97306; cahuun@comcast.net

6:00 PM-7:00 PM A044

BARRIERS TO TREATMENT INITIATION AND ADHERENCE FOR HIV POSITIVE PEOPLE: A QUALITATIVE APPROACH

Tonya Tavares, M.S.[1], Janelle Alabiso, MA[2], Elian Roberts, BS[3], Merredith Collins[4], Christina Lee, PhD[3]

[1]Northeastern University, Bouve College of Health Sciences, Brighton, MA; [2]Northeastern University, Tewksbury, MA; [3]Northeastern University, Boston, MA; [4]Boston Medical Center, Boston, MA

Background: Over 1.1 million people in the U.S. are living with the human immunodeficiency virus (HIV). Among those linked to care, national data indicate only 37% are retained. While most research has focused on medication adherence, less is known about adherence to HIV treatment (TX) (mental health care, support services). Study goals are to identify and learn more about barriers to HIV TX adherence post diagnosis (DX). Data from a pilot study that recruited HIV+ people with history of past year or lifetime TX non-adherence are reported. Procedure: HIV+ people ($N = 17$) ages 18-65 met criteria for TX non-adherence (missing clinic visits or medication in the past year or similar history of missed visits since DX); any substance use in the past 90 days and experience with risky alcohol or drug use (>5/4 drinks/occasion, men/women, or any drug use 4+/month) a cognitive interview designed by the last author and a HIV primary care nurse. Questions included, "What went through your mind when you were first diagnosed (DXd)?", "What makes it hard for you to seek TX?", and "What advice would you give newly DXd people?" Interviews were audiotaped, transcribed, and reviewed independently by TT, JA and ER to identify themes; a codebook was developed and themes were discussed under the last author's supervision. Results: Of the 17 participants, (76% male; 24% Hispanic) the average age was 49 years, 59% were single, 75% were low income (< $30,000/household), and 53% had high school or equivalent education. Three main topics were identified: emotional response to DX, barriers to entering and maintaining TX, and living with HIV and advising the newly DXd. Themes included: Telling newly DXd people that HIV is not a death sentence; fearing and facing stigma as part of HIV disclosure; coping with one's DX by abusing substances; confusion surrounding access to HIV care; the significance of accurate medication related information; the importance of reaching out for social support and taking an active role in one's care. Discussion: Knowledge from this study may enhance treatment engagement at all points in the HIV care continuum. Emotional and motivational factors, as well as gaps in health literacy regarding HIV management emerged as viable targets for future intervention development.

CORRESPONDING AUTHOR: Tonya Tavares, M.S., Northeastern University, Bouve College of Health Sciences, Brighton, MA, 02135; tonya.tavares@gmail.com

6:00 PM-7:00 PM A045

HEALTH DISPARITIES IN GASTROINTESTINAL SYMPTOMS AND CHRONIC ABDOMINAL PAIN IN INDIVIDUALS WITH HIV

Bridgett Rahim-Williams, MA, MPH, PhD[1], Judith A. Erlen, PhD, RN, FAAN[2], Lisa K. Tamres, MS[2], Nicholas H. Fourie, PhD[1], Wendy A. Henderson, PhD[3]

[1]National Institutes of Health, Bethesda, MD; [2]University of Pittsburgh School of Nursing, Pittsburgh, PA; [3]NINR, NIH, DHHS, Bethesda, MD

Individuals with HIV on HAART are living longer, and are predisposed to chronic disease comorbidities. This study investigated chronic gastrointestinal symptoms (diarrhea and abdominal pain) in individuals with HIV. Our sample, n= 351, included 200 Black individuals (131 males); 145 White (113 males), ages 20-66 years (mean = 43.65). We collected HIV viral load, CD4 counts, Symptom Co-Morbidity Questionnaire and clinical and demographic information (race/ethnicity, sex/gender and age). We used SPSS v.20 for our analysis. Forty-one percent (n=144) reported diarrhea. Fifty-four participants (15.5%) reported chronic abdominal pain (CAP). Men were significantly more likely to report diarrhea compared to women ($p \geq .036$). Fewer Black men (47.7%) reported diarrhea compared to White men (52.3%). Fewer White women (25.7%) reported diarrhea compared to Black women (71.4%). Interestingly, fewer females (37.0%) reported CAP compared to males (63.0%); and fewer White women (35%) compared to Black women (46.4%), However, report of CAP was similar for Black men compared to White men. For individuals with co-morbid diarrhea and constipation, more men reported these symptoms compared to women. But, fewer Whites reported experiencing comorbid diarrhea and constipation compared to Blacks (46.1% vs.57.6% repectively), as well as fewer Whites reported abdominal pain and constipation compared to Blacks (43.7% vs. 56.2% respectively). Fewer women also reported eperiencing abdominal pain and constipation as well as abdominal pain and diarrhea compared to men. Interestingly, fewer Black individuals (45.4%) reported comorbid abdominal pan and diarrhea compared to White (54.5%). There was no significant predictor of diarrhea or CAP by CD4 counts, viral load, race/ethnicity or age. Clinical indices, (CD4, viral load) are indicators of chronic disease symptoms negatively affecting health outcomes. Moreover, research identifying underlying social and behavioral determinants associated with clinical indices is important for an integrated, biopsychosocial understanding of HIV chronic disease comorbidity contributing to health disparities.

CORRESPONDING AUTHOR: Bridgett Rahim-Williams, MA, MPH, PhD, National Institutes of Health, Bethesda, MD, 20852; bridgett.rahim-williams@nih.gov

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HIV KNOWLEDGE AND RISKY SEXUAL BEHAVIORS: CORRELATES OF STDS ATTITUDE AMONG COLLEGE STUDENTS

Temidire Bada, MPH[1], Eliot J. Lopez, MS[2], Mark Vosvick, M.ED., MBA, PhD[3]

[1]Center for Psychosocial Health Research, University of North Texas, Houston, TX; [2]University of North Texas, North Augusta, SC; [3]University of North Texas, Denton, TX

STDs and HIV infections continue to increase yearly, especially among college students. The Centers for Disease Control and Prevention (2008) reported 75% of the newly diagnosed HIV infections, were found in population aged 20-24 years. Prior research suggests that risky behavior is more attractive to this population than the danger associated with risk taking. Therefore, understanding the intention to act towards STDs may be a reflection of the likelihood to engage in risky sexual behaviors. The goal of our research is to determine how knowledge of HIV and engagement in risky sexual behaviors among college students' associates with attitude towards STDs.A cross sectional study was conducted with college students ($N= 662$), who attend a large state university in Texas. The majority of the participants were females (70.1%), white (60.3%), with a mean of age of 20.7 years ($SD= 3.7$) and reported a Christian affiliation (75.8%). Data were collected via paper survey and were analyzed using multiple linear regression.The analysis suggests our independent variables account for 21.3% of the variation seen in STD attitude (*adjusted* $R^2= .23$, $F(15,646)= 12.9$, $p< .01$). Condom use ($\beta= -.214$, $t= -5$, $p< .01$), risky sexual behavior ($\beta= .241$, $t= 5.8$, $p< .01$), HIV knowledge ($\beta= -.10$, $t= -2.1$, $p < .01$), and condom embarrassment ($\beta= .15$, $t= 4.1$, $p<= .001$), were all associated with STD attitude. No significant difference was found between age, ethnicity, education, religion and mental health. However, a significant difference in STD attitude scores was found between gender: male ($M= 56.6$) and female ($M=50.9$). The Levine's test for equality of variance yielded $F=.01$, $p= .9$, which illustrates unequal variances between males and females. The results suggest that HIV knowledge is negatively correlated with STD attitude among college students, while risky sexual behavior is positively associated with STD attitude. Also, perception towards STDs differs by gender.Our research shows that college students who engage in risky sexual behaviors are aware of the risks involved in their choices. Although they may intend to act towards reducing STDs, understanding the rationale behind their willingness to engage in risky sexual behaviors is important in the prevention and control of STDs in this group.

CORRESPONDING AUTHOR: Temidire Bada, MPH, Center for Psychosocial Health Research, University of North Texas, Houston, TX, 77083; temidirebada@my.unt.edu

6:00 PM-7:00 PM A047

A CONDITIONAL PROCESS MODEL OF WORRY ABOUT PHYSICAL IMPERFECTIONS BASED ON LEVEL OF SELF-COMPASSION

Jessica J. Taylor, BS, Jennifer B. Webb, PhD

University of North Carolina at Charlotte, Charlotte, NC

Modern conceptualizations of worry frame it as a repetitive, future-directed cognitive process that serves an emotional regulation function. In the domain of body image, scholars have found worry about physical imperfections to be linked to increased social appearance anxiety, body image disturbance, and dietary weight control behaviors. Drawing upon an integration of sociocultural, self-discrepancy, and affect regulation theoretical perspectives on body image, the present study's objectives were: 1) to examine whether media-ideal internalization predicted worry about physical imperfections, 2) to evaluate the extent to which this relationship was mediated by the perceived discrepancy from invested body-image ideals, and 3) to ascertain whether self-compassion, a Buddhism-inspired adaptive self-regulatory characteristic would moderate the proposed indirect effect. A weight-diverse sample of 281 college women attending a large public university in the southeastern U.S. completed self-report instruments of the variables of interest via an online survey format. Hayes' (2013) regression-based PROCESS macro involving 10,000 bootstrap resamples per analysis was used to evaluate the presence of the hypothesized direct, indirect, and conditional indirect effects. The 95% confidence interval (CI) excluding zero was used to interpret the significance of the effects controlling for body mass index and self-esteem. In accordance with predictions, analyses revealed a significant direct effect of media-ideal internalization on worry about physical imperfections (β = .25, 95% CI: .16 to .34). Results additionally confirmed the indirect effect of media-ideal internalization on worry about physical imperfections via discrepancy from invested body-image ideals (β = .08, 95% CI: .04 to .13). Notably, the magnitude of this effect varied as a function of level of self-compassion (index of moderated mediation: -.03, 95% CI: -.06 to -.004) with greater attenuation observed at higher self-compassion. Findings point to useful process variables to consider targeting in reducing the impact of internalization of body comparison-based media ideals on appearance-evaluative worry in college women and may aid in distinguishing who experiences greater vulnerability.

CORRESPONDING AUTHOR: Jessica J. Taylor, BachelorsofScience, Psychology, University of North Carolina at Charlotte, Charlotte, NC, 28215; jtayl183@uncc.edu

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A FACTOR MIXTURE ANALYSIS OF SOCIAL STIGMA TOWARD PEOPLE WITH MENTAL ILLNESS

Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA[1], Ted C.T. Fong, MPhil[2], Andy H.Y. Ho, PhD, MFT, FT[3], Jordan S. Potash, PhD[4], Eric Chen, FRCPsych, FHKAM[5], Vania F. L. Ho

[1]The University of Hong Kong, Hong Kong, China, Peoples Rep; [2]The University of Hong Kong, Hong Kong, Hong Kong; [3]Nangyang Technological University, Singapore, Singapore; [4]The George Washington University, USA, VA; [5]Department of Psychiatry, HKU, Hong Kong, Hong Kong

Background: Social stigma toward people living with mental illness and the associated treatment avoidance are acute in the Chinese communities. There is an urgent need to identify ways to eradicate stigma and promote the understanding of people living with mental illness (PLMI). The present study explored the cluster patterns and attributing factors of social stigma in Hong Kong using a factor mixture analysis. Methods: Participants were a university sample of 218 Chinese adults (mean age = 22.4 years, SD = 6.1). They filled in a self-report questionnaire which measured the attribution factors of social stigma, social distance, and interpersonal reactivity toward PLMI. The Attribution Questionnaire was used to assess nine stigmatizing attitudes toward PLMI: pity, danger, fear, blame, segregation, anger, help, avoidance, and coercion, on a 9-point rating scale. Latent profile analysis and factor mixture analysis were carried out using Mplus 7 and the identified classes were validated by comparing their demographics and attributing factors using a stepwise distal outcome approach. Results: Two latent classes were identified in the factor mixture models with good classification accuracy. The majority of the participants (N = 175, 80.2%) belonged to the low-stigmatizing class with low to moderate degrees of expression of stigmatizing attitudes toward PLMI. The high-stigmatizing class (N = 43, 19.8%) displayed moderate to high degrees of expression of stigmatizing attitudes toward PLMI. Compared to the low-stigmatizing class, participants in the high-stigmatizing class was more likely to be male, younger, and reported significantly higher social distance, personal distress, and empathetic concern.

: The different group profiles elucidated the complex interactions among emotions, thoughts, and behavior of social stigma toward PLMI. An appreciation of the complexity in stigma patterns enhances psychiatric services through tailored education and promotion initiatives.

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CORRESPONDING AUTHOR: Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA, The University of Hong Kong, Hong Kong, 852; tinho@hku.hk

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ACADEMICS, CAREER DEVELOPMENT AND PSYCHOSOCIAL FUNCTIONING OF EMERGING YOUNG ADULT CAREGIVERS

Allison Marziliano, MA[1], Anne Moyer, PhD[2]

[1]Stony Brook University, Glen Oaks, NY; [2]Stony Brook University, Stony Brook, NY

Background: Advances over the past decade have led to an increase in informal caregivers, or non-paid individuals who provide care to ill or disabled family members or friends. Although there is a large and growing literature on adult caregivers, there is considerably less research on emerging young adult (EYA) caregivers, a sub-population between the ages of 18-24 years who balance dual roles during a fragile developmental period of the life trajectory. The purpose of this study was to address this gap in the literature by comparing the academic progress, career development, and psychosocial functioning of self-identified EYA caregivers and non-caregivers enrolled in college. Method: Two hundred participants (100 caregivers and 100 non-caregivers) were administered a one-time online questionnaire assessing academic achievement and progress, vulnerability to peer pressure, mental and physical functioning, interpersonal relationships, psychosocial service use, and engagement in recreational activities. Caregivers received additional measures assessing benefit finding and growth, burden, meaning in life, and spiritual well-being. Results: These two groups did not significantly differ in most domains, with the exceptions that the caregiver group held more paid positions ($t = 3.14$, $p < .05$), took fewer vacations within the past five years ($t = -2.63$, $p < .05$), and were less likely to adhere to routine dental check-ups ($X^2 = 8.38$, $p < .05$). The caregivers showed only moderate burden and high levels of finding meaning and benefit in their experience, which was further supported by qualitative responses. Conclusions: It is encouraging that caregivers presented similarly to non-caregivers in domains that are critical for this age group, such as academic achievement and career development. Where differences did exist, they were limited to temporal and financial burden. Such findings may result from the characteristics of the participants, who are still enrolled as full-time students despite their caregiving responsibilities, or may indicate particular resilience in EYA caregivers.

CORRESPONDING AUTHOR: Allison Marziliano, MA, Stony Brook University, Glen Oaks, NY, 11004; allison.marziliano@gmail.com

6:00 PM-7:00 PM A050

BODY DYSMORPHIC DISORDER AMONG FREQUENT INDOOR TANNERS

Jonathan M. Scully, B.A.[1], Gin-Fei Olendzki, MS, MBA[2], Martinus M. Evans, MS[3], Jessica Oleski, MA[4], Grace A. Amponsah, BSc.[5], Sherry L. Pagoto, PhD[4]

[1]UMass Medical School Division of Preventative and Behavioral Medicine, Worcester, MA; [2]Umass Medical School, Worcester, MA; [3]University of Massachusetts Medical School, Sturbridge, MA; [4]University of Massachusetts Medical School, Worcester, MA; [5]University of Massachusetts Medical School, Westerville, OH

Body Dysmorphic Disorder (BDD) is a psychological disorder characterized by a preoccupation with an imagined or slight defect in appearance that causes significant distress. According to epidemiologic studies, BDD has a prevalence rate of 0.7% to 2.4% in the general population (Bjornsson, Didie, & Phillips, 2010). One study has shown that 25% of people with BDD tanned specifically to improve BDD- related defects. The extent to which heavy tanners have BDD symptoms has never been investigated and whether individuals with elevated BDD symptoms engage in higher skin cancer risk behavior. This study aims to investigate the prevalence of BDD in frequent indoor tanners (as defined as tanning more than 10 times in the last year) and the relationship between BDD and outdoor tanning, indoor tanning, sunless tanning (application of creams, foams, and sprays), usage of cosmetic products, and sun protection behavior. Baseline measures included Dysmorphic Concern Questionnaire (DCQ), indoor/outdoor/sunless tanning frequency, sun protection behavior, and usage of tanning cosmetic products. Participants (N=74; 90.5% Caucasian, mean age=35, SD=12.6) completed the DCQ, a self-report questionnaire designed to measure BDD symptoms. Of 74 participants, 29 (39.2%) exceeded the cutoff for BDD, far higher than rates observed in the general population. Using simple linear regression analyses, BDD symptoms were significantly associated with more frequent indoor tanning (β=0.315, p=0.047), greater use of makeup bronzers (β=0.002, p=0.024), but not outdoor tanning, sunless tanning, and sun protection behavior. Findings suggest that BDD may be more common than expected among indoor tanners and these tanners engage in higher rates of indoor tanning, but not other skin cancer risk behaviors. Tanners with BDD symptoms may be at higher risk for skin cancer given their indoor tanning habits. Given the high rate of BDD among heavy tanners, dermatologists may be in a position to screen for BDD and refer patients for psychological treatment.

CORRESPONDING AUTHOR: Jonathan M. Scully, B.A., UMass Medical School Division of Preventative and Behavioral Medicine, Worcester, MA, 01655; jonathan.scully@umassmed.edu

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CHARACTERIZATION OF PRIMARY CARE-MENTAL HEALTH INTEGRATION PROGRAM IMPLEMENTATION

Chelsea Rothschild, PhD, Ashley Barroquillo, Psy.D., Jill Pate, MD, Sharon Gordon, Psy.D.

Tennessee Valley Healthcare System, Alvin C. York VAMC, Murfreesboro, TN

Characterization of Primary Care-Mental Health Integration Program ImplementationThe primary objective of this study was to gain preliminary data about veterans who present to the PC-MHI clinic. Referral information and data regarding patient sex, age, race, ethnicity, marital status, and number of psychiatric/medical diagnoses was also collected. This information provides descriptive data about the patient population within PC-MHI clinics at Alvin C. York VAMC to assist with providing specific training and education to the Patient Aligned Care Team (PACT) regarding psychiatric and behavioral health initiatives. Data from a random sampling of 230 primary care patients seen over the course of one year in PC-MHI were included. Descriptive analyses were conducted to categorize patients based on presenting problems/concerns and demographic variables. Results suggest complex patient referrals: a large variety of complex, multidimensional presenting concerns evidenced by primary encounter diagnosis are referred and seen in PC-MHI. There were no exclusionary criteria. Data revealed a primarily male (N=201), Caucasian (N=192), Married (56.5%) veterans. The mean age of this sample is 58, mean # of medical diagnoses 7.98, (range 0-25), mean number of psychiatric conditions was 2; however 97% of veterans referred had a significant psychiatric diagnosis. Results Suggest a wide range of type and severity of psychiatric conditions are referred to PC-MHI. Results also suggest co-location is a key element to integrating mental health into the primary care setting, 71.7% of patient referrals received from clinics with an embedded mental health provider. Future directions include ongoing data collection regarding patient population to provide evidence driven education efforts regarding highly comorbid psychiatric and medical diagnoses, assessing provider/patient satisfaction with integrated care services through both provider and patient satisfaction self-report measures, and implementation of an E-Consult to provide Pharmacological Support to the Primary Care Physician to assist with medication intervention for mild to moderate psychiatric co-morbidity in primary care.

CORRESPONDING AUTHOR: Chelsea Rothschild, PhD, Tennessee Valley Healthcare System, Alvin C. York VAMC, Murfreesboro, TN, 37129; chelsea.rothschild@va.gov

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COGNITIVE RESPONSES RECIPROCALLY TRANSMIT VULNERABILITY BETWEEN DEPRESSIVE AND SOMATIC SYMPTOMS

Kaitlin Harding, M.S.[1], Karly M. Murphy, MS[2], Melissa J. Garner, M.A.[3], Amy Mezulis, PhD[2]

[1]Seattle Pacific University, Bellevue, WA; [2]Seattle Pacific University, Seattle, WA; [3]Seattle Pacific University, Portland, OR

Despite high comorbidity between depressive and somatic symptom disorders (APA, 2013), cognitive mechanisms that transmit vulnerability between symptom clusters are largely unknown. Dampening, positive rumination and brooding rumination are three cognitive predictors of depression, with rumination indicated as a transdiagnostic vulnerability for both depressive and somatic disorders (Harvey et al., 2009). Dampening describes thoughts that decrease positive affect (PA) in response to positive events (Quoidbach et al., 2010), positive rumination describes thoughts that increase PA in response to positive events (Martin & Tesser, 1996), and brooding describes thoughts that increase negative affect (NA) in response to negative events (Treynor et al., 2003). To examine the potential transfer of symptoms through shared cognitive mechanisms, the current study examined bidirectional relationships between depressive and somatic symptoms as mediated by dampening and positive rumination in response to positive events and brooding in response to negative events. We hypothesized that greater dampening and less positive rumination would reciprocally predict greater depressive and somatic symptoms through decreasing PA in response to positive events. We also hypothesized that greater brooding would reciprocally predict greater depressive and somatic symptoms through increasing NA in response to negative events. Participants were 326 (73.6% female) young adults (M=19.12 yrs, SD=2.15 yrs) who completed baseline measures of depressive and somatic symptoms, followed by six weekly measures of cognitive responses and a final measure of depressive and somatic symptoms. Structural equation modeling controlled for the opposite symptom cluster at baseline. Results indicated that dampening ($\beta_{\mathrm{deptosom}}$=.086, p=.001; $\beta_{\mathrm{somtodep}}$=.088, p=.001) and brooding ($\beta_{\mathrm{deptosom}}$=.097, p=.001; $\beta_{\mathrm{somtodep}}$=.083, p=.001) mediated reciprocal pathways between depressive and somatic symptoms but positive rumination did not ($\beta_{\mathrm{deptosom}}$=-.012, p=.095; $\beta_{\mathrm{somtodep}}$=.000, p=.797). Findings indicate dampening and brooding in the reciprocal relationship between depressive and somatic symptoms though diminishing PA and amplifying NA in response to positive and negative events.

CORRESPONDING AUTHOR: Kaitlin Harding, M.S., Seattle Pacific University, Bellevue, WA, 98004; hardingk@spu.edu

6:00 PM-7:00 PM A053

COMPARING PROMIS AND LEGACY DEPRESSION MEASURES IN A COMMUNITY SAMPLE OF OLDER ADULTS

Jennifer B. Levin, PhD[1], Michelle E. Aebi[2], Kathleen Smyth, PhD[3], Curtis Tatsuoka, PhD[3], Edna Fuentes-Casiano, MA, MBA[3], Thomas Scheidenmantel, MD[4], Martha Sajatovic, MD[5]

[1]Case Western Reserve University School of Medicine, Solon, OH; [2]Case Western Reserve University School of Medicine, North Ridgeville, OH; [3]Case Western Reserve University, Cleveland, OH; [4]University Hospitals Case Medical Center, Cleveland, OH; [5]Professor of Psychiatry and of Neurology, Cleveland, OH

Objective: This study set out to compare performance of the Patient Reported Outcomes Measure Information System (PROMIS) 8a Short Form and selected "Legacy" depression scales, including the Geriatric Depression Scale (GDS), GDS Short Form (GDS-SF), and Montgomery-Asberg Depression Rating Scale (MADRS) in a well-educated and largely euthymic sample of older adults with varying levels of cognitive functioning.
Methods: This cross-sectional baseline analysis was part of a larger prospective cohort study. The PROMIS and Legacy depression scales were given to individuals age 70 and over. Participants were grouped into three categories of cognitive functioning: normal cognition, MCI, or mild/moderate dementia as assessed by the Saint Louis University Mental Status Examination.
Results: Mean age of the sample at baseline was 78.3. The majority was female (71%), white (78.6%), and had at least a high-school education (89%). Most did not have clinically significant depression at baseline and there were no significant differences between normal, MCI and dementia groups on PROMIS or Legacy depression scores. The percentage of individuals meeting at least mild symptomatology for clinically relevant depression was 20.7% on the PROMIS-8a, 17.9% on the GDS, 13.5% on the GDS-SF, and 19.0% on the MADRS. PROMIS-8a scores correlated moderately with the GDS ($r = .68$, $p=.00$), GDS-SF ($r=.65$, $p=.00$) and MADRS ($r = .56$, $p=.00$). Chi-square analyses show that while all measures identified a similar total of depressed individuals, the depression classification was significantly different on each. Also, the PROMIS-8a, GDS, and GDS-SF may underestimate depression severity level relative to MADRS.
Conclusions: The 8-item PROMIS depression scale correlates moderately well with the 30-item self-administered GDS, GDS-SF and the rater-administered MADRS. Measures differed on sensitivity to identify individuals with clinically relevant "threshold" depression in this sample. Given the brevity and ease of administration, our preliminary data indicate the PROMIS-8a depression scale may be useful as a depression screen in community-based samples.

CORRESPONDING AUTHOR: Jennifer B. Levin, PhD, Case Western Reserve University School of Medicine, Solon, OH, 44139; jennifer.levin@uhhospitals.org

6:00 PM-7:00 PM A054

COMPARING SELF-REPORTED COGNITIVE FUNCTION ACROSS NEUROLOGICAL CONDITIONS

Jin-Shei Lai, PhD, Cindy Nowinski, MD, PhD, Michael Kallen, PhD, David Cella, PhD

Northwestern University, Chicago, IL

OBJECTIVE: Cognitive problems are common among patients with neurological disorders. Both PROMIS and Neuro-QoL include self-report measures of cognition. Via Item Response Theory models, we linked these two systems on the same measurement continuum, and referenced scores to the US general population. Using these features, we compared cognition reported by patients with amyotrophic lateral sclerosis (ALS), stroke, multiple sclerosis (MS), Parkinson's disease (PD), and epilepsy (EP).
METHODS: Patients (n=581), recruited from specialty clinics across the US, completed Neuro-QoL Cognitive Function (COG): 101 stroke (55% male; mean age=59 yrs), 80 ALS (65% male; mean age=59 yrs), 161 MS (14% male; mean age=49.8 yrs), 120 PD (62% male; mean age=65 yrs), and 119 EP patients (51% male; mean age=47.3 yrs). COG were reported using the PROMIS T-score metric (Mean=50, SD=10) and compared to PROMIS Mental (MH), Physical Health (PH) and condition-specific legacy scales: Stroke Specific Quality of Life scale -Thinking (SSQOL-T) and Language (SSQOL-L); Functional Assessment of Multiple Sclerosis (FAMS) – Thinking/Fatigue; Quality of Life in Epilepsy-31(QOLIE)-Cognition; Montreal Cognitive Assessment (MoCA: PD), using Spearman's rho, except MoCA. T-test was used to evaluate the difference between PD with vs without normal MoCA.
RESULTS: Significant between-condition differences in COG were found, $F=20.5$ $p < 0.0001$. Mean (range) COG T-score = 48.7 (27.9-69.5), 50.2 (31.9-69.5), 58.2 (42.1-69.5), 49.1 (19.6-69.5), and 47.5 (20.4-69.5) for MS, PD, ALS, stroke and EP, respectively. Spearman's rho =0.80, -0.75, 0.63, and 0.80 between COG and FAMS-TF (MS), SSQOL-T, SSQOL-L (stroke), and QOLIE (EP), respectively. COG significantly differentiated PD with normal (n=64) vs. abnormal (n=55) MoCA, $t=-2.91$ $p=0.0043$; significantly ($p < 0.001$) correlated with MH, rho=0.62, 0.45, 0.46, and 0.54, for MS, PD, stroke and EP, respectively; with PH, rho=0.55, 0.39, 0.21 ($p=0.03$), 0.51 for MS, PD, stroke and EP, respectively. For ALS, COG was correlated with MH, rho=0.28 $p=0.015$, but not with PH, $p=0.43$.
CONCLUSIONS: Neuro-QoL Cognitive Function is a valid self-report cognition measure. By linking Neuro-QoL and PROMIS, we can compare COG in Neuro-QoL tested participants to the US general population.

CORRESPONDING AUTHOR: Jin-Shei Lai, PhD, Northwestern University, Chicago, IL, 60611; js-lai@northwestern.edu

6:00 PM-7:00 PM A055

COPING, MENTAL HEALTH AND ASTHMA CONTROL IN RACIALLY AND ETHNICALLY DIVERSE YOUTH

Erin M. Rodriguez, PhD[1], Harsha Kumar, MD[2], Annie Draeger, MEd[3], Lisa Sanchez-Johnsen, PhD[2]

[1]University of Texas at Austin, Austin, TX; [2]University of Illinois at Chicago, Chicago, IL; [3]University of Illinois at Chicago, Oak Park, IL

Asthma is the most common childhood chronic illness (Akimbami et al., 2012). Children with asthma are at risk for mental health problems (Katon et al., 2007), which may interfere with treatment adherence and disease control. Youth who cope effectively with their illness may experience better asthma control (Schreier & Chen, 1998), but previous research has not considered the role of emotional and behavioral problems in coping with asthma. Children ages 9-17 (N=42; 47% African-American; 35% Latino; 68% family income < $25,000) were recruited from an asthma outpatient clinic in a large Midwestern city. Children and parents completed the Responses to Stress Questionnaire regarding children's coping with asthma. Children reported their emotional and conduct problems on the Strengths and Difficulties Questionnaire and their disease control on the Asthma Control Test. Parent reports of child secondary control coping (e.g., acceptance, cognitive restructuring) were negatively correlated with emotional problems ($r = -.31$, $p < .05$) and conduct problems ($r = -.44$, $p < .01$). Similarly, child self-reported secondary control coping was negatively correlated with emotional problems ($r = -.49$, $p < .01$). Asthma control was negatively correlated with emotional ($r = -.44$, $p < .01$) and conduct ($r = -.35$, $p < .05$) problems and positively correlated with child self-reports of secondary control coping ($r = .33$, $p < .05$). Primary control coping (e.g., problem solving) was not associated with emotional or behavioral problems or asthma control. Regression analyses indicated that associations between secondary control coping and asthma control were indirectly accounted for by children' emotional problems for both parent-report of children's coping ($B = -.42$, b = 11.06, 95% CI [2.31, 28.05]) and child self-reported coping ($B = -.36$, b = 16.31, 95% CI [3.90, 35.21]). The findings suggest that secondary control coping is associated with better mental health and asthma control in youth with asthma. Furthermore, emotional problems account for the association between how children cope with asthma and their asthma control. Future studies should examine longitudinal links among these processes to determine appropriate targets for psychosocial intervention.

CORRESPONDING AUTHOR: Erin M. Rodriguez, PhD, University of Texas at Austin, Austin, TX, 778712; erodriguez@austin.utexas.edu

6:00 PM-7:00 PM A056

CULTURAL CONSIDERATIONS IN ASSESSING FOR BINGE EATING DISORDER

Megan Brault, Psy.D.

Edith Nourse Rogers Memorial Veterans Hospital, Acton, MA

Disordered eating behaviors are largely socially construed, and are evaluated based on cultural norms. This is specifically true for the diagnosis of Binge Eating Disorder (BED), which requires the consumption of an unusually large amount of food coupled with a loss of control (American Psychiatric Association (APA), 2013). Personal identities impact experiences of distress, control, food choice, eating environment and eating rituals. Despite this, little guidance is available on how to incorporate cultural identities in to the assessment for BED. Individuals holding minority identities (i.e. gender, race, ethnic background, SES, etc.) may be more likely to experience significant factors that impact their symptom presentation and treatment. Such factors might include family expectations and norms, food-related religious practices, lack of access to healthy food options, limited time to devote towards eating, or lack of awareness that the behavior is problematic in reaching eating-related goals. Identities greatly influence values, experiences, behaviors, and motivation for change. Likewise, the DSM-V has introduced the Cultural Formulation Interview (CFI), a set of 16 questions aimed to help clinicians gather pertinent cultural background data. The CFI is divided in to four sections (Cultural Definition of the Problem; Cultural Perceptions of Cause, Context, and Support; Cultural Factors Affecting Self-Coping and Past Help Seeking; and Cultural Factors Affecting Current Help Seeking; APA, 2013). Individuals may report significant factors during the CFI that impact their diagnosis and treatment. This paper aims to outline the gaps in the current BED literature, discuss the potential role of the CFI in BED-specific assessment, and provide suggested areas for future research that would increase cultural competency when assessing for BED.

CORRESPONDING AUTHOR: Megan Brault, Psy.D., Edith Nourse Rogers Memorial Veterans Hospital, Acton, MA, 01718; meg.brault@gmail.com

6:00 PM-7:00 PM A057

CUMULATIVE CHILDHOOD FAMILY ADVERSITY, TIMING OF PUBERTY AND ADOLESCENT DEPRESSIVE SYMPTOMS

Carol Strong, MengChe Tsai, Chung-Ying Lin

National Cheng Kung University, Tainan, Taiwan

The aims of the present study are to identify the long-term impact on depressive symptoms in children experiencing family adversity and whether this association was moderated by gender and early timing of puberty among adolescents in Taiwan, using a large-cohort longitudinal study and latent growth model (LGM) method. Childhood family adversity is one proposed compelling mechanism that contributes to depressive symptoms in adolescence, but there has been far less research in an Asian context. The onset of puberty has also been hypothesized and tested as a risk factor for depression in adolescence. The potential moderating effect of early timing of puberty and childhood adversity has rarely been tested in understanding adolescent depression. Data in this proposed study are from the Taiwan Education Panel Survey, a longitudinal study that started in 2001 and surveyed about 13,959 junior high school students (age 13). A core panel of 4,261 students were followed for three more waves (at ages 15, 17 and 18). Cumulative family adversity was defined by having more than one type of adverse family event up to age 12, such as experiencing parental divorce, death in the family, or episodes of mental disorders. Timing of puberty was defined as early if students had menarche or spermarche before age 12. Conditional LGM results show that having cumulative adversity is positively associated with the intercept, but negatively associated with the slope of depressive symptoms in adolescence ($p < .01$). Early pubertal timing is only positively associated with intercept ($p < .01$), but not significantly with the slope. Being female is positively associated with both intercept and slope of depressive symptoms ($p < .01$). We found no significant interaction effect between cumulative adversity and pubertal timing on depressive symptoms. Both cumulative family adversity and early pubertal timing contributes to depressive symptoms at age 13 when adolescents start junior high school. The adverse impact of adversity on adolescents' mental health decreased over time, especially for males. The adverse mental health impact of childhood adversity, early pubertal timing and gender differences for adolescents in Taiwan is evident.

CORRESPONDING AUTHOR: Carol Strong, National Cheng Kung University, Tainan, 701; carol.chiajung@gmail.com

6:00 PM-7:00 PM A058

ASSESSING THE DIETARY BEHAVIOR OF MIDDLE SCHOOL GIRLS

Shannon Chiles, B.S.[1], Marissa Alert, M.S.[1], Mary Kate Clennan, B.S.[2], Karyn Meshbane, MS[3], Patrice Saab, PhD[1]

[1]University of Miami, Coral Gables, FL; [2]University of Miami, Miami, FL; [3]University of Miami Miller Schools of Medicine, Miami beach, FL

Accurate analysis of dietary behavior is critical to evaluating obesity prevention and intervention trials in children. However, it is well documented that dietary behaviors are often challenging and time consuming to assess. This study compared the dietary reports obtained with an easy to administer self-report scale to a 24-hour dietary recall. Forty-four middle school girls completed Fahlman's Eating Behavior Scale (EBS), where they indicated how many times they consumed food from a particular group, and interviewers obtained 24-hour dietary recalls from each participant. The data collected from the 24-hour dietary recalls were also quantified by counting the times the participant reported that she consumed food from that food group. The ten food group categories were Dairy, Meat, Fried Meat, Fruits, Vegetables, Non-Nutritious Foods, Non-Nutritious Drinks, Whole Grain, Non-Whole Grain, and Beans. Spearman rank correlation coefficients were computed to examine the association between the EBS and the 24-hour dietary recall. There was a significant relationship between the EBS and 24-hour dietary recall measure for five of the food groups: Fried Meat (= .528, p < .001), Fruit (= .363, p = .016), Vegetables (= .315, p = .038), Dairy (= .301, p = .047), and Non-nutritious Drink (=. 528, p < . 001). Three additional food groups approached significance: Meat (=.275, p = .071), Non-Nutritional Food (=.278, p =.068), and Whole Grains (=.275, p < .070). The concordance between the EBS and 24-hour dietary recall for multiple food groups was notable. This study supports the use of the EBS as a dietary assessment tool for assessing the daily intake of fruits, vegetables, and dairy for middle school girls. Future research should continue to examine the reliability and validity of the EBS among middle school-aged girls and boys as well as the utility of the EBS in determining the adherence to the USDA guidelines among children and adolescents.

CORRESPONDING AUTHOR: Shannon Chiles, B.S., University of Miami, Coral Gables, FL, 33146-0751; shannon.chiles25@gmail.com

6:00 PM-7:00 PM A059

ASSOCIATIONS OF DISCIPLINE AND PARENTAL SUPPORT ON FRUIT AND VEGETABLE INTAKE IN UNDERSERVED ADOLESCENTS

Lauren Huffman, B.S., Dawn K. Wilson, PhD

University of South Carolina, Columbia, SC

Fewer than ten percent of adolescents meet national recommendations for daily fruit and vegetable (F+V) intake. Parenting practices, such as support, monitoring, and limit setting positively influence health behaviors, but negative or controlling practices, such as discipline and punishment, have not yet been fully explored. Parental support for health behaviors has been identified as a correlate of healthy diet in youth, but the role of discipline is not understood in relation to F+V intake, especially in underserved youth (low income, minorities). The purpose of this study was to examine whether parental discipline around health behaviors would interact with parental support in understanding F+V intake in underserved adolescents. In the presence of parental support, high levels of discipline were hypothesized to result in lower levels of adolescent F+V intake in comparison to low levels of discipline. Participants were 6th graders (N = 198, 77% African American, *Mage*= 11.4, 53% females) and their caregivers who were part of the Active by Choice Today (ACT) trial, a motivational and behavioral skills intervention aimed at increasing physical activity in underserved adolescents. Support and discipline were measured using parent-report surveys that have been previously validated, while F+V intake was measured using a nationally validated screener designed for adolescents. A hierarchical regression model controlling for sex, race, age, and body mass index of the adolescent demonstrated a trend for the overall model (F (7,190) = 1.62, $p < 0.14$). There was also a significant parent discipline x parent support interaction for youth F+V intake ($\beta = -0.09$, $p < 0.05$). A post-hoc comparison ($t=-2.03$, $p = 0.06$) showed that parental support was associated with higher levels of youth F&V intake under conditions of low discipline (*Mservings* = 1.86, *SD*=0.38) as compared to conditions of high discipline (*Mservings* = 1.22, *SD* = 0.83). Results provide preliminary support suggesting that discipline may be restrictive to adolescents, which may undermine the positive effects of parent support. Research is needed to examine the influence of positive and negative parenting practices on understanding underserved adolescent health behaviors to better inform future interventions.

CORRESPONDING AUTHOR: Lauren Huffman, B.S., University of South Carolina, Columbia, SC, 29201; lehuffman1@gmail.com

6:00 PM-7:00 PM A060

ASSOCIATIONS OF REGULATORY FOCUS WITH MULTIPLE HEALTH BEHAVIORS AND PRACTICES

Paul T. Fuglestad, PhD[1], Alexander J. Rothman, PhD[2], Colin G. DeYoung, PhD[2], William A. Cunningham, PhD[3]

[1]University of North Florida, Jacksonville, FL; [2]University of Minnesota, Minneapolis, MN; [3]University of Toronto, Toronto, ON, Canada

Using items from the open-access International Personality Item Pool (IPIP; Goldberg, 1999), Fuglestad et al. (2014) created a new measure of dispositional differences in regulatory focus (Higgins, 1997). The purpose of the present research was to examine associations of this regulatory focus measure with multiple health behaviors and practices in the Eugene Springfield community sample (ESCS; N=480; Goldberg, 2008). The participants in the ESCS have completed various questionnaires and IPIP items over a period of many years. In addition to the items used to assess regulatory focus (9 promotion focus items; 9 prevention focus items), participants completed a 39-item health practices questionnaire assessing risk avoidance (e.g., reckless traffic behavior, household safety), good health practices (e.g., eating a balance diet and exercising), and health concern (e.g., gathering information about things that could affect health) and a 48-item eating habits and practices inventory assessing vegetable/fiber consumption, high calorie/fat food consumption, and fat/calorie trimming practices. Although both promotion focus and prevention focus were positively related to good health practices ($r = .13$, $p < .01$; $r = .19$, $p < .01$) and health concern ($r = .14$, $p < .01$; $r = .19$, $p < .01$), promotion focus was negatively related to risk avoidance ($r = -.18$, $p < .01$), whereas prevention focus was positively related to risk avoidance ($r = .35$, $p < .001$). Examining eating habits and practices, promotion focus was positively related to vegetable and fiber consumption ($r = .17$, $p < .01$), but unrelated to high calorie/fat food consumption and fat/calorie trimming practices. Prevention focus was not related to vegetable and fiber consumption, but was negatively related to consuming high calorie/fat foods ($r = -.11$, $p < .05$) and positively related to fat/calorie trimming practices ($r = .19$, $p < .01$). Results suggest that dispositional differences in promotion focus and prevention focus are distinctly related to multiple health behaviors and practices.

CORRESPONDING AUTHOR: Paul T. Fuglestad, PhD, University of North Florida, Jacksonville, FL, 32224; paul.fuglestad@unf.edu

6:00 PM-7:00 PM A061

AWARENESS OF DIETARY GUIDELINES AND HEALTHY EATING PRACTICES AMONG COLORECTAL CANCER SURVIVORS

Nikki Hawkins, PhD[1], Zahava Berkowitz, MSc, MSPH[2], Juan L. Rodriguez, MPH, MS[3]

[1]Centers for Disease Control & Prevention, Atlanta, GA; [2]CDC, Chamblee, GA; [3]Centers for Disease Control and Prevention, Atlanta, GA

Background & Purpose: Although cancer survivors may benefit from targeted interventions to improve their diet, it is unclear how much cancer survivors generally know about dietary guidelines and what the common barriers are to following these practices. We sought to answer questions about colorectal cancer (CRC) survivors' general familiarity with USDA dietary guidelines for healthy eating, their healthy eating habits, and perceived facilitators and barriers to healthy eating, including social support and self-efficacy for maintaining a healthy diet. Methods: 593 individuals (50% male; mean age 74 years) diagnosed with colon or rectal cancer approximately 6 years prior to the study in early 2010 were identified through California Cancer Registry records and participated in a cross-sectional survey of prevention behavior after cancer. Questions assessed familiarity with key recommendations from the "Food Groups to Encourage," "Fats," "Carbohydrates" and "Alcoholic Beverages" sections of the 2005 USDA dietary guidelines. We also assessed current healthy eating habits, perceived healthfulness of current diet, facilitators and barriers to healthy eating, perceived social support, and self-efficacy. Results: CRC survivors were most familiar with- and most likely to follow recommendations to choose lean and low-fat foods and least familiar with recommendations to limit alcohol (15%, CI 12%-18%, "never heard of it"). Over 13% reported never/rarely choosing food containing whole grains over processed/refined grains; 56% indicated their diet was not always as healthy as it should have been. Top barriers to healthy eating habits included effort (27%) and distaste for healthy foods (24%) while facilitators included believing that it increased overall health (91%) and long life (83%). Over 79% reported social support for healthy eating and 63% felt mostly or totally confident in their ability to eat a healthy diet.Conclusions: Results provide an overview of familiarity with and adherence to key healthy eating recommendations among CRC survivors. Results provide a benchmark for assessing general awareness of healthy eating recommendations and suggest priority areas for educational interventions.

CORRESPONDING AUTHOR: Nikki Hawkins, PhD, Centers for Disease Control & Prevention, Atlanta, GA, 30341; cyt4@cdc.gov

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BRIEF SUGAR-REDUCTION INTERVENTION

Maija B. Taylor, M.A.[1], Jessica E. Borushok, M.A.[1], Debra Hoffmann, M.A.[1], Kirstin J. Lauritsen, MA[1], James J. Rossi, M.A.[2], Nova G. Hinman, M.A.[3], Jacob Burmeister, M.A.[1], Robert Carels, PhD, MBA[2], Jenna M. Marx, M.S.[1]

[1]Bowling Green State University, Bowling Green, OH; [2]East Carolina University, Greenville, NC; [3]Bowling Green State University, Perrysburg, OH

Objective: Excess sugar consumption is common among college students and has damaging effects on health. It is important to create and evaluate brief interventions that are oriented to reduce sugar consumption. The current study evaluated the effectiveness of a brief sugar-reduction intervention in a college student sample.

Method: Participants ($N = 57$) were college students with an average age of 19.7. Over two-thirds were freshman (72%), female (77%), and non-Hispanic white (72%). Average body mass index was 24.3, with 25% of the sample classified as overweight or obese. The ninety minute intervention consisted of an overview of the history of sugar and the harmful physiological effects of sugar consumption, common dietary sources of added sugar, healthy alternatives to common high-sugar products, an experiential exercise demonstrating sugar content of common foods, a mindful eating exercise, and individualized implementation intentions to reduce consumption of primary dietary sources of sugar. Participants completed dietary assessment immediately before and after the workshop, and at one week follow-up.

Results: From pre-test to one week follow-up, participants significantly reduced their added sugar consumption, from a mean of 75.4 grams ($SD = 44.5$), to a mean of 54.7 grams ($SD = 23.9$); $t(49) = 4.67$, $p < .001$, $d = .58$. From pre-test to follow-up, participants significantly reduced their consumption of sugar from sugarsweetened beverages from a mean of 40.3 grams ($SD = 48.5$), to a mean of 20.6 grams ($SD = 17.0$); $t(50) = 3.47$, $p = .001$, $d = .54$.

Discussion: The findings of the current study suggest that this comprehensive yet brief sugar intervention is effective in reducing added sugar consumption in college students. Future research should examine the long-term maintenance of decreased sugar consumption following similar interventions and the effects of significant sugar reductions on health parameters.

CORRESPONDING AUTHOR: Maija B. Taylor, M.A., Bowling Green State University, Bowling Green, OH, 43402; maijat@bgsu.edu

6:00 PM-7:00 PM A063

BRIEF, COMPUTER BASED IMPLICIT AND EXPLICIT ATTITUDE MEASURES TO PREDICT ONLINE AND ACTUAL FOOD CHOICE

Angela Pfammatter, PhD[1], Amy Shirong Lu, PhD[2], David E. Conroy, PhD[1], Bonnie Spring, PhD, ABPP[3]

[1]Northwestern University, Chicago, IL; [2]Northeastern University, Boston, MA; [3]Northwestern University Feinberg School of Medicine, Chicago, IL

Understanding predictors of dietary choices could impact the design and implementation of behavioral interventions to improve diet. Recent work on dual-process models of decision-making and behavior suggests that both implicit (IA) and explicit attitudes (EA) towards food can influence food choice but the IA measures can be too demanding for some populations. The purpose of the current study was to develop and evaluate the validity of brief online IA and EA measures in relation to virtual and in-person food choice. Participants (n=70) were 61% female, 46% White, 34% Black, and BMI ranged from 19-41 (mean=26.89). Participants attended a lab session to complete measures on a laptop computer. The same 5 healthy and 5 unhealthy foods were presented for all measures. For the EA measure, participants self-reported attitudes for each of the 10 food items. After practice trials, participants completed a choice reaction time task to assess IA toward the foods. Participants then chose 5 items in an online grocery store and one food to consume immediately. A logistic regression model with EA scores only was significant in predicting actual food choice, $\chi^2(2)=14.56$, p < .001 and explained 28% of the variance, classifying 76% of cases correctly. One unit increase in unhealthy EA scores increased odds of choosing an unhealthy food by 18%. Similarly, in a linear regression model, composite EA score predicted virtual food choices, $\beta=.23$, t(65)=9.17, p < .001, $R^2=.57$. Contrary to hypotheses, IA was not associated with either virtual or actual food choice. These findings support the notion that EA could have a stronger role than IA in predicting dietary behavior. The IA measure used in this study did not have the ability to predict behavior, possibly due to its brevity or demand effects during the criterion measurement. Further research is needed to refine the computer-based IA measure.

CORRESPONDING AUTHOR: Angela Pfammatter, PhD, Northwestern University, Chicago, IL, 60611; angela.pfammatter@northwestern.edu

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CAN APPROACH MOTIVATION TRAINING INCREASE FRUIT AND VEGETABLE CONSUMPTION?

Casey K. Gardiner, B.A., Angela Bryan, PhD

University of Colorado Boulder, Boulder, CO

Fruit and vegetable consumption confers many health benefits and has been associated with decreased risk for weight gain and obesity, yet most American adults do not meet the guidelines for recommended consumption. The present work examines one potential mechanism to increase consumption: enhancing approach motivation toward fruits and vegetables. The study employs a novel application of the Approach Avoid Task (AAT; Wiers et al., 2011), a computerized behavioral task that can measure and train approach and avoidance motivation toward classes of stimuli. The AAT has previously been used to measure approach motivation toward substances, predict increases in substance use, and successfully train avoidance toward alcohol among alcohol dependent individuals. Undergraduate participants (n=66) completed one of three versions of the task, designed to increase approach motivation toward fruits and vegetables, increase avoidance motivation toward fruits and vegetables, or not have an impact on motivation (i.e. control). Following the task, participants had a laboratory-based eating opportunity while completing self-report measures. It was predicted that participants who underwent approach motivation training would consume more fruits and vegetables than participants who underwent other forms of training, though this hypothesis was not supported. That is, there were no group differences in fruit and vegetable consumption during the laboratory eating opportunity [$F(2,63) = 1.53$, $p = .23$]. Moreover, the different versions of the AAT did not impact critical psychosocial determinants of future eating behavior from the Theory of Planned Behavior (Ajzen, 1985; Conner, Norman, & Bell, 2002), namely perceived behavioral control [$F(2,63) = 0.96$, $p = .39$] and intentions [$F(2,61) = 0.88$), $p = .42$]. These findings suggest that the motivational mechanisms underlying healthy eating may be distinct from those associated with substance use, and more broadly, that interventions designed to increase engagement in health protective behaviors may require different approaches than those designed to decrease engagement in health risk behaviors.

CORRESPONDING AUTHOR: Casey K. Gardiner, B.A., University of Colorado Boulder, Boulder, CO, 80309; casey.gardiner@colorado.edu

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A CONDITIONAL PROCESS MODEL OF FAT TALK IN COLLEGE WOMEN BASED ON LEVEL OF SELF-COMPASSION

Jennifer B. Webb, PhD[1], Nadia Jafari, B.A.[2], Mallory F. Fiery, M.A.[2]

[1]University of North Carolina at Charlotte, Charlotte, NC; [2]UNC Charlotte, Charlotte, NC

Fat talk has been framed as the relational manifestation of the “normative body discontent” many, especially young women face in modern society’s appearance-driven culture. These conversations are characterized by the mutual disclosure of disparaging commentary regarding some aspect of one’s body size, shape or weight and have been linked to impaired health and well-being (e.g., body image disturbance, disordered eating). In tandem with this phenomenon, an equally concerning sociocultural trend has been the rise of weight stigmatization corresponding to the heightened public awareness of calls to eliminate the “obesity epidemic”. In efforts to integrate these lines of research, the primary aims of the present investigation were: 1) to examine whether anti-fat attitudes (i.e., dislike, fear of fat, and willpower) predicted fat talk, 2) to evaluate the extent to which these relationships were mediated by body shame, and 3) to ascertain whether self-compassion, a Buddhism-inspired adaptive self-regulatory quality would moderate the proposed indirect effects. A weight-diverse sample of 293 college women attending a large state institution in the southeastern U.S. completed self-report instruments of the variables of interest via an online survey format. Hayes’ (2013) regression-based PROCESS macro involving 10,000 bootstrap resamples per analysis was used to evaluate the presence of the hypothesized direct, indirect, and conditional indirect effects. The 95% confidence interval (CI) excluding zero was used to interpret the significance of the effects controlling for body mass index. As predicted, significant direct effects emerged in all 3 models. Results also confirmed the indirect effects of all 3 dimensions of anti-fat attitudes on fat talk via body shame (dislike: $\beta = .20$, 95% CI: .13 to .28; fear of fat: $\beta = .25$, 95% CI: .18 to .33; willpower: $\beta = .08$, 95% CI: .01 to .15). The size of these effects was dependent upon level of self-compassion [index of moderated mediation: dislike: -.03, 95% CI: -.06 to -.01; fear of fat: -.05, 95% CI: -.08 to -.01; willpower: -.01, 95% CI: -.03 to -.001)] with greater attenuation at higher self-compassion. Results point to useful process variables to target in mitigating the impact of internalized weight bias on fat talk in college women and may help clarify who is at higher risk.

CORRESPONDING AUTHOR: Nadia Jafari, B.A., UNC Charlotte, Charlotte, NC, 28223; njafari@uncc.edu

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ACHIEVING CLINICALLY SIGNIFICANT WEIGHT LOSS: HOW SOON CAN WE RESPOND TO NON-RESPONDERS?

A Lauren Crain, PhD[1], Nancy E. Sherwood, PhD[1], Evan Forman, PhD[2], Meghan L. Butryn, PhD[2], Daniel Almirall, PhD[3], Robert W W. Jeffery, PhD[4], Rona L Levy, M.S.W., PhD, MPH[5]

[1]HealthPartners Institute for Education and Research, Bloomington, MN; [2]Drexel University, Philadelphia, PA; [3]University of Michigan, Ann Arbor, MI; [4]University of Minnesota, Minneapolis, MN; [5]University of Washington, Seattle, WA

Background: State-of-the art behavioral interventions can help people lose 8-10% of body weight over a 6 month period, typically the nadir for weight loss efforts. Unfortunately, 40-60% of participating adults do not achieve this clinically significant weight loss goal. If early response to treatment accurately predicts successful weight loss, identifying early non-responders and either augmenting or switching treatment approaches could be a potentially cost-effective approach to enhancing overall success rates. However, clinically useful definitions for early response/non-response have not been established. Purpose: To systematically compare alternative definitions for identifying early responders/non-responders to standard behavioral weight loss intervention based on weight loss during treatment, rate of weight loss, and program attendance, as well as the timing at which early responders/non-responders are identified. Methods: Weekly weight data collected during intervention sessions and at baseline and 6-month research assessments from four behavioral weight loss trials (n=492) were pooled. Receiver operating characteristic (ROC) curves were used to compare alternate definitions for early response/non-response. The accuracy in predicting successful weight loss at month 6 (10% weight loss) for each was quantified using the area under the ROC curve (AUC). Results: Early response/non-response definitions based on cumulative weight loss to date, either in pounds or as percent of starting weight lost, more accurately predict successful weight loss than rules based on rate of loss (1, 1.5, 2 lbs/week) or program attendance. By Week 3, pounds (AUC=.72) and percent lost (AUC=.73) accurately predicted success, and better than rate-(AUCs=.60-.66) or attendance-based rules (AUCs=.52-.53). We will demonstrate how to use model-predicted likelihoods (e.g., participants losing less than 3% of body weight only have a 43% success likelihood) to refine a non-response definition (e.g., 3% weight loss by 3 weeks) to meet specific objectives such as a high non-responder rate. Conclusions: Simpler definitions for early response/non-response based on amount or percent of weight loss during treatment predict successful weight loss at month 6 at least as accurately as more complicated definitions.

CORRESPONDING AUTHOR: A Lauren Crain, PhD, HealthPartners Institute for Education and Research, Bloomington, MN, 55440; lauren.a.crain@healthpartners.com

6:00 PM-7:00 PM A067

AN EXAMINATION OF WEIGHT SUPPRESSION AS A PREDICTOR OF OUTCOMES IN BEHAVIORAL WEIGHT LOSS TREATMENT

Emily Wyckoff, B.A., Leah Schumacher, B.S., Stephanie Manasse, M.S., Katherine Schaumberg, PhD, Evan Forman, PhD, Meghan L. Butryn, PhD, Michael Lowe, PhD

Drexel University, Philadelphia, PA

While behavioral weight loss (BWL) is effective at achieving an average weight loss of approximately 10% in the first year, a substantial number of participants do not lose weight or regain lost weight. Further, an important minority of participants drop out of BWL programs altogether. Weight suppression (i.e., difference between highest weight and current weight) could potentially partially explain differences in success. Research has suggested that previous diet attempts and weight fluctuation predict attrition and lesser weight loss in BWL interventions. Since most individuals have had several weight loss attempts prior to entry into BWL programs, many participants may already be weight suppressed at the start of treatment. In one of the first investigations of its kind, we sought to examine whether weight suppression predicted outcomes across two 12-month BWL interventions. Participants (n= 296) were overweight and obese (Body Mass Index = 27.0-50.0 kg/m^2) adults (ages 18-70). At baseline, participants completed the Weight and Lifestyle Inventory, which includes self-report of weight history. In the current sample, weight suppression ranged from 0 to 34.0 kg ($M = 3.73$ kg, $SD = 5.84$ kg). Linear regression analyses indicated that weight suppression was not predictive of weight loss early in treatment (i.e., six weeks, $\beta = .02$, $p = .59$) but negatively predicted weight loss at post-treatment ($\beta = -.17$, $p < .01$). Logistic regression analyses revealed that greater weight suppression at baseline decreased the likelihood of treatment completion (Wald chi^2 = 5.87, OR = .18, $p = .01$). These results suggest that despite similar weight loss early in treatment, weight suppressed individuals are unable to sustain the rate of weight loss experienced by those entering BWL closer to their highest weight. Additionally, those who are more weight suppressed are more likely to drop out of treatment, potentially due to frustration with limited weight loss. Future research efforts should be directed toward better understanding the potential physiological, psychological, and behavioral mechanisms of poorer weight loss outcomes and treatment attrition in weight-suppressed individuals.

CORRESPONDING AUTHOR: Emily Wyckoff, B.A., Drexel University, Philadelphia, PA, 19104; epw38@drexel.edu

6:00 PM-7:00 PM A068

AN OBSERVATIONAL STUDY ON HOW STUDENTS SEARCH FOR WEIGHT MANAGEMENT INFORMATION ON THE INTERNET

Valerie Senkowski, BS, Paul Branscum, PhD, RD

The University of Oklahoma, Norman, OK

Currently, 97% of young adults (18-29 years) report using the Internet, and across college campuses usage is high, as students go online for entertainment, and a number of school-related tasks such as scheduling courses, and accessing class materials. Some reports also suggest that students use the Internet as a primary source for finding health related information, of which, weight management (ex. nutrition and physical activity) is the among the most searched topics. While a number of studies have reported how many students use the Internet to find health-related information, fewer have attempted to examine how students search for such information. Therefore, the purpose of this study was to determine how college students search for information related to weight management on the Internet. This study utilized a cross-sectional design, whereby a sample of undergraduate students (n=30) were given eleven scenarios related to weight management, and asked to find the answer to each scenario using the Internet. Observations were made using the Camtasia Studio software, a computer program that has the capacity to record a computer user’s screen in real time, while simultaneously recording the user’s verbal descriptions of their search strategy. Results showed that participants used search engines 97% of the time, and Google was used by all participants but one. Students also heavily relied on Google to assist them in crafting search parameters, such as suggested key words and spelling corrections. Participants varied in how successful they were in finding correct answers. Students were most successful for the scenarios on how to determine whether an individuals is normal weight (Scenario 2, 96.4% correct), and how many servings of vegetables an adult should consume daily (Scenario 11; 96.4% correct), while the most challenging scenario was how many calories an individual should restrict per day to lose 1 pound per week (Scenario 6; 57.1% correct). Transcripts from the audio recordings revealed four qualitative themes: (1) Google as an efficient search tool; (2) perceptions about what information is common sense; (3) determinants of website credibility; and (4) difficulties finding and interpreting information. Implications for future research and practice will be discussed.

CORRESPONDING AUTHOR: Valerie Senkowski, BS, The University of Oklahoma, Norman, OK, 73019; valerie.m.senkowski-1@ou.edu

6:00 PM-7:00 PM A069

ASSOCIATIONS AMONG PERCEIVED NEIGHBORHOOD ATTRIBUTES AND BODY COMPOSITION AMONG RURAL RESIDENTS

Kristen McAlexander, PhD[1], Veronica Castillo, BS[2], Brittany Boyett, BS[3], Lucas Burge[4], Bullitt Osborne, BS[4]

[1]Our Lady of the Lake University, San Antonio, TX; [2]University of Texas San Antonio, San Antonio, TX; [3]Schreiner University, Houston, TX; [4]Schreiner University, Kerrville, TX

Studies suggest that rural communities are less supportive for active transportation, and residents are more vulnerable to physical inactivity and obesity. Urban residents' perceptions of their built environments have shown to be significantly associated with weight status, but few studies have examined these associations among rural residents, despite rising obesity rates. This cross-sectional pilot study measured the associations of built environmental perceptions with body mass index (BMI) and percent body fat among 54 Texas Hill Country residents (64.8% female, M age=24.3 ± 9.5 years) as part of the pilot project: MYHEALTH (Measuring Your Healthful Environmental Attributes while Living in the Texas Hill country). Participants voluntarily attended the annual Schreiner University Health Fair in the Fall of 2013. Trained research assistants measured height and weight and used a bioimpedance monitor with scales to measure percent body fat and BMI. Perceived, or self-reported, physical activity resource and sidewalk density was measured by the self-administered International Physical Activity Prevalence Study environmental survey module. Bivariate analyses among environmental perceptions and weight status variables suggested significant associations ($ps < .05$) and results were used to inform regression analyses. Regression models accounted for age, gender and ethnicity and analyzed the associations among perceived physical activity resource and sidewalk density and resident BMI (M= 26.4 ± 4.5 kg/m^2) and percent body fat (Female M =30.7 ± 9.7%, Male M=16.7 ± 7.6 %). Perceived physical activity resource and sidewalk density were not significantly associated with BMI. Perceived physical activity resource density (Beta=.306, t=2.126) positively predicted percent body fat, $F(4,37)$=6.727; p=.000, but perceived sidewalk density did not. Although perceived physical activity resource density was associated with percent body fat, this association was positive, suggesting other unexamined, yet important, relationships between perceived neighborhood characteristics and percent body fat may exist. More research is needed to clarify the specific mechanisms that relate physical activity resource perceptions to body composition among rural residents.

CORRESPONDING AUTHOR: Kristen McAlexander, PhD, Our Lady of the Lake University, San Antonio, TX, 78207; kmmcalexander@lake.ollusa.edu

6:00 PM-7:00 PM A070

BARRIERS AND FACILITATORS TO HEALTHY LIFESTYLE IN YOUTHS WITH SERIOUS EMOTIONAL DISTURBANCE

Katelynn Bourassa, B.A.[1], Aaron Lee, M.S.[1], Christine McKibbin, PhD[1], Cynthia Hartung, PhD[1], Lydia Prado, PhD[2]

[1]University of Wyoming, Laramie, WY; [2]Mental Health Center of Denver, Denver, CO

Youths with serious emotional disturbance (SED) are twice as likely to be obese as the general population of youths (Hammerman, Dreiher, Klan, Munitz, Cohen, & Goldfracht, 2008). This is concerning, as obesity is associated with a number of negative health and psychological outcomes in youths (e.g., Correll, Manu, Olshanskiy, Napolitano, Kane, & Malhotra, 2009; Strauss, 2000). Few, if any, obesity intervention models that are tailored to meet the needs of youths with SED exist. Understanding barriers and facilitators of healthy lifestyle is a first-step toward development of an intervention. Qualitative methods were employed as a formative step to developing an initial understanding of factors that influence healthy lifestyles in this population. A sample of 55 participants, 21 youths ages 9-17 with a diagnosis of SED, 19 parents or guardians of youths ages 9-17 with a diagnosis of SED, and 15 community mental health providers who serve youths with SED participated in the study. Participants were recruited from community mental health centers in Wyoming and Colorado via brochure or provider referral. Participants completed a sociodemographic form and a semi-structured interview regarding healthy lifestyle behaviors. Parents were (M=38.84, SD=8.87) years of age, Non-Latino White (n=16, 84.2%), and female (n =17, 89.5%). Youths were (M=12.04, SD =3.49) years of age, Non-Latino White (n =14, 66.7%), and male (n =15, 71.4%). Providers were Non-Latino White (n =11, 73.3%), and female (n =13, 86.7%), with an average of 12.67 (SD=8.67) years of experience working with youths. Grounded theory methodology was used to examine the barriers and facilitators experienced by families of youths with SED. Barriers to healthy lifestyle behaviors included: taste and texture, lack of access (e.g., poverty), and psychiatric symptoms. Facilitators included: social support, access (e.g., food banks), and techniques (e.g., exercising with friends). Families of youths with SED experience a number of general (e.g., poverty) and unique (e.g., psychiatric symptoms) barriers to healthy eating and exercise, but also possess strengths to challenge those barriers. These results highlight important targets of accessible and potentially acceptable healthy lifestyle interventions for families of youths with SED.

CORRESPONDING AUTHOR: Katelynn Bourassa, B.A., University of Wyoming, Laramie, WY, 82072; kmcconn4@uwyo.edu

6:00 PM-7:00 PM A071

BMI MEASUREMENT IN WOMEN, ATTENTION TO THE THIN IDEAL, AND DEPRESSED MOOD: AN EYE TRACKING STUDY

Tony T. Wells, PhD[1], Hayley Twyman, B.S.[2], Melissa Manila[1]

[1]Oklahoma State University, Stillwater, OK; [2]University of Central Oklahoma, Edmond, OK

There is substantial evidence that elevated body mass index (BMI) is associated with negative health outcomes such as cardiovascular disease and type 2 diabetes. As such, the calculation of BMI via weight and height measurements is standard practice in medical settings in the United States. While BMI measurements can help physicians and other medical health professionals calculate potential health risks and advise patients on preventive health measures, there may be negative psychosocial effects of BMI measurement in women. For example, recent research suggests that inducing a body focus in women leads to increased depressed mood. The current study examined the relationship between taking BMI measurements and acute effects on mood and attention for thin ideal images in 60 young adult (M age = 19.8 years) women. Participants were randomized to one of three conditions: BMI with normative (i.e., "underweight", "normal weight", "overweight", "obese") feedback (BMIf), BMI without feedback (BMIn), and a control condition where BMI measurements were not taken. All groups completed an eye tracking task evaluating their attention for thin ideal and non-thin ideal images of women. Participants completed a brief measure of depressed mood at three time points. Results indicated a significant effect of group on attention for thin ideal images, F (59, 2) = 7.4, p = .001, but not for non-ideal images, F < 1, p = .48. The significant effect was driven by greater attention by the BMIn group compared to the BMIf, t (41) = 2.6, p = .012, and control, t (37) = 3.8, p = .001, groups. There was also a significant effect of group on depressed mood with the BMIn group demonstrating increased depressed mood following eye tracking, t (21) = 2.4, p = .023. Other groups did not demonstrate a significant change in mood. There was a significant association between attention to thin ideal images and increase in depressed mood, r (59) = .42, p = .001. Importantly, BMI is not associated with change in mood, p = .26. These results indicate that taking measurements for calculating BMI may have acute, negative effects on women if the measurements do not include normative feedback. This suggests that it is important for medical professionals to provide normative feedback to women when taking BMI measurements.

CORRESPONDING AUTHORs: Tony T. Wells, PhD, Oklahoma State University, Stillwater, OK, 74078; tony.wells@okstate.edu; Melissa Manila, Oklahoma State University, Stillwater, OK, 74075; mmanila@okstate.edu

6:00 PM-7:00 PM A072

CAN AN INTERVENTION ENHANCING POSITIVE AFFECT LEAD TO WEIGHT LOSS? A FEASIBILITY STUDY.

Erica Jane. Cook, PhD[1], Faye Powell, PhD[1], Angel Marie. Chater, PhD[2]

[1]University of Bedfordshire, Luton, United Kingdom; [2]University College London, London, United Kingdom

Background: Positive emotions have been researched to be beneficial for health. This research takes a novel approach to weight loss using the theory of implementation-intentions to increase both personal control beliefs and positive affect. Method: A total of 92 participants who had a BMI of 25+ (M=32.00, SD=5.80) with a mean age of 37.89 (SD=15.62) were randomly allocated to either an intervention (N=56) (if-then planning self-help leaflet) or control group (N=36) over a four week period. Participants completed questionnaires at 3 time points: pre (T1), 2 weeks (T2) and at 4 weeks (T3) measuring generalised self-efficacy, depression, anxiety, happiness, eating behaviour (binge, emotional, external, and restrained) alongside perceived body satisfaction. Results: Repeated measures ANOVA confirmed that the intervention had significantly increased levels of generalised self-efficacy (p<.01) happiness (p < .01) and life satisfaction (p < .01) from T1 to T3 compared to the control. Furthermore, results confirmed that participants in the intervention group at T3 had significantly lower levels of depression (p<.01), anxiety (p < .05) alongside lower levels of external (p<.001) and binge eating behaviour (p<.01). There was also a reduction in BMI although this was not significant (p>.05). Conclusion: The presented research highlights how 'if-then' plans can be tailored to increase levels of self-efficacy and positive affect, factors which are conducive to positive health behaviour change. Suggestions are made to the inclusion of affect as a mediator within contemporary health psychology cognition models.

CORRESPONDING AUTHORs: Erica Jane. Cook, PhD, University of Bedfordshire, Luton, LU1 3JU; erica.cook@beds.ac.uk; Faye Powell, PhD, University of Bedfordshire, Luton, LU1 3JU; faye.powell@beds.ac.uk

6:00 PM-7:00 PM A073

CHARACTERISTICS OF COLLEGE STUDENTS PARTICIPATING IN A HEALTHY EATING AND ACTIVITY INTERVENTION

Nicole Kimura, B.A., Julie Blow, PhD, Erica Landrau, B.A., Sofia Lopez, Francisco Sagredo, Theodore V. Cooper, PhD

University of Texas at El Paso, El Paso, TX

Studies suggest that motivation to exercise regularly and eat healthily is associated with behavior change. Construct importance is similarly related to outcomes. This study assessed the association between importance and motivation and baseline characteristics of Hispanic college students (N=267) who participated in a healthy eating and physical activity intervention.Measures included demographics, theoretical constructs from Self-Determination Theory and Transtheoretical Model, and eating behaviors. Six multiple linear regression models were constructed to assess importance and motivation for weight, exercise, and eating healthily, and their relationship to relevant constructs.Greater importance of weight was related to endorsing more positive aspects of losing weight (WDB pros) ($\beta = .402$, $p < .001$). Greater motivation to change weight was related to increased age ($\beta = .127$, $p = .036$), higher perceived competence (PC) for diet ($\beta = .172$, $p = .022$), and WDB pros ($\beta = .383$, $p < .001$). Greater importance of regularly exercising was associated with advanced stages of change (SOC) for exercise ($\beta = -.302$, $p < .001$), greater PC for exercise ($\beta = .272$, $p < .001$), WDB pros ($\beta = .155$, $p = .009$), and no family history of cancer ($\beta = -.143$, $p = .008$). Increased motivation to exercise regularly was associated with greater body mass index ($\beta = .118$, $p = .020$), being in advanced SOC for exercise ($\beta = -.149$, $p = .009$), greater PC for diet ($\beta = .173$, $p = .007$) and exercise ($\beta = .402$, $p < .001$), WDB pros ($\beta = .149$, $p = .008$) and no family history of high blood pressure ($\beta = -.114$, $p = .049$) or cancer ($\beta = -.159$, $p = .002$). Greater importance of a healthy diet was associated with greater PC for diet ($\beta = .561$, $p < .001$), lower PC for exercise ($\beta = -.231$, $p = .001$), and WDB pros ($\beta = .187$, $p = .002$). More motivation to eat healthily was associated with older age ($\beta = .173$, $p = .001$), lower body mass index ($\beta = -.103$, $p = .049$), greater PC for diet ($\beta = .594$, $p < .001$), lower PC for exercise ($\beta = -.183$, $p = .006$), and WDB pros ($\beta = .160$, $p = .006$) and cons ($\beta = -.108$, $p = .047$). These findings can help researchers tailor interventions based on level of motivation and importance in order to obtain successful behavior change.

CORRESPONDING AUTHOR: Nicole Kimura, B.A., University of Texas at El Paso, El Paso, TX, 79968; nicole.m.kimura@gmail.com

6:00 PM-7:00 PM A074

CLASSIFYING WEIGHT STATUS IN ADOLESCENTS: A COMPARISON OF CDC BMI PERCENTILE AND IOTF CUT POINTS

Kaigang Li, PhD, Denise Haynie, PhD, MPH, Hira Palla, BS, Leah Lipsky, PhD, Bruce Simons-Morton, PhD

National Institute of Child Health and Human Development, Bethesda, MD

Background: A difficulty in assessing changes in weight status among emerging adults is the inconsistency of the Centers for Disease Control and Prevention (CDC) standards. For those ≤20 years the standards are based on percentile ranking of body mass index (BMI, kg/m^2) for age; for those >20 years there is a single BMI cutoff. The age and sex specific BMI cutoffs developed by the International Obesity Task Force (IOTF) may provide a uniform method of assigning weight status across emerging adulthood. Purpose: To examine the agreement of assignment to weight status groups based on the CDC and IOTF cutoffs. Methods: Weight status was categorized as normal weight (NW), overweight (OW) or obese (OB) according to the CDC and IOTF cutoffs in a nationally-representative sample of 10th grade U.S. high school students (n=2323, mean age=16.19 years). Kappa statistics compared 2-group (NW vs OW/OB) and 3-group (NW vs OW vs OB) assignments in the overall sample, by gender, and by race/ethnicity. BMI was calculated using measured height and weight. Results: Kappas were excellent (>.90) and % agreement exceeded 90% in all analyses. In the overall sample, 66 subjects (5%) classified as NW and 66 subjects (14%) classified as OB by the CDC method were misclassified as OW by the IOTF method. BMI%iles of misclassified subjects were within approximately 1%ile of the CDC cut-offs. Conclusion: The two methods of weight status classifications showed substantial agreement. The IOTF classified more adolescents as OW; the misclassifications from both the NW and OB groups were included in this group. This tendency should be noted when considering prevalence and incidence of weight status using this method. Nonetheless, the IOTF method provides a consistent mechanism by which to classify weight status across the transition from adolescence to adulthood, and addresses the inconsistency in using the CDC cut offs in samples in this age group.

CORRESPONDING AUTHOR: Denise Haynie, PhD, MPH, National Institute of Child Health and Human Development, Bethesda, MD, 20852; haynied@exchange.nih.gov

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COLLEGE STUDENTS' BODY PERCEPTIONS AND THEIR RELATION TO LIFESTYLE BEHAVIORS

Rebecca Palacios, PhD, Joe Tomaka, PhD, Angelee G. Shamaley, PhD, Karoline Sondgeroth, BA

New Mexico State University, Las Cruces, NM

Obesity is a risk factor for heart disease, stroke, type II diabetes, and cancer. Approximately 2/3 of US adults are overweight or obese (CDC, 2014). In 2013, 34.4% of college students were overweight or obese, 53.8% did not meet the recommended guidelines for physical activity, and 94.6% did not eat the recommended amount of daily fruits and vegetables (American College Health Association, 2014). Research suggests that obese adults misperceive their own weight and in result are less likely to engage in physical activity or healthy lifestyle behaviors (Duncan, et al., 2011). The purpose of this study is to examine how college students' perceptions of their body image relate to their lifestyle behaviors, such as eating habits and physical activity, perceived health, and shape concerns. METHODS. Participants included 681 students attending New Mexico State University. MEASUREMENT. The Body Image Assessment (Thompson & Gray, 1995) assessed self-perceptions and satisfaction of the body. The International Physical Activity Questionnaire (Craig et al., 2003) assessed self-reported physical activity in past 7 days. The Eating Behaviors Questionnaire assessed eating behaviors on a typical day (Greenwood, et al., 2008; 5 items) and the Eating Disorders Examination (Fairburn & Beglin, 2008) assessed shape and weight concern. Additionally, this study also assessed demographics, Body Mass Index, and perceived health (BRFSS, CDC, 2012). ANALYSES. We conducted bivariate correlations between Body Image Assessment and all other assessments. RESULTS. Findings suggest that this college sample had an accurate perception of their body image with heavier individuals rating heavier contour drawings. Body contour ratings correlated positively with weight/shape concerns, dieting practices, and sedentary lifestyle and correlated negatively with healthy eating practices (e.g., eating breakfast, number of snacks), engagement in vigorous physical activity, and physical health self-rankings. In general, women demonstrated stronger relationships between body contour self-ratings and behavioral practices and body perceptions. Although college students are properly assessing their weight status, this study finds the heavier an individual is the less likely they engage in healthy lifestyle practices.

CORRESPONDING AUTHOR: Karoline Sondgeroth, BA, New Mexico State University, Las Cruces, NM, 88003; ksondg@nmsu.edu

6:00 PM-7:00 PM A076

COMMUNICATION AND WEIGHT RELATED BEHAVIORS IN ACCULTURATION DISCORDANT MOTHER-DAUGHTER DYADS

Becky Marquez, PhD, MPH

UC San Diego, San Diego, CA

This study examined the relationship between communication, cohesion, and weight related behaviors in first generation Mexican-American mothers and their U.S. raised daughters. Thirty-five overweight dyads (n=70) completed measures on acculturation, weight related behaviors, eating and weight verbal messages, and dyad cohesion. Mothers (Age 49.6 ± 8.0 years; BMI 35.8 kg/m^2) were foreign-born and spoke predominately Spanish (77%). Daughters (Age 24.6 ± 6.0 years; BMI 33.5 kg/m^2) were mostly U.S. born (60%) and bilingual (91%). Positive maternal messages were associated with lower acculturation discordance (r=-.337, p=.048) and higher cohesion (r=.384, p=.023) in dyads. Positive maternal messages were associated with higher frequency of self-weighing (r=.349, p=.040) and lower frequency of eating out at restaurants (r=-.416, p=.013) in daughters. These results suggest that acculturation differences and communication quality are important intervention targets for overweight Mexican-American mothers and daughters.

CORRESPONDING AUTHOR: Becky Marquez, PhD, MPH, UC San Diego, San Diego, CA, 92122; becky.marquez@gmail.com

6:00 PM-7:00 PM A077

CROSS-BEHAVIORAL RELATIONSHIPS OF SELF-EFFICACY AND INTENTION TO PHYSICAL ACTIVITY AND DIETARY BEHAVIOR IN ADULTS

Trevor A. Pickering, MS[1], Susan M. Schembre, PhD, RD[2], Chih-Ping Chou, PhD[3], Genevieve F. Dunton, PhD, MPH[3], Donna Spruijt-Metz, MFA, PhD[4], Mary Ann Pentz, PhD[5]

[1]University of Southern California, West Covina, CA; [2]The University of Texas MD Anderson Cancer Center, Houston, TX; [3]University of Southern California, Los Angeles, CA; [4]Center for Economic and Social Research, University of Southern California, Los Angeles, CA; [5]University of Southern California Keck School of Medicine, Los Angeles, CA

The study of multiple health behaviors (MHB) — two or more behaviors that influence health outcomes simultaneously or sequentially — has been identified as a strategic area for dietary and physical activity (PA) behavior change interventions. In a sample of 254 adults (87% female, 74% overweight/obese, mean age=39.2, sd=6.0), we examined direct and indirect effects among measures of self-efficacy and intentions to increase PA and change dietary intake (increase fruit/vegetable intake, FV; and reduce added fat/sugar intake, FS) assessed at baseline of an observational study and self-reported outcomes for each behavior measured one year later. Structural equation models included sex, body mass index, ethnicity, and socioeconomic status as covariates. In addition to significant direct and indirect within-behavior effects, several important cross-behavioral associations were observed. PA self-efficacy was directly related to FS intentions (β=0.19, p < .05) and FV intentions (β=0.30, p < .05). PA self-efficacy was also indirectly related to FV intake one year later through FV intentions (β=0.11, p < .05). Additionally, FS self-efficacy was directly related to FV intake one year later (β=0.24, p < .05). Collectively, these findings demonstrate that PA self-efficacy has a significant direct and indirect influence on future dietary intake behavior; FV intake, in particular. These results are supported by the Theory of Triadic Influence and the Transfer Theory and may be useful when designing MHB-based interventions to change FV intake.

CORRESPONDING AUTHOR: Trevor A. Pickering, MS, University of Southern California, West Covina, CA, 91791; tpickeri@usc.edu

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WEIGHT LOSS MOTIVES AND RELATIONSHIP TO OUTCOMES IN A LIFESTYLE INTERVENTION: YOUNG V. OLDER ADULTS

Autumn Lanoye, MS[1], Andrea Grenga, B.A.[2], Tricia M. Leahey, PhD[3], Jessica Gokee. LaRose, PhD[4]

[1]Virginia Commonwealth University, Richmond, VA; [2]The Weight Control and Diabetes Research Center at The Miriam Hospital, Greenville, RI; [3]University of Connecticut, Storrs, CT; [4]Virginia Commonwealth University School of Medicine, Richmond, VA

Although over 40% of young adults (YA) age 18-25 are overweight or obese, they are less likely than older adults (OA) to enroll in behavioral weight loss programs, and when they do, they lose less weight and have higher attrition. Data also indicate differences between YA and OA in terms of their motivations for weight loss, but little is known about how these differences relate to weight loss behaviors. A better understanding of the role that motives may play in engagement and adherence may help improve treatment development efforts with YA. In this study, we compared YA and OA on weight loss motives and examined the relationship between motives and engagement and weight loss outcomes. Participants were drawn from two lifestyle interventions (LI), one targeting YA (*n*=52, 78.8% female, 52.0% minority, BMI=34.2+5.5, Age=22.3+2.0, range 18-25) and one targeting OA (*n*=101, 69.3% female, 13.9% minority, BMI=35.6 +5.7, Age=52.9+5.7, range 40-60). Both LIs involved weekly treatment contact for 3 months and assessments at 0 and 3 months. YA attended fewer sessions (63.1% vs. 90.5%, *p* < .01), completed fewer food diaries (37.9% vs. 79.5%, *p* < .01), and lost less weight than OA (3.3% vs. 5.8%, *p*=.01). Wanting to lose weight to improve appearance (4.6 vs. 4.2, *p* < .01) and due to social pressure (2.7 vs. 2.2, *p* < .01) were stronger motivations for YA than OA, while improving energy (4.0 vs. 4.6, *p* < .01) and health concerns (3.9 vs. 4.6, *p*< .01) were stronger motivations in OA. Motivation to lose weight to improve appearance had differential effects for YA compared to OA. In YA, it was associated with poorer weight loss outcomes, β=.535, *p* < .01, whereas in OA it was associated with better engagement in terms of session attendance (β=.466, *p* < .01) and food diaries (β=.331, *p* < .01), but was not associated with weight loss. Other motivations were not significant predictors of outcomes. Findings are discussed in terms of extant literature and treatment development efforts with YA.

CORRESPONDING AUTHOR: Autumn Lanoye, MS, Virginia Commonwealth University, Richmond, VA, 23221; lanoyeam@vcu.edu

6:00 PM-7:00 PM A079

WHAT DO EATING INVENTORIES MEASURE?

Joe Tomaka, PhD[1], Dejan Magoc, PhD[2], Angelee G. Shamaley, PhD[1], Rebecca Palacios, PhD[1]

[1]New Mexico State University, Las Cruces, NM; [2]Stetson University, Deland, FL

The research literature on eating patterns and related risks is replete with multi-item scales assessing potentially overlapping concepts. A possible reduction of the vast array of available indicators into a smaller and more manageable set of non-redundant constructs would help unify research in this area by coalescing the discussion around these fundamental constructs. Two this end, we examined potential redundancies among eating constructs assessed by three multidimensional eating scales including the Three Factor Eating Questionnaire (TFEQ; de Lauzon et al., 2004), the Eating Disorders Examination (EDE-Q, Fairburn, 2008), and the Power of Food Scale (POF; Lowe et al., 2009). The TFEQ includes three subscales assessing Cognitive Restraint, Uncontrolled Eating, and Emotional Eating. The EDE-Q includes four subscales assessing Restraint, Eating Concern, Weight Concern, and Shape Concern. Finally, the POF scale includes four subscales assessing POF Present, POF Available, and POF Tasted.We used exploratory and confirmatory factor analyses in two demographically unique samples. The first included 471 predominantly Hispanic students from a university in the southwest US; the second included 500 predominantly non-Hispanic white students from a university in the midwest US. Students in each sample voluntarily completed the measures as part of a larger study of weight management practices among college students. Exploratory and confirmatory factor analyses showed the 10 subscales that comprise these instruments to reduce to two superordinate factors. The first factor was labelled "Impulsive Eating" and was comprised of subscales assessing the power of food and uncontrolled and emotional eating. The second factor was labelled "Regulation" and consisted of subscales assessing concerns with eating, weight, and shape, and subscales assessing cognitive and behavioral restraint. Confirmatory analyses indicated reasonable goodness of fit for the two factor models (chi-squares/df ≤ 6.65, CFIs ≥ .946, RMSEAs ≤ .082). Overall, the results suggest that two key dimensions underlie eating-related inventories and possibly eating behavior.

CORRESPONDING AUTHOR: Joe Tomaka, PhD, New Mexico State University, Las Cruces, NM, 88003; tomaka@nmsu.edu

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WOMEN'S PREFERENCES ABOUT USING SMARTPHONES IN A PRECONCEPTIONAL HEALTH INTERVENTION

Danielle Symons Downs, PhD[1], Mark Feinburg, PhD[1], Kristin Heron, PhD[2], Marianne Hillemeier, PhD[1], Erica Rauff, PhD[1], Joshua M. Smyth, PhD[3], Patricia Fonzi, MS[4]

[1]The Pennsylvania State University, University Park, PA; [2]Old Dominion University, Norfolk, VA; [3]Pennsylvania State University, University Park, PA; [4]Family Health Council of Central PA, Camp Hill, PA

Prior evidence demonstrated that women in the Strong Healthy Women (SHW) preconceptional behavior change intervention improved physical activity/nutrition/stress outcomes and reduced weight and BMI compared to controls. Although SHW was effective, delivering it in face-to-face sessions was expensive and time-intensive for both investigators and participants. Integrating Smartphones into a modified version of SHW may mitigate these challenges; however, little is known about women's preferences for receiving health behavior change content via Smartphone. Purpose: This study conducted formative community-engaged research to examine women's preferences for using Smartphones in a modified SHW intervention. Methods: 40 community (*M* age=31) and 25 college (*M* age=21) women were recruited via family planning clinics, university channels, and community advertisements to participate in focus group interviews and complete surveys regarding their Smartphone usage and beliefs. Descriptive statistics and principles of thematic analysis were used to code and analyze the data. Results: Smartphone use was reported by 89% of community and 92% of college women. A slightly greater proportion of community women (93%) reported using their phones somewhat more than college women (88%), and also reported greater Smartphone benefits [useful (95%, 46%), convenient (89%, 35%)] and barriers [user (e.g., annoyances; 95%, 41%), device (e.g., phone screen; 89%, 53%)] compared to college women. Salient themes about the SHW intervention emerging from focus groups were using the Smartphone to: a) customize the intervention, b) supplement (but not replace) face-to-face visits, c) monitor physical activity/nutrition/weight behaviors, and d) encourage use of familiar health-oriented apps (e.g., MyFitnessPal). Conclusion: Community and college women both appear open to using a Smartphone for intervention delivery and reported similar perceived benefits and barriers, although community women more strongly endorsed both benefits and barriers. Developing a future SHW intervention that capitalizes on the Smartphone's ability to customize the intervention to each woman's unique needs may be a useful strategy for improving preconceptional health and reducing future pregnancy complications.

CORRESPONDING AUTHOR: Danielle Symons Downs, PhD, 2002, HealthandHumanPerformance, UniversityofFlorida, The Pennsylvania State University, University Park, PA, 16802; dsd11@psu.edu

6:00 PM-7:00 PM A081

YOUNG ADULTS' PREFERENCES FOR A WEIGHT LOSS TREATMENT PROGRAM

Debra Hoffmann, M.A.[1], Robert Carels, PhD, MBA[2]

[1]Bowling Green State University, Bowling Green, OH; [2]East Carolina University, Greenville, NC

Objective: The prevalence of obesity remains high in young adults. Unfortunately, few programs target this age group for weight loss treatment and those that have been developed report inconsistent findings. The purpose of the current study was to better understand young adults' preferences in weight loss treatment. Young adults' preferences for the content, format, duration, and mode of delivery of a weight loss intervention was assessed.

Method: Undergraduate students (N = 139) were recruited through psychology classes and campus e-mail at a Midwestern university. Participants were predominately Caucasian (73%) and female (77%). Average age was 19.6 (SD = 1.4; range = 18-25) and Body Mass Index (BMI) was 31.7 (SD = 6.5; range = 25-57.8). Almost half were freshman (45%) and most were enrolled full-time (99%). Over two-thirds lived on-campus (70%) and were enrolled in a school meal plan (70%). Most were single (81%) and approximately two-thirds were employed (63%). Further, 83% had previously attempted to lose weight and had on average 3.4 (SD = 3.0) diet attempts in the past year.

Results: Ninety-four participants (68%) were interested in enrolling in a weight loss program. The main reason for not wanting to enroll was preferring to lose weight on their own (19%). The top programs that participants expressed interest in were: self-help (47%), a program delivered via a phone app (45%), and an individual program delivered in-person (42%); whereas the least were: social media (14%), video chat (8%), and a program delivered via telephone (4%). Features that were desired included: individual activities (70%), demonstrations (60%), and individual competitions/challenges (60%); whereas the least were: discussions (32%), homework assignments (30%), and lectures (18%). The main reason for wanting to participate was appearance (89%), followed by mood (73%), and the preferred season was spring (43%).

Discussion: Young adults are not only underrepresented in behavioral weight loss programs, but, when compared to older adults (>35 years), are less likely to lose weight and more likely to drop out of treatment. Unfortunately, little is known about what techniques and treatment components are most effective for young adults. The findings from the current study could be used to better inform interventions for this age group.

CORRESPONDING AUTHOR: Debra Hoffmann, M.A., Bowling Green State University, Bowling Green, OH, 43403; dhoffma@bgsu.edu

6:00 PM-7:00 PM A082

A PILOT TEST OF THE SYSTEMATIC NONVERBAL ANALYSIS OF PATIENTS AND PHYSICIANS (SNAPP) CODING SYSTEM

Lauren M. Hamel, PhD[1], Susan Eggly, PhD[1], Rifky Tkatch, PhD[1], Janella Hudson, MA[1], Louis Penner, PhD[1], Robert Chapman, MD[2], Terrance Albrecht, PhD[1]

[1]Wayne State University/Karmanos Cancer Institute, Detroit, MI; [2]Josephine Ford Cancer Institute, Detroit, MI

Black-White cancer treatment disparities are partly due to patient and oncologist racial attitudes and poor communication during racially discordant (Black patient- non-Black physician) clinic visits. We posit that racial attitudes are manifested through nonverbal communication (e.g. gaze), and this, in turn, affects treatment. This study was a pilot test of an observational coding system of nonverbal behaviors in racially discordant clinic visits.

We developed the Systematic Nonverbal Analysis of Patients and Physicians (SNAPP) coding system from extant literature and community member input. SNAPP has three phases. Phase I codes facial behaviors (smiling, gaze); phase II codes body behaviors (lean, orientation, openness, fidgeting); phase III codes paraverbals (talk time, laughter, continuers). We applied Phase I to 87 video-recorded clinic visits of Black patients and their non-Black oncologists. Five one-minute "thin slices" from each visit were extracted (N=435), randomized, then coded by two coders for smiling and gaze. Repeated measures ANOVAs analyzed change in behaviors across visits; Pearson correlations analyzed relationships among behaviors. Reliability for frequency was assessed using Cramer's V (v=.70) and duration using Krippendorff's alpha (a=. 87).

We found frequency of patient smiling ($p < .001$) and gaze (p=.001) decreased over the course of the visit; physician frequency of smiling increased ($p < .001$) and duration of gaze decreased ($p < .001$). Regarding relationships among behaviors, we found that frequency of patient smiling was positively related to frequency of physician smiling ($p < .001$) and frequency of physician gaze (p=.01); and duration of patient gaze was related to duration of physician gaze ($p < .001$). Frequency of physician smiling was positively related to frequency of patient gaze ($p < .001$); frequency of physician gaze was positively related to frequency of patient gaze ($p < .001$) and duration of patient gaze (p=.01).

The SNAPP system determined frequency, duration, change over time and relationships between patient and oncologist nonverbals. Next we will assess relationships between racial attitudes and nonverbal behaviors, determine behavioral convergence, and link nonverbal behaviors to health outcomes.

CORRESPONDING AUTHOR: Lauren M. Hamel, PhD, Wayne State University/Karmanos Cancer Institute, Detroit, MI, 48201; hamell@karmanos.org

6:00 PM-7:00 PM A083

"DEVELOPING A BEST-PRACTICE SEASONAL INFLUENZA VACCINATION PROGRAM TARGETING ALL EMPLOYEES."

Cynthia Karlsson, MS, MPH, PhDCandidate2015[1], Fabio Almeida, PhD[2]

[1]Virginia Tech, Christiansburg, VA; [2]Virginia Tech, Roanoke, VA

Influenza vaccination is an effective strategy to provide herd immunity once 83-85% of the population is inoculated. However, most non-benefited employees who may have positions as food handlers, child care providers, and cleaning staff do not have access to this important preventative measure. In fact, data from a large Virginia employer indicated that even benefited employees with access to vaccinations had their preventive vaccinations decreased by over 24% since the 2009 H1N1 influenza pandemic (swine flu). Meanwhile, less than 5% of non-benefited employees had received annual preventative flu vaccines. In order to close this gap and increase non-health insured employees' vaccination rates, a pilot study was introduced to provide free influenza vaccinations onsite to all non-benefited employees. A retrospective recall questionnaire was developed and distributed to the pilot group post inoculation to obtain historical data for past influenza vaccination status and influenza type symptoms for the previous two years. Overall, 42 non-benefited employees participated in the free vaccination pilot and answered the post-inoculation surveys. Participants were primarily female (78%), between the ages of 41-70 (65%), and Caucasian (72%). Survey results indicated that less the 5% of participants had been vaccinated during the previous two years. Of those not vaccinated 22.5% reported the following influenza type symptoms (fever, chills, nausea, headache, vomiting), while 13.6% of those vaccinated reported having these symptoms. Results indicated that a free influenza vaccination campaign was effective in providing access to this important preventative measure to non-benefited employees. Findings have been utilized to develop best practices to target health promotion programs, develop policies, and to expand novel concepts to engage non-benefited employees in seasonal influenza vaccination campaigns.

CORRESPONDING AUTHOR: Cynthia Karlsson, MS, MPH, PhDCandidate2015, Virginia Tech, Christiansburg, VA, 24073; cyn07@vt.edu

6:00 PM-7:00 PM A084

ADDRESSING RECOVERY EXPECTATIONS OF PATIENTS WITH SHOULDER IMPAIRMENT USING KINECTTM-GENERATED IMAGERY: A FEASIBILITY STUDY

Elizabeth Neuman, BS[1], Jay Urbain, PhD[2], Ann K. Rosenthal, MD[3], Steven Grindel, MD[3], Sergey Tarima, PhD[1], Dara Mickschl, PA-C, ATC[4], Sarah Eickmeyer, MD[3], Bambi Wessel, MS[3], Edith Burns, MD[3]

[1]Medical College of Wisconsin, Wauwatosa, WI; [2]Milwaukee School of Engineering, Milwaukee, WI; [3]Medical College of Wisconsin, Milwaukee, WI; [4]Medical College of Wisconsin, Whitefish Bay, WI

Rotator cuff injuries are one of the most common joint conditions in adults over 65, and resultant pain and impaired range of motion (ROM) can significantly impact functional status and independence.First line management includes conservative treatment with physical therapy (PT) and home exercise, and recovery may take months to years. It is difficult to evaluate efficacy due to lack of standardization in treatment and assessment, and poor compliance. This may be due to patients' unrealistic expectations for and perceptions of recovery. To address this, we are using Kinect$^{\text{TM}}$ technology to improve the management of impaired shoulder function by allowing more sensitive measurement and comparison of clinical outcomes over time. The Kinect$^{\text{TM}}$ sensor records 3-dimensional limb movement and projects a real-time patient image side-by-side with a "stick figure" avatar that tracks ROM around the shoulder joint. Data has been collected with normal subjects to establish an Ideal Range of Motion avatar (IRMA) that will be used as comparison. Comparing patient images to IRMA provides immediate feedback on deviation from normal, and stored images allow tracking progress over time, critical for reinforcing motivation to maintain PT. A clinical shoulder survey has been conducted with 188 primary care patients, confirming 31% prevalence of severe shoulder pain and 36% functional shoulder impairment in older adults. A feasibility trial was conducted with 7 rotator cuff patients (mean age 48, mean 7 chronic medical issues) pre- and post-operatively to assess workability of the Kinect. Once initial setup was completed, imaging did not add time to a clinic visit. A correlation of 0.966, 95% confidence interval 0.940-0.981, was found between Kinect images and clinician assessment of ROM, which were not statistically different (paired t= -0.23, p=0.81). These patients anticipated recovering over 95% shoulder ROM over a mean of 5.7 months post-op. We anticipate that such unrealistic expectations will predict limited adherence and that providing accurate feedback on progress over time will improve adherence and positive outcomes. In future this approach may be applied to a broad range of joint impairments and chronic conditions (e.g. stroke).

CORRESPONDING AUTHOR: Edith Burns, MD, Medical College of Wisconsin, Milwaukee, WI, 53217; eaburns@mcw.edu

6:00 PM-7:00 PM A085

AN EMPIRICAL ANALYSIS OF INDOOR TANNERS: IMPLICATIONS FOR SKIN CANCER PREVENTION INTERVENTIONS

Dannielle Kelley, MPH[1], Seth M. Noar, PhD[2], Jessica G. Myrick, PhD[3], Alexandra Zeitany, B.S.[1], Brenda Morales-Pico, B.S.[1], Nancy Thomas, MD, PhD[4]

[1]University of North Carolina at Chapel Hill, Chapel Hill, NC; [2]UNC Chapel Hill, Chapel Hill, NC; [3]Indiana University, Bloomington, IN; [4]University of North Carolina at Chapel Hill, Bloomington, NC

In 2014, the Surgeon General's office released a Call to Action to address the increasing incidence of skin cancer in the United States. One goal of this call focuses on reduction of tanning bed use and the need for more skin cancer prevention messaging research. The current study sought to advance an understanding of audience segmentation for indoor tanning to inform interventions to prevent and reduce this behavior.Panhellenic sorority systems at 2 universities in the Southeastern United States participated in this study. A total of *N*=1,481 young women took the online survey; *N*=421 (28%) tanned indoors in the past 12 months, and are the focus of the present analysis. Using a previously developed item, young women chose 1 of 5 statements that best described their indoor tanning behavior (i.e., before events, irregularly, occasionally, regularly-seasonal, and regularly-all year round). Our analyses focus on how various psychosocial variables operated across these possible types of indoor tanners.Preliminary analyses resulted in dropping "regularly-all year round" from further analysis (only n=8). Such analyses also found no differences among "before event," "irregular," and "occasional" classifications. Instead, our results suggested the existence of 2 tanner types – we termed these regular (N=60) and occasional tanners (N=353). Relative to occasional tanners, regular tanners reported significantly higher positive outcome expectations ($p < 0.001$), lower negative outcome expectations ($p < 0.01$) and greater indoor tanning behavior ($p < 0.001$). Hierarchical logistic regression analysis predicting tanner type (occasional, regular) revealed several significant ($p < 0.001$) findings, with tanning dependence emerging as the strongest predictor of regular tanner classification (OR=2.25).Our results provide support for 2 distinct types of indoor tanners (regular and occasional). Relative to occasional tanners, regular tanners tan more frequently and score higher on a number of psychosocial constructs. Health communications should be uniquely targeted to each of these groups, and regular tanners may need more intensive clinical interventions given their apparent dependence on UV light via indoor tanning.

CORRESPONDING AUTHOR: Dannielle Kelley, MPH, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599; dekelley@live.unc.edu

6:00 PM-7:00 PM A086

ASSESSING HEALTH LITERACY LEVELS AND PATIENT PREFERENCES FOR HEALTH INFORMATION

Julie E. Volkman, PhD[1], Andrew E. Williams, PhD[2], Kathleen M. Mazor, EdD[3]

[1]Bryant University, Smithfield, RI; [2]Maine Medical Center Research Institute, Portland, ME; [3]Meyers Primary Care Institute, Worcester, MA

Background: Capturing patient preferences for health information within the medical record could help physicians provide information in more useful ways to patients.Objectives: To describe patient preferences for receiving health information in the context of medical encounters and to examine the association between patient preferences and health literacy (both reading and listening) and numeracy.Methods: Adults (N=438) from three sites completed in-person interviews, and reported their preferences for: help with forms; receiving written instructions; information sheets for later review; presentation of risk information; recommendations about screening; and recording preferences in their medical record. Participants previously completed two health literacy measures (CMLT-Listening and CMLT-Reading) and a numeracy test. We computed response frequencies and used ANOVA to examine the relationship between preferences and literacy and numeracy scores.Results: Most participants (56%; n=247) were female, married (64%; n=282), and >60 years of age (74%; n=204), with 14.6% (n=64) African-American. Many participants wanted an information sheet to look at later (81.5%; n=353), and just over half (53%; n=228) wanted written or printed instructions. These preferences were not associated with significant differences in CMLT-Reading scores. Relatively few expressed a desire for help filling out forms or going over written instructions (14%; n=62), but those who wanted help scored lower on the CMLT-Reading (78.7) compared to those would not want such help (n=252; CMLT-Reading=86.4) or who would "sometimes" want help (n=118; CMLT-Reading =84.6) (p=.001). Most participants wanted their preferences included in their medical record (88%; n=384) and their risks told in both words and numbers (58.7%; n=283). Conclusion: Patients' preferences for health information are easily assessed, and could readily be incorporated into patients' records. Findings suggest that most patients would support having their preferences assessed and recorded, and there are opportunities to further meet the needs of patients that align with their health literacy levels.

CORRESPONDING AUTHOR: Julie E. Volkman, PhD, Bryant University, Smithfield, RI, 02917; jvolkman@bryant.edu

6:00 PM-7:00 PM A087

ASSESSING THE HEALTH OF AFRICAN-AMERICANS: THE TROUBLE WITH TELEPHONE SURVEYS

Hope Landrine, PhD[1], Irma Corral, PhD, MPH[2], Jukelia J. Bess, BS[3], Marla B. Hall, PhD[3]

[1]East Carolina University, Greenville, NC; [2]East Carolina University, Brody School of Medicine, Greenville, NC; [3]Brody School of Medicine, East Carolina University, Greenville, NC

The percentage of U.S. households without landline telephones continues to increase; in 2012, 41% of the population was wireless and an additional 5% lacked any telephone service. The growing number of households without landlines has raised questions about the data from random population-health telephone surveys such as the Behavioral Risk Factor Surveillance System because the majority of calls in such surveys are to landline phone numbers. Racial-ethnic minorities are significantly more likely than Whites to lack landlines (i.e., be wireless or phoneless), and in general, people without landlines have lower socioeconomic status (SES) and poorer health than their landline counterparts. Hence, there is increasing concern that substantial percentages of racial-ethnic minorities may be excluded from population-health telephone surveys, and that those excluded may have the lowest SES and poorest health and health behaviors. Such data would suggest that population-health telephone surveys underestimate racial-ethnic health disparities and overestimate racial-ethnic minority SES.

We examined these possibilities with a random, statewide sample of N = 2,118 African American adults. Participants were sampled door-to-door on weekends, and completed a brief, written health survey and questions about their telephone status. Results revealed that the 13.8% of African-Americans who lacked landlines were significantly younger and had significantly lower education and income than their landline counterparts. Prevalence of health insurance and of a regular source of care were both significantly lower among those who lacked landlines, and those who lacked landlines also had a significantly higher prevalence of smoking (landline = 29.5%, no landline = 48.6%, OR = 1.84). However, prevalence of physician-diagnosed diabetes and hypertension were both significantly higher among those with landlines, and the telephone-status groups did not differ in self-rated health. These findings suggest that telephone health surveys may overestimate African-American SES and access to care, and may underestimate cigarette smoking, but perhaps do not underestimate chronic disease prevalence. Replication is needed with Latinos and other minorities whose prevalence of lack of landlines exceeds that of African-Americans.

CORRESPONDING AUTHOR: Hope Landrine, PhD, East Carolina University, Greenville, NC, 27834; landrineh@ecu.edu

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CAN THE CULTURAL HEALTH ATTRIBUTIONS QUESTIONNAIRE BE USED IN LATINO CHURCH SAMPLES?

Dagoberto Heredia, M.A.[1], Angela Gutierrez, B.A.[2], David Martinez, PhD[3], Jannette Berkley-Patton, PhD[4], Kathy Goggin, PhD[5]

[1]Texas A&M University, Bryan, TX; [2]San Diego State University/University of California, San Diego, Byran, TX; [3]University of San Francisco, San Francisco, CA; [4]University of Missouri-Kansas City, Kansas City, MO; [5]Children's Mercy Hospitals and Clinics, University of Missouri - Kansas City Schools of Medicine and Pharmacy, Kansas City, MO

Sociocultural beliefs contribute to health decision-making and health care utilization among Latinos. Churches may be ideal places to implement interventions that promote health among Latinos because they are an integral part of Latino culture. However, reliable and valid measures of the health beliefs of Latino church samples are scarce. The purpose of this study was to examine the reliability and underlying factor structure of the Cultural Health Attributions Questionnaire (CHAQ) that measures health Equity Attributions (EA; e.g., belief that good deeds are rewarded and bad deeds are punished by God) and Behavioral Health Attributions (BEA; e.g., belief that health is a result of conventional behavioral and environmental factors) through a series of six short vignettes among a Latino church sample in a large Midwestern city. Participants provided demographic information and completed the original 24-item version of the CHAQ. Participants were 353 church members (62.7% female, 88.3% heterosexual, 99.1% Latinos, mean age = 38.3 years [SD = 11.9], and 69% had a high school education or less). Cronbach's alpha analyses revealed good reliability for the EA ($\propto = .80$) and BEA ($\propto = .81$) subscales of the CHAQ. Factor analysis revealed a two-factor structure (loadings> .40) for the CHAQ and accounted for 39% of the variance. However, these results also suggested a shortened 17-item version (9-item EA; 8-item BEA) of the CHAQ. These findings indicate that the CHAQ was reliable, produced similar factor structure as previously published studies, and that a shortened version of the CHAQ may be useful in inquiries of health beliefs among Latino church populations.

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CORRESPONDING AUTHOR: Dagoberto Heredia, M.A., Texas A&M University, Bryan, TX, 77801; djr.heredia@gmail.com

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CHALLENGES INHERENT IN IMPLEMENTING A VIRTUAL CARE APPROACH TO PRE-VISIT PLANNING IN PRIMARY CARE

Timothy Hogan, PhD[1], Diana Hall, MPH[1], Kathryn DeLaughter, MA[1], Tana Luger, PhD[1], Bridget Smith, PhD[2], Thomas Houston, MD, MPH[1]

[1]VA CHOIR, Bedford, MA; [2]VA, Hines, IL

A formidable challenge to Virtual Healthcare implementation is integration within complex, demanding clinical settings. Patient-provider electronic secure messaging (SM) is a virtual care modality described by the Institute of Medicine as key to continuous, patient-centered care. The Veterans Health Administration (VA) has adopted SM to enhance efficiency and increase access; however, most use of SM is conceptualized in a reactive (clinical teams responding to patient messages) rather than proactive manner. In a hybrid implementation-effectiveness trial, we designed a program to facilitate implementation of pre-visit planning through SM among primary care teams. The pre-visit messages included an appointment reminder and a prompt for patients to reflect on topics that they may want to discuss at their visit. We initially instituted a decentralized program, comprised of in-person team trainings, leadership buy-in, and tools to facilitate clinical team members sending pre-visit messages. Two primary care teams (15 team members) participated; however, over six months, these teams sent less than 10 pre-visit SMs to their patients. Teams voiced strong support for the pre-visit SM concept, but problems integrating it within existing workloads. In response, we developed a revised implementation program that centralized a “pre-visit SM champion” who assumed the work of sending out pre-visit messages for all teams. Five primary care teams (27 team members) received the centralized implementation program. After five months, 181 patients received pre-visit messages, 40% read the messages, and 11% responded to them. Despite the dedicated, external champion to reduce burden, clinical team members continued to voice strong concerns about potentially increased workloads resulting from pre-visit messages. These findings raise important questions about the implications of burnout out and “over-implementation” in primary care settings. Without bandwidth, the adoption of virtual care approaches to increase access in VA will be challenging. Funded by VA’s Quality Enhancement Research Initiative Program.

CORRESPONDING AUTHOR: Timothy Hogan, PhD, VA CHOIR, Bedford, MA, 01730; timothy.hogan@va.gov

6:00 PM-7:00 PM A090

CHILDHOOD ABUSE, SOCIOCULTURAL FACTORS AND IPV VICTIMIZATION AMONG HISPANIC EMERGING ADULTS

Myriam Forster, PhD(c)[1], Timothy Grigsby, BA[2], Daniel Soto, MPH[2], Jennifer B. Unger, PhD[2]

[1]University of Southern California, Santa Monica, CA; [2]University of Southern California, Los Angeles, CA

Objective: Emerging adults (18-26 year olds) are among the most high-risk groups for intimate partner violence (IPV). There is little available knowledge regarding prevention and almost no community samples have assessed the role of demographic variables, childhood trauma, and theoretically relevant sociocultural variables in IPV victimization among Hispanic emerging adults. The aim of the present study was to investigate the role of adverse childhood experiences and possible sociocultural risk or protective factors in IPV victimization. Methods: The analytic sample is comprised of a cohort of Hispanic emerging adults in the greater Los Angeles area participating in Project RED (Reteniendo y Entendiendo Diversidad para Salud). Electronic and over the phone surveys in Spanish and English were used to collect data during 2012-2013 (n= 1,291). Analysis: Logistic regression models included adverse childhood events and theoretically relevant sociocultural factors while controlling for age, gender, and lifetime sexual partners. Quantities of interest were calculated using the estimates from the multivariable analysis by simulation using 1,000 randomly drawn sets of estimates from a sampling distribution with mean equal to the maximum likelihood point estimates and variance equal to the variance covariance matrix of the estimates. Probabilities of experiencing IPV were computed for adverse childhood experiences and sociocultural factors. This method isolates the influence of each variable and describes the amount of variance explained by each independently. Conclusions: Approximately 13% of the sample reported past year physical abuse and 26% reported past year verbal abuse. Number of lifetime sexual partners, childhood sexual abuse, and perceived discrimination were positively associated with past year verbal abuse, while number of lifetime partners, witnessing parental IPV, childhood sexual abuse, and perceived discrimination were positively associated with experiencing multiple types of past year IPV victimization (verbal + physical) (p’s < .05). These novel findings suggest that Hispanic emerging adults could benefit from programs that not only emphasize behavioral and familial stressors but address aspects of the sociocultural experience that may compound risk for IPV.

CORRESPONDING AUTHOR: Myriam Forster, PhD(c), University of Southern California, Santa Monica, CA, 90402; myriamfo@usc.edu

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COGNITIVE BEHAVIOR THERAPY CHANGES PARENT BEHAVIOR AND PERCEPTIONS OF INFLAMMATORY BOWEL DISEASE

Rona Levy, MSW, PhD, MPH[1], Joan Romano, PhD[1], Shelby Langer, PhD[1], Lloyd Mancl, PhD[1], Tasha Murphy, PhD[1], Miranda van Tilburg, PhD[2], Melissa DuPen, BS[1]

[1]University of Washington, Seattle, WA; [2]University of North Carolina at Chapel Hill, Chapel Hill, NC

Inflammatory Bowel Disease (IBD) is a term used to describe two chronic gastrointestinal conditions caused by inflammation of the gut, Crohn’s disease and ulcerative colitis, which often result in significant life disruption, hospitalization and surgery. While psychosocial factors are not believed to cause IBD, they can worsen symptoms. Our group has shown that cognitions and behavior in response to symptoms, often learned from, and transmitted by parents, may be related to the exacerbation of symptoms associated with IBD and other GI disorders. A major goal of this study was to evaluate the effect of a cognitive behavioral therapy on parental perceptions of threat and behavioral responses to IBD. 185 families were randomized to either a 3-session cognitive behavioral (CBT) or attention placebo (Education/Support-ES) condition. Parental perceptions regarding threat of the child’s pain were measured using the Pain Beliefs Questionnaire (PBQ) and parental behavioral responses (solicitousness) were measured using the Adult Response to Child Symptoms scale (ARCS). All parent-child dyads with at least one member of the dyad having follow-up were included in these analyses (N = 171; CBT n = 86 and ES n = 85). Demographic characteristics were: M (SD) age = 13.5 (2.7), 46% female, 4% Hispanic and 79% Caucasian [children]; M (SD) age = 44.8 (6.8), 9% Hispanic and 89% Caucasian [parent]. Measures were taken immediately following treatment (T2), and at 3 (T3) and 6 month (T4) follow-ups. Results show a greater baseline to T4 follow-up reduction for CBT participants on the ARCS relative to ES (time x treatment interaction, p = .028) with the largest difference at T2 (p=.005) and a trend for greater improvement for CBT in PBQ scores (time x treatment interaction, p=.10) with the largest difference at T2 (p=.024). These findings suggest a cognitive behavioral intervention has an early and positive impact on parent cognitive reactions to illness, with lasting behavioral changes.

CORRESPONDING AUTHOR: Rona Levy, MSW, PhD, MPH, University of Washington, Seattle, WA, 98195; rlevy@uw.edu

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COMPARING PATIENT-PROVIDER PERCEPTIONS OF AN EHR FACILITATED BEHAVIORAL AND PSYCHOSOCIAL ASSESSMENT

Sallie Beth Johnson, MPH, MCHES[1], Mark Greenawald, MD[2], Jessica Ladage, MS[3], Alexander H. Krist, MD, MPH, FAAFP[4], Paul Estabrooks, PhD[5]

[1]Virginia Tech / Carilion Clinic, Roanoke, VA; [2]Virginia Tech Carilion School of Medicine / Carilion Clinic, Roanoke, VA; [3]Carilion Clinic, Roanoke, VA; [4]Virginia Commonwealth University, Richmond, VA; [5]Virginia Tech / Carilion Clinic / Virginia Tech Carilion School of Medicine, Blacksburg, VA

As primary care transforms to population health management, there’s a need to address patients’ health behaviors and psychosocial factors. Tools that facilitate identification and make meaningful use of electronic health records (EHR) are in demand. The My Own Health Report (MOHR) national pragmatic trial tested whether primary care practices could integrate a tool to systematically collect and respond to patient-reported behavioral and psychosocial issues. As an assessment, prioritization, and engagement tool, the MOHR website was partially integrated with practices’ existing EHRs. This study’s objective was to compare, in a case study, patient-provider reports of 1) screening, 2) collaborative goal-setting, 3) referrals, and 4) perceptions of positive change within two matched clinics in SW Virginia. Patient and provider experience surveys were administered at a delayed intervention. Questions addressed diet, exercise, tobacco, alcohol use, drug use, stress level, anxiety/depression, and sleep. Chronic disease/wellness patients (n=247) were mailed a survey two weeks post-visit, with follow-up calls for non-responders. Physicians and residents (n=20) were administered surveys after the tool was fielded. Response rate was 71.3% for patients and 90% for providers. For patients, reports of screening ranged from 68% to 85%, goal setting ranged from 10% to 51%, referrals ranged from 6% to 29%, and change ranged from 11% to 58% across domains. Patients perceived tobacco was addressed most for screening, while diet was addressed most for other areas. Drug use was the least approached topic across domains, along with alcohol use referrals. For providers, similarities to patient reports existed in areas receiving the most attention; screening (tobacco-89%), goal setting (diet-78%), referrals (diet, 33%), and change (diet and exercise, 94%). However, differences existed in providers’ areas of least attention, sleep screening (22%) and tobacco referrals (11%). Overall, providers perceived screening, goal setting, and change more frequently than patients reported those activities. To optimize tool use, providers recommended full EHR integration, with built-in linkages to patient portal and referral resources to promote ongoing assessment and follow-up.

CORRESPONDING AUTHOR: Sallie Beth Johnson, MPH, MCHES, Virginia Tech / Carilion Clinic, Roanoke, VA, 24061; sbjohnson@vt.edu

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USING GOOGLE DOCS TO MEASURE DAILY PHYSICAL ACTIVITY AMONG COLLEGE STUDENTS

Miriam H. Eisenberg, PhD[1], Margot C. Quinn[2], Katherine Thompson, B.A.[3], Jessica Abrams, B.A.[4], Lauren A. Fowler, BS[5], Philip Moore, PhD[5], Leigh Alison Phillips, PhD[6]

[1]National Institutes of Health, NICHD, Washington, DC; [2]The George Washington University, Washington, DC; [3]George Washington University, Bethesda, MD; [4]George Washington University, Somerville, MA; [5]George Washington University, Washington, DC; [6]Iowa State University, Ames, IA

Background: Accurate measurement of exercise is important for prevention research. Self-reported daily diaries (DD) can be useful, but participants may forget to complete their DDs which can lead to incomplete data or recall bias. Thus, there is a need in exercise research to develop effective methods to capture daily exercise and verify that it was completed on time. The purpose of this study is to explore the usefulness of using Google Docs to administer a DD.Method: Participants (n=122) completed a DD daily using Google Docs for 28 days. After being acclimated to Google Docs, participants completed DDs each night at their leisure. Google Docs prompted participants to report whether they had engaged in at least 20 minutes of moderate or vigorous exercise that day and their minutes of mild, moderate, and vigorous exercise that day. Immediately upon completion, their results were automatically time-stamped and available to the researchers. Only DDs completed within 24 hours of the target date were considered "on time" for analyses.Participants also completed the International Physical Activity Questionnaire (IPAQ) at baseline and wore a Fitbit, which uses accelerometry technology to capture exercise objectively. Both the IPAQ and Fitbits report minutes of mild, moderate, and vigorous exercise. The Fitbit is similar to the DD in that it calculates daily exercise, but it is more objective and captures all movement regardless if it was actual exercise. Results: Over 98% of participants (n = 110) completed the diary at least 75% of the days and 81% of participants completed the diary on time at least 90% of the days (n = 99). The diaries were significantly correlated with the IPAQ ($r = .48$, $p < .001$) and the Fitbit results ($r = .32$, $p < .01$) .Discussion: Google Docs seems to be an effective and practical way to measure DD exercise that improves traditional paper and pencil methods. Our methods led to a relatively complete data set, and we could verify that the vast majority of data was completed on time – a crucial aspect of daily diary data. Additionally, as expected, the DD was significantly correlated with a similar SR measure (IPAQ) that was not measured daily and a daily objective measure that was not self-report (Fitbit). Data security issues will be discussed given the uncertain security of online data platforms.

CORRESPONDING AUTHOR: Miriam H. Eisenberg, PhD, National Institutes of Health, NICHD, Washington, DC, 20009; miriam.h.eisenb@gmail.com

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A THEORY-BASED PHYSICAL ACTIVITY INTERVENTION IN GERMAN UNIVERSITY STUDENTS AND FACULTY

Ftan 2014 Behavior Change Workgroup[1], Claudio Nigg, PhD[2]

[1]University of Hawaii, Hoonolulu, HI; [2]University of Hawaii at Manoa, Honolulu, HI

There is a dose-response relationship between physical activity (PA) and positive physiological and psychological health outcomes. This project's purpose was to develop a theory-based PA intervention for German University students and faculty who attended a 2-week summer academy in a village (Ftan) in the Swiss Alps. The intervention was based on the Transtheoretical Model and consisted of daily questions posted on a common communication board (to increase pros and to raise consciousness for those in pre-action stages); 1-3 minute activities during morning breaks and prior to the evening presentations to promote self-efficacy; and hosting a sports day to showcase a variety of activities (for those in action and maintenance stages). The intervention took place during the summer academy attended by 107 students and 14 professors of whom 85 (70.2%) participated in baseline measurement (45.9% female; mean age 25.7, SD=11.0 years; mean BMI=21.9, SD=2.9) with 61 (71.8%) completing the 2 week follow-up. Completers were not demographically different from non-completers (p's>.05). Participants reported the frequency and duration of moderate PAs (transport activities of normal walking and bicycling plus leisure time activities of walking, gymnastics, weight training, doubles tennis) and vigorous PAs (transport activities of fast or uphill walking, walking carrying a heavy load, fast bicycling; plus leisure time activities of bicycling, jogging, soccer, dance, swimming, singles tennis) based on the Office in Motion Questionnaire. Moderate PA minutes per week at baseline (786.8, SD=616.4) was not different at follow-up (892.8, SD=717.0; t[58]=1.08, ns). Vigorous PA increased from 600.7 (SD=399.5) to 1354.0 minutes per week (SD=654.4; t[53]=8.23, p < .001). No gender effects were found (p's>.05). This pilot project revealed that it is possible to increase PA in an already active German University sample. Longer term follow-up is required to document the sustainability and long term health effects of the increased PA.

CORRESPONDING AUTHOR: Claudio Nigg, PhD, University of Hawaii at Manoa, Honolulu, HI, 96822; cnigg@hawaii.edu

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ADHERENCE SELF-EFFICACY IMPACTS QUALITY OF LIFE IN INJURED RUNNERS

Shannon Mihalko, PhD[1], Ashley Wodecki, BS[1], Monica Carpenter, MS[1], Edward Ip, PhD[2], Santiago Saldana, MS[2], Stephen Messier, PhD[1]

[1]Wake Forest University, Winston Salem, NC; [2]Wake Forest School of Medicine, Winston Salem, NC

Although running is positively associated with many health benefits, the risk for injury in runners is high, with 50% of runners experiencing an injury and 25% being injured at any given time. Since little is known about what impacts quality of life in injured runners, the purpose of this study was to examine associations among adherence self-efficacy (SE), severity of injury, and quality of life (QOL) in distance runners. The Runners and Injury Longitudinal Study (TRAILS) was a prospective observational study of injuries among 184 runners who had been running injury free for at least 5 miles per week in the past six months. Measures of adherence SE, QOL (SF-12, Satisfaction with Life (SWL), Positive Affect (PA), and Negative Affect (NA) were assessed at baseline, 6-, and 12-month time points. Injury severity was scored from 1 (maintains activity) to 3 (interrupts all training). Participants were emailed every two weeks to determine injury status and the study physician verified all reported injuries. Mean (SD) baseline characteristics of the cohort included: age, 42.1 (9.0) yrs.; BMI, 23.9 (3.2) kg/m2; %female, 41. At baseline, SE was significantly (p < .05) correlated with physical functioning (r=.22) and NA (r=-.23). SE was a significant (p < .05) predictor of NA at 6 and 12 months and of mental functioning at 6 months. Increased injury severity was a significant (p < .05) predictor of lower SWL and PA at 6 months, and lower physical functioning and PA at 12 months. Self-efficacy is a modifiable factor related to decreased quality of life. Health care professionals should target self-efficacy when treating overuse injuries in runners.

CORRESPONDING AUTHOR: Shannon Mihalko, PhD, Wake Forest University, Winston Salem, NC, 27109; mihalksl@wfu.edu

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ADULTS SUCCESSFULLY MAINTAINING PHYSICAL ACTIVITY REPORT HIGHER INTEREST, COMPETENCE, AND FITNESS MOTIVES

Kate Lynn. Renneke, BS[1], Karly S. Geller, PhD, MEd, BA, BA[2]

[1]Miami University, Hamilton, OH; [2]Miami University, Oxford, OH

Purpose: While physical activity (PA) has risen to the forefront of behaviors preventing chronic disease, there is no consistent evidence suggesting the most effective approach to long-term PA maintenance. The self-determination theory outlines five distinct motives or reasons to participate in regular PA, including *enjoyment* (interest, fun), *competence* (improvement, skill mastery), *appearance* (physique, body weight), *fitness* (health, strength), and *social* (friends, meet new people). A greater understanding of the motivations underlying individuals' successful PA maintenance will provide valuable insight regarding the most salient motives fostering their success. The current study examined differences in PA motives between participants who have successfully maintained PA and those who have not. Methods: Adults (28-45 yrs) were recruited via college alumni and rec facility collaborations. A cross-sectional design was used to capture participants' current and previous PA levels and PA motives. Four subgroups were created groups based on whether participants met national PA recommendations: *maintainers*, those who have maintained PA; *decliners*, have not maintained PA; *sedentary*, never active; and *improvers*, those who became regularly active. Differences in motives were examined between subgroups via ANOVA with post hoc tests. Results: Participants (N=721; mean age=33.4, SD=3.9) were 63% female, mostly White, non-Hispanic (90%), and most had at least a Master's degree (n=418). Maintainers (n=461) were significantly higher than all other groups in PA interest (*P*s< .05); improvers' (n=79) *interest* was higher than sedentary (n=56) and decliners (n=125) (*P*s < .05). Compared to all subgroups, maintainers were higher in *competence* (*P*s < .00), and increasers were higher than the sedentary and decliners (*P*s < .00). *Fitness* motives were higher among maintainers compared to decliners and the sedentary (*P*s < .05), and improvers were higher than decliners (*P*s < .00). *Social* motives were higher among maintainers than decliners and the sedentary (*P*s < .00). There were no differences in *appearance* motives. Conclusion: Prominent motives among adults successfully maintaining PA included interest, competence, and fitness; and should be considered in future promotional efforts.

CORRESPONDING AUTHOR: Kate Lynn. Renneke, BS, Miami University, Hamilton, OH, 45011; rennekkl@miamioh.edu

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AN EVALUATION OF UNDERGRADUATE MEDICAL EDUCATION CURRICULA IN THE UNITED STATES

Mark Stoutenberg, PhD, MSPH[1], Selina Stasi, MPH[2], Taylor Dufour[3], Dagmara Danek, BS[4], Emmanuel Stamakis, PhD[5], Steven Blair, PED[6]

[1]University of Miami, Miami Beach, FL; [2]University of Hawaii, Honolulu, HI; [3]University of Miami, Coral Gables, FL; [4]University of Miami, Miami, FL; [5]The University of Syndey, Sydney, FL, Australia; [6]University of South Carolina, Columbia, SC

Background: Physical inactivity has continued to escalate in the U.S. Lack of training and knowledge are two major barriers to physical activity (PA) counseling by physicians in healthcare settings. In 2002, an assessment of medical education programs in the U.S. showed that only 13% of medical schools included PA in their curriculum. However, no systematic review of the level of PA training in U.S. medical schools has taken place since this time. Purpose: The purpose of this study was to assess current U.S. medical school curricula for the inclusion of training in PA.Methods: A website search of 171 allopathic (n=34) and osteopathic (n=137) schools was conducted to analyze the level of PA and BC content listed online. Next, representatives from each of these programs was contacted and asked to complete an interview designed to assess the level of PA and BC training included in their curriculum.Results: Of the 156 programs that had a curriculum listed on their website, 11 mentioned PA. Seventy four interviews were completed; 40 via the phone, 22 through an online survey, 11 through the completion of a word document, and 1 in-person interview. Fifty-eight schools reported including training in PA (78.4%). Of these, 35 (61.4%) included instruction on the PA Guidelines, 25 (43.9%) on strength training guidelines, and 31 (56.4%) felt that they taught a sufficient level of PA for their students to successfully counsel their patients. Schools reported requiring a total of 8.11 hours over the four years of their undergraduate medical education programs. The strategies for providing PA training included class lectures and elective and parallel experiences such as health breaks for students, student involvement in community projects, student wellness programs and clubs, and student affairs lectures on personal wellness.Discussion: Our results provide a current snapshot of the level of PA content provided in U.S. medical schools. Since the last assessment of medical education curricula, we found an increased number of medical schools that provide some level of PA training. However, there is much room for improvement as these levels are still below recommended levels, offered in informal settings, lack a standardized format, and vary greatly across institutions.

CORRESPONDING AUTHOR: Mark Stoutenberg, PhD, MSPH, University of Miami, Miami Beach, FL, 33139; mstoutenberg@med.miami.edu

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ASSOCIATIONS OF PEDOMETER STEPS AND PHYSICAL ACTIVITY WITH QUALITY OF LIFE AMONG OLDER ADULTS

Jeff Vallance, PhD[1], Dean Eurich, PhD[2], Paul A. Gardiner, PhD[3], Lorian Taylor, PhD[4], Steven Johnson, PhD[1]

[1]Athabasca University, Athabasca, AB, Canada; [2]University of Alberta, Edmonton, AB, Canada; [3]The University of Queensland, Herston, Australia; [4]Alberta Health Services, Athabasca, AB, Canada

Purpose: To examine associations of both self-reported moderate-vigorous physical activity (MVPA) and pedometer steps with health-related quality of life (HRQoL) among a population-based, and geographically representative sample of older adults.Methods: For this cross-sectional study, adults greater than 55 years (N=1,296) were recruited through random-digit dialing and responded to a questionnaire via computer-assisted telephone interviewing methods. Questionnaires assessed demographic variables and validated self-report measures of MVPA (Godin Leisure Time Exercise Questionnaire) and HRQoL (RAND-12). All participants received a step pedometer and waist circumference tape measure via post. Participants completed a three-day pedometer step test and provided three successive measures of their waist circumference (n=1,081).Results: Compared to participants in the low step group (0-6,999 steps per day), participants in the high step group (>10,000 steps per day) had significantly higher scores on mental health (M_{diff}=3.1, p < 0.001, CI: 1.8, 4.3), physical health (M_{diff}=3.5, p < 0.001, CI: 2.2, 4.7), and global health (3.5, p < 0.001, CI: 2.3, 4.7). Compared to the inactive group (<150 minutes of MVPA), participants exceeding the base MVPA guidelines (>300 minutes of MVPA) had significantly higher scores on mental health (M_{diff}=3.0, p < 0.001, CI: 1.8, 4.2), physical health, (M_{diff}=3.3, p < 0.001, CI: 2.1, 4.5), and global health (M_{diff}=3.6, p < 0.001, CI: 2.4, 4.8). Waist circumference and BMI did not moderate any associations of pedometer steps and MVPA with HRQoL.Conclusions: Irrespective of body size and waist circumference, older adults exceeding physical activity guidelines for MVPA as well as established pedometer step thresholds reported significantly higher HRQoL indices compared to older adults not achieving guidelines.

CORRESPONDING AUTHOR: Jeff Vallance, PhD, Athabasca University, Athabasca, AB, T9S3A3; jeffv@athabascau.ca

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BUCKLING FOUNDATION? A VIOLATION OF THE ASSUMPTION OF RATIONALITY IN EXERCISE DECISION MAKING

Zachary Zenko, M.S., Panteleimon Ekkekakis, PhD, FACSM

Iowa State University, Ames, IA

Contemporary theories of exercise behavior assume that behavioral decisions are made rationally. To test the assumption of rationality in the context of exercise, we used an anchoring paradigm. Anchoring is a classic heuristic in which initial values, or anchors, bias subsequent judgments. Purpose: To investigate the effects of normatively irrelevant anchors on affective attitudes and intentions towards exercise. Methods: An online survey engine was used to recruit 314 respondents, 295 of whom (64.1% male, mean age: 29.89 ± 8.3 years) satisfied criteria for valid entries. Participants were randomly assigned to a high-anchor or a low-anchor group. The high [or low] anchor group first responded with a "yes" or "no" to the question: "On a scale of 0 to 100, with 100 being the most desirable, is 30 minutes of exercise at a Rating of Perceived Exertion of 13 (Somewhat Hard) more desirable than 90 [less desirable than 10]?". Next, both groups provided an absolute rating of desirability on a scale ranging from 0 to 100 (most desirable). To make already-available information more salient, the high [or low] anchor group then listed and described their best [or worst] exercise experience and aspects of exercise that they liked [or disliked] before responding to measures of affective attitudes (Cronbach's $\alpha = .93$) and intentions towards exercise (Cronbach's $\alpha = .71$). Results: The high-anchor group reported higher desirability (Cohen's $d = .29$, $p = .012$), more positive affective attitudes (Cohen's $d = .27$, $p = .019$), and stronger exercise intentions (Cohen's $d = .25$, $p = .036$) than the low-anchor group. Conclusion: Consistent with evidence from other contexts, this study demonstrates that judgments about exercise can be altered while holding information constant, thus apparently violating the assumption of rationality. These results thus suggest that the fundamental assumption of rationality underpinning behavior change theories must be reconsidered.

CORRESPONDING AUTHOR: Zachary Zenko, M.S., Iowa State University, Ames, IA, 50011; zenko@iastate.edu

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CAN INCREASED MOBILITY PREDICT COMPLEX TASK PERFORMANCE IN OLDER ADULTS?

Diane Ehlers, MA[1], Sarah E. Banducci, BS[2], Arthur F. Kramer, PhD[3], Edward McAuley, PhD[4]

[1]University of Illinois, Urbana, IL; [2]University of Illinois at Urbana-Champaign, Champaign, IL; [3]University of Illinois at Urbana Champaign, Champaign, IL; [4]University of Illinois Urbana Champaign, Urbana, IL

Research suggests impaired mobility may contribute to reduced performance in activities of daily living in older adults, particularly in dual-task conditions (e.g., walking and talking on the phone). The purpose of this study was to examine the extent to which mobility predicts street crossing duration in sedentary older adults. Participants were 194 low active, older adults (*M* age = 65.5 ± 4.5 years, 63% female) assessed at baseline of an exercise training program. Participants completed assessments of mobility, cardiorespiratory fitness (CRF), physical activity, and street crossing duration. Time to climb up a flight of stairs and the timed 8-foot up and go test (TUG) were used to measure mobility; a modified Balke protocol was used to measure CRF; and accelerometry was used to measure physical activity. The street crossing task is a validated real-world instantiation of an important component of executive function, multi-tasking, and is carried out in a virtual reality environment. Participants walked on a self-propelled treadmill and were instructed to safely cross a virtual street. Crossing duration in single-task (i.e., without distraction) and dual-task (i.e., while talking on a cell phone) conditions was assessed (n=20 trials each). Multiple linear regression was use to examine the predictive influence of mobility, independent of age, gender, CRF, and physical activity, on street crossing duration. Average crossing duration was slower in the dual-task condition when compared with the single-task condition, $t = -3.85$, $p < 0.001$. Stair climb up time significantly predicted crossing duration in single-task conditions ($\beta = 0.09$, $p = 0.004$, $R^2 = 0.06$), while TUG predicted crossing duration in dual-task conditions ($\beta = 0.17$, $p = 0.002$, $R^2 = 0.06$). Faster times on both tests were associated with faster crossing duration. Findings suggest that lower extremity function may be related to single- and dual-task crossing duration independent of CRF in a novel real-world task. Additional research examining the role of improvements in mobility, as a result of exercise training, on improvements in task performance is warranted.

CORRESPONDING AUTHOR: Diane Ehlers, MA, University of Illinois, Urbana, IL, 61801; dkehlers@illinois.edu

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CAN WE PAY PEOPLE TO BE PHYSICALLY ACTIVE? A RANDOMIZED CONTROLLED TRIAL COMPARING INCENTIVE TYPES

Rachel J. Burns, PhD[1], Alexander J. Rothman, PhD[2]

[1]McGill University, Montreal, PQ, Canada; [2]University of Minnesota, Minneapolis, MN

Offering financial incentives that are contingent upon the performance of a specified health behavior has emerged as a popular intervention strategy and financial incentives take on a variety of forms (e.g., cash reward, reimbursement). Although direct comparisons of these different forms are needed to determine which are most effective, a systematic comparison of their impact on health behavior has yet to be conducted. This study is the first empirical test of a theoretical framework that specifies two dimensions (i.e., type and schedule) along which incentives may vary (Burns et al., 2012). First, incentives usually involve one of two types: cash rewards involve earning a sum of money if the target health behaviour is performed, and deposit contracts require participants to forfeit their own money to the researcher unless they perform the target behavior. Second, incentives may also vary in the schedule at which they are distributed; incentives may be administered at a fixed, predictable rate (e.g. $2/lb. lost) or at a variable, unpredictable rate (e.g. $1-$5/lb. lost). During a 5-week randomized controlled trial, 153 fairly inactive undergraduates were assigned to one of five conditions: 1) cash/fixed, 2) cash/variable, 3) deposit/fixed, 4) deposit/variable, or 5) no-incentive control. Incentives were administered on a weekly basis and contingent upon walking 10 000 steps per day on most days of the week. Participants in the incentive conditions met the walking goal more often than those in the control condition ($p < .001$); incentive conditions improved walking rates equally well. Generalized linear mixed effects regression analyses showed that walking rates declined at the same rate in all conditions, but participants in the incentive conditions were more likely to meet the goal at all times than those in the control condition (i.e., intercept effect, but not slope effect). Walking rates during a 2-week follow-up dropped markedly and did not differ across conditions. This study illustrates the value of systematically and directly comparing theoretically grounded types of incentives and underscores the utility of theory when designing incentives. Future work should test stronger manipulations and explore the generalizability of the results in other populations and with other health types of behaviors.

CORRESPONDING AUTHOR: Rachel J. Burns, PhD, McGill University, Montreal, PQ, H4A3L3; rachel.burns@mail.mcgill.ca

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CHANGES IN PHYSICAL ACTIVITY LEVELS AND MOTIVATIONAL CONSTRUCTS BY DISABILITY SEVERITY AND TYPE

Rebecca Ellis, PhD[1], Maria Kosma, PhD[2], Jeremy J. Bauer, PhD[3]

[1]Georgia State University, Atlanta, GA; [2]Louisiana State University, Baton Rouge, LA; [3]Hayes + Associates, Inc., Corvallis, OR

Objectives: Adults with physical disabilities are less active than people without disabilities. In addition, physical activity (PA) participation and motivational factors among individuals with physical disabilities may vary based on disability severity and type, which has important implications for intervention design. Therefore, the purpose of this longitudinal study was to examine temporal changes in PA levels and theory of planned behavior (TPB) constructs by disability severity (mild, moderate, and severe) and disability type (multiple sclerosis [MS] vs. spinal cord injury [SCI]). *Methods*: Participants were 77 adults (M age = 51.1 years ± 9.7, Range = 23-77) with physical disabilities (49.4% MS, 33.8% SCI; 23.4% mild disabilities, 42.9% moderate, and 26% severe) who completed a web-based survey. The survey assessed the global TPB constructs of attitude, subjective norm, perceived behavioral control, and intention, as well as PA participation and was completed once every four months for a total of three time points. *Results*: Two-way repeated measures ANOVAs were used to examine if the TPB constructs and PA levels changed over time and as a result of disability severity and type. There was only one significant between-subjects effect for PA levels by disability severity, $F(2, 68) = 5.94$, $p = .004$, $\eta^2 = 15\%$. People with mild disabilities exhibited higher mean PA levels over the three time periods ($M = 21.06 \pm 11.49$ MET-hrs/day) than those with moderate disability levels ($M = 11.27 \pm 9.3$ MET-hrs/day) and people with severe disabilities ($M = 13.43 \pm 14.74$ MET-hrs/day). *Conclusions*: Although participants with MS and SCI possessed positive PA motivational factors that remained stable over time, their PA levels differed as a function of disability severity. Therefore, PA interventions created for adults with physical disabilities should include exercises tailored to disability severity, specifically for those with moderate and severe disabilities, rather than behavioral strategies.

CORRESPONDING AUTHOR: Rebecca Ellis, PhD, Georgia State University, Atlanta, GA, 30302; rellis@gsu.edu

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COGNITIVE RESPONSES MODERATE THE PROTECTIVE EFFECT OF PHYSICAL ACTIVITY AGAINST DEPRESSOGENIC AFFECT

Kaitlin Harding, M.S.[1], Kara Pegram, M.S.[2], Michelle Kuhn, BA[2], Julie Vieselmeyer, M.A.[2], Amy Mezulis, PhD[2]

[1]Seattle Pacific University, Bellevue, WA; [2]Seattle Pacific University, Seattle, WA

Greater physical activity and the cognitive responses of less dampening and greater positive rumination may serve as protective factors against depressive symptoms by decreasing negative affect (NA) and increasing positive affect (PA; Paluska & Schwenk, 2000; Feldman et al., 2008). Dampening describes thoughts that decrease PA in response to positive events (Quoidbach et al., 2010), while positive rumination describes thoughts that increase PA in response to positive events (Martin & Tesser, 1996). Dampening and positive rumination may partially explain the protective effects of physical activity against depression by diminishing NA and enhancing PA already elicited by physical activity, but no studies have examined this interaction. Thus, we examined whether weekly aerobic and anaerobic physical activity predicted weekly NA and PA as influenced by dampening and positive rumination in response to weekly positive events. We hypothesized that greater aerobic and anaerobic physical activity would predict less NA and greater PA as moderated by less dampening and greater positive rumination. Participants were 150 (71.3% female) young adults (M=19.26 years, SD=1.62 years) who completed self-report measures of physical activity over the past year and depressive symptoms over the past week, followed by seven weekly measures of physical activity, dampening, positive rumination, and NA and PA in response to positive events. Data were analyzed via multilevel modeling in Hierarchical Linear Modeling 6.04. Partially consistent with hypotheses, (1) less aerobic activity protected against NA under less dampening (β=-.00005, p=.024), (2) less aerobic activity protected against NA under greater positive rumination (β=.00004, p=.032), and (3) greater anaerobic activity marginally amplified PA under greater positive rumination (β=-.0002, p=.082). Cognitive responses to positive events moderated the protective effect of greater physical activity in predicting less NA and greater PA, with distinct interaction effects observed for aerobic versus anaerobic activities. Findings extend understanding of the differential protections of aerobic and anaerobic physical activity on depressogenic affect regulation as influenced by dampening and positive rumination.

CORRESPONDING AUTHOR: Kaitlin Harding, M.S., Seattle Pacific University, Bellevue, WA, 98004; hardingk@spu.edu

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CORRELATES OF BREAST CANCER PATIENTS CHOOSING TO CONTINUE IN AN EXERCISE MAINTENANCE PROGRAM

Heather J. Leach, PhD, Colleen Cuthbert, Jessica M. Danyluk, MKin, S. Nicole Culos-Reed, PhD

University of Calgary, Calgary, AB, Canada

Background: A previous review found inconsistent evidence for determinants of exercise maintenance in cancer survivors. The aim of this study was to further explore correlates of breast cancer (BC) patients continuing in an exercise maintenance program. Method: The Breast cancer patients Engaging in Activity & Undergoing Treatment (BEAUTY) program is a 12-week community exercise program with a 12-week optional maintenance program for women who are currently undergoing, or within 3 months of completing treatment. Correlates of choosing to enroll in maintenance (Yes or No) were based on previous literature and ad hoc hypotheses. These included demographic variables, aerobic fitness, body composition, time from diagnosis to initial assessment, cancer stage, depressive symptoms, fatigue, health-related quality of life (HRQL), distance from home to program location, being physically active prior to starting program, and attendance at group exercise sessions during the initial 12-weeks. Pearson correlations detected significant univariate associations, which were included in a logistic regression model with enrolled in maintenance as the categorical dependent variable. Results:Out of 60 women who completed the initial 12-week program, 42 (70%) chose 'Yes' to continue in the maintenance program. Attending group exercise classes and time since diagnosis to initial assessment were associated with enrolling in maintenance. Participants enrolled in the program M=4.6±3.1 months after diagnosis and attended M=7.08±6.4 group exercise sessions. For each group exercise class attended, likelihood of enrolling in maintenance increased by 17.7% (β=.163, p=.031). For each month between diagnosis and initial assessment, likelihood of enrolling in maintenance decreased by 23.3% (β=-2.65, p=.033). Conclusions:Group exercise classes may increase social support or cohesion and lead to exercise maintenance. BC patients enrolled in an exercise program soon after diagnosis may not feel able to exercise independently after only 12-weeks, and therefore opt for a maintenance program. This also supports the 'teachable moment' hypothesis, which theorizes that beginning an exercise program closer to diagnosis may make BC patients more amenable to making significant, and possibly lasting, health behavior changes.

CORRESPONDING AUTHOR: Colleen Cuthbert, ; cacuthbe@ucalgary.ca

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DESIGNING COMMUNITIES FOR ACTIVE LIVING CREATES DIVERSE CO-BENEFITS

James Sallis, PhD[1], Chad Spoon, MRP[2], Nick Cavill, PhD, MPH, MFPH[3], Jessa Engelberg, DoctoralStudent[4], Klaus Gebel, PhD[5], Debbie Lou, PhD[2], Mike Parker, BSc[6], Christina M. Thornton, J.D., M.A.[7], Amanda Wilson, MS[2], Carmen Cutter, MPH[2], Ding Ding, PhD, MPH[8]

[1]University of California, San Diego, San Diego, CA; [2]Active Living Research, San Diego, CA; [3]Cavill Associates Ltd, Cheshire, United Kingdom; [4]University of California San Diego / San Diego State University, San Diego, CA; [5]James Cook University, Cairns, Australia; [6]Progress Health Partnerships, Wigan, United Kingdom; [7]University of California, San Diego / San Diego State University, San Diego, CA; [8]The University of Sydney, Sydney, Australia

Background: Creating "activity-friendly environments" is recommended to promote physical activity, but potential co-benefits of such environments have not been well described. Objective: To explore a wide range of literature to understand the co-benefits of activity-friendly environments. Methods: An extensive but non-systematic review of scientific and "gray" literature was conducted. Five physical activity settings were defined: parks/trails, urban design, transportation, schools, and workplaces/buildings. Three to eight evidence-based activity-friendly features were identified for each setting. Six potential co-benefits were searched: physical health, mental health, social health, safety/injury prevention, environmental sustainability, and economics. A total of 418 higher-quality findings were summarized based on direction of associations and quality of source. Results: Specific environmental features included proximity of parks, mixed land use, traffic calming, siting schools near neighborhoods, and mixed use around workplaces. The highest percentage of environment feature by co-benefit combinations categorized as "strong" positive evidence was found for urban design (27%) and parks/trails (17%) settings. The best evidence of co-benefit was found for environmental sustainability. The highest percentage of combinations with "insufficient" evidence was found for transportation (71%) and building/workplace (69%) settings. Across all settings, only one activity-friendly environmental feature had strong evidence of an unfavorable outcome. Conclusions: The exploration revealed substantial evidence that designing environments that make physical activity attractive and convenient is likely to produce additional important benefits. Evidence of co-benefits could be of interest to decision makers, but there are many gaps in evidence.

CORRESPONDING AUTHOR: James Sallis, PhD, University of California, San Diego, San Diego, CA, 92103; jsallis@ucsd.edu

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A RANDOMIZED TRIAL EXAMINING WAYS TO IMPROVE HEALTH INSURANCE LITERACY AMONG THE UNINSURED

Mary Politi, PhD[1], Kimberly Kaphingst, ScD[1], Jingxia Liu, PhD[1], Hannah Perkins, MPP[1], Matthew W. Kreuter, PhD, MPH[2], Timothy Mcbride, PhD[2]

[1]Washington University in St Louis School of Medicine, St Louis, MO; [2]Washington University in St Louis, George Warren Brown School of Social Work, St Louis, MO

Background: The Affordable Care Act allows uninsured individuals to select health insurance from numerous private plans in the health insurance marketplace, a challenging decision-making process even for those who have faced this decision in the past. This study examined the effectiveness of strategies to improve health insurance literacy among the uninsured. Methods: Participants (n=343) from urban, suburban, and rural areas were randomized to one of three conditions: 1) a plain language table; 2) a visual condition separating the plain language table into parts, with added graphics. Participants chose what information to view and in what order; 3) a narrative condition. We administered measures assessing knowledge, confidence in choices, satisfaction, preferences for insurance features, and plan choice. Results: Although we did not find significant differences in knowledge, confidence in choice, or satisfaction across conditions, participants across conditions made value-consistent choices, selecting plans that aligned with their reported preferences. Participants with higher education, adequate health literacy and higher numeracy skills had higher knowledge overall. They also preferred the plain language table to other conditions. Those with inadequate health literacy and numeracy skills showed no preference for study condition. Those with higher income felt less confident in their choices. Conclusions: Plain language communication might be enough to support health insurance decisions among more educated individuals or those with higher health literacy and numeracy skills. Additional non-written strategies such as trained navigators may continue to be needed to better support health insurance decisions among vulnerable populations such as those with limited health literacy and numeracy skills or those with lower education. Tradeoffs between cost and coverage may lead higher income groups to feel conflicted about choices, while lower income groups might focus solely on minimizing out-of-pocket costs.

CORRESPONDING AUTHOR: Mary Politi, PhD, Washington University in St Louis School of Medicine, St Louis, MO, 63110; mpoliti@wustl.edu

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“DON’T KNOW” REPONSES TO QUESTIONS ABOUT HIV RISK: PREVALENCE, TRENDS OVER TIME, AND CORRELATES

Megan McKillip, BA[1], Marc T. Kiviniemi, PhD[1], Heather Orom, PhD[2], Erika A. Waters, PhD, MPH[3], Jennifer Hay, PhD[4]

[1]University at Buffalo, SUNY, Buffalo, NY; [2]University at Buffalo, Buffalo, NY; [3]Washington University School of Medicine, St Louis, MO; [4]Memorial Sloan Kettering Cancer Center, New York, NY

Background: Risk perception is a central facet of models of health decision making. However, some adults report not knowing their risk for health problems. Much of this work has been done with convenience samples, leaving open the question of how prevalent the phenomenon is in the population. In this study, we examine prevalence of don’t know responding to risk for HIV infection. We also examine how the prevalence of don’t know responding changes over time as knowledge about HIV infection diffuses in the population. Methods: Data were analyzed from 8 years (1993-2000) of the CDC’s Behavioral Risk Factor Surveillance Survey. In each of those eight years, participants were asked to rate their likelihood of becoming infected with the HIV virus; responses were coded as don’t know if participant said don’t know to the interviewer. Participants also provided a variety of demographic information, including age, gender, race/ethnicity, income, and education. Complex survey analyses were used to account for design features and sampling weights so as to provide population representative estimates. Results: In each survey year, more than 1% of participants responded don’t know; i.e., at least 2.5 million American adults each year did not know their risk for HIV infection. The proportion of don’t know responses declined steadily over the 8 year period, with 2.4% of respondents answering don’t know in 1993 versus 1.1% in 2000. For each year of data, lower income, lower education, and minority race/ethnicity were associated with greater likelihood of don’t know responding. Discussion: Don’t know responding characterizes a substantial number of American adults. The decline in don’t know responding over the 8 years of data and the relation of responding to SES both suggest that a lack of knowledge about HIV and/or health literacy might account for don’t know responses.

CORRESPONDING AUTHOR: Megan McKillip, BA, University at Buffalo, SUNY, Buffalo, NY, 14214; mrmckill@buffalo.edu

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ALTRUISTIC MOTIVATIONS TO TEST: IMPACT OF GENETIC COUNSELING AND TESTING

Rahul Garg, M.Pharm, Kimberly Kelly, PhD

West Virginia University, Morgantown, WV

Background: Despite the importance of altruism in an individual’s participation in genetic testing and research, little research has explored these altruistic motivations in depth. Aim: This study analyzed the factors associated with altruistic motivations to test and change in altruistic motivations after genetic counseling and testing among individuals (n=120) at risk for BRCA 1/2 mutation. Methods. The perceived positives of genetic testing were analyzed in a repeated measures design at pre-counseling, post-counseling and post genetic testing. Results: Six common perceived benefits of genetic testing were identified – cancer prevention (64.3%), increased awareness (42.0%), family’s survival (25.0%), relief from anxiety (16.1%), progress in research (13.4%) and future planning (5.4%). These benefits were then coded into 3 categories of motivations to test: for altruism, for mutual benefit and for personal benefit according to Hamilton’s classification of social behavior. Study participants were mostly women (89.2%), never married (78.3%), ranging in age from 18 to 83 ($M = 49.7$, $SD = 13.2$) and had high education level ($M = 16.8$ years, $SD = 2.4$). Nearly half of them (46.2%) had a family income of above $100,000, had a personal cancer history (47.5%) and a majority (89.2%) underwent genetic testing. Most of them (68.2%) received uninformative negative results; 22.4% received positive and 9.4% received informative negative results for BRCA 1/2 mutations. Before counseling, a majority (51.8%) reported only personal motivations, 16 (14.3%) participants reported only altruistic motivations and 38 (33.9%) reported it to be for mutual benefit. At baseline, chi-square analysis showed those with a personal history of cancer were more likely to cite altruistic motivations to test ($p=0.002$). McNemar test showed that altruistic motivations to test significantly increased after genetic counseling ($p=0.010$) but declined after receiving genetic test results ($p < 0.001$). Conclusions: Empathy for their family or other women to prevent them from getting cancer might have caused those with personal cancer history to be more altruistic. Further, better understanding of benefits of genetic testing for their families after genetic counseling had a significant effect on participants’ altruistic motivations to test.

CORRESPONDING AUTHOR: Rahul Garg, M.Pharm, West Virginia University, Morgantown, WV, 26508; ragarg@mix.wvu.edu

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ANALYSIS OF THE EFFICACY OF A HEALTH LITERACY INTERVENTION IN MIDDLE TENNESSEE

Hannah Todd[1], Catherine Crooks, PhD[1], Stuart E. Bernstein, PhD[2], Hailey E. Lawson[1]

[1]Middle Tennessee State University, Murfreesboro, TN; [2]Middle Tennessee state University, Murfreesboro, TN

The needs of at-risk families were addressed through a service learning project in which undergraduate college students conducted health literacy training for families in their community in both English and Spanish. Families (n = 24 persons) with young children enrolled in a public preschool received two nights of health literacy training using the book *What To Do When Your Child Gets Sick.* A medication label comprehension test showed that over 20% of parents gave incorrect answers to questions about dosage, active ingredients, and side effects of a common over-the-counter medication. A test of what to do when children are sick, administered before the training, showed that 96% of parents know to go to the emergency room when a child is injured, however, only 70% knew this is appropriate for certain allergic reactions. Almost half of the parents would go to the emergency room when their children have fevers of 100 (a case that requires only a doctor visit). Training addressed these issues by having parents practice reading medication labels, and practice looking up childhood ailments including high fevers, stomach aches, allergic reactions, and rashes. The training and the book provided clear indication of conditions that can be treated at home, conditions that require doctor visits, and conditions that require urgent care. In a 3 month follow-up, 28% reported using the book instead of visiting an emergency room; 35% reported using the book to answer a question instead of calling a hospital or clinic; 21% reported using the book to identify an urgent healthcare need that did require a doctor or ER visit; 57% reported sharing the book with other parents.

CORRESPONDING AUTHOR: Hannah Todd, Middle Tennessee State University, Murfreesboro, TN, 37130; hannahmtodd@gmail.com

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ANTICIPATED REGRET AND HEALTH BEHAVIOR: A META-ANALYSIS

Noel Brewer, PhD[1], Jessica T. DeFrank, PhD[2], Melissa Gilkey, PhD[3]

[1]University of North Carolina at Chapel Hill, Chapel Hill, NC; [2]Research Triangle Institute, Raleigh, NC; [3]Harvard Medical School / Harvard Pilgrim Health Care, Boston, MA

Introduction: Recent work suggests that anticipated regret may be an important risk appraisal that motivates health behavior. We sought to characterize whether anticipated regret motivates health behavior and the conditions under which it does so.

Methods: We systematically searched electronic databases (MEDLINE, PsycInfo, Web of Science, CINAHL, and EMBASE) through 2013 for studies of anticipated regret and health behavior. We calculated r as our effect size and synthesized effects using random effects meta-analysis.

Results: We identified 78 studies. The most commonly studied health behaviors were vaccination, safe sex including condom use, and cancer screening. Higher anticipated regret was strongly associated with having higher behavioral intentions (pooled r = .50, 95% CI .47-.54). It was also moderately associated with being more likely to engage in health behavior (pooled r = .29, 95% CI .24-.34). Anticipated regret of action and inaction had equally strong, though oppositely signed, effects. Anticipated action regret showed stronger associations for more frequent behaviors that addressed more severe and more proximal hazards than did inaction regret. Anticipated action regret had a weaker effect when the measure included other anticipated negative emotions such as anticipated guilt or anticipated sadness. We did not find these moderators for anticipated inaction regret.

Discussion: Anticipated regret plays an important role in motivating a broad array of health behaviors. The field should give greater attention to understanding how anticipated regret differs from other types of negative affect, its role in health behavior theory, and its potential use in health behavior interventions.

CORRESPONDING AUTHOR: Noel Brewer, PhD, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599; ntb@unc.edu

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ASSOCIATIONS BETWEEN DECISIONAL BALANCE AND HEALTH BEHAVIORS AMONG OLDER ADULT CANCER SURVIVORS

Jonathan Shtaynberger, MSCandidate[1], Paul Krebs, PhD[2], Michelle Iocolano, MA[3], Jamie Ostroff, PhD[4]

[1]Columbia University School of Public Health, Brooklyn, NY; [2]NYU School of Medicine, New York, NY; [3]Memorial Sloan Kettering Cancer Center, Flushing, NY; [4]Memorial Sloan Kettering Cancer Center, New York, NY

Objective: The construct of decisional balance has often been compared with stage of change, but its association with behavioral outcomes has rarely been examined. Using data from a pilot e-health program designed to increase healthy eating and physical activity among adult cancer survivors, the study explored associations between decisional balance and physical activity and fruit and vegetable consumption. Methods: Patients (N=86) with a history of breast or prostate cancer and at least 5 years from active treatment were randomized to Treatment (e-health intervention) or Control (usual care) groups. At baseline and three month follow-up, patients completed the Godin Leisure-Time Activity and Thompson Food Frequency Questionnaires and standard measures of perceived pros and cons for both behaviors. Controlling for within-patient correlation, the relationship between decisional balance standardized scores and behavioral outcomes was examined via longitudinal regression. Results: Participants were mostly female (96%) with a mean age of 59.8. Physical activity, measured in weekly metabolic equivalent units, was significantly associated with physical activity pros (B=0.46, p=.012) and cons (B=-0.51, p=.004). Combined fruit and vegetable consumption was significantly associated with pros (B=0.04, p=.002), but not with cons (B=-0.01, p=.246). All relationships were in the predicted directions. Conclusion: Results show that significant relationships exist between perceived pros and cons and engagement in health behaviors, which serve to support the relevance of the decisional balance construct in this domain. Findings imply that interventions that increase pros while decreasing cons may be important in assisting participants to change their health behaviors.

CORRESPONDING AUTHOR: Paul Krebs, PhD, NYU School of Medicine, New York, NY, 10016; paul.krebs@nyumc.org

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AWARENESS OF TYPE 2 DIABETES FAMILY HISTORY ON PREVENTIVE BEHAVIORS: A SYSTEMATIC LITERATURE REVIEW

Ann Amuta, MPH, CPH, Divya Talwar, MPH, BDS

Texas A&M, College Station, TX

Purpose: Family History is considered as an important independent risk factor towards development of Type2Diabetes (T2D) which can be prevented by adoption of a healthy lifestyle. However, there is dearth of literature assessing the association between family history of T2D and preventive behavior adoption. Some studies report strong associations while others report no association. We conducted a systematic review assesses the scientific literature and report on the association between awareness of a family history of T2D and adoption of preventive behaviors. It is important to clarify that we did not look at clinical studies that had exercise or diet interventions and merely included those with a family history of T2D in the studies. Instead, we focused on only the awareness of family history of T2D and risk behaviors.Methods: In order to identify relevant studies, we searched electronic databases such as Medline, Embase, CINAHL, Global Health and Psyc INFO. The inclusion criteria in our review was: 1) published after 1990 (Human Genome Project start), 2) in English language, 3) focuses on T2D, 4) measures participant knowledge/awareness/risk perception of family history of T2D, 5) measures risk-reducing behaviors related to T2D (diet, physical activity, smoking, screening etc.), 6) includes populations with a family history of T2D, and 7) peer-reviewed article.Results: A total of 11 articles met our inclusion criteria. Nine studies were cross-sectional designs and two studies were randomized control trials. Nine articles reported statistically significant relationships between having a family history of T2D and awareness of family history and increased T2D-related risk reducing behaviors (physical activity, screening and diet). One article found statistical relationships with healthy behaviors only among low-educated participants and the last article did not report any significant relationships whatsoever.Conclusion: Although strong evidence for the effectiveness of the use of family history information for T2D prevention is limited, this systematic review reveals that the use of family history has great potential for encouraging those with a personal history of T2D to prevent or delay the development of T2D by eating healthier foods, increasing physical activity and routinely screened.

CORRESPONDING AUTHOR: Ann Amuta, MPH, CPH, Texas A&M, College Station, TX, 77840; aamuta@hlkn.tamu.edu

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BREASTFEEDING: NO ROLE IN PERCEPTIONS OF CARDIOVASCULAR DISEASE RISK

Kimberly Kelly, PhD

West Virginia University, Morgantown, WV

Breastfeeding confers many health benefits not only to babies but also to their lactating mothers. Specifically, breastfeeding is a notable protective factor in the Gail model for breast cancer and may be more effective than statins for reducing risk of cardiovascular disease. Although individuals in the Appalachian region have a lower risk of developing breast cancer, their risk of cardiovascular disease is elevated compared to the US. Further, WV, located entirely in the Appalachian region, has one of the lowest breastfeeding rates in the country. Thus, this juxtaposition of risks and risk factors, makes the Appalachian population significant for the study of breastfeeding and perceptions of breast cancer and cardiovascular disease risk. We surveyed 232 mothers of toddlers under 3 years of age, recruited through parenting groups (including breastfeeding social networking sites), daycares, and county extension in Appalachian WV. Participants were asked their comparative risks for breast cancer and cardiovascular disease and why they felt their risk was higher, same, or lower than the general population. Most were white (96.7%), had a bachelor's degree or more (74.5%), and breastfed their children (91.4%). For breast cancer, 29.8% felt their risk was lower than the general population. For cardiovascular disease, 26.8% felt their risk was lower than the general population. Although these risks were highly correlated (p=.002), there was considerable variability in responses (p=.005). Qualitative responses for breast cancer risk frequently mentioned breastfeeding (23.8%) and family history (46.4%); responses for cardiovascular disease noted family history (44.0%) but not breastfeeding. Forward stepwise regression models were conducted for the outcomes of breast cancer and cardiovascular disease risk. Those who were employed full time had the highest breast cancer risk ($p < .05$). Those who were currently smoking had the highest cardiovascular disease risk ($p < .05$). History of breastfeeding was not a predictor in either model. In this well-educated sample of predominantly lactating women, none reported the protective effects of breastfeeding for cardiovascular disease. Educational efforts may be even more important for those who are not breastfeeding to encourage this health behavior.

CORRESPONDING AUTHOR: Kimberly Kelly, PhD, West Virginia University, Morgantown, WV, 26508; kmkelly@hsc.wvu.edu

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COLLEGE STUDENT HEALTH AND FITNESS APP USE: A QUALITATIVE STUDY

Mary Gowin, MPH, Marshall Cheney, PhD, Taylor Wann, BS, Shannon Gwin, M.S.

University of Oklahoma, Norman, OK

Most (66%) young adults own a smartphone and 24% have downloaded a health and fitness application, yet little is known about how they are utilized. College students (n=27) participated in individual interviews exploring health and fitness app use. Interviews were recorded, transcribed, and analyzed using NVivo. Multiple themes were identified. College students would not pay for apps; even 99¢ was a barrier to downloading an app. Apps with extensive data entry or complicated components were deleted. Acceptable apps provided visual or auditory cues, easy access to desired features, game-like rewards or challenges, and few start up requirements. Participants talked about the apps as if they were people, and described apps providing both positive and negative reinforcement. Participants enjoyed when the app "coached" them. They expressed positive feelings about the app motivating them, holding them accountable, and challenging them to compete with their previous accomplishments. They also talked about the app "guilting" them into doing better and feeling stressed when they did not meet the app's expectations. Several students indicated that they became preoccupied with the app, which they acknowledged was a problem. Most students had a goal when they downloaded the app. Most students with a goal reported meeting it and believed the app helped them. Two distinct groups emerged: those who used the app as a tool to support an established behavior and those who used the app as an attempt to adopt a new behavior. Approximately half of the students had at least one failed attempt to change their behavior prior to using the app. Those attempting to adopt a new behavior were more likely to use the app to establish a routine, increase awareness of the behavior, or to motivate them to attempt a previously failed behavior. Participants who had already established the behavior used the app for a specific purpose such as monitoring nutrient intake, increasing speed or distance, or finding new ways to engage in the behavior. Several participants from both of these groups discontinued or reduced app use because they could regularly do the behavior without it. Others still attempting the behavior utilized the app inconsistently, and a few discontinued use because they stopped trying to change their behavior.

CORRESPONDING AUTHOR: Mary Gowin, MPH, University of Oklahoma, Norman, OK, 73019; marygowin@ou.edu

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DEFINING CASUAL SEX RELATIONSHIPS

Jessica Meers, MA, Mary Short, PhD

University of Houston-Clear Lake, Houston, TX

All sexual relationships involve some degree of risk. One important variable associated with risk is the type of relationship these sexual behaviors occur within. Research has only recently begun to recognize that relationships such as One Night Stands, Booty Calls, Hook Ups, and Friends with Benefits might be associated with different behaviors, such as sexual intercourse, condom use, repeated encounters, etc. To date, however, there has been little research into how these relationships differ from each other, as most studies have grouped these relationships into broad categories, such as "casual sex" or "non-monogamous" relationships. This method, however, neglects the subtle differences in behaviors associated with each category, such as whether the relationship is regularly repeated, which sexual behaviors are associated with each, and with whom the relationship occurs (stranger vs. friend or acquaintance). The current study aimed to define and categorize the behaviors associated with each relationship type. A sample of 369 participants aged 18 to 64 participated in an online survey about how they define each relationship type. Results indicated high rates of agreement on the defining behaviors of each relationship. For example, 72% agreed that, by definition, a One Night Stand occurs with a stranger, while 73% believed Booty Call involves an acquaintance. Almost all participants (98%) agreed One Night Stands involve sexual intercourse. Hook Ups, however, include more kissing (78%) and touching (79%) compared to One Night Stands (54% and 61% respectively). This agreement on behaviors and definitions indicate that these relationships warrant independent investigation.

CORRESPONDING AUTHOR: Jessica Meers, MA, University of Houston-Clear Lake, Houston, TX, 77008; jessica.meers.patton@gmail.com

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DISGUST SENSITIVITIES PREDICT HEALTH-PROMOTING AND HEALTH-DELETERIOUS AVOIDANCE IN SEXUAL HEALTHCARE

Lisa Reynolds, MSc, PGD, Jessica Suri, MSc, Nathan S. Consedine, PhD

The University of Auckland, Auckland, New Zealand

Background: Delay and avoidance of sexual healthcare are common problems, particularly among young adults. Although understudied, disgust's elicitors (e.g., bodily product, insertion-based tests) are common in sexual health contexts and may thus promote healthcare avoidance. The current report tested whether trait disgust predicted delay and avoidance in sexual healthcare and assessed the best ways to operationalize this understudied emotion.
Methods: A sample of 318 volunteers provided consent before completing anonymous online questionnaires assessing disgust sensitivity and propensity (DPSS), content-specific disgust (DS-R), social desirability, neuroticism, and typical patterns of healthcare utilisation as well as completing medical decision scenarios relating to sexual health.
Results: Forward stepwise regressions controlling for demographics, desirability, neuroticism, past sexual partners, and typical utilization revealed that disgust sensitivity was associated with greater utilization for flu-like symptoms ($\beta = .21, p < .01$) and aches and pains ($\beta = .15, p < .01$) but lower utilization for sexual health concerns ($\beta = -.13, p < .05$). More provocatively, disgust predicted reduced delay in seeking healthcare for disgusting symptoms ($\beta = -.17, p < .01$) but also predicted reduced odds of undergoing a disgust-eliciting insertion examination ($\beta = -.12, p < .05$).
Conclusions: Disgust is understudied and poorly understood in sexual health contexts, but consistently predicts sexual healthcare behaviours. Depending on the specific elicitor, disgust may contribute to either health-promoting or health deleterious delay and avoidance in sexual healthcare. Directions for future empirical work are discussed.

CORRESPONDING AUTHOR: Lisa Reynolds, MSc, PGDipHlthPsych, The University of Auckland, Auckland, 1142; lisa.reynolds22@gmail.com

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PSYCHOLOGICAL CAPITAL IN HOMELESS YOUNG WOMEN: PRELIMINARY INTERVENTION FINDINGS

Lynn Rew, EdD, RN, AHN-BC, FAAN[1], Sanna Thompson, PhD, MSW[1], Adama Brown, PhD[1], Tara L. Powell, PhD, MSW[2]

[1]The University of Texas at Austin, Austin, TX; [2]University of Illinois, Urbana-Champaign, Urbana, IL

Problem: Young women, ages 18-23 years, are the most vulnerable of homeless youth to poor health outcomes related to substance use and risky sex. Theory-driven brief interventions are needed to offset risks.Aim: The aim was to determine the feasibility and preliminary efficacy of a brief 4-session group intervention.Method: A quasi-experimental design was used. Following IRB approval and written informed consent, we collected data, using valid scales (a = .78-.96), prior to (T1), immediately after (T2), and 4 weeks after the intervention (T3). Young ethnically diverse women (N = 86, mean age = 20.7, 30% Latina) who sought services from a drop-in center or a shelter for young mothers and babies were assigned to either a control group (CG) where they had 4 sessions about staying healthy or the intervention group (IG) with 4 sessions focusing on psychological capital (hope, resilience, optimism) in the context of setting goals to curtail risky sex and substance use. The IG and CG were led by two female group facilitators (graduate students in nursing and social work) trained by the investigators. Following the 4 sessions, participants in both IG and CG were each given a pre-paid cell phone to use for the next 4-weeks. The purpose was to encourage those in the IG to meet their goals and to remind those in the CG of the date for final data collection. Each participant received a total of $45 for providing data at all 3 times. Data for this report were analyzed using repeated measures ANOVA and included only those for whom we had complete data at all 3 time-points.Findings: There were significant changes for time in measures of hope ($p < .001$), psychological capital, social connectedness ($p < .01$), resilience, and self-efficacy to refuse alcohol ($p < .05$) with the IG showing consistently higher scores than the CG. There was a significant time by group effect in talking about sex, indicating that the IG increased scores over time, but CG fluctuated with a decrease in scores at T2 ($p < .05$). There was a trend toward significance in time by group in optimism, showing that IG improved but CG fluctuated ($p < .10$). Conclusions: To our knowledge, this is the first intervention for homeless young women that shows promising results for improving psychological capital while reducing risky sex and skills to refuse alcohol use.

CORRESPONDING AUTHOR: Lynn Rew, EdD, RN, AHN-BC, FAAN, The University of Texas at Austin, Austin, TX, 78701; ellerew@mail.utexas.edu

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SECRET OF SEVEN STONES: A GAME TO PREVENT YOUTH HIV/STIS AND PREGNANCY BY PARENT-YOUTH COMMUNICATION

Sara Dube, B.S.[1], Laura Ceglio, B.S.[1], Hsingyi Song, MD[1], Christine Markham, PhD[1], Diane Santa Maria, DrPH, MSN, RN, APHN-BC[2], Melissa Peskin, PhD[1], Jeffery McLaughlin, B.A.[3], Chris Lahiri, BBA[3], Johnny Wilkerson, PhD, MPH[1], Susan Tortolero Emery, PhD[1], Ross Shegog, PhD[1]

[1]University of Texas Health Science Center at Houston/Center for Health Promotion and Prevention Research/School of Public Health, Houston, TX; [2]University of Texas School of Nursing, Houston, TX; [3]Radiant Creative Group, Houston, TX

Introduction Game-based interventions can motivate youth, yet few have targeted sexual health and even fewer to impact parent-youth communication. The purpose of this study is to develop a home-based online adventure game, 'The Secret of Seven Stones' (SSS), to engage parents and youth (11-14 yrs.) to go beyond 'the sex talk' to impact youth decisions related to friendships, dating, and sex.

Methods Intervention Mapping (IM) informed SSS development including needs assessment protocols (focus groups and semi-structured interviews with 19 parent-youth dyads, and review of literature and previous empirical data), design document development, single-level prototype production, and cyclical 'talk aloud' usability testing with youth to inform production of a complete prototype.

Results Initial usability ratings for understandability, likeability, ease of use, credibility, and motivational appeal were moderate (50 - 83%) with needed revisions including game mechanics, content delivery, and procedural logic. Revised prototype testing resulted in improved ratings (60% - 100%) providing sufficient confidence in production of a complete SSS game prototype. The resultant game provides behavioral skills training in 15 domains (drawn from 135 performance behaviors and over 1300 learning objectives) encompassing responsible decision making about friendships, dating relationships, and sex. This adventure game features 18 levels that include 50 interactive skills training clusters and 54 application 'battle' sequences for youth, and 7 game-mediated parent-youth 'PEP' talks. As youth play the game, parents receive progress updates and cues to receive resources to guide communication with their youth.

Discussion The IM protocol and cyclical prototype usability testing enabled an improved user interface and game mechanics prior to production of the complete SSS game. Beta testing to test the functionality, feasibility, and appeal of SSS in the home is indicated prior to a planned randomized control trial to evaluate efficacy.

Conclusion SSS represents an innovative approach to address the gap between the needs of families in preparing their sexually maturing youth and the developmentally appropriate resources currently available.

CORRESPONDING AUTHOR: Sara Dube, B.S., University of Texas Health Science Center at Houston/Center for Health Promotion and Prevention Research/School of Public Health, Houston, TX, 77030; sara.m.dube@uth.tmc.edu

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SEXUAL RISK IN TEXAS MSM: EXPLORING THE ROLE OF SEXUAL MINORITY MICROAGGRESSIONS AND SUBSTANCE USE

Andrew Pereira, B.A.[1], Mark Vosvick, PhD[2], Victor Prybutok, PhD, CQE, CQA, CMQ/OE, PSTAT®[1], Doug Henry, PhD[1], Jonathon Poe, MSSW[3], Shane U. Sheu, MPH[3]

[1]University of North Texas, Denton, TX; [2]UNT, Denton, TX; [3]Texas Department of State Health Services, Austin, TX

The increasing prevalence of HIV infection in men who have sex with men (MSM) (CDC, 2013) suggests the need for researchers to identify points of intervention most useful in lowering sexual risk. In this study we identify how sexual minority micro aggressions (SMA) relate to condomless anal and vaginal intercourse (CAV) in the context of substance use and ethnic/racial differences. The analysis used data from the third wave of the National HIV Behavioral Surveillance (NHBS) survey in Dallas, Texas that recruited 370 MSM in 2011. Results of regression analyses show that the relationship of SMA and CAV vary significantly by ethnicity/race and as a result of MSM identifying as gay or bisexual. In addition, drug and alcohol use was a consistent contributor in the model. For example, endorsement of SMA in public settings other than health care settings was positively associated with CAV in multiracial participants (β=1.47, t(40)=5.7, $p < .001$) but non-significant for European-Americans, who tended to have more CAV partners when experiencing SMA in health care settings (β=1.07, t(130)=2.04, p=.044). Furthermore, the modeled factors explained 26.4% of the variance in CAV for MSM identifying as bisexual (R=.51, F(7, 92)=4.71, $p < .001$), but only 7.6% in MSM identifying as gay (R=.28, F(7, 251)=2.94, p=.006). Also, SMA in public settings was again associated with CAV in MSM identifying as bisexual (β=.72, t(100)=3.51, p=.001) but not in MSM identifying as gay, who did not have significant relationships between the measured forms of SMA and CAV. These findings suggest the need for a nuanced approach to addressing sexual risk behaviors for MSM in the south that takes into account personal experiences with discrimination, ethnic/racial cultural differences and individual struggles with substance use.

CORRESPONDING AUTHOR: Andrew Pereira, B.A., University of North Texas, Denton, TX, 76205; andrew.pereira@unt.edu

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SEXUAL RISK-TAKING AMONG COLLEGE STUDENTS

Richard McAnulty, PhD[1], David P. McAnulty, PhD[2]

[1]University of North Carolina-Charlotte, Charlotte, NC; [2]Abilene Christian University, Abilene, TX

Sexual Risk-Taking Among College Students

Young adults account for a disproportionate number of sexually transmitted infections (STIs). According to recent estimates, over half the new STIs occur in older adolescents even though they account for only 25% of the sexually active population (CDC 2010). A total of 310 undergraduate students completed online surveys about sexual behavior in the previous 6 months, personal risk appraisal or perceived susceptibility, safer sex practices, and perceived severity of sexual health threats. Nearly 60% of the participants reported being in a monogamous relationship.

The majority of the sample reported only one sexual partner within the previous six months. Twenty-three percent reported 2 to 3 sexual partners in the past six months and 7% had four or more partners in the past six months. Although most of the sample having only one sexual partner in the past 6 months, almost half of the respondents described at least one of their partners as "casual", suggesting that it took place outside of a monogamous and committed relationship. Mean number of sexual partners in the past 6 months was 1.69 and mean number of casual sexual partners was 0.76. A third of respondents always used condoms. Only 37% reporting "never" having intercourse while under the influence. Over 30% of respondents were uncertain of their primary sexual partners' exclusivity to their sexual relationship.

Perceived severity of an STI was high. Most participants rated their susceptibility of contracting an STI as moderate. Condom use self-efficacy was fairly high. Perceived susceptibility was correlated with sexual risk-taking, suggesting that participants were aware of their sexual risk-taking. Condom use self-efficacy was inversely correlated with perceived susceptibility, suggesting that participants who perceived themselves as higher risk also tended to have lower condom use self-efficacy. These and other results will be discussed in light of existing health behavior models, particularly the Health Behavior model. Implications for risk reduction and prevention programs will be considered.

CORRESPONDING AUTHOR: Richard McAnulty, PhD, University of North Carolina-Charlotte, Charlotte, NC, 28223; rdmcanul@uncc.edu

MERITORIOUS POSTER

6:00 PM-7:00 PM A121

THE RELATIONSHIP BETWEEN GIRLS' PUBERTAL TIMING AND ADOLESCENT HEALTH RISK BEHAVIOR

C. Emily Hendrick, MPH, Jessica D. Cance, MPH, PhD

The University of Texas at Austin, Austin, TX

Developmental readiness theory proposes that girls with early pubertal timing are not cognitively or emotionally mature enough to effectively cope with the social challenges associated with a more physically-developed body. This mismatch leads to difficulties with healthy decision-making and maladaptive coping behaviors in adolescence. Accordingly, girls with early pubertal development have demonstrated heightened risk for numerous health risk behaviors in adolescence, including substance use and sexual risk-taking. However, the majority of this research has focused on white girls and been regional in scope. In the current study, we use data from the ethnically-diverse National Longitudinal Survey of Youth 1997 female cohort (N=3,898) to investigate the relationships between early menarche (menarche before age 12) and the onset of substance use (age of first cigarette, age of first alcoholic drink) and reproductive and sexual health risk behaviors (age of sexual debut, teenage childbearing) in adolescence. We conducted a series of bivariate and multivariate linear and logistic regression models in STATA 13.1. In the multivariate models we controlled for race/ethnicity, mother's educational attainment, father absence during youth, and participant perception of peer participation in the risk behavior of interest.In the bivariate models, early menarche was associated with earlier ages of cigarette use, alcohol use, and sexual debut (all $p < .05$) and girls with early menarche had higher odds of becoming a parent before age 20 (OR=1.43, $p < .001$) compared with their on-time and later developing peers. In the multivariate models, early menarche was still associated with earlier ages of cigarette use, alcohol use, and sexual debut (all $p < .05$) but the relationship between early menarche and teen parenthood was no longer significant.Our findings suggest that girls in the U.S. with early pubertal development are commencing substance use and reproductive and sexual health risk behaviors earlier than their on-time and later-developing peers. Identifying early developing girls for targeted intervention efforts may help to delay or prevent the onset of risk behaviors in adolescence that lead to behavioral health problems later in life.

CORRESPONDING AUTHOR: C. Emily Hendrick, MPH, The University of Texas at Austin, Austin, TX, 78712; emily.hendrick@utexas.edu

6:00 PM-7:00 PM A122

VARIABLES ASSOCIATED WITH ABNORMAL PAP TEST RESULTS AND HPV VACCINE UPTAKE AMONG FEMALE COLLEGE STUDENTS

Kristina Harper, BS[1], Mary Short, PhD[2]

[1]University of Houston Clear Lake, Pearland, TX; [2]University of Houston-Clear Lake, Houston, TX

The current study explored psychosocial variables associated with HPV vaccine uptake and abnormal pap smear results among college females (N = 222), ranging in age from 19-26 (M =23.26). Participants completed an online survey pertaining to sexual history, pap smear history, health related anxiety, intolerance of uncertainty, and HPV-related stigma and shame.With regard to abnormal pap smear results, 35% ($n = 78$) endorsed receiving abnormal results. These women reported significantly more prospective anxiety, $t(219) = 2.02, p < .05$; higher levels of inhibitory anxiety, $t(219) = 2.15$, $p < .01$; increased intolerance for uncertainty, $t(219) = 2.97, p < .01$; and increased shame, $t(219) = 2.21, p < .05$. Those with abnormal pap smear results also reported significantly more lifetime sexual partners $t(218) = 3.92, p < .01$; more sexual partners in the past year $t(219) = 2.26, p < .05$; and an earlier age of sexual debut, $t(219) = 2.26$, $p < .05$. A chi-square test for independence indicated a significant association between abnormal pap smear results and maintaining a regular OB/GYN, X^2 (1, n = 221) = 14.87, $p < .01$. Among those who received abnormal results, 86% ($n = 67$) completed further testing recommended by their doctor.With regard to HPV vaccinations, 24.3% ($n = 54$) had received the vaccine, of which 34 had completed the series. Results indicated that those women who received at least one HPV shot reported significantly more prospective anxiety $t(220) = 2.23$, $p < .05$; increased intolerance for uncertainty, $t(220) = 2.15, p < .05$; and higher levels of HPV-related shame, $t(220) = 1.60, p < .05$. A chi-square test for independence indicated a significant association between vaccine uptake and a history of cervical dysplasia, X^2 (1, n = 213) = 3.99, $p < .05$ as well as with an abnormal pap smear results, X^2 (1, n = 221) = 3.788, p =.05 The two groups of women (vaccine yes/no) did not significantly differ on age of sexual debut, total number of sexual partners, number of sexual partners in the past year, or HPV-related stigma.The current data add to the understanding of college students' attitudes and behaviors pertaining to sexual health. The results are pertinent for doctor-patient communication surrounding pap smear results and informing psychoeducational interventions to increase HPV vaccine uptake.

CORRESPONDING AUTHOR: Kristina Harper, BS, University of Houston Clear Lake, Pearland, TX, 77584; krissyharper22@gmail.com

6:00 PM-7:00 PM A123

WHAT ARE THE "ACTIVE INGREDIENTS" OF CHANGE IN THE THEORY OF PLANNED BEHAVIOR?

Erika Montanaro, PhD[1], Angela Bryan, PhD[2]

[1]Yale University, New Haven, CT; [2]University of Colorado Boulder, Boulder, CO

Health interventions only have small to moderate effects on behavior change. The lack of a solid understanding of how the key theoretical constructs interact to motivate behavior change may be partly to blame. The current study examines the utility of each of the hypothesized determinants of behavior in the TPB (i.e., attitudes, norms, perceived behavioral control (PBC)/self-efficacy, and intentions) and explores the optimal combination of these constructs in an intervention to increase condom use intentions and behavior among college students. 287 participants were randomly assigned to one of seven computer-based interventions. 70 (24.4%) completed behavioral follow-up assessments three-months later. Simple effect analyses revealed that targeting one construct (e.g., norms) had diffuse effects on other constructs in the TPB (i.e., attitudes and intentions). Mediational analyses revealed that theory-based interventions were better at changing intentions than the control condition. Changes in attitudes toward condom use were related to changes in intentions. Finally, as predicted by the TPB, intentions predicted risky sexual behavior at follow-up. Theory-based interventions were superior to the control, but which combination of constructs is most effective at creating behavior change remains to be established.

CORRESPONDING AUTHOR: Erika Montanaro, PhD, Yale University, New Haven, CT, 06511; erika.montanaro@yale.edu

6:00 PM-7:00 PM A124

WOMEN'S EXPERIENCE OF CASUAL SEX RELATIONSHIPS

Jessica Meers, MA, Mary Short, PhD

University of Houston-Clear Lake, Houston, TX

The risks associated with casual sex behavior are high. Beyond risk of STIs, women experience more negative consequences relative to men due to the risk of unwanted pregnancy and sexual assault. Additionally, research has shown that women tend to have more negative emotional experiences as a result of casual sex relationships compared to men. Recently, studies have started to show that there are different types of casual sex relationships, with popular names like One Night Stands and Booty Calls. To date, however, studies have not shown how behaviors and risk vary for women across these relationship types. This study aimed to identify the unique experiences of women who engage in casual sex behaviors across several different relationship types, including One Night Stands, Booty Calls, and Friends with Benefits. Risk behaviors such as sexual intercourse, oral sex, condom use, pregnancy prevention, and alcohol consumption, as well as emotional experiences, were identified and compared across relationship type. Data was collected from 317 participants via an online survey. Ages of participants ranged from 18 to 64. ANOVAs revealed significant differences in behaviors across relationship types in behaviors such as sexual intercourse ($F(5,813) = 18.72$, $p < .01$) and alcohol use($F(5, 817) = 53.95$, $p < .01$). Negative emotional experiences like regret varied significantly as well ($F(5,808)=8.01$, $p < .01$). Results indicated that that One Night Stands were associated with the most risks to women as rates of sexual intercourse and alcohol use were significantly higher for these relationship types compared to the others. Similarly, women who had sex with a prior partner ("sex with an ex") were at increased risk due to high rates of sexual intercourse and negative emotional experiences. These data indicate that each relationship type is associated with its own set of risks. Prevention strategies should target a relationship's unique risk profile to increase acceptance of intervention messages.

CORRESPONDING AUTHOR: Jessica Meers, MA, University of Houston-Clear Lake, Houston, TX, 77008; jessica.meers.patton@gmail.com

6:00 PM-7:00 PM A125

A DECADE LONG SYSTEMATIC REVIEW OF SMS BASED SMOKING CESSATION AND RELAPSE PREVENTION INTERVENTIONS

Amir Bhochhibhoya, MS, MBA, Paul Branscum, PhD, RD, Alexandra Housely, MS, CHES, Danielle Digeralamo, BS

The University of Oklahoma, Norman, OK

Background: Tobacco use, primarily from cigarette smoking, is the leading cause of preventable deaths worldwide. Currently, 20.8% of Americans still use tobacco and rates have been stagnant since the mid 2000s. Advancements in technology has allowed health practitioners to be more creative in delivering smoking cessation interventions. Text messaging, or texting, may be an effective and innovative approach for reaching populations, especially youth and young adults. The objective of this review was to assess the effectiveness of texting based interventions that aim for reducing smoking rates, and/or relapse prevention and provide recommendation to future researchers and practitioners. Methods: The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines were used to conduct systematic analysis. Eight databases were used in the search using key words smoking, cell phone, texting, cessation, relapse, mobile phone, and SMS, from 2003 to 2013. Results: Overall, eleven studies were identified. Eight studies reported significant improvements for cessation rates, and five studies reported an increase in self-efficacy for cessation. Limitations of current studies included an inadequate description of the theoretical underpinnings of the intervention, and an underutilization of process evaluations. Many studies used young adults therefore studies evaluating the effectiveness of texting with older adult samples are warranted.Conclusions: Texting was found to be a lower-cost and effective means of communication tool that can be used for smoking cessation and relapse prevention. The use of texting could reduce face-to-face and telephone counseling time. Texting can also reach to large number of people with minimal personal contact. Recommendations for future studies will be presented.

CORRESPONDING AUTHOR: Paul Branscum, PhD, RD, The University of Oklahoma, Norman, OK, 73019; pbranscum@ou.edu

6:00 PM-7:00 PM A126

APPLICATION OF THE THEORY OF NORMATIVE SOCIAL BEHAVIOR TO IMPROVE IMPLEMENTATION OF SMOKE-FREE LAWS

M. Justin Byron, PhD[1], Joanna E. Cohen, PhD[2], Shannon Frattaroli, PhD[2], Joel Gittelsohn, PhD[2], David H. Jernigan, PhD[2]

[1]University of North Carolina at Chapel Hill, Chapel Hill, NC; [2]Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

Background: Laws that ban smoking in public places protect nonsmokers, reduce tobacco use, and encourage a norm of tobacco-free living. While smoke-free laws are working successfully in many settings, some low- and middle-income countries struggle to attain compliance. Social norms theory, which has been notably absent from most smoke-free implementation efforts, may be pivotal in directing remedial actions. As an illustration, we present research from Bogor, the first city in Indonesia to pass a comprehensive smoke-free law. Indonesia is on the forefront of the tobacco epidemic with the third largest population of smokers in the world and minimal tobacco control.Methods: We conducted 11 stratified focus groups with residents of Bogor (n=89). These semi-structured focus groups followed a guide and included discussion about various photographed settings. The emergent themes from the coded transcripts were explored using the Theory of Normative Social Behavior, which posits that the influence of descriptive norms (perceptions about what other people do) on behavior is moderated by injunctive norms (perceptions about what one is expected to do), outcome expectations, and group identity.Results: Participants described smoking in public as a part of the Indonesian social and religious culture for men but not women (descriptive norm). Few people had heard of the new smoke-free law. Participants explained that public smoking is widely considered acceptable except in places with air conditioning and around children or pregnant women (injunctive norms). Men who smoke in public do so without worry of social disapproval or legal sanctions (outcome expectations) and feel affiliation in socializing with other smokers (group identity). These factors reinforce public smoking behaviors.Discussion: The theory suggests four points of leverage for increasing compliance: 1) correcting any misperceptions about the frequency of violations, 2) making salient the moral and legal requirement to follow the law, 3) increasing the expectation of social and legal punishment for violations, and 4) promoting a message that good Indonesian men do not smoke indoors. These findings provide avenues for revisions to enforcement approaches and more constructive communication efforts.

CORRESPONDING AUTHOR: M. Justin Byron, PhD, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599; jbyron@unc.edu

6:00 PM-7:00 PM A127

CORRELATES OF PERCEIVED SMOKING PREVALENCE AMONG KOREAN AMERICAN EMERGING ADULTS IN CALIFORNIA

Christian Cerrada, BS, Jennifer B. Unger, PhD, Jimi Huh, PhD

University of Southern California, Los Angeles, CA

Background: Overestimation of peer smoking prevalence among youth is common and is associated with youth's own smoking behavior. However, less is known about correlates of perceived smoking prevalence among ethnic minority groups. Specifically, Korean American emerging adults (KAEA) are immersed in a culture of prevalent tobacco use, which may be associated with cultural and gender-related norms. We explored whether correlates of perceived smoking prevalence among KAEA (current smoking status, family members' smoking status, and gender) differed based on the ethnicity and gender of the reference group they were asked to estimate for, i.e. Caucasian vs. Korean American, male vs. female. Methods: KAEA from Southern California, aged 18-25, completed an online survey about environmental smoking attitudes (N=475). Multiple linear regression models were conducted to compare pertinent correlates of perceived smoking prevalence among four reference groups: Caucasian Americans, Korean Americans (in general), Korean American men, and Korean American women. Results: KAEA overestimated smoking prevalence for all reference groups. Controlling for covariates, current smokers perceived greater smoking prevalence for all Korean American groups but not that of Caucasian Americans (b=.44, n.s.). For the general Korean American reference group, the interaction term for current smoking status and male gender was significant (b=1.17, $p < 0.05$). Father's smoking status was significantly associated with perceived smoking prevalence for the Korean American men reference group (b=.74, $p < 0.05$). The interaction term for father's smoking status and male gender was also significant (b=-1.06, $p < 0.05$). Discussion: Our findings suggest that typical predictors of perceived smoking prevalence depend not only on the ethnicity and gender of the reference group but also on the gender of the respondent. Current smoking status among KAEA appears to be influenced by perceptions of smoking behavior within the Korean American community and the disproportionately higher rates of smoking among Korean American men. Interventions should consider these factors when addressing perceived smoking prevalence in programs intended to modify social norms among these young adults.

CORRESPONDING AUTHOR: Christian Cerrada, BS, University of Southern California, Los Angeles, CA, 90014; cerrada@usc.edu

6:00 PM-7:00 PM A128

DOES CHANGE TALK EXPRESSED DURING MOTIVATIONAL INTERVIEWING INDICATE NEW OR PRE-EXISTING MOTIVATION?

Saige Stortz[1], Jose Moreno, MA[1], Sofie Champassak, MA[1], Andrea Bradley-Ewing, M.P.A, MA[2], Kari Harris, PhD[3], Kathy Goggin, PhD[4], Kimber Richter, PhD, MPH[5], Delwyn Catley, PhD[1]

[1]University of Missouri - Kansas City, Kansas City, MO; [2]Children's Mercy Hospital and Clinic, Kansas City, MO; [3]University of Montana, Missoula, MT; [4]Children's Mercy Hospitals and Clinics, University of Missouri - Kansas City Schools of Medicine and Pharmacy, Kansas City, MO; [5]University of Kansas Medical Center, Kansas City, KS

Motivational Interviewing (MI) is thought to motivate behavior change by eliciting expressions of a desire to change or "change talk" (CT). However it is unclear whether CT elicited during MI reflects increased motivation, or whether MI merely elicits the expression of pre-treatment motivation. The purpose of this study was to determine whether MI (compared to health education) predicted change talk above and beyond what would be predicted by baseline measures of motivation in a randomized trial to induce quit attempts among unmotivated smokers (N=202). A variety of indicators of pre-treatment motivation to quit (contemplation ladder, motivation ruler, recent quit attempts, autonomous motivation) were assessed at study baseline. Patients' first counseling session was coded for the occurrence (yes/no) of Desire CT (i.e., expression of the desire to quit). T-tests demonstrated that individuals who expressed in session Desire CT were more motivated at baseline than those who did not (all p's < .01). However, a logistic regression analysis revealed that receiving MI (rather than HE (OR 3.51[CI =1.83-6.73]) predicted Desire CT independent of all of the baseline motivation measures. Findings indicate that although the occurrence of Desire CT may be in part a reflection of pre-existing motivation, MI (when compared with HE) further increases the expression of Desire CT. These results support the hypothesis that CT is a mediator of MI's treatment effects. Study support provided by National Cancer Institute grant R01 CA133068. Varenicline (Chantix) provided by Pfizer through Investigator Initiated Research Support (No. WS759405)

CORRESPONDING AUTHOR: Saige Stortz, University of Missouri - Kansas City, Kansas City, MO, 64111; sws27f@mail.umkc.edu

CITATION POSTER

6:00 PM-7:00 PM A129

EVALUATION OF THE GREAT AMERICAN SMOKEOUT BY DIGITAL SURVEILLANCE

John W. Ayers, PhD[1], J. Lee Westmaas, PhD[2]

[1]San Diego State University, San Diego, CA; [2]American Cancer Society, Atlanta, GA

Background: For 36 years the “Great American Smokeout” (GASO), held annually on the the 3rd Thursday of November, has aimed to increase Americans’ awareness of and interest in smoking cessation. Because cancer control surveillance generally relies on annual trends that may not be linked to a single day, it is difficult to evaluate GASO. Methods: We developed surveillance strategies to monitor daily rhythms in population cessation "information availability" (news media coverage of cessation), "information sharing" (Tweets), "information seeking" (Bing search queries), and eventual help seeking (Quitline calls) for smoking cessation for 2013 and previous years (per availability). These behavioral outcomes were compared between GASO day and selected reference periods (e.g., days prior to GASO). Results: Internet search queries for cessation information were higher on GASO day compared to the previous 6 Thursdays each year for the years 2009 to 2012 (range 9% - 46%), but were significantly higher for only 1 of 4 years. Using the same comparison, media stories about cessation increased 41% on GASO day in 2013 but not significantly. Calls to quitlines on GASO day increased on average 22% each year for the years 2008 to 2012, but differences were not significant. In comparing the 3 days up to and including GASO day to the same period the previous month, tweets encouraging or describing a quit attempt were significantly higher for each of the years 2008 to 2013. Conclusions: GASO appeared to have the strongest effects on tweets related to quitting smoking, and modest or no statistically significant effects on media coverage of cessation stories, public search queries for cessation information, or quitline calls for cessation assistance. Evaluations as we describe can serve as a guideline for the reevaluation of public health marketing campaigns, and provide data that can potentially inform strategy for promotional campaigns aimed at increasing public health.

CORRESPONDING AUTHOR: J. Lee Westmaas, PhD, American Cancer Society, Atlanta, GA, 30303; lee.westmaas@cancer.org

6:00 PM-7:00 PM A130

EXAMINING STRESS, IMAGE, AND WEIGHT CONTROL E-CIGARETTE PERCEPTIONS AMONG YOUNG ADULTS

Melissa Napolitano, PhD[1], Sarah Lynch, MPH[2], Cassandra Stanton, PhD[3]

[1]The George Washington University School of Public Health, Washington, DC; [2]University of Colorado-Denver, Highlands Ranch, CO; [3]Westat/ Georgetown University Medical Center, Washington, DC

Background: The use of e-cigarettes has increased exponentially among young adults, yet research is lacking on the perceptions related to image, weight control and stress relief of these products. Methods: College students (N=57; mean age 20.4±2.2; 68% female) completed an anonymous online survey. Survey items included: tobacco use (cigarettes, e-cigarettes), perceptions of harm/benefit and weight control from e-cigarette use. Results: Cigarette (CIG) smoking was endorsed by 42.1% (n=24) of sample, with e-cigarette (eCIG) use reported by 28.0% (n=16). Of note, 52.6% (n=30) reported being a non-smoker, and 22.8% (n=13) reported both CIG and eCIG use. Given the small sample size, only descriptive statistics are presented here. Seventy-five percent of eCIG users endorsed the belief that e-cigarettes are less harmful than cigarettes, compared to 70.8% of smokers and 30.3% of non-smokers. Among eCIG users, 62.5% endorsed the perception that eCIGs manage stress compared to 37.5% of CIG smokers and 39.4% of non-smokers. Regarding whether media figures or other public figures used eCIGs, 81.3% of eCIG users believed this statement, compared with 33.3% of CIG smokers and 24.2% of non-smokers. Across tobacco using groups, only 12.5% of eCIG users compared to 20% of CIG users thought that eCIGs helped prevent weight gain when quitting CIG smoking, compared with 33.3% of non-smokers. However, 81.3% of eCIG users believed that eCIG cartridges came in good flavors compared to 62.5% of CIG smokers and 45.5% of non-smokers. eCIG users (75%) reported they use cartridges flavored as sweets (e.g., vanilla, fruits, chocolate). Discussion: While the present sample size is small, interesting trends revealed different perceptions about eCIG use from non-smokers, CIG smokers and eCIG users. Most e-CIG users were also CIG users; thus, future research on dual use of products versus pure use is necessary. Further, eCIGs may be perceived as a weight and stress control device—more research is needed regarding the substitution of these flavored nicotine delivery products and how they are being used by young adults. Prevention and education related to weight, image and tobacco are needed to address misperceptions regarding the potential harms and benefits of new under-studied tobacco products that are rapidly rising in use among young adults.

CORRESPONDING AUTHOR: Melissa Napolitano, PhD, The George Washington University School of Public Health, Washington, DC, 20052; mnapolitano@gwu.edu

6:00 PM-7:00 PM A131

EXPLORING THE ROLE OF PEER INFLUENCE AMONG KOREAN AMERICAN EMERGING ADULT (KAEA) SMOKERS

Hee sung Shin, DoctoralStudent[1], Minn Oh, MPH[1], Peter Choo, MS[1], Jimi Huh, PhD[2]

[1]USC, LOS ANGELES, CA; [2]University of Southern California, Los Angeles, CA

Background: Previous studies have shown that peer influence is one of the strongest predictor for smoking among Korean adolescents. Cultural factors (e.g., Confucian values) have been linked as a possible explanation, which emphasizes the importance of group awareness than individual concerns. A number of studies have used social network analysis to understand how friendship influence smoking, yet no study to our knowledge have examined peer influence among Korean American emerging adult (KAEA) smokers. In the present study, we used an ego-centric survey to obtain smoking status and interaction frequency of nominated friends to characterize participants’ close network. We explored how smoking-related cultural custom are associated with time spent with smoker friends and whether time spent with smoker friends is associated with cigarette use among KAEA smokers.

Method: KAEA smokers participated in this study (N=78). Nicotine dependency, smoking habits and ego-centric data were assessed. We also used a single item that asked whether one accompanies a smoker friend for a “smoke break” even without one’s own urge to smoke. Linear regressions were conducted to explore: 1) whether smoking-related cultural custom were associated with average time spent with smoking friends, and 2) whether average time spent with smoker friends and cultural custom beliefs were associated with average daily cigarette use.Results: Willingness to accompany friends for a smoke break was marginally positively associated with average time spent with close friends that smoke (B=0.05, p=0.07). Adjusting for nicotine dependency and gender, results showed that average time spent with smoker friends was positively associated with average daily cigarette use (B=0.88, $p < 0.05$), but no significant results were observed between willingness to accompany smoker friends and average daily cigarette use. Conclusion: Using egocentric social network analysis, we showed that KAEA exposed to more smoker friends, but not those with affinity towards the Korean customs of accompanying friends, reported heavier smoking in the past month. Higher belief in cultural custom to accompany friends during smoke break was associated with more time spent with smoker friends. Overall, these results highlight the importance of buffering/modifying the influence of peers for interventions designed for KAEA smokers.

CORRESPONDING AUTHOR: Hee sung Shin, DoctoralStudent, USC, LOS ANGELES, CA, 90032; heesungs@usc.edu

6:00 PM-7:00 PM A132

AN EXPLORATION OF THE EFFECTS OF A SEMINAR ON COMPASSION ON STUDENT PSYCHOLOGICAL OUTCOMES

Celine Ko, PhD, Lisa Olson, PhD, Fran Grace, PhD

University of Redlands, Redlands, CA

Mindfulness-based interventions have been shown to decrease anxiety and depressive symptoms, especially among college students, many of whom report such symptoms (Regehr, 2013). We wanted to explore the effects of a seminar on compassion on students’ psychological health. The seminar integrated studying biographical accounts of compassionate individuals such as Mother Teresa and Gandhi with experiential contemplative practices such as meditation as well as community service. We hypothesized that students who took this course would report better psychological outcomes compared to those who did not. Students who were interested in taking the course or participating in the research were randomly assigned to the course or to the control group who received a one-day mindfulness workshop after the second assessment. Forty-one participants (14 male, 27 female), with mean age of 19.8, SD = 1.4 years completed measures on anxiety (State-Trait Anxiety Inventory), depression (Center for Epidemiologic Scales-Depression), stress (Perceived Stress Scale and Student Stress Scale), self-compassion (Self-Compassion Scale) and mindfulness (Mindful Attention Awareness Scale) during finals week before and after the course. At baseline, self-compassion was significantly negatively correlated with state anxiety (r = -0.56), depression (r = -0.59), and perceived stress (r = -0.70). Mindfulness was also significantly correlated with state anxiety (r = -0.46), depression (r = -0.54), and perceived stress (r = -0.54). Mindfulness and self-compassion were moderately correlated (r = 0.45) suggesting that these are two separate constructs. There were no significant changes in depression and perceived stress between the two groups at Time 2. State anxiety increased among those in the control group (Mean =42, SD=17.5) compared to the intervention group (Mean=34, SD=12.7); however, this was not statistically significant (F(1,32)=3.4, p=.07). Because this was not a clinical sample, the measures may not have been sensitive enough to detect effects of the course on students’ psychological health. More research is needed to further explore the relation of self-compassion and mindfulness, as well as the effects of meditation curriculum on student psychological outcomes.

CORRESPONDING AUTHOR: Celine Ko, PhD, University of Redlands, Redlands, CA, 92373; celine_ko@redlands.edu

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AVOIDANCE COPING MEDIATES THE RELATIONSHIP BETWEEN PERCEIVED STRESS AND DRINKING BEHAVIORS

Crystal Gabert-Quillen, PhD[1], Bryce Hruska, PhD[2], Charles Sanislow, PhD[3]

[1]Middlesex County College, Edison, NJ; [2]University of Vermont, Burlington, VT; [3]Wesleyan University, Middletown, CT

Objective: Problematic alcohol use is a pressing public health concern among today's college undergraduates. Understanding the influences of stress and coping styles can clarify factors motivating drinking behaviors. Methods: College undergraduates (N=129) were assessed for perceived stress, coping (i.e., emotion- and problem-focused, and avoidance), and drinking behaviors (i.e., problematic alcohol use and alcohol-related problems).Results: A multiple mediation model using a bootstrap approach indicated that avoidance coping was a significant mediator of the relationship between perceived stress and both problematic alcohol use [95% CI: .15-.43] and alcohol-related problems [95% CI: .09-.48]. Undergraduates that had more perceived stress scored higher on avoidance coping (ps < .001) leading to greater drinking behaviors (ps < .001).Conclusions: Together, results suggest that targeting avoidance coping (not emotion- or problem-focused coping) in alcohol interventions among university students may be an effective way to curb problematic alcohol use in this population.

CORRESPONDING AUTHOR: Crystal Gabert-Quillen, PhD, Middlesex County College, Edison, NJ, 08818; cquillen@middlesexcc.edu

6:00 PM-7:00 PM A134

CHANGES IN HEALTHY LIFESTYLE: WHEN ANXIETY AND DEPRESSION SYMPTOMS GET IN THE WAY

Claudia Trudel-Fitzgerald, PhD[1], Shelley Tworoger, PhD[2], Elizabeth Poole, PhD[3], David M. Williams, PhD[4], Laura Kubzansky, PhD, MPH[1]

[1]Harvard School of Public Health, Boston, MA; [2]Brigham and Women's Hospital, Boston, MA; [3]Channing Division of Network Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, MA; [4]Brown University School of Public Health, Providence, RI

Background: Previous findings, mainly obtained from cross-sectional studies, have shown that unhealthy behaviors (e.g., physical inactivity) are associated with higher levels of distress. However, less is known about the influence of anxiety and depression symptoms on adopting a healthy lifestyle. We hypothesized that individuals with higher distress will be less likely to engage in or maintain healthy behaviors over time. Methods: Women (n=55,716; mean age of 54.1 years old) from the *Nurses' Health Study* cohort reported their anxiety symptoms in 1988. Measures of healthy lifestyle (i.e., diet, physical activity, alcohol and tobacco consumption, BMI) were collected and dichotomized in 1988, and at follow-up assessments in 1994 and 2006. A healthy lifestyle was defined as endorsing ≥4 out of 5 healthy behaviors. Women were then categorized into four groups according to their baseline status: "Non-anxious/Healthy", "Anxious/Healthy", "Non-anxious/Unhealthy", "Anxious/Unhealthy". Logistic regressions were used to estimate the odds ratio of engaging/maintaining a healthy lifestyle over time, according to the baseline categories, and models were adjusted for potential confounders. Similar analyses were also conducted with depressive symptoms, first reported in 1992. Results: Compared to the "Non-anxious/Healthy" women, those in the "Non-anxious/Unhealthy" and "Anxious/Unhealthy" groups were significantly less likely to engage in a healthy lifestyle over time (OR=0.25; CI=0.24-0.26 and OR=0.20; CI=0.19-0.21, respectively). Of note, "Anxious/Healthy" women at baseline were less likely to maintain their desirable lifestyle later on (OR=0.81; CI=0.76-0.86), compared to the "Non-anxious/Healthy" group. Comparable patterns were observed with depression. Conclusion: Anxiety and depression reduce the likelihood of *engaging* in healthy behaviors later on. Moreover, psychological symptoms reduce the likelihood of *maintaining* a healthy lifestyle over time among women who already endorse favorable behaviors. Hence, distress may be an important target of intervention to promote a healthy lifestyle and thus, lower the risk of chronic diseases.

CORRESPONDING AUTHOR: Claudia Trudel-Fitzgerald, PhD, Harvard School of Public Health, Boston, MA, 02215; ctrudel@hsph.harvard.edu

6:00 PM-7:00 PM A135

CHILDREN'S COPING AND STRESS REACTIVITY IN RESPONSE TO ASTHMA-RELATED STRESSORS

Ashlee B. Mitchell, B.S.[1], Erin M. Rodriguez, PhD[1], Harsha Kumar, MD[2], Annie Draeger, MEd[3], Lisa Sanchez-Johnsen, PhD[2]

[1]University of Texas at Austin, Austin, TX; [2]University of Illinois at Chicago, Chicago, IL; [3]University of Illinois at Chicago, Oak Park, IL

Asthma disproportionately affects children from low socioeconomic status (SES) backgrounds (Caroll, 2013). Thus, many children with asthma face the combined risk of illness-related stress and multiple socioeconomic stressors. Elevated stress may lead to maladaptive stress responses, such as lower levels of primary control coping (e.g., problem solving) and secondary control coping (e.g., cognitive restructuring), and higher levels of disengagement coping (e.g., avoidance, denial) and involuntary reactivity (e.g., rumination), all of which increase risk for negative health outcomes (Krueger & Chang, 2008). This study examines relations among SES, perceived stress about asthma, and responses to stress (coping and stress reactivity) in low-SES children with asthma.Parents (N=78) of children ages 5 to 17 (66.7% male; 47.4% African American) being treated for asthma completed the Response to Stress Questionnaire about their child's asthma-related stressors, coping (primary control, secondary control, disengagement), and stress reactivity (involuntary engagement, involuntary disengagement). Parents also reported on family income and education.. 63% of parents reported an income of < $25,000, and had on average 12.9 years of education. Children's asthma-related stress was negatively correlated with their primary (r=-.261, p < .05) and secondary (r=-.251, p < .05) control coping, and positively correlated with their disengagement coping (r=.226, p < .05) and involuntary engagement reactivity (r=.255, p < .05). SES was not related to asthma-related stress nor stress responses. In the regression model with all stress responses included, no stress response contributed uniquely significant variance to children's asthma-related stress. These findings suggest that children with high asthma-related stress may be less likely to respond adaptively to their asthma. Future studies should examine these processes over time to further understand reciprocal relationships between stress, coping, and stress reactivity in low-SES children with asthma.

CORRESPONDING AUTHOR: Ashlee B. Mitchell, B.S., University of Texas at Austin, Austin, TX, 78751; ashlee.mitchell@utexas.edu

6:00 PM-7:00 PM A136

DEPRESSION AND STRESS PREDICT DECLINE IN PHYSICAL HEALTH FUNCTIONING IN POSTMENOPAUSAL WOMEN

Biing-Jiun Shen, PhD[1], Uta Maeda, PhD[2], Wendy Mack, PhD[3], Howard Hodis, MD[3]

[1]Nanyang Technological University, Saratoga, CA; [2]Stanford Unversity, Redwood City, CA; [3]Keck School of Medicine of USC, Los Angeles, CA

The role of stress and psychological distress during menopause has been well documented, but their impact on health functioning post-menopause has not been well studied. This study examined the prospective associations between depression, perceived stress, and physical health functioning in a sample of 339 community-dwelling postmenopausal women, with ages 49-87 (M = 63.10, SD = 6.90), who were assessed every 6 months over 2 years. Among them, 305 (90%) completed follow-up at 12 months, 243 (72%) at 18 months, and 212 (63%) at 24 months. Physical health functioning was assessed with 13 items of the Women's Health Questionnaire to gauge the common physical symptoms during postmenopause. These items fall into 3 domains: somatic (e.g., pains, headaches, frequent urination, nausea, fatigue), vasomotor (night sweats, hot flushes), and sleep (difficulty falling asleep, early wakening). Stress and depression were measured with the Perceived Stress Scale and a modified CES-D devoid of somatic symptoms that overlap with physical health symptoms. Hierarchical linear regression was used to examine the relationships between depressive symptoms, perceived stress, and physical symptoms over time while adjusting for age, ethnicity, marital status, SES, education, and current hormone replacement therapy. When examined in separate models, higher baseline depression (β = -.33, t = -5.56, p < .001) and perceived stress (β = -.27, t = -2.07, p = .042) were associated with lower overall physical health functioning at baseline. Higher baseline depression (β = -.23 to -.15, t = -3.46 to -2.36, p = .019 to .001) and perceived stress (β = -.22 to -.16, t = -4.107 to -2.834, p < .001 to p =.005) also predicted lower overall physical health functioning at 6, 12, 18, and 24 months after adjusting for baseline physical health functioning and covariates. These worsening symptoms occurred in the somatic and sleep domains, but not the vasomotor domain, of physical health functioning. When in the same model, perceived stress remained significant, while depression was not, as a predictor of declines in physical health functioning over 6, 12, 18, or 24 months. Results suggest that mental distress, especially perceived stress, constitutes a marker for health functioning declines over time for women in postmenopause.

CORRESPONDING AUTHOR: Biing-Jiun Shen, PhD, Nanyang Technological University, Saratoga, CA, 95070; bjshen@gmail.com

6:00 PM-7:00 PM A137

IMPACT OF ACUTE STRESS ON PLASMA FATTY ACID PROFILE IS MODERATED BY SEX AND BODY MASS INDEX

Élise Dionne, B.sc[1], Bianca D'Antono, PhD[2]

[1]Montreal Heart Institute, Ile-Bizard, PQ, Canada; [2]Montreal Heart Institute, Montréal, PQ, Canada

Introduction: Psychological stress and fatty acids have both been associated with cardiovascular status. Limited data suggests that stress may alter plasma levels of free fatty acids, though individual differences in this regard are unknown.Objectives: To examine the impact of acute laboratory stress on fatty acid profiles of healthy adults and to examine whether sex or being overweight moderate these effects.Methods: 182 healthy men and women (41±12 yrs) underwent a standardized psychological stress protocol. The fatty acid profile was obtained from plasma in blood drawn during resting and immediate post-stress conditions. Overweight was defined as body mass indices (BMI) > 25 kg/m^2. Sex × BMI group × Condition mixed repeated measures ANOVAs were performed.Results: Three-way interactions emerged for Omega-3, as well as for the Omega-3/Omega-6 and the saturated fatty acid/polyunsaturated fatty acid ratios (all $p < .05$). Most remarkable were the women with BMI < 25 who showed a consistently different reaction of these measures to acute stress compared to the other groups. More specifically, they showed significant increases in these measures post-stress relative to baseline, while other groups showed a decrease or no change. A BMI group × Condition interaction also emerged for Omega-6 with BMI>25 individuals showing a significant increase in this measure ($p < .01$) but not those with BMI< 25. Conclusion: Exposure to acute stress can alter fatty acid metabolism, but the effect is influenced by the characteristics of individuals, namely their sex and BMI. Further research is needed to evaluate the significance of these changes.

CORRESPONDING AUTHOR: Élise Dionne, B.sc, Montreal Heart Institute, Ile-Bizard, PQ, H9E1C2; elise.dionne@umontreal.ca

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MEN'S SATISFACTION WITH SPECIFIC BODY PARTS AND BODY-IMAGE-RELATED MENTAL DISTRESS IN TAIWAN

Jiun-Hau Huang, S.M., Sc.D., Pei-Chun Kuo, M.S.

National Taiwan University College of Public Health, Taipei, Taiwan

Background: Prior research on body-image-related issues has mainly focused on the relationship between overall body satisfaction and health-related outcomes, particularly among Western women. Recently, such issues among gay and heterosexual men have received increasingly more research attention than in the past. However, there is still a paucity of information on whether body satisfaction with specific body parts is differentially associated with body-image-related mental distress, especially across gay, bisexual, and heterosexual men in Taiwan. Methods: An anonymous online survey was used to collect data from male participants (n=665) recruited via a popular electronic bulletin board system frequented by Taiwanese youth. The web link with a description of the study was posted in twenty forums where participants of diverse backgrounds and with various interests and sexual orientations across Taiwan congregate online. Multivariate logistic regression analysis, controlling for background characteristics, body mass index (BMI), and severity of depression, was performed to examine the relationship between satisfaction with specific body parts and body-image-related mental distress across gay, bisexual, and heterosexual men. Results: Increased levels of satisfaction with weight were significantly associated with lower odds of body-image-related mental distress across gay, bisexual, and heterosexual men (AOR=0.38, 0.31, and 0.56, respectively). Gay men who were more satisfied with their height (AOR=0.57) and body fat (AOR=0.28), as well as heterosexual men who were more satisfied with their facial features (AOR=0.51), muscle (AOR=0.53), and body fat (AOR=0.55), were significantly less likely to have body-image-related mental distress than their counterparts. Conclusions: Higher levels of satisfaction with various specific body parts were associated with reduced risk of body-image-related mental distress. Further, these associations varied differentially across gay, bisexual, and heterosexual men. Future research may explore the possible mechanisms through which satisfaction with specific body parts influences men's body-image-related mental distress. Accordingly, interventions could be tailored for men of different sexual orientations.

CORRESPONDING AUTHOR: Jiun-Hau Huang, S.M., Sc.D., National Taiwan University College of Public Health, Taipei, 10055; jhuang@ntu.edu.tw

6:00 PM-7:00 PM A139

POLICE STRESSORS AND THE AWAKENING CORTISOL RESPONSE: COMPARING THE MOST AND LEAST SEVERE EVENTS

John M. Violanti, PhD[1], Desta Fekedulegn, PhD[2], Michael Andrew, PhD[2], Tara A. Hartley, PhD[2], Luenda E. Charles, PhD, MPH[3], Diane B. MIller, MS, PhD[4], Cecil Burchfiel, PhD[2]

[1]SUNY at Buffalo, Buffalo, NY; [2]NIOSH/CDC, Morgantown, WV; [3]NIOSH, CDC, Morgantown, WV; [4]CDC/NIOSH, Morgantown, WV

The present study examined associations involving the five self-rated most severe and least severe events from the Spielberger Police Stress Survey, a 60-item instrument for assessing specific sources of stress in police work, with a stress biomarker (awakening cortisol patterns over time). Participants were police officers enrolled in the Buffalo Cardio-Metabolic Occupational Police Stress (BCOPS) study (n=370). Officers rated the perceived stressfulness of each event from 0-100 and provided frequency of occurrence over the past month. The top five highest and bottom five lowest rated stressors were selected by the mean rating of each event. For each group, the total stress index (product of rating and frequency) was calculated by summing the stress index of the five events. The stress index served as the exposure of interest. Participants collected saliva for analysis of unbound cortisol concentration by means of a Salivette device on awakening, and 15, 30 and 45 minutes after waking. Slopes reflecting awakening patterns of cortisol overtime were estimated by fitting a linear regression model relating cortisol in log-scale to time of collection. The slope served as the outcome variable. Analysis of covariance, regression, and repeated measures models were used to examine associations of stress index with waking cortisol pattern. Results showed a significant positive linear association between the total stress index of the top five most stressful events and slope of the awakening cortisol regression line (Trend p-value = 0.0486). As the stress index increased, the pattern of the awakening cortisol curve tended to flatten. Officers with zero stress index showed a steep and steady increase in cortisol from baseline (often observed in healthy individuals) while officers with moderate and high stress index showed a dampened or flatter response over time. Conversely, the stress index of the five least stressful events was not significantly associated with the awakening cortisol pattern. This study suggests that highly stressful police events may be associated with disturbances of a typical awakening cortisol pattern. The results are consistent with previous research where chronic exposure to stressors is associated with a diminished awakening cortisol response pattern.

CORRESPONDING AUTHOR: John M. Violanti, PhD, SUNY at Buffalo, Buffalo, NY, 14214; violanti@buffalo.edu

Thursday
April 23, 2015
8:30 AM-9:45 AM

Symposium 01 8:30 AM-9:45 AM

ENGINEERING BEHAVIOR: ENGINEERING & COMPUTER SCIENCE WORK THAT FACILITATE BETTER MHEALTH RESEARCH

Eric B. Hekler, PhD[1], Rich Fletcher, PhD[2], Daniel E. Rivera, PhD[3], Santosh Kumar, PhD[4], Wendy Nilsen, PhD[5]

[1]Arizona State University, Phoenix, AZ; [2]MIT, Cambridge, MA; [3]Arizona State University, Tempe, AZ; [4]Universeity of Memphis, Memphis, TN; [5]National Institutes of Health, Bethesda, MD

The advent of smartphones, wearable sensors, cloud computing, "big data," and advanced analytic techniques for managing all of this information have opened previously unthought-of opportunities for behavioral science. The purpose of this symposium is to highlight important advancements being made by engineers and computer scientists related to mHealth and to then discuss the current challenges our colleagues face, with particular emphasis on how behavioral scientists can contribute to their work. Our first presenter will describe advancements he is making in the development of sensors for detecting behaviors and other important factors that impact behavior. Our second presenter will describe his research in developing the algorithms for translating raw sensor signals into actionable insights. Finally, our third presenter will describe his use of control systems engineering strategies for creating dynamic mathematical models that can be used to drive decisions on a real-time basis on exactly when, where, and how much to intervene. Our discussant is a pioneer in helping to bridge the gap between disciplines.

Symposium 01A

MOVING BEYOND SELF-REPORTED MEASURES: BETTER SENSOR TECHNOLOGY TO MEASURE BEHAVIOR AND SUPPORT mHEALTH

Rich Fletcher, PhD

In clinical practice, as well as clinical research, we rely on self-reported measures for much of our data and decisions. However, self-reported data presents many challenges, including accuracy, personal bias, and the need to sustain motivation and engagement of the participant for long periods of time (many weeks or months). Although wearable sensors are now available for recording and monitoring participants' physiology, there is a need to measure other clinically-relevant parameters and behaviors that cannot be ascertained by the measurement of physiology alone; examples include: social interaction, measurement of television screen time, environmental stimuli (noise, light color), and nutrition – which are traditionally measured through self-reported assessments. In this talk, we shall survey new technologies used by the advertising industry to measure people's behavior, and also present emerging technology from our lab including sensors for measuring TV screen time, computer use (e.g. e-mail, text), and environmental stimuli (sound, light, air quality). In addition to wearable sensors and computational intelligence on the mobile phone and cloud, the ability to measure additional behaviors, social interaction, nutrition, and environmental stimuli, could potentially benefit the treatment of many common patient groups, including childhood obesity, asthma, autism, diabetes, sleep disorders, and cancer patient care.

Symposium 01B

FACILITATING MHEALTH BEHAVIORAL RESEARCH USING DYNAMICAL SYSTEMS MODELING AND CONTROL SYSTEMS ENGINEERING

Daniel E. Rivera, PhD

This presentation will provide an overview of on-going, broadly-applicable efforts to apply engineering approaches from dynamical systems modeling and control systems engineering to problems in behavioral health, with particular emphasis on the challenges and opportunities presented by mHealth applications and "just-in-time" adaptive mobile interventions (JITAMIs). Control systems engineering consists of a wide variety of methods that can be applied to better understand individual behavior change over both time and varying context; ultimately, these methods can inform approaches for optimal decision-making on treatment dosages in mHealth settings that are highly personalized and are characterized by intensive measurements and frequent decision-making. On the theme of dynamical systems modeling, we will describe how techniques from system identification in engineering can be used to obtain black-box models and "semi-physical" models that rely on behavioral theories (such as self-regulation, the Theory of Planned Behavior, and Social Cognitive Theory) as the basis for determining model structure. With a dynamical systems model in hand, techniques from control systems engineering can then be applied to develop decision policies for optimal treatment implemented in JITAMIs; these can range from simple "IF/THEN" rules to more advanced model predictive control schemes exhibiting high degrees of functionality. A series of application examples will be discussed to illustrate these concepts; these include the treatment of chronic pain, smoking cessation, and interventions to promote increased physical activity.

Symposium 01C

USING MOBILE SENSORS TO MEASURE ADDICTIVE BEHAVIORS – KEY LESSONS FOR ROBUST PERFORMANCE

Santosh Kumar, PhD

Recent advances in the sensing and computational capacity of mobile devices have opened up enormous opportunities to improve patients' health and well-being. They can quantify dynamic changes in an individual's health state as well as key physical, biological, behavioral, social, and environmental factors that contribute to health and disease risk, anytime and anywhere. This talk will describe key lessons learned from recent works on automatically detecting addictive behaviors from wearable sensor data collected in the mobile environment. The first example is the detection of smoking from respiration measurements that capture the deep inhalation and exhalation during taking smoking puffs and combining it with inertial sensor data that detect the movements of wrists to take it close to mouth. A second example is that of detecting cocaine use from ECG data. These recent works show that using explainable machine learning models provide a more robust performance in the mobile field setting when detecting addictive behaviors from noisy sensor data.

CORRESPONDING AUTHORS: Rich Fletcher, PhD, MIT, Cambridge, MA, 02142; fletcher@media.mit.edu; Daniel E. Rivera, PhD, Arizona State University, Tempe, AZ, 85287-6106; daniel.rivera@asu.edu; Santosh Kumar, PhD, Universeity of Memphis, Memphis, TN, 38152; skumar4@memphis.edu

Symposium 02 8:30 AM-9:45 AM

EMERGING ADULTHOOD IN ADOLESCENTS & YOUNG ADULTS WITH DIABETES: OPPORTUNITY FOR BEHAVIORAL MEDICINE

Karl E. Minges, MPH[1], Marilyn D. Ritholz, PhD[2], Bret Boyer, PhD[3], Jessica T. Markowitz, PhD[2], Elizabeth Pyatak, PhD, OTR/L, CDE[4], Vicki Helgeson, PhD[5]

[1]Yale University, Wallingford, CT; [2]Joslin Diabetes Center, Boston, MA; [3]Widener University, Philadelphia, PA; [4]University of Southern California, Los Angeles, CA; [5]Carnegie Mellon University, Pittsburgh, PA

Emerging adulthood, characterized as the developmental stage from late adolescence to young adulthood (ages 18-25), is one of competing educational, social, and financial demands. In emerging adults with diabetes, issues related to diabetes self-management, psychosocial adaptation, and the transition to adult-oriented medical care further compounds this period. Correspondingly, this population is at risk for adverse health outcomes, including poor glycemic control, acute and chronic disease complications, and lower health-related quality of life. This symposium will present quantitative and qualitative data on how patients with diabetes, as well as their families and providers, experience the transition to emerging adulthood and the factors associated with a successful transition. Clinical implications and recommendations will also be provided to improve the transition to emerging adulthood for this population. The first presenter will review the factors affecting development of successful self-management independence in adolescents with diabetes. The second presenter will discuss the patient, family, and provider perspectives of the transition to adult-oriented medical care. The third presenter will review transition issues that are unique to underserved emerging adults from a low socioeconomic status and ethnic minority background, many of whom do not transition to a higher education institution. The final presenter will examine how changes in risky health behaviors (e.g. smoking, drinking) and psychological health for emerging adults occur over time. The discussant will address both the specific contributions of these presentations and the potential to design interventions that will strengthen transition preparation and advance health behavior change in emerging adults with diabetes.

Symposium 02A

ADOLESCENT SELF-MANAGEMENT OF DIABETES: IMPLICATIONS FOR TRANSITION FROM PEDIATRIC TO ADULT CARE

Bret Boyer, Ph.D.

Research investigating the development of adolescents' self-management skills has identified factors with important implications for transition from pediatric care to adult medical care for those with Type 1 diabetes (T1D). First, multiple studies indicate that continued parental involvement is crucial as adolescents develop independent self-management. Second, parent-child conflict about T1D-management appears to play a crucial role in successful self-management and glycemic control. Our studies indicate that conflict is related to greater illness intrusiveness, and that conflict mediated the relationship between self-management independence and illness intrusiveness, and independence contributed to adolescents' illness instrusiveness when it generated conflict. Longitudinal analyses indicated that T1D-specific distress (conflict and illness intrusiveness) predicted later self-management independence more strongly than vice versa. Conflict predicted subsequent self-management and glycemic control. Furthermore, conflict predicted subsequent glycemic control more consistently and strongly than did self-management behavior, and continued to predict glycemic control over 3 years, even though the relationship between conflict and subsequent self-management decreased, suggesting that conflict may impact glycemic control via stress/sympathetic nervous system arousal, beyond conflict's interference with self-management. Third, our cluster analyses have identified differences in patterns of self-management independence, conflict, illness instrusiveness, and T1D-outcomes among families, suggesting the use of a typology among families' T1D-process to individualize therapy interventions. Collectively, these studies suggest that greater assessment and intervention regarding conflict may reduce stress-related impact upon glycemic control, facilitate effective independent self-management, improve parent support as adolescents transition to emerging adulthood, and equip patients to navigate the transition to adult medical care, in which support may be reduced or provided differently than in pediatric care.

Symposium 02B

TEEN, PARENT, AND PROVIDER PERCEPTIONS OF TRANSITION FROM PEDIATRIC TO ADULT CARE IN TYPE 1 DIABETES

Jessica T. Markowitz, PhD

The healthcare transition (HCT) from pediatric to adult medical care can be difficult for youth with type 1 diabetes (T1D), their parents, and their medical providers. To assess family and provider perceptions of HCT, we conducted structured focus groups/interviews with 20 youth (60% male) with T1D, ages 12-18, their parents (70% mothers), and 22 diabetes medical providers (55% pediatric, 45% adult; 36% MD, 9% NP, 32% RN, 23% RD). Youth/parent sessions were conducted in 2 groups (youth age 12-14 and 15-18) and separately for youth and parents. Provider sessions were conducted separately with pediatric and adult providers. Sessions were audio recorded, transcribed, and reviewed by 3 coders; sessions continued until thematic saturation. Youth age was 15±2.1 years, T1D duration 8.0±3.4 years (range=1-13), and A1c 8.6±1.0%.There were different perceptions of HCT between youth vs parents; younger vs older youth; pediatric vs adult providers; and medical providers vs families. Youth and parents reported limited awareness about HCT. While the majority of youth had not previously considered HCT, some parents of older youth had. From the provider perspective, pediatric providers reported that transition should happen at a later age than that reported by adult providers, and adult providers suggested a more structured HCT process than pediatric providers. Youth, parents, and adult providers were mainly unaware of differences between pediatric and adult diabetes care delivery, while pediatric providers were familiar with differences. The theme of a need to reteach diabetes self-care to young adults was common among both pediatric and adult providers.There is a need to develop 'best-practice' structured transition programs; however, program development remains difficult. Understanding perceptions of stakeholders regarding HCT, as reported, can help guide program development and direct future implementation and evaluation.

Symposium 02C

TRANSITION TO ADULTHOOD: PERSPECTIVES FROM LOW-SES AND MINORITY YOUNG ADULTS WITH DIABETES

Elizabeth Pyatak, PhD, OTR/L, CDE

Becoming independent is frequently cited as a goal in emerging adulthood (EA), including attaining financial independence, living independently, and, for EAs with chronic conditions, managing healthcare independently. However, previous research has shown that the trajectory of EA may differ according to socioeconomic status (SES) and racial/ethnic background. This paper examines transition experiences of EAs with diabetes from low-SES and/or minority backgrounds.This study synthesized qualitative data from 3 studies of EAs with diabetes. In Study 1, 11 EAs with type 1 diabetes (T1D) (age 20.5 ± 1.5 yrs; 45% Hispanic; 56% low SES) participated in focus groups to discuss transition challenges and peer mentoring program recommendations. In Study 2, 20 EAs with T1D (age 21.1 ± 1.1 yrs; 70% Hispanic; all low-SES) who had experienced disrupted healthcare transitions were interviewed regarding their life circumstances and barriers to transition. In Study 3, 8 EAs with T2D (age 20.6 ± 3.5 yrs; all Hispanic; all low-SES) were interviewed regarding barriers and supports to their diabetes care. A secondary thematic analysis was used to identify transition issues unique to low-SES minority EAs.Key findings across studies included: (1) Traditional markers of independence were not highly relevant to EAs' self-identification as adults; most planned to stay linked to their families of origin economically and in their living situations indefinitely due to preference and/or economic constraints. (2) Similarly, most EAs expected family involvement in their diabetes care to continue in some form; this was more often perceived as supportive than intrusive. (3) Many EAs experienced challenges accessing healthcare due to bureaucratic obstacles associated with entitlement programs and the public healthcare system. (4) Owing to the high prevalence of diabetes in their communities, lay understandings of diabetes often influenced EAs' diabetes self-care. There are important differences in the typical trajectory to adulthood for EAs from low-SES and/or minority backgrounds as compared to those from more advantaged backgrounds. The implications of these differences with regard to diabetes care should be considered when developing and implementing programs for this population.

Symposium 02D

EMERGING ADULTS WITH AND WITHOUT DIABETES: COMPARISON OF PSYCHOLOGICAL HEALTH AND RISK BEHAVIOR

Vicki Helgeson, Ph.D.

Emerging adulthood is an understudied period of development and one that is considered to be a high-risk period in terms of health behaviors and psychological distress. We conducted three annual assessments with 117 emerging adults with type 1 diabetes and 121 healthy controls (93% white, 53% female) beginning in the spring of their senior year in high school. We examined changes in risk behaviors and psychological health over time. There were no differences between emerging adults with and without diabetes on depressive symptoms, but group differences appeared on perceived health ($p < .05$), perceived stress ($p < .05$) and loneliness ($p = .10$). Those with diabetes reported worse perceived health, greater stress and marginally more loneliness than controls. There also was a group effect ($p < .01$) qualified by an interaction with time ($p < .05$) on life satisfaction. Those with diabetes reported lower levels of life satisfaction than controls at all assessments, and life satisfaction deteriorated over time for those with diabetes. In terms of risk behaviors, there were no group differences in binge drinking but a marginally significant group by sex by time interaction on alcohol consumption, such that females with diabetes started out with lower alcohol consumption but all groups increased over time and reached similar rates. There was a significant three-way interaction on smoking, such that all groups increased over time, with the largest increase being observed among males with diabetes. A health behavior index, averaging across both healthy behaviors and risk behaviors, revealed a group by time interaction ($p < .05$). Health behaviors decreased for all but especially those with diabetes. Thus, emerging adulthood appears to be an especially risky period of time for those with type 1 diabetes in terms of psychological well-being and risky health behaviors.

CORRESPONDING AUTHORS: Bret Boyer, PhD, Widener University, Philadelphia, PA, 19119; baboyer@mail.widener.edu; Jessica T. Markowitz, PhD, Joslin Diabetes Center, Boston, MA, 02215; jessica.markowitz@joslin.harvard.edu; Elizabeth Pyatak, PhD, OTR/L, CDE, University of Southern California, Los Angeles, CA, 90089-9003; beth.pyatak@osot.usc.edu; Vicki Helgeson, PhD, Carnegie Mellon University, Pittsburgh, PA, 15213; vh2e@andrew.cmu.edu

Symposium 03 8:30 AM-9:45 AM

INTERNATIONAL AND CULTURAL ADAPTATION OF PEER SUPPORT IN HEALTH PROMOTION

Andrea Cherrington, MD[1], Linda Baumann, PhD[2], Maggy Coufal, MPH, MA[3], Sarah Kowitt, MPH[4], Monika M. Safford, MD[1]

[1]University of Alabama at Birmingham, Birmingham, AL; [2]University of Wisconsin-Madison, Madison, WI; [3]University of North Carolina at Chapel Hill, Chapel Hill, NC; [4]UNC Chapel Hill, Carrboro, NC

Research overwhelmingly suggests the beneficial effects of peer support among diverse populations, health conditions, and settings. Yet with the recognition of peer support's universal importance are key cultural considerations that influence the ways in which support is construed. While outcomes of peer support may be consistent across settings, patterns regarding the provision, expression, and desire of support vary according to unique cultural values and norms. As growing interest attends to the scale up and dissemination of peer support more broadly, key cultural features will received increased attention. This symposium will review how peer support has been adapted in different international settings, drawing on research conducted with varied populations in Uganda, Vietnam, Thailand, and China. From Vietnam and Uganda, Dr. Baumann will describe various cultural and institutional factors—patient, health care system, treatment, health profession—related to the design and implementation of successful peer support programs. From Thailand, Ms. Kowitt will describe social and cultural features of the Village Health Volunteer program, including patterns of support and how they have been adapted to communities. From China, Ms. Coufal will describe key societal, familial, and clinical considerations that affect development of peer support programs from over 250 program managers participating in program development workshops and follow up consultation. Discussion by Dr. Safford will address the findings of the other presentations from the perspective of her work examining similar cultural issues in adapting peer support to diabetes management among African Americans in rural Alabama.

Symposium 03A

CULTURAL ADAPTATIONS IN PEER SUPPORT FOR ADULTS WITH TYPE 2 DIABETES IN TWO SETTINGS: VIETNAM AND UGANDA

Linda Baumann, PhD

This presentation will describe peer support interventions for type 2 diabetes conducted in two settings – Vietnam and Uganda. In Uganda, a 4 month pre-post quasi-experimental study was done to evaluate the impact on: diabetes self-care behaviors, glycemic control, social support and emotional well-being, and linkages to health care providers. Participants ($n = 46$) attended a 1-day diabetes education program and made weekly contacts with each other by phone or in person to assist with daily management, provide social support, and encourage appropriate contact with health care providers. In Vietnam, a randomized control group pre- post-test design study was done to evaluate the effectiveness of diabetes self-management support. Participants with a hemoglobin A1c (HbA1c) > 7% were recruited and randomly assigned to either the experimental ($n=42$) or control group ($n=44$). Seventeen participants with a HbA1c < 7% acted as peer leaders. Participants in the experimental group attended a four-session diabetes education program and were assigned peer leaders who provided support by telephone over five months. Participants in the control group received usual care and a diabetes self-care booklet. Outcome measures included diabetes social support, diabetes self-efficacy, diabetes self-care behaviors, and HbA1c collected at baseline, and three and six months post-intervention. Results from both settings showed improvement in HbA1c, while the Vietnamese participants in the experimental group showed improvement in all outcome measures. Conclusions: A short-term peer support program was a feasible intervention to improve diabetes care in both settings. In Uganda, although fewer outcomes showed favorable change, elements of the intervention were sustained up to 18 months post-intervention. We will discuss patient, healthcare system, treatment and health profession related factors that influenced the design and results of the interventions.

Symposium 03B

SOCIAL AND CULTURAL ADAPTATION OF PEER SUPPORT: THE PEERS FOR PROGRESS EXPERIENCE IN CHINA

Maggy Coufal, MPH, MA

Peer support is an effective strategy to initiate and sustain behavioral change. Amidst the various models and approaches for peer support around the world, there are four key functions of peer support that appear to be universal across cultures and settings: 1) Assistance in daily management 2) social and emotional support 3) linkage to clinical care and community resources, and 4) ongoing support that can be extended over time. Since 2008, Peers for Progress, a program of the American Academy of Family Physicians Foundation, has helped adapt peer support in China through research, training, and consultations. This has included collaboration with the Chinese Diabetes Society and several universities, resulting in workshops training over 450 program managers for diabetes peer support. This experience has illuminated how social and culture contexts can impact the local tailoring of the four key functions and program features. As a hierarchical society where many individuals do not trust others to help with health care needs, Chinese providers are recognized as "the" credible source. Therefore, it is crucial to involve clinicians in developing and providing peer support programs. Patients prefer that providers attend educational activities or discussions. In many cases, participants prefer to meet in a clinical setting at initial stages of the program. Chinese culture's emphasis on collectivism and harmony leads to general acceptance of support groups. In Chinese culture, families can be counted upon to help individuals, but this also leads to reluctance to "burden" their families with individual problems. Peer support emerges as a channel through which the individual can share concerns without fear of burdening the family. The role of family support and the relationship among family members also has a critical influence on program design. Cultural factors also influence program development. With an emphasis on moving quickly to action, program design focuses on simplicity, small wins and ongoing troubleshooting leading, eventually, to comprehensive programs.

Symposium 03C

KEY SOCIAL FEATURES OF THAILAND'S VILLAGE HEALTH VOLUNTEER PROGRAM

Sarah Kowitt, MPH

The Village Health Volunteers (VHVs) have been a regular part of Thailand's health system since the 1960s and acclaimed as an international model for community-based public health. Amidst the successes of the VHVs, research has yet to describe social and cultural features of the program. Fieldwork conducted with VHVs in 3 communities examined kinds of support provided. VHVs reported providing nondirective support (i.e., support that is accepting of the recipient's feelings and choices and cooperative with their plans). However, they also reported "taking charge" of health-related problems and directly intervening in community members' lives to provide support (e.g., cooking healthy foods for people with diabetes). This style of "doing for" appears consistent with nondirective support in Thai collectivist culture in which anticipating and acting to meet others' needs is expected. More clearly directive "telling people what to do" is not acceptable in Thai culture and was not reported by the VHVs. Interestingly, "doing for" others was often combined with implicit support, i.e., non-verbal actions that conveyed emotional acceptance, e.g., community dance and walking groups. These patterns of nondirective and implicit support were even more pronounced in the two villages closest to Bangkok where changing demographics and urbanism have undermined traditional village support systems. In these communities, "doing for" went beyond intra- and inter-personal levels as VHVs reported efforts to strengthen community cohesion, build community capacity, and empower community members through local forums, economic initiatives, and community participation. These findings suggest that VHVs use both local and national culture to enhance the appropriateness, relevance, and usefulness of their activities for community members.

CORRESPONDING AUTHORS: Linda Baumann, PhD, University of Wisconsin-Madison, Madison, WI, 53715; ljbauman@wisc.edu; Maggy Coufal, MPH, MA, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599; coufal@email.unc.edu; Sarah Kowitt, MPH, UNC Chapel Hill, Carrboro, NC, 27510; kowitt@email.unc.edu

Symposium 04 8:30 AM-9:45 AM

EVIDENCE-BASED STRATEGIES THAT IMPROVE RECRUITMENT, ADHERENCE, AND RETENTION OF RANDOMIZED TRIALS

Michaela Kiernan, PhD[1], Melissa M. Crane, MA[2], Corrine I. Voils, PhD[3], Tricia M. Leahey, PhD[4], Bonnie Spring, PhD, ABPP[5]

[1]Stanford Prevention Research Center, Stanford, CA; [2]University of North Carolina at Chapel Hill, Chapel Hill, NC; [3]Durham Veterans Affairs Medical Center and Duke University Medical Center, Durham, NC; [4]University of Connecticut, Storrs, CT; [5]Northwestern University Feinberg School of Medicine, Chicago, IL

Meeting recruitment, adherence, and retention goals are fundamentally important for the successful execution of behavioral randomized trials both in terms of internal and external validity. Yet, achievement of these goals remains challenging as there is limited empirical evidence to guide the development and implementation of effective strategies. This methodological symposium will include four empirical studies that were explicitly designed to improve the recruitment, adherence, and/or retention of randomized lifestyle intervention trials. These results have potential for widespread generalizability as the studies include younger and older adults as well as both men and women; involve in-person and Internet intervention delivery channels; and focus on multiple types of lifestyle behaviors. Three of four studies employ experimental designs. Recruitment: The first presentation will describe two studies: a randomized comparison of targeted versus generic recruitment direct mailings developed to increase male recruitment to a young adult weight gain prevention trial and a quasi-experimental study comparing two types of direct mailings to extend reach. Recruitment: The second presentation will describe an observational examination of baseline demographic and psychosocial variables that predict which eligible veterans attend the first treatment session of a behavioral weight-loss trial versus those eligible veterans who do not. Adherence: The third presentation will describe a randomized controlled trial among 18-70 year olds that examines whether adding small financial incentives to an Internet behavioral weight-loss program improves adherence relative to the Internet program alone. Retention: The fourth presentation will describe a randomized experiment conducted among a sample of ethnically-diverse undergraduates that tested whether a retention letter—with an easy-to-understand graphic illustrating the methodological impact of study dropouts on study conclusions—increased perceived value for completing follow-up assessments and trust of the research organization.

Symposium 04A

PARTICIPANTS AS PARTNERS: SHARING METHODOLOGICAL RATIONALE INCREASES VALUE FOR RETENTION AND TRUST

Michaela Kiernan, PhD

Low and differential retention undermines the internal and external validity of randomized trials if participants who are not responsive to the intervention drop out at a higher rate. To date, retention strategies typically focus on extrinsic motivators such as incentives or reminders, are rarely tested experimentally, and have small or inconsistent effects. Here, we take an alternative approach. Informed by a community-based participatory research perspective in which participants are considered partners in research, we hypothesized that increasing participants' appreciation or value for the methodological rationale of retention—i.e., a 'true picture' of trial outcomes is preferred even if the trial does not 'work' or individual participants are not successful—may improve retention. We tested if a 1-page retention letter—with a clear graphic illustrating the methodological impact of dropouts on trial conclusions—increased value for retention. Ethnically-diverse undergraduates (n=77, 61% non-White, 71% female) were randomly assigned to read the retention letter or control letter from a hypothetical research organization evaluating a program to increase fruit and vegetable intake among young adults. As hypothesized, the retention letter increased participants' value for retention and did not increase value for the outcome. Retention letter participants rated 'it is important to me that I complete the survey at the end of the program, whether or not I eat more fruits and vegetables' more highly than control letter participants (3.8 ± 1.0 vs 3.3 ± 1.0, respectively, p=.02, d=0.5), and did not rate 'it is important that I eat more fruits and vegetables' more highly than controls (4.2 ± 0.7 vs 4.1 ± 0.8, p=.36). Also, retention letter participants rated 'the organization is willing to find out the program may not be helpful' (3.8 ± 1.0 vs 2.9 ± 1.1, p=.001, d=0.8) and 'I trust the organization that sent the letter' more highly than controls (3.2 ± 0.9 vs 2.3 ± 0.8, $p < .0001$, d=1.0). This transparent approach may be especially useful with populations with less initial trust about research and is being tested within a large trial.

Symposium 04B

INCREASING RECRUITMENT FOR WEIGHT GAIN PREVENTION: TESTING MESSAGE TARGETING AND TYPE

Melissa M. Crane, MA

Background: Recruitment of diverse samples is important to extend the impact of clinical trials. Men have been underrepresented in many studies of weight loss and weight gain prevention. Further, recruitment for weight gain prevention trials has been challenging. We used a randomized design to test the effect of using targeted messages to recruit and enroll men into a weight gain prevention trial (Aim 1). We tested the effect of two types of direct mailings on the overall reach of the mailings using a quasi-experimental design (Aim 2).Methods: For Aim 1, 30,000 male and female young-adult households were randomly assigned to receive either a targeted or generic recruitment postcard. Targeted postcards included the word "Men" in the headline text. Response rates were calculated based on self-report of postcard receipt during a subsequent telephone screening and confirmed via mailing lists. For Aim 2, an additional 30,000 young-adult households were sent a recruitment brochure. Visits to recruitment websites were used to compare the response rates of postcards versus brochures. Each website visit was categorized by whether or not it included an initiation of the online screener.Results: Aim 1: The targeted postcard produced fewer overall (men plus women) visits to the recruitment website than the generic postcards (p = 0.05); however, there was no significant difference in phone screening rates by message type (p = 0.39). A greater proportion of men were screened in response to the targeted card (37%) than the generic card (19%). Thus, targeting the mailing increased the percentage of men responding (p = 0.07). Aim 2: The reach of the postcards and brochures was similar (421 and 386 website visits respectively, p = 0.22). A greater percentage of brochure recipients initiated the online screener (70%) than postcard recipients (62%, p = 0.01).Conclusions: This study demonstrated that targeted messages increased the proportion of men completing the trial screening procedures, despite small reductions in overall reach. There was little difference in the reach of postcards versus brochures. We found that recipients of brochures were more likely to continue to the next stage of study enrollment: providing more information during initial contact may increase interest in the study.

Symposium 04C

PREDICTORS OF INITIATION OF A BEHAVIORAL WEIGHT LOSS INTERVENTION

Corrine I. Voils, PhD

Patients often show an initial interest in behavioral weight loss interventions but fail to initiate or complete the intervention. In an ongoing trial, patients who >=4 kg during run-in are eligible for randomization to a maintenance phase. We compared demographic and clinical variables for (1) patients who did and did not initiate the program and (2) among initiators, patients who lost >=4 kg versus dropped out or lost < 4 kg. Methods: Obese veterans complete a 16-week, group-based weight loss intervention. If >=4kg weight loss is achieved, then patients are randomized to a maintenance intervention or usual care (goal N=220). During in-person screening, eligibility was assessed and psychosocial measures were administered. A multivariable logistic regression was estimated to characterize associations with intervention initiation (i.e., provided a baseline weight at the time of the first group session), whereas a multinomial logistic regression was used to characterize associations with weight loss of >= 4 kg vs. drop out or loss Results: Following screening, 573 patients were eligible for participation; of those, 504 initiated the intervention.The odds of initiation were greater among patients with a support person (p=.01) and males (p=.01). Of the 504 patients who initiated the intervention, only 304 provided a 16-week weight to determine eligibility for randomization. The odds of dropping out and losing insufficient weight were greater among females than males (p=.02 and p=.04) and non-Whites than Whites (p=.004 and p=.01). The odds of dropping out were also greater among tobacco users than non-users (p=.01). There were no differences by number of previous weight loss attempts; favorable expectations about weight loss; or self-efficacy, intrinsic and extrinsic motivation, and behavioral intentions for diet or physical activity. Conclusions: In trials involving a run-in phase, extra efforts are needed to recruit and retain patients to achieve the target sample size. Efforts to recruit and retain individuals who have shown initial interest in such trials may incorporate strategies targeting females (in male-dominated environments such as the VA), non-Whites, and people lacking social support to enhance motivation for initiation of behavioral weight loss programs.

Symposium 04D

A BEHAVIORAL ECONOMICS APPROACH TO IMPROVING ADHERENCE IN WEB-BASED INTERVENTIONS

Tricia M. Leahey, PhD

Web-based interventions have potential for wide reach and substantial public health impact. However, they commonly suffer from suboptimal adherence/engagement, which adversely impacts outcomes. Thus, efforts are needed to identify ways to improve adherence in these initiatives. We examined whether adding small financial incentives delivered consistent with behavioral economics (i.e. delivered frequently and varying in size from week to week) improves adherence in a 12-week Web-based weight loss program (WWL). Participants (N=180, 82% female, age=45.7years, 33.2kg/m^2) were randomized to WWL or WWL plus small incentives (WWL$). WWL included weekly video lessons; a self-monitoring platform where participants submitted daily weight, diet, and activity information and received feedback; and weekly reminders to submit self-monitoring data. Participants in WWL$ also earned money for adherence; each week they submitted at least 5 days of weight, diet, and activity information into the self-monitoring platform they earned anywhere from $1 to $10, for maximum earnings of $45 during the entire program. Consistent with behavioral economics, reminders to submit self-monitoring data were framed using regret aversion language ("Don't miss out on your money, be sure to submit"). At post-treatment those who met their weight goal were also eligible for a raffle. Results showed that small financial incentives delivered consistent with behavioral economics improved adherence. Participants in WWL$ submitted more self-monitoring information (71.7 days v. 58.2 days, p < .05). In addition, even though only submission of self-monitoring information was incentivized, WWL$ had more login weeks (10.6 v. 9.0, p < .05) and viewed more lessons (7.1 v. 5.7, p < .05), suggesting a spillover effect. Adherence was associated with percent weight loss (r's>.54, p's < .05), and WWL$ achieved significantly greater weight losses than WWL (6.4% v. 4.2%, p < .05). Cost-effectiveness was examined and was similar in the two groups ($34/kg; $34/kg). Modest incentives delivered consistent with principles from behavioral economics may be an efficacious and cost-effective method for improving adherence and thus treatment outcomes in Web-based health behavior change interventions.

CORRESPONDING AUTHORS: Michaela Kiernan, PhD, Stanford Prevention Research Center, Stanford, CA, 94305; mkiernan@stanford.edu; Melissa M. Crane, MA, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27514; mmcrane@email.unc.edu; Corrine I. Voils, PhD, Durham Veterans Affairs Medical Center and Duke University Medical Center, Durham, NC, 27705; corrine.voils@dm.duke.edu; Tricia M. Leahey, PhD, University of Connecticut, Storrs, CT, 06269; tricia.leahey@uconn.edu

Symposium 05 8:30 AM-9:45 AM

ADVANCEMENTS IN APPLYING ECOLOGICAL MOMENTARY ASSESSMENT TO PHYSICAL ACTIVITY AND DIETARY RESEARCH

Diane Ehlers, MA[1], Jason Fanning, MS[2], Genevieve F. Dunton, PhD, MPH[3], Susan M. Schembre, PhD, RD[4]

[1]University of Illinois, Urbana, IL; [2]University of Illinois at Urbana-Champaign, Urbana, IL; [3]University of Southern California, Los Angeles, CA; [4]The University of Texas MD Anderson Cancer Center, Houston, TX

Compared with global, retrospective reports, ecological momentary assessment (EMA) provides researchers an exciting opportunity to better understand the dynamic mechanisms that drive health behaviors and to design interventions targeting these behaviors in context. Although research utilizing these methods is becoming increasingly popular, EMA remains underutilized due to expensive data collection applications, intricate sampling schemes and analyses, and burdensome implementation. Advances in and widespread adoption of mobile technology have contributed to the improved feasibility of implementing ecological momentary designs, particularly for researchers with limited resources. Using three innovative and distinct EMA methodologies targeting physical activity and dietary behaviors as examples, this symposium will illuminate the increased feasibility of ecological momentary designs and important challenges to anticipate when conducting this research. The first presenter will describe the use of commercially available technology to collect and manage ecological momentary data on self-worth and physical activity in middle-aged women. The second presenter will discuss the development and initial results of an EMA study employing web application techniques to examine relationship between physical activity, sedentary activity, and attention in college-aged adults. The third presenter will describe methods for managing and analyzing daily dyadic data addressing temporal, bidirectional relationships among physical activity, dietary behaviors and stressful events in mother-child dyads. The discussant will address how these studies contribute to advancements in EMA, in addition to the implications for increased utilization of EMA methods in physical activity and dietary research.

Symposium 05A

FEASIBILITY OF EMPLOYING WIDELY AVAILABLE TECHNOLOGY FOR ECOLOGICAL MOMENTARY ASSESSMENT

Ms. Diane Ehlers, MA

Ecological momentary assessment (EMA) may help us better explain individual variations in daily physical activity (PA) in women. Understanding the practicality of implementing these designs is important. This presentation will discuss an EMA method that utilizes available technology to measure daily variations in PA and PA correlates in middle-aged women. Women (*M* age=49 yrs) received text message prompts with links to a mobile-friendly, internet-based survey in the morning, afternoon, and evening for 28 days on their cell phones. The survey assessed current activity, self-worth, and self-efficacy and included embedded data such as ID. The survey was developed from published questionnaires, pilot tested in a separate sample, and modified for this study. Women were asked to complete the questionnaires from which the mobile survey was developed at the beginning of the study and to wear a wrist-worn accelerometer (GENEActiv) for the 28 days. Feasibility was assessed using survey completion rates, accelerometer wear time and process evaluation indicators (e.g., participant burden, technology issues). Of the 67 women enrolled, 63 had 10+ days of survey data and 59 had 10+ days of survey and valid PA data. After excluding surveys due to researcher or technology errors and from participants who withdrew from the study, 5155 surveys were eligible for completion, of which 4163 (80.8%) were complete and valid. Missing survey responses occurred primarily on evenings, Saturdays, and Days 18-26. Accelerometer malfunction accounted for 184 days of missing PA data. Wear time was high: 10+ hours on 1469 of 1580 eligible days and 953 ± 101 minutes per valid day. Non-wear was greatest on Day 26. In total, data were complete for 3573 (67.5%) of 5292 potential observations. Increased smartphone and text message adoption, coupled with advanced sophistication in internet-based research software, may provide the opportunity to feasibly collect and manage EMA data. Although the GENEActiv allowed continuous measurement of PA for 28 days, it did not allow continuous access to data or identification of device malfunctions and non-wear during the study period. More research identifying feasible EMA methods is warranted.

Symposium 05B

PHYSICAL ACTIVITY AND ATTENTION: A MOMENTARY ASSESSMENT (PANAMA): METHODS

Jason Fanning, MS

Contemporary research suggests strong relations between physical activity, sedentary behavior, and myriad health indices. Currently, however, it is not well understood how associations between sedentary behavior and physical activity relate to attention alone, nor how they predict health-related outcomes. PANAMA is an ongoing study that serves to bridge this explanatory gap. To do so, PANAMA utilizes common web application techniques to execute a low cost, disseminable, and dynamic ecological momentary assessment (EMA) paradigm. Briefly, eligible participants complete baseline questionnaires prior to attending an orientation session in which they receive an activity monitor and are introduced to the PANAMA study software package. Over the course of one week, a web server distributes 16 hourly customized text messages to participant smartphones with a link to individualized surveys. These short surveys assess attention, mind wandering, affect, arousal, and type and time of physical and sedentary activities. During the first survey of each day, participants indicate the quality of the previous night's sleep. To prevent short periods between surveys, prompts are delayed if an individual completes a survey after the 45th minute of the hour. To prevent overly large lapses in reporting, participants who miss 3 consecutive surveys are unable to continue answering surveys until the next day. Upon completion of 7 consecutive study days, participants receive a link for post-test questionnaires and attend an exit interview. We believe that PANAMA serves as a unique platform to assess the transient nature of activity states and associated attentional correlates. Moreover, it will allow us to determine the efficacy of EMA methods for capturing physical and sedentary behaviors as compared with objective measures. Investigating these dynamic associations using a novel EMA paradigm enables us to explore both the real-time nature of health behavior and its attentional correlates.

Symposium 05C

MOMENTARY ASSESSMENT OF WITHIN-DAY EFFECTS OF MATERNAL STRESS ON CHILDREN'S EATING AND ACTIVITY

Genevieve F. Dunton, PhD, MPH

Parental stress is an understudied factor that may compromise parenting practices related to children's dietary intake and physical activity. However, past studies examining the association between parental stress and child obesity used retrospective measures of stress and ignored within-day processes. This presentation will describe the development and testing of an Ecological Momentary Assessment (EMA) smartphone application (app) to capture real-time data on dyadic interactions among 200 mother-child pairs participating in the MATCH (Mothers And Their Children's Health) study. The Android app collects EMA data across 7 continuous days, with up to 7 paired signal-contingent (i.e. random) EMA survey prompts per day per member of the dyad. In order to examine within-day directional relationships, children are prompted approximately 30-60 minutes after the paired EMA survey is prompted for mothers (with the exception of during school hours). EMA items assess perceived stress, stressful events, exposure to stressors, weight-related parenting practices (e.g., monitoring, limiting, encouraging) for mothers only, and eating and physical activity behaviors. The EMA app was tested in mothers (N=11) and their 8-12 year-old children (62% female, 69% Hispanic). On average, mothers and children responded to 79% and 74% of the EMA survey prompts, respectively. No phones were lost, stolen, or broken during the study. Mothers reported experiencing a stressful event over the past 2 hours in 40% of EMA surveys; with stress from work at a job (44%), work at home (18%) and tension with children (16%) reported most frequently. The frequencies of child-reported physical activity and eating behaviors occurring in the past two hours were as follows: TV/videos/video games (58%); exercise/sports (36%); fruit/vegetables (28%); pastries/sweets (13%); soda/energy drinks (10%); chips/fries (7%); and fast food (3%). This presentation will describe EMA data merging, processing, and analytic strategies to examine within-day bidirectional temporal effects using dyadic data. It will also discuss the benefits and challenges of using dyadic EMA methods in large-scale surveillance, epidemiological, and intervention studies to understand how within-daily interpersonal transactions can shape health behaviors.

CORRESPONDING AUTHORS: Diane Ehlers, MA, University of Illinois, Urbana, IL, 61801; dkehlers@illinois.edu; Jason Fanning, MS, University of Illinois at Urbana-Champaign, Urbana, IL, 61801; fanning4@illinois.edu; Genevieve F. Dunton, PhD, MPH, University of Southern California, Los Angeles, CA, 90032; dunton@usc.edu

Symposium 06 8:30 AM-9:45 AM

USING TECHNOLOGY TO ADDRESS CHALLENGES IN HEALTH DECISION MAKING: CASE STUDIES AND RECOMMENDATIONS

Christine Pellegrini, PhD[1], Bryan Gibson, PhD[2], Megan Lewis, PhD[3], Jean Balgrosky, MPH, RHIA[4], Bradford Hesse, PhD[5]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]University of Utah, Salt Lake City, UT; [3]RTI International, Research Triangle Park, NC; [4]MD Revolution, Inc., San Diego, CA; [5]National Cancer Institute, Rockville, MD

People increasingly make health decisions in challenging circumstances—treatment decisions with no evidence-based "right" choice, decisions about screening tests that may lead to unnecessary treatments, or decisions about whether and how to protect their future health with lifestyle changes. Technology-based behavioral interventions can help people make these decisions in a way that avoids taxing limited healthcare resources; however, to be useful they must overcome challenges to informed decision making and produce satisfactory outcomes. Speakers in this symposium (co-sponsored by the Health Decision Making and Technology SIGS) will discuss challenges they have dealt with in developing technology-based decision aids for 3 common health decisions: those involving medical treatments, screening, and changing health behaviors. The first speaker will describe a decision aid called "veterans like me" that facilitates informed decision making among veterans with atrial fibrillation. It illustrates a novel use of both quantitative and narrative information about similar others' experiences and outcomes to overcome challenges of presenting risks and benefits of therapies in an understandable, engaging manner. The second speaker will describe a decision aid designed to facilitate parents' decisions to accept or decline a newborn screening test that uses genomic sequencing. Challenges addressed when developing this intervention include the complexity and rapidly changing nature of the information and the need to develop content using a consensus-driven approach. The third speaker will describe development of personalized health data dashboards for individuals and teams. They strive to engage and maintain motivation for enduring behavior change with features such as gamification and clinical messaging to educate participants and encourage desired behaviors for managing or preventing chronic disease risk factors. The discussant will contextualize these talks in light of SBM's strategic aim to capitalize on "digital health" technologies to promote better outcomes for individuals and care systems. The discussant and panel will also exchange perspectives on embedding decision support technologies into evidence-based care systems.

Symposium 06A

VETERANS LIKE ME: DESIGN OF AN ELECTRONIC SYSTEM FOR SHARED DECISION-MAKING

Bryan Gibson, PhD

Background Shared clinical decision making requires integrating patient's values and preferences with provider's beliefs regarding the comparative efficacy of potential treatments.

In this project we describe the challenges we have faced in designing an electronic system that is theory based and intended to engage patients in shared decision-making. The system is driven by Electronic health record data and provides graphical feedback on the outcomes associated with different treatments in addition individuals can read synthesized narratives about individual cases.

Methods We are conducting a series of semi-structured interviews with patients and providers regarding their therapeutic decision-making. These interviews are conducted in the clinic, as soon as possible after the therapeutic decision is made.

To address the challenge of making the system engaging, interviewers probe patients regarding what makes other people "like them", what information they want in the narratives, and what clinical outcomes, process measures and patient reported outcomes they would like to be able to investigate.

To address the challenge of making risk predictions understandable we provide participants with a paper mock-up of the system interface and probe them regarding its presentation of the differences in risk between treatments.

Results The 30 interviews will be completed over the next three months. Preliminary results from the first ten interviews indicate that participants' beliefs about what makes another individual "Like me" are largely intuitive (age, sex, race, etc.) but also may be idiosyncratic ("were these people also exposed to agent orange?") and may be unrelated to medical risk ("what are these people's hobbies?", "where do these people live"?)

Overall participants seem to have a good understanding of the icon grid as a mechanism to display the distribution of outcomes. However have assumed that the single story in the paper mock-up reflects all the individuals, whether this is an artifact of paper vs. interactive software will be tested in future interviews.

Conclusions We present the challenges encountered in designing an electronic tool for shared decision-making.

Symposium 06B

WORKING AT THE EDGE OF POLICY, SCIENCE AND PRACTICE: THE NC NEXUS STUDY

Megan Lewis, PhD

Next-generation genetic sequencing (NGS) is rapidly becoming the screening technology of choice in many clinical fields. Using NGS for screening presents ethical issues about the return of results due to the wealth of incidental findings generated. These issues are compounded by the application of NGS to newborn screening when parents make decisions about their baby. NC NEXUS is studying if NGS can detect disease reliably in newborns, and if an electronic decision aid (DA) can help parents make informed decisions about the results they want. This includes decisions about carrier status, adult-onset conditions that have treatment and childhood conditions that do and do not have treatment. In this presentation we describe the consensus-driven, multi-method approach to designing a DA that addresses a plethora of ethical, legal, and social challenges.We are using multiple data sources and methods to design the DA. These include: 1) external (n=7) and internal (n=20) expert consultation with clinicians, geneticists, genetic counselors, pediatricians, newborn screening experts, and ethicists to obtain guidance on the classification of genetic findings, issues in returning actionable and non-actionable genetic findings, and the study design of a trial that will test the DA; 2) Formative interviews with 34 couples (N=68) who are pregnant or have had post-natal genetic testing for a child; and 3) A national survey of parents stratified and balanced by race and gender (N=1200) that contained a discrete choice experiment (DCE) to examine the dimensions of genetic health conditions that may drive decision making.To date, expert consensus indicates childhood onset conditions are of primary importance for parents to learn. Parents should be able to opt out of any return of result category, and the child's decision-making autonomy should be preserved, even if that means withholding information from parents. Qualitative analysis of parent interviews indicates wide variability in understanding of, and desire for, genetic information. DCE analysis suggests that the likelihood of occurrence may be the most important factor in parent's decision to obtain results. We will discuss how these data, and the challenges posed in this study, are shaping the NC NEXUS DA.

Symposium 06C

USING TECHNOLOGY TO ADDRESS CHALLENGES IN HEALTH DECISION MAKING: CASE STUDIES AND RECOMMENDATIONS

Jean Balgrosky, MPH, RHIA

Problem: Innovations in the "quantified self" movement employing use of mobile data tracking devices assist tracking single metrics such as number of footsteps or heart rate, but pulling these various parameters together into personalized, relevant, actionable information remains challenging. Chronic disease management in the traditional health care delivery system is expensive and often ineffective, highlighting the need for digital capabilities to help patients and physicians connect to successfully monitor and manage chronic illnesses and associated risk factors. Further, digital health platforms can improve care coordination and communication between patients and providers involved in their care. Activity: MDRevolution, a San Diego-based company has developed a digital health platform called RevUp that aggregates personal health data from biosensors and mobile devices onto a personalized health dashboard for participants. Exercise, nutrition, and clinical parameters are measured and fed back via the dashboard to participants and clinicians who provide online coaching and education through messaging supporting sustained, health-enhancing behavior change. Focus is on physiological parameters reducing visceral fat, increasing VO2 through interval training, improving nutritional quality, and other interventions to improve participants' individual health status and risk factors. Mobile devices (e.g., accelerometers, heart rate monitors, smart scale blood pressure cuffs, and glucometers) are used based on participants' preferences and clinical needs. Points system uses incentives employing motivating gamification techniques. Data aggregated into a back-end analytics platform enable outcomes analysis and other research. Results: Significant positive results have been achieved in early pilots. Aggregated data analytics refine algorithms and points system. Participants achieving 40 or more points per week achieve positive outcomes from sustained, health-improving behavior changes. The platform is being tested in large employer environments, health systems, and other organizations. Conclusion: Scalable digital health capabilities can be implemented by providers and health systems for population health and chronic disease management.

CORRESPONDING AUTHORS: Bryan Gibson, PhD, University of Utah, Salt Lake City, UT, 84108; qing.zeng@utah.edu; Megan Lewis, PhD, RTI International, Research Triangle Park, NC, 27709; melewis@rti.org; Jean Balgrosky, MPH, RHIA, MD Revolution, Inc., San Diego, CA, 92122; jean@mdrevolution.com

Symposium 07 8:30 AM-9:45 AM

EXERCISE PROMOTION IN COMMUNITY MENTAL HEALTH SETTINGS: TRANSLATING FINDINGS FROM CLINICAL TRIALS

David E. Goodrich, EdD[1], Gerald Jerome, PhD[2], Sarah I. Pratt, PhD[3], Kristin L. Schneider, PhD[4], Lynette Craft, PhD[5], Deborah Rohm Young, PhD, MBA[6], Stacy Goldsholl[7], Gail L. Daumit, MD, MHS[7], Stephen Bartels, MD, MS[8], Kelly Aschbrenner, PhD[9], Sherry L. Pagoto, PhD[10], Jacey Keeney, BA, BS[11], Daniel Kern, BA[12]

[1]VA Ann Arbor Healthcare System, University of Michigan Department of Psychiatry, Ann Arbor, MI; [2]Towson University, Towson, MD; [3]Geisel School of Medicine at Dartmouth, Concord, NH; [4]Rosalind Franklin University of Medicine & Science, North Chicago, IL; [5]American College of Sports Medicine, Chicago, IL; [6]Kaiser Permanente Southern California, Pasadena, CA; [7]Johns Hopkins School of Medicine, Baltimore, MD; [8]Geisel School of Medicine at Dartmouth, Lebanon, NH; [9]Geisel School of Medicine at Dartmouth, Nashua, NH; [10]University of Massachusetts Medical School, Worcester, MA; [11]Rosalind Franklin University of Medicine and Science, Arlington Heights, IL; [12]Rosalind Franklin University of Medicine and Science, River Grove, IL

Since 2011, the Society of Behavioral Medicine (SBM) and the American College of Sports Medicine (ACSM) have collaborated at annual meetings to advance Exercise is Medicine (EIM), an initiative with the guiding principles that exercise and physical activity (PA) are essential to health and to the prevention and treatment of chronic diseases. Many persons living with debilitating mood disorders or schizophrenia who are treated in community mental health (CMH) settings face barriers to preventive health services. High levels of physical inactivity exacerbate health disparities and providers often lack exercise prescription training tailored to this population to promote physical health and recovery from mental illness. The aims of this SBM-ACSM symposium are to discuss key learnings from clinical intervention trials that inform: 1) adapting exercise prescription to mental health diagnosis 2) overcoming implementation barriers, 3) supporting financing and policy reform for integrated behavioral medicine, and 4) placing EIM within recovery-based care. Dr. Jerome will discuss the exercise programing from the Achieving Healthy Lifestyles in Psychiatric Rehabilitation (ACHIEVE) randomized trial as well as practical considerations for implementation of group exercise in CMH centers. Dr. Pratt will discuss the development, clinical evaluation, and dissemination of the In SHAPE fitness program in multiple states and its role in fostering psychiatric recovery in adults with serious mental illness. Dr. Schneider will review findings from clinical trials in which exercise was integrated into depression care for those with comorbid health conditions, and will discuss opportunities to make such strategies part of routine care. Finally, Dr. Craft will discuss the implications of these issues within the aims of EIM and next steps that can facilitate the translation of evidence-based exercise promotion in CMH settings.

Symposium 07A

COMMUNITY-BASED GROUP EXERCISE FOR ADULTS WITH SERIOUS MENTAL ILLNESS

Gerald Jerome, PhD, Deborah Rohm Young, PhD, MBA,

Director of Behavioral Research, Stacy Goldsholl, Gail L Daumit, MD, MHS Adults with serious mental illness (SMI) exhibit higher rates of chronic conditions and lower physical activity levels than the general population. Addressing these disparities requires multi-level efforts to promote regular physical activity in this population. Policy- and system-level changes are needed to help increase access to exercise facilities and programming. Individual level tailoring is needed to help adults with serious mental illness in overcoming barriers and challenges to regular exercise including psychiatric symptoms, cognitive challenges and low initial fitness levels. Both the ACHIEVE pilot study and the subsequent clinical trial offered group exercise classes to adults with serious mental illness through community-based psychiatric rehabilitation programs. The ACHIEVE trial offered group exercise classes as part of a weight loss program at ten different psychiatric rehabilitation programs through the state of Maryland. Results will be discussed with respect to the need for system-level changes that support sustainable prevention programing for patients treated in community mental health settings. This presentation will also review lessons learned when implementing the group exercise classes in these community-based centers. We will share practical considerations when tailoring group exercise classes for this population. These findings provide evidence for the effectiveness and benefits of community-based physical activity programming to address health disparities in this vulnerable population.

Symposium 07B

AN INDIVIDUALIZED FITNESS PROGRAM FOR PEOPLE WITH SMI: IMPLEMENTATION CHALLENGES AND LESSONS LEARNED

Sarah I. Pratt, PhD, Stephen Bartels, MD, MS, Kelly Aschbrenner, PhD

The rate of obesity in people with serious mental illness (SMI) is nearly twice that of the general population, largely due to lack of exercise, inactivity, and poor eating habits, which contributes to a substantially reduced life-expectancy. Person- and systems-level challenges to engaging in fitness activities for people with SMI necessitate the development of programs tailored for this at-risk group that can be broadly disseminated and adopted in routine health care settings. In SHAPE is a fitness program that includes weekly individual meetings with a fitness trainer, access to a low-cost gym in the community, nutrition education, and motivational group celebrations. Tailored for people with SMI, In SHAPE is intended to be delivered in mental health settings embracing a whole health, recovery-oriented approach to care that are able to establish partnerships with community-based wellness resources to promote social inclusion of its members. Designed in 2003, In SHAPE has been evaluated in a pilot study, two randomized controlled trials, and a statewide implementation study. This presentation will review the existing evidence for In SHAPE with respect to improvement of health behaviors and objective health indicators. Descriptive data from an ongoing study to evaluate the value of incentives in promoting engagement in fitness programming, including In SHAPE, will also be presented, as well as an introduction to a newly funded national implementation study of In SHAPE. Finally, lessons learned from a decade of experience working with mental health centers in many states to implement the In SHAPE program will be discussed, including strategies for funding and maintaining the program, conducting ongoing, local evaluation of program outcomes, and overcoming challenges to engaging people with SMI in fitness behaviors. Integrated fitness in behavioral health homes may provide the missing link in efforts to increase health outcomes and life expectancy of people with SMI.

Symposium 07C

PAIRING EXERCISE WITH EVIDENCE-BASED DEPRESSION TREATMENT FOR ADULTS WITH COMORBID TYPE 2 DIABETES

Kristin L. Schneider, PhD, Sherry Pagoto, PhD, Jacey Keeney, BA, BS, Daniel Kern, BS

A 2013 Cochrane Review documented the benefits of exercise for treating depression. Less is known about the use of exercise to treat depression in the context of comorbid health conditions. For individuals with physical health comorbidities like obesity, type 2 diabetes and heart disease, using exercise to treat depression may have the added benefits of improving the health condition and facilitating secondary disease prevention. Although the majority of exercise interventions for depression use structured exercise classes for treatment delivery, adults with depression and comorbid health conditions may require more tailored intervention to address the greater number of exercise barriers these individuals report (e.g., dislike exercise, feel uncomfortable exercising) and their heightened inactivity. Combining evidence-based depression treatment with exercise may provide a more efficacious approach to improving depression and the health condition by addressing exercise barriers. This presentation will review the existing evidence for interventions that paired or integrated evidence-based depression treatment (e.g., cognitive-behavioral therapy, behavioral activation) to treat depression and comorbid type 2 diabetes. From our pilot trial of women with depression and type 2 diabetes, we will describe how behavioral activation strategies were tailored to increase exercise, as well as the use of community resources to support these strategies. We will discuss treatment acceptability and adherence to the behavioral activation strategies, as well as the challenges of using exercise with this population (e.g., more interested in weight loss, safety). Discussion will include how behavioral activation strategies could be integrated into community mental health or behavioral health settings to treat depression and comorbid health conditions, including the training and expertise required of treatment providers, and areas for further research.

CORRESPONDING AUTHORS: Gerald Jerome, PhD, Towson University, Towson, MD, 21252; gjerome@towson.edu; Sarah I. Pratt, PhD, Geisel School of Medicine at Dartmouth, Concord, NH, 03301; sarah.i.pratt@dartmouth.edu; Kristin L. Schneider, PhD, Rosalind Franklin University of Medicine & Science, North Chicago, IL, 60064; kristin.schneider@rosalindfranklin.edu

Symposium 08 8:30 AM-9:45 AM

CULTURALLY COMPETENT INTERVENTIONS ACROSS THE CANCER CONTINUUM

Qian Lu, MD, PhD[1], Kristi D. Graves, PhD[2], Brian D. Gonzalez, PhD[3], Linda Fleisher, PhD, MPH[4], Clement Gwede, PhD, MPH, RN[3], Jamilia Sly, PhD[5]

[1]University of Houston, Houston, TX; [2]Georgetown University, Washington, DC; [3]Moffitt Cancer Center, Tampa, FL; [4]Children's Hospital of Philadelphia, Philadelphia, PA; [5]Icahn School of Medicine at Mount Sinai, New York, NY

Despite the growing number of cancer survivors in the multi-cultural U.S. and the remarkable success of cancer control efforts in non-Hispanic White populations, there is a dearth of interventions that have been developed specifically for other cultural or ethnic groups. Numerous challenges arise in developing culturally competent interventions for people from diverse cultural backgrounds. The purpose of this symposium is to provide insight and lessons learned on how to overcome the challenges and how to effectively develop and evaluate culturally sensitive interventions for cancer patients and survivors from ethnic minority populations. Experts selected by the Ethnic Minority and Multicultural Health Special Interest Group (EMMH SIG) will present empirical evidence and strategies of developing and evaluating culturally competent interventions. All presenters will examine various aspects of three themes: 1) improving health and quality of life for all through elimination of health disparities, 2) developing culturally and linguistically sensitive interventions through programmatic efforts, and 3) empowering communities of color. The first presenter focuses on developing a culturally-relevant quality of life intervention for Latina breast cancer survivors and their caregivers. The second presenter reports the development and evaluation of a peer mentoring and education intervention using mixed methods among Chinese American breast cancer survivors. The third presenter describes a culturally-relevant intervention transcreated into Spanish from an English version and the beneficial effects of this intervention on Latinas' self-efficacy for managing stress. The fourth presenter concentrates on findings from a culturally tailored education pilot program in six population groups in order to improve the communities' understanding of biospecimen research. The discussant will synthesize these findings and discuss the cultural relevance to ethnic minority and underserved populations, best practices for addressing disparities, and remaining gaps and implications for future research.

Symposium 08A

A CULTURALLY SENSITIVE SOCIAL SUPPORT INTERVENTION FOR CHINESE BREAST CANCER SURVIVORS

Qian Lu, M.D, Ph. D. Jenny Man, Reese Tou, Nelson Yeung, Hannah Feng, Jin You, Christine Wu, Alice Loh, Lucy Young

Background: Minority breast cancer survivors face many challenges due to cultural and linguistic barriers. Past research has shown that social support interventions effectively improve adjustment among non-Hispanic White cancer survivors. However, there is scant information on how to develop culturally competent social support interventions for minority cancer survivors. This study documented an innovative intervention specifically developed for a minority group, evaluated its feasibility, cultural sensitivity, and potential effectiveness, and explored underlying mechanisms.

Methods: A community-based participatory research approach (CBPR) and mixed qualitative and quantitative methods were used. Forty-three Chinese American breast cancer survivors post-treatment completed the Joy Luck Academy (JLA), an 8-week program designed to provide emotional and informational support through peer mentoring and education. The educational sessions focused on increasing participants' knowledge of breast cancer post-treatment issues, including stress management skills and aspects of physical, mental, and emotional recovery. We assessed quality of life before and after the intervention, and conducted eight weekly process evaluations and two focus group interviews with nine mentees and eight peer mentors.

Results: Participants highly valued the program. The program was associated with an increase in quality of life from baseline ($M = 95.10$, $SD = 27.08$) to follow-up ($M = 103.24$, $SD = 22.26$), $F = 12.17$, $p = .001$, $\eta^2 = .23$. Inductive analysis revealed the unique needs among Chinese American breast cancer survivors and reasons why the JLA was culturally competent.

Conclusions: The peer mentoring and education program has the potential to serve as a model intervention for successful transition to survivorship after breast cancer treatment for Chinese Americans. Mixed methods and CBPR are keys to success in intervention studies with minorities. Future studies with randomized controlled trials in this population and pilot testing with other minority groups are warranted to better understand the efficacy and the mechanisms of social support interventions across culture.

Symposium 08B

CULTURALLY-RELEVANT QUALITY OF LIFE INTERVENTION FOR LATINA BREAST CANCER SURVIVORS AND CAREGIVERS

Kristi D.. Graves, PhD, Gloria Elliott, M.A. L.P.C, Margaret Darling, B.A., Ysabel Duron, B.A., Ivis Febus-Sampayo, H.S.D., Migdalia Torres, LCSW-R, Anna Napoles, Ph.D., M.P.H

Introduction: Few research studies have evaluated psychosocial interventions to improve outcomes among Latina breast cancer survivors and caregivers. The purpose of this study is to refine and evaluate the Nueva Vida intervention to improve quality of life in Latina breast cancer survivors and their caregivers. Method: A Latina breast cancer survivor developed the initial 14-session Nueva Vida intervention to meet the cultural needs of Latino families seeking services at a community-based organization. The intervention emphasizes the importance of family and sharing experiences, while recognizing stigma related to certain topics such as mental health services. Families arrive together for the intervention workshops then separate into different groups for survivors, caregivers and children. The separation of survivors and caregivers allows each to share experiences without concern about upsetting the other person. We conducted qualitative interviews with 8 Latina survivor-caregiver dyads and sought input from community partners to refine the intervention. Interview transcripts were evaluated using content analysis. Together the team decided on research design elements, study methods and outcomes. Team members emphasized the need for intervention adaptability and dissemination of future results.Results: The original intervention program was refined into 8 sessions; changes included allowing participants to select certain workshop topics, adding information about cancer and its treatment, recognizing differences between male and female caregivers and identifying needs of young adult caregivers. Our sample of Latina breast cancer survivors and their caregivers is diverse in terms of country of origin, level of acculturation, and time since breast cancer diagnosis. To help sustain cultural-relevancy and engage patients and community members, we have used an innovative human subjects training approach, encouraged open communication and held regular team meetings. Conclusions: Active partnerships among academic researchers, community organizations, clinicians, Latina survivors and caregivers resulted in a culturally-relevant intervention being evaluated in a RCT. Future intervention research may benefit from adapting programs in use by agencies that serve the target population.

Symposium 08C

A CULTURALLY RELEVANT STRESS MANAGEMENT INTERVENTION FOR LATINAS STARTING CHEMOTHERAPY FOR CANCER

Brian D. Gonzalez, Ph.D., Suzanne C. Lechner, PhD, Heather S.L. Jim, PhD, Cathy D. Meade, PhD, RN, Dinorah Martinez-Tyson, PhD, MPH, Michael H. Antoni, PhD, Yvelize Rodriguez, Andrea S. Vinard, Madeline Krause, Roohi R. Ismail-Khan, MD, Sachin M. Apte, MD, Paul B. Jacobsen, PhD

Background: Although Latinas are a large and growing proportion of the population of cancer patients, few studies have examined the efficacy of stress management interventions among Spanish-speaking Latinas. Moreover, most established stress management interventions are not presented in Spanish, the primary language of many Latinas, and do not take into account their cultural values and beliefs. We are currently evaluating the impact of a culturally-relevant self-administered intervention developed specifically for Spanish-speaking Latinas beginning chemotherapy for cancer. These interim analyses focused on intervention effects on self-efficacy for managing stress.Method: Spanish-speaking Latinas about to begin chemotherapy for cancer were randomized to receive usual care (n=44, age M=52) or usual care + a self-administered stress management intervention (n=43,age M=52). The intervention was transcreated from an English version in order to incorporate design and content elements recommended by key stakeholders regarding cultural sensitivity, linguistic/literacy issues, and layout. It consists of a DVD, booklet, and Spanish audio CD that provide instruction relaxation strategies as well as use of coping self-statements. Latinas completed a measure of self-efficacy for managing stress before beginning chemotherapy and 6 and 13 weeks later.Results: Using mixed models, a group by time interaction was observed from baseline to 13-week follow-up self-efficacy for managing stress (p=.03); the intervention group reported increased self-efficacy over time, whereas the usual care group did not report changes in self-efficacy. A group by time interaction was also observed for the self-efficacy for relaxation subscale ($p < .001$); the intervention group reported increased self-efficacy over time, whereas the usual care group reported decreased self-efficacy for relaxation.Conclusion: This is the first study to test the efficacy of a culturally-relevant self-administered stress management intervention designed to meet the needs of Spanish-speaking Latinas with cancer. Interim analyses demonstrated that the intervention is efficacious in enhancing Latinas' self-efficacy for managing stress, which may be driven by improvements in self-efficacy for engaging in relaxation.

Symposium 08D

PERSPECTIVES OF BIOSPECIMEN RESEARCH: RESULTS OF CULTURALLY TAILORED PROGRAM ACROSS SIX POPULATIONS

Linda Fleisher, PhD, MPH Carrie Norbeck, MPH, CHES

Purpose/Background: Advances in genetics and personalized medicine are dramatically changing cancer care. Research focused on the cultural tailoring of community-based approaches to engage racial/ethnic minority communities in biospecimen donation is critical to reduce disparities. The Cancer Disparities Research Network (CDRN) is a network of health disparities researchers (25 institutions-15 states) to address challenges in cancer health disparities and diverse engagement in research. The CDRN,funded through the NCI's Center for Cancer Health Disparities' Geographic Management, conducted a pilot project to adapt (including translation) and pilot test an evidenced-based biospecimen education curriculum for 6 target population groups: African American, Hispanic, Appalachian, Chinese, South Asian, and Native American. Methods: A rigorous adaptation process led by the CDRN Coordinating Office and the CDRN Cancer 101 Working Group, guided the community based pilot and the key content for the educational program. Each participating institution worked closely with their community in the development and implementation. The evaluation included a pre and post-program survey to assess impact on knowledge and intention to participate in biospecimen related research which was required for all of the educational programs.Results: 530 community members (including cancer survivors) participated in the pilot program. The sample included 19% African American, 19% Appalachian, 18% Chinese, 17% Hispanic, 10% Native American, and 17% Southeast Asian. Preliminary analyses of data from the pretest indicated that 14% (range 10-24%) had taken part in a research study and only 16% (range 3% to 50%) had ever donated a biospecimen. There were differences among population groups. Ranked reasons to participation are: helping others in the future, improving my own health, and to contribute to new discoveries. On the post-survey, 73% strongly agreed that that program helped them to better understand biospecimen research and 3 out of 4 participants reported they were very (42%) or somewhat likely (33%)to donate a sample to a future study.Discussion: We will present on the final results of the pilot, including variations among the 6 populations in knowledge, attitudes and behavioral intentions.

CORRESPONDING AUTHORS: Qian Lu, MD, PhD, University of Houston, Houston, TX, 77004; qlu.ucla@gmail.com; Kristi D. Graves, PhD, Georgetown University, Washington, DC, 20007; kdg9@georgetown.edu; Brian D. Gonzalez, PhD, Moffitt Cancer Center, Tampa, FL, 33612; brian.gonzalez@moffitt.org; Linda Fleisher, PhD, MPH, Children's Hospital of Philadelphia, Philadelphia, PA, 19104; fleisherl@email.chop.edu

Symposium 09 8:30 AM-9:45 AM

TRANSFORMING PRIMARY CARE THROUGH BIOINFORMATICS AND BEHAVIORAL MEDICINE. SPONSORED BY THE SPLC.

Sherri Sheinfeld Gorin, Ph.D.[1], Julie A. Wright, PhD[2], Kevin O. Hwang, MD, MPH[3], Alexander H. Krist, MD, MPH, FAAFP[4], Jing Wang, PhD, MPH, RN[5], David K. Ahern, PhD[6]

[1]Leidos (NCI) and New York Physicians against Cancer (NYPAC), New York, NY; [2]UMass Boston, Boston, MA; [3]University of Texas Medical School at Houston, Houston, TX; [4]Virginia Commonwealth University, Richmond, VA; [5]University of Texas Health Science Center at Houston School of Nursing, Houston, TX; [6]Behavioral Research Program (BRP), Boston, MA

The goals of both Behavioral Medicine (BMed) and Bioinformatics are synergistic; both focus on high quality, cost-effective, health promotive patient care. While the two fields vary in their concepts and methods, training, and professionals, through collaboration, the two fields could transform primary care. This symposium will explore the opportunities for collaboration between bioinformatics and BMed in primary care with exemplars in risk assessment, interventions to reduce health risks, and to manage chronic diseases. First, a bioinformatician and physician, will discuss potential synergies between the two fields in primary care through the Patient-Centered Medical Home (PCMH) and medical neighborhood models, using resources such as electronic health records (EHRs), registries, patient portals, and patient-facing technologies for disease self-management. Second, a bioinformatician and physician will discuss the outcomes of a cluster-randomized pragmatic trial to implement a patient-centered, electronic tool (My Own Health Report [MOHR]), that routinely screens patients for risks, allows patients to prioritize concerns, provides immediate feedback, and alerts clinicians to patient concerns. Given the findings from this study, as well as the high prevalence of unhealthy behaviors and mental health risks, bioinformatics tools could increase patient screening for increased engagement in their own care. Third, a bioinformatician and nurse, will describe the findings from a 3-group pilot RCT of a consumer informatics-assisted lifestyle intervention (app on a smartphone) to reduce obesity in an African American population diagnosed with type II diabetes. She will discuss the implications of patient sharing of self-monitoring data collected on mobile phones for the EHR within the PCMH model. The discussant, a BMed and informatics expert, will summarize the implications of the two perspectives for BMed, in particular. He will share a road map for collaborative approaches to enhance patient care in primary care settings, and for patient self-management, using bioinformatics resources and BMed specialists.

Symposium 09A

BIOMEDICAL INFORMATICS IN THE PRIMARY CARE SETTING

Kevin O. Hwang, MD, MPH

Biomedical informatics (BMI) is an interdisciplinary field that “studies and pursues the effective uses of biomedical data, information, and knowledge for scientific inquiry, problem solving, and decision making, driven by efforts to improve human health” (AMIA). This presentation will focus on opportunities and challenges in improving primary care through BMI, and the role of behavioral medicine in this endeavor. Friedman’s fundamental theorem of BMI is that “A person working in partnership with an information resource is ‘better’ than that same person unassisted.” The presentation will discuss how the theorem can be tested in the primary care setting, with an emphasis on medical problems influenced heavily by health behavior. Traditional primary care is reactive and opportunistic. The patient centered medical home (PCMH) is a model for transforming the organization and delivery of primary care. PMCH seeks to provide patient-centered, comprehensive, coordinated, and proactive care. There is an emphasis on accessibility, quality, and safety of health care. An extension of the PCMH is the medical neighborhood, which connects primary care practices to medical specialists, hospitals, community resources, as well as behavioral health specialists and organizations that promote healthy lifestyle changes. The presentation will review how an effective PCMH and medical neighborhood requires information resources such as electronic health records (EHRs), registries, patient portals, and patient-facing technologies for disease self-management. The role of behavioral medicine specialists in evaluating and acting upon the information offered by these technologies will be discussed. A case study will be presented to illustrate how collaboration among primary care providers, biomedical informaticians, and behavioral scientists can improve health behaviors and health outcomes in patients with chronic diseases such as hypertension and diabetes. Challenging issues will be discussed, such as balancing patient expectations with the capacity of the health care team, and making sense of data collected in the process of routine care.

Symposium 09B

HEALTH INFORMATION TECHNOLOGY TO COMPREHENSIVELY CONDUCT HEALTH RISK ASSESSMENTS

Alexander H. Krist, MD, MPH, FAAFP

There is a high prevalence of unhealthy behaviors and mental health concerns in primary care. Routine patient-centered health risk assessments that systematically screen for risks, allow patients to prioritize concerns, provide immediate feedback, and alert clinicians of concerns, may improve counseling, goal setting, and health. We developed an electronic tool to support these actions, called My Own Health Report (MOHR), and studied how 18 diverse primary care practices implemented the tool in a cluster-randomized pragmatic trial. Practices were randomized to implement MOHR versus continue usual care. Intervention practices offered MOHR to all patients presenting for wellness or chronic care. Patients from intervention and control practices were mailed a survey about whether they were screened for eight behaviors or mental health issues, set a change goal (primary outcome), received follow-up, or felt they had made improvements. How practices implemented MOHR varied by practice. Four practices mailed patients an invitation to complete MHR online, four had staff ask patients questions and entered responses online, and one utilized a paper version of MOHR. Overall, 3,591 patients were approached and 1,782 completed the assessment (49.6%). On average, patients had 5.8 unhealthy behaviors or mental health concerns. Significantly more patients from intervention practices reported receiving counseling for all eight topics, setting a goal for six topics, and making improvements for five topics. Between 3.8% – 16.6% more patients reported setting a goal from intervention practices compared to control practices ($p < 0.01$). Patients from intervention practices were more likely to report that their clinician cared about them, they could trust their clinician, and their clinician showed interest in their questions and concerns. While practices were successful implementing MOHR and it seemed to improve goal setting, no practice was able to fully integrate MOHR into their electronic health record. Given the high prevalence of unhealthy behaviors and mental health risks, practices need greater assistance from health information technology tools to systematically conduct risk assessments and engage patients in their care. The authors will discuss next steps and the role of informatics.

Symposium 09C

CONSUMER INFORMATICS-ASSISTED BEHAVIORAL INTERVENTION FOR DIABETES IN PRIMARY CARE: A PILOT STUDY

Jing Wang, PhD, MPH, RN

Self-monitoring is cornerstone of behavior interventions for obesity and diabetes. Previous studies have found that consumer informatics, including mobile technology, have the potential to improve adherence to self-monitoring and patient outcomes. The aim of this presentation is to describe the findings from a 3-group pilot RCT of a consumer informatics-assisted lifestyle intervention (app on a smartphone [Mobile] vs. Paper vs. service-as-usual [Control]) to reduce obesity in an African American population diagnosed with type II diabetes. Twenty six overweight or obese patients with type 2 diabetes were recruited from an urban primary care health center in Houston, TX, that serves underserved minority populations. Participants were assigned at random to one of three groups. The Mobile group received an android-based smart phone with two applications loaded to record diet, physical activity, weight, and blood glucose, while the paper group received paper diaries. Both the Mobile and Paper groups received a total of 11 group sessions. Primary outcomes of the study included % weight loss and HbA1c changes at the end of the 6-month intervention period. The sample was primarily African American (M, age= 56.4 yrs, M, BMI= 29.6), with a retention rate of 96%. At 6 months, participants lost an average weight of 2.73% (Mobile group) vs. 0.13% (Paper Group), by comparison to the Control group, with an average 0.49% weight gain. HbA1c changed from 8% to 7 % in the Mobile group, 10% to 9% in Paper group, and maintained at 9% for the Control group. Because of the small sample size, we did not find statistical significance on outcomes (P=.20), however, we found a clinically informative effect size of 0.40 for weight loss and 0.28 for glycemic control. Focus group and individual interview data revealed that patients found the intervention and smart phones acceptable and useful. While the findings require confirmation with a larger RCT, the results suggest that integrating consumer informatics-assisted behavioral lifestyle interventions in primary care setting are feasible, and potentially effective. Importantly, a consumer-assisted self-monitoring behavioral intervention is acceptable for underserved minority patients with type 2 diabetes.

CORRESPONDING AUTHORS: Kevin O. Hwang, MD, MPH, University of Texas Medical School at Houston, Houston, TX, 77030-3006; kevin.o.hwang@uth.tmc.edu; Alexander H. Krist, MD, MPH, FAAFP, Virginia Commonwealth University, Richmond, VA, 23298-0251; ahkrist@vcu.edu; Jing Wang, PhD, MPH, RN, University of Texas Health Science Center at Houston School of Nursing, Houston, TX, 77030; jing.wang@uth.tmc.edu

Symposium 10 8:30 AM-9:45 AM

ADVANCING THE NATIONAL PREVENTION STRATEGY STARTING WITH ACUTE CARE AND ACUTE EVENTS

Barbara Resnick, PhD, CRNP[1], Marie Boltz, PhD, CRNP[2], Mary E. Cooley, PhD, RN, FAAN[3], Laura L. Hayman, PhD, RN, FAAN[4]

[1]University of Maryland, Baltimore, MD; [2]Boston College, Boston, MA; [3]Dana-Farber Cancer Institute, Boston, MA; [4]University of Massachusetts-Boston, Boston, MA

Increasingly in acute care settings there is a focus on wellness and engaging patients and families in their health care while institutionalized and thereby facilitating enhanced health behavior following discharge. The American Hospital Association in its framework for health reform, Health for Life, embraced the need to engage patients and families and focused their efforts on accessing these individuals during acute care admissions. The way in which acute care facilities ultimately influence the health of individual patients is through interpersonal interactions with patients and care providers. This two-way interaction requires knowledge on the part of the provider in terms of how to engage patients and families in health care, how to facilitate behavior change and a willingness among providers and patients to identify and address health promotion goals rather than just treating the acute problem. There are many identified challenges to facilitating behavior change and improving health behaviors among patients in the acute care setting including the fact that: 1) the acute care systems has not routinely encompassed patients as partners in health care; 2) patients continue to expect that their acute problems will be managed in these settings by physicians, nurses and others working with them and do not want to consider future behavior change interventions; and 3) there is limited reimbursement for care that does not address the acute problem. Further providers in these settings do not have the skills needed to motivate patients and facilitate behavior change. The purpose of this symposium is to provide examples of how to engage patients and families across the age continuum in health promoting activities while hospitalized or during treatment for acute events. Specifically, we provide three innovative approaches to changing health behavior among older adults and children and their families. The first session addresses optimizing function and physical activity following a traumatic orthopedic event; the second addresses optimization of function and physical activity among patients, with a focus on inclusion of the family, following a medical admission and the third session focuses on implementation of a lifestyle intervention for patients receiving treatment for lung cancer with a focus on lessons learned.

Symposium 10A

OPTIMIZING FUNCTION AND PHYSICAL BEHAVIOR IN OLDER ADULTS POST TRAUMA ADMISSION

Barbara Resnick, PhD, CRNP

Older adults account for 25% of hospitalized trauma patients and these rates are expected to increase so that by 2050 approximately 40% of all trauma patients will be older adults. These patients often have multiple comorbidities and decreased physiologic reserve and when exposed to acute care environments and health care interventions that restrict movement a decline in physical activity and function occurs. Generally older trauma patients experience a decline of 1 activity of daily living, a third will be discharged to nursing homes and have a greater likelihood of mortality within 5 years when compared to matched controls. Function Focused Care for Acute Care (FFC-AC) was developed to prevent this functional decline. FFC-AC incorporates a Social Ecological Model and self-efficacy theory to facilitate behavior change among nurses and patients. This model assures that intrapersonal factors, interpersonal factors, the environment and current policy and culture are all addressed. For example, we evaluate the environment and implement changes such as developing a safe walking areas for patients. The interpersonal aspects of the model are guided using self-efficacy theory and four sources of information (performance, verbal encouragement, role modeling and elimination of unpleasant sensations) that are used to increase self-efficacy to perform a given activity. FFC-AC includes four steps: 1) Environment and Policy/Procedure Assessments; 2) Education of Nurses, Families and Patients; 3) Developing Function Focused Goals; and 4) Mentoring and Motivating. The purpose of this report is to describe the intervention and identify challenges in the implementation process. The 4 steps of the FFC-AC intervention were implemented by a Function Focused Nurse Facilitator who worked on the units 20 hours a week. Environment and policy assessments guided a need for significant interventions and administration was open to changes across the units. We taught all nurses using either a group or one-on-one approach. Challenges with regard to engaging patients in function and physical activity were focused on the beliefs of providers, patients and families around care expectations, fear of falls and disease exacerbation. Self-efficacy based interventions are described and used to move toward behavior change in this setting.

Symposium 10B

THE FAMILY ROLE IN FUNCTION-FOCUSED CARE OF THE HOSPITALIZED OLDER ADULT

Marie Boltz, PhD, CRNP

Family caregivers (FCGs) play an important role influencing the functional recovery of hospitalized older adults. They provide vital information about baseline function and support timely detection of clinical issues such as delirium and pain. FCGs also offer motivation and support of function-focused care and assume responsibility in varying degrees for post-acute care delivery and coordination. An empowerment-educational model (Fam-FFC) that considers family caregivers and patients as partners in function-focused care has demonstrated improved functional outcomes, decreased hospital readmissions, and improved FCG sense of well-being. This session will describe Fam-FFC and present a blueprint for implementation, considering common facilitators and barriers. Components of Fam-FFC include: 1)family/patient education addressing their role in preventing hospital-acquired complications including functional decline; 2) function-promoting techniques and resources that FCGs can utilize to support cognitive and physical function; 3) interdisciplinary team education on attending to family needs for information, education, and support of FCG role as key informant s and advocates; and 4) jointly developed bedside goals and care plans that delineate FCG role; and 5) discharge planning and post-acute follow-up that support continuity of the FFC plan. Prior research has shown that family caregivers who are exposed to Fam-FFC showed a significant improvement in preparedness for caregiving and had less anxiety and depression over the two months following discharge from acute care. Patients exposed to Fam-FFC had less delirium and showed improvements in activities of daily living and walking performance when compared to those who received routine care. Tools will be provided for how to implement this innovative approach and integrate it into routine care in the acute care setting

Symposium 10C

IMPLEMENTING A LIFESTYLE INTERVENTION FOR PATIENTS RECEIVING TREATMENT FOR LUNG CANCER

Mary E. Cooley, PhD, RN, FAAN

Effective methods are available for early detection and treatment for non-small cell lung cancer. As the length of survival improves, an important consideration will be improving health-related quality of life (HR-QOL). One promising avenue to improve HR-QOL is to increase patient uptake of a heathly lifestyle after the diagnosis of lung cancer. Smoking cessation, increased physical activity, and a diet high in fruits and vegetables were found to be associated with improved HR-QOL, decreased cancer recurrence and increased survival among lung cancer patients. This session will 1) describe a lifestyle intervention, *"Healthy Directions"*, that was adapted for use in lung cancer patients 2) describe patient preferences for intervention materials, and 3) identify challenges and strategies used in implementing the intervention. Based on patient feedback, the intervention was adapted and a study kit was given to all patients upon enrollment to the study. The adapted intervention focuses on symptom control, reducing lifestyle risk factors, providing social support, and increasing motivation and self-efficacy during the transition from acute care to the recovery phase of illness. Intervention activities consisted of an assessment by a nurse, a personalized feedback report to guide goal-setting, health coaching calls, and self-guided print or web-based materials. Forty-one percent of patients preferred written materials, 41% preferred web-based, 6% preferred both and 2% were undecided. Challenges encountered during implementation of the intervention included too restrictive inclusion criteria, insufficient time for patients to consider the intervention, and uncomfortable equipment used to monitor physical activity. Some patients had a difficult time with recovery and needed additional time to engage in the intervention. Various strategies were implemented to address the challenges identified in implementing the study: broadened inclusion criteria, modified requirements about wearing equipment, use of health communication experts to design recruitment materials, and active engagement of clinicians and patient advocates in discussion about optimal timing for intervention delivery. Discussion will focus on lessons learned from implementing the intervention.

CORRESPONDING AUTHORS: Barbara Resnick, PhD, CRNP, University of Maryland, Baltimore, MD, 21201; barbresnick@gmail.com; Marie Boltz, PhD, CRNP, Boston College, Boston, MA, 02467; boltzm@bc.edu; Mary E. Cooley, PhD, RN, FAAN, Dana-Farber Cancer Institute, Boston, MA, 02115; mary_cooley@dfci.harvard.edu

Symposium 11 8:30 AM-9:45 AM

DEVELOPING DIGITALLY-MEDIATED INTERVENTIONS FOR PREVENTING/TREATING OBESITY IN PEDIATRIC POPULATIONS

Bernard F. Fuemmeler, PhD, MPH[1], Ann M. Davis, PhD, MPH, ABPP[2], Christopher Cushing, Ph.D.[3], Donna Spruijt-Metz, MFA, PhD[4], Jessica R. Wearing, MPH (in progress)[5], Kelsey Dean, MS, RD, LD, CCRP[6]

[1]Duke University Medical Center, Durham, NC; [2]University of Kansas Medical Center; Center for Children's Healthy Lifestyles & Nutrition, Kansas City, KS; [3]University of Kansas, Lawrence, KS; [4]Center for Economic and Social Research, University of Southern California, Los Angeles, CA; [5]University of Kansas School of Medicine, KC, MO; [6]Univeristy of Kansas Medical Center, Kansas City, KS

There is increasing interest in the use of digitally-mediated interventions designed to prevent and treat pediatric obesity. The use of these interventions is often focused on certain health behaviors, such as increasing exercise or decreasing physical activity, and also often involves the delivery of educational materials. These innovative approaches may be particularly useful among children and adolescents, since nearly all of today's youth are "digital natives". The purpose of this symposium will be to 1) provide an overview of the fields of mHealth and eHealth in children, 2) provide recent examples of the use of mHealth and eHealth to treat pediatric obesity, focusing on the project development phase, and 3) provide a vision for the future of eHealth and mHealth in pediatric obesity. Jessica Wearing will provide an overview of current publicly available applications and how they adhere to the Expert Committee Recommendations for the Treatment of Pediatric Obesity. Dr. Cushing will describe results from an N-of-1 RCT for developing an SMS intervention for increasing adolescent physical activity. Dr. Davis will describe the pilot of a home based physical activity application as part of a family based behavioral group program for the treatment of pediatric obesity. Dr. Fuemmeler will describe the development and outcomes data from a feasibility trial of *Mila Blooms*, a mobile phone app for promoting health diet and physical activity among a special group of teenagers: cancer survivors. As the discussant, Dr. Donna Spruijt-Metz will highlight future directions and next steps necessary to advance the science of using digitally-mediated interventions to prevent and treat pediatric obesity.

Symposium 11A

MILA CELESTIAL BLOOM: HEALTH PROMOTION AMONG ADOLESCENT CANCER SURVIVORS VIA A SMARTPHONE APP

Bernard F. Fuemmeler, PhD, MPH

Pediatric survivors of Acute Lymphoblastic Leukemia (ALL) are at risk for obesity. As an accommodating distance-based strategy, we present the development of and feasibility data from a smartphone app aimed at supporting healthy dietary intake and daily physical activity among teenagers with a history of cancer. Social-Cognitive Theory and gamification guided the development. The overall aim was on a motivating process, i.e., playing a game, rather than a particular health outcome. The game involved a post-apocalyptic world where a band of survivors must restore Earth's balance. To advance through a series of expeditions, players must to earn virtual points by engaging in real world physical activity and recording their diet. In a pre-test post-test within subjects design, participants (n=15) were recruited to use the app for 8 weeks. We tracked daily usage and changes in diet, physical activity, and social-cognitive constructs. The average number of interactions with the app was 8.5 times per day. Non-use of was due to technical glitches as well as loss of interest in participating. Although not powered to detect significant within subject differences, changes in self-efficacy and obesity-related behaviors were in the expected direction. Subjects who used the app regularly (>4 weeks; n=8) reported a significant decrease in added sugars intake (9.2 to 8.5 tsps, $p < .05$, Cohen's $d = .1$) and a marginal, but non-significant, decrease in average daily grams of sugary beverages (207 to 157 g, p=.08, Cohen's $d = .3$). FV increased by three quarters of a serving, ($p = .66$; Cohen's $d = .6$). Physical activity self-efficacy increased slightly from pre to post (3.5 to 3.9, p = .53, Cohen's $d = .4$), but minor changes in physical activity were observed (4.0 to 4.1, p = .51, Cohen's $d = .1$). Participant satisfaction was rated as "somewhat/very easy" for ease of use (80% for entering diet; 60% for syncing steps) and teens "mostly enjoyed/enjoyed a lot" several aspects of the app (73% for chat messaging; 60% for earning points; 67% for storyline). The results indicate support to motivate obesity-related behavior change in teens; however, minimizing technical glitches and maximizing ease of use for digitally-mediated interventions is key for full engagement.

Symposium 11B

AN EXERCISE APP FOR FAMILIES IN A BEHAVIORAL GROUP PEDIATRIC OBESITY PROGRAM: FITNET

Ann M. Davis, PhD, MPH, ABPP

Co-Authors: Kelsey Dean, MS, RD, LD, Children's Mercy Hospital (kdean@kumc.edu); Bob Summers, Chief Geek, Fitnet (Bob@fit.net); Kevin Hill, Data Czar, Fitnet (kevin@fit.net)

Pediatric overweight and obesity is an epidemic facing one third of children today. These children are at risk for a number of long-term health problems, medical, social and psychological. To treat this widespread problem, the Expert Committee developed recommendations for treatment. Stage 1 starts in the primary care office, stage 2 occurs at a multidisciplinary team visit, and stage 3 involves family based behavioral groups. Data exist to suggest family based behavioral groups are effective with minor amounts of weight loss, but that there is room for improvement in health behavior change. One solution may be the delivery of certain intervention components to the home through secure technology. Fitnet, a home based physical activity application, was originally developed for use with adults. However, the developers became aware of the problem in the area of physical activity with obese youth, and partnered with a family based behavioral group program to develop and pilot a child focused application of their exercise delivery application. In the application, children and families participate in 5 minute bouts of exercise, selecting their activity of choice from yoga, cardio and strength. Depending upon performance, children can increase or decrease the intensity of the next 5 minute bout. Throughout the 12 week family based behavioral group program parents and children were encouraged to engage in 15-20 minutes per day of exercise with the Fitnet application. Game design and mechanics will be presented.

Pilot data are being collected currently with 12 families, each of whom are participating in our family based behavioral group program, and received a free iPad with wireless internet connectivity. Results regarding feasibility, use, and health behavior change will be presented. Primary outcomes include changes in accelerometer measured physical activity, 24 hour dietary records, and BMIz (children)/BMI (parents).

Apps for home physical activity may enhance health behavior change in families participating in family based behavioral groups for the treatment of pediatric obesity.

Symposium 11C

N-OF-1 RCT FOR DEVELOPING A CONTROL THEORY SMS INTERVENTION FOR ADOLESCENT PHYSICAL ACTIVITY

Christopher Cushing, PhD

Recent reviews have revealed that in order to modify physical activity behavior in children and adolescents without a health condition it is necessary to intervene directly with the individual child (Cushing, Brannon, Suorsa, & Wilson, 2014). Moreover, eHealth interventions can be effective in pediatric populations if they include behavior change strategies consistent with Carver and Scheier's (1982) Cybernetic Control Theory (Cushing & Steele, 2010). These include behavioral self-regulation strategies such as goal-setting, self-monitoring, feedback, and goal review.The current study is an N-of-1 randomized controlled trial of an automated text messaging program for promoting physical activity. The intervention system is a fully automated server-side platform that sends text messages to participants asking them to set a goal for minutes of physical activity on a given day. The platform then receives a response from the participant and applies a proprietary algorithm to determine if the goal is attainable and sufficiently challenging using the participant's past performance, normative data, and Centers for Disease Control and Prevention recommendations. The platform will then ask the participant late in the day how much activity was performed and provide feedback.Five participants completed an N-of-1 randomized controlled trial over the course of 56 days. Days within participant were randomized to treatment and control. Treatment days involved the participant sending text messages with the automated system while control days involved no contact. Physical activity was assessed using a wrist worn accelerometer (step counts). Using multilevel modeling analysis, it was possible to determine which participants demonstrated an effect of the intervention and those that did not. Only one participant engaged in more steps (~1,765) on intervention relative to control days ($p < .05$). However, three participants demonstrated evidence of a carryover effect averaging an increase of 1,115 steps the day after receiving the intervention ($p < .05$).The results of the current study provide a low-cost small-scale demonstration of the efficacy of a fully automated text messaging system for increasing physical activity in adolescents.

Symposium 11D

IPHONE APP ADHERENCE TO EXPERT-RECOMMENDED GUIDELINES FOR PEDIATRIC OBESITY PREVENTION

Jessica R. Wearing, MPH (in progress)

Co-authors: Nikki Nollen, PhD, Christie Befort, PhD, Ann M. Davis, PhD, MPH, ABPP, University of Kansas Medical Center, Kansas City, Kansas

Pediatric obesity is a serious and prevalent problem. Smartphone technology, which is becoming increasingly available to children of diverse backgrounds, presents a unique opportunity to instill healthy behaviors prior to the onset of obesity. Past studies have examined the use of smartphone applications as tools of health behavior modification for adults. The present study examines the content of children's exercise and nutrition smartphone apps and examines their adherence to the American Academy of Pediatrics (AAP) Expert Committee Guidelines for the Treatment of Pediatric Obesity. Sixty-two iPhone apps were identified and coded by two independent raters for adherence to AAP expert-recommended behaviors (e.g. 5 fruits/vegetables per day) and strategies (e.g. self-monitoring diet/physical activity) for the prevention of pediatric obesity. App behavioral and strategy index scores were uniformly low. Apps were more likely to address expert-recommended behaviors for the prevention of pediatric obesity (93.5%), while few apps addressed recommended strategies (20.9%). The most common behaviors addressed included physical activity (53.2%) and fruit/vegetable consumption (48.3%). Other important behaviors – e.g. screen time (1.6%) and family meals together (1.6%) were rarely addressed. Results indicate that there are very few applications that adhere to the recommended treatment guidelines. The applications that do exist are not comprehensive but rather tend to focus on a single health behavior and rarely address behavior change strategies. Findings highlight a critical need for development of quality, empirically-derived apps for the prevention and treatment of pediatric obesity.

These data have been published: Wearing JR, Nollen N, Befort C, Davis, A.M., Christenson, C. iPhone App Adherence to Expert-Recommended Guidelines for Pediatric Obesity Prevention, Child Obes. 2014 Apr;10(2):132-44.

CORRESPONDING AUTHORS: Bernard F. Fuemmeler, PhD, MPH, Duke University Medical Center, Durham, NC, 27710; bernard.fuemmeler@duke.edu; Ann M. Davis, PhD, MPH, ABPP, University of Kansas Medical Center; Center for Children's Healthy Lifestyles & Nutrition, Kansas City, KS, 66160; adavis6@kumc.edu; Christopher Cushing, Ph.D., University of Kansas, Lawrence, KS, 44045; christopher.cushing@ku.edu; Jessica R. Wearing, Masters of Public Health (in progress), University of Kansas School of Medicine, KC, MO, 64114; jwearing@kumc.edu

Symposium 12 8:30 AM-9:45 AM

THE GROUP-MEDIATED COGNITIVE BEHAVIORAL PHYSICAL ACTIVITY INTERVENTION: PAST, PRESENT, AND FUTURE

Brian Focht, PhD[1], Jack Rejeski, PhD[2], Lawrence Brawley, PhD[3]

[1]Ohio State University, Columbus, OH; [2]Wake Forest University, Winston-Salem, NC; [3]University of Saskatchewan, Saskatoon, SA, Canada

Regular physical activity (PA) is an integral aspect of behavioral disease prevention and health promotion efforts. Unfortunately, traditional PA programs are plagued by high attrition rates and rapid return to sedentary lifestyles following program termination. Helping individuals develop the behavioral skills to transition from structured, supervised programs to independent self-managed PA participation is critical for longer-term adherence. The group-mediated cognitive behavioral intervention (GMCB) is designed to promote the systematic development of PA self-regulatory skills, using the group as an agent of behavioral change to facilitate independent PA participation. This symposium will focus upon evidence demonstrating the efficacy of the GMCB intervention for producing improvements in PA adherence and relevant functional, social-cognitive and quality of life outcomes. Dr. Focht will discuss recent findings supporting the utility of the GMCB in the treatment of knee osteoarthritis and prostate cancer patients. Dr. Rejeski will summarize key findings from community-based intervention trials utilizing the GMCB approach in older adults with chronic disease and address modifications relevant to these populations. Finally, Dr. Brawley will provide a synthesis of the theory and extant evidence supporting the efficacy of the GMCB intervention and discuss its potential for various aspects of knowledge translation.

Symposium 12A

THE GROUP-MEDIATED COGNITIVE BEHAVIORAL PHYSICAL ACTIVITY INTERVENTION: PAST, PRESENT, AND FUTURE

Brian Focht, PhD

Lifestyle interventions promoting modification in physical activity (PA) and dietary (D) behavior elicit meaningful improvements in health, physical function, and quality of life outcomes in an array of chronic disease populations. Nonetheless, challenges in promoting successful adoption and maintenance of PA and D behaviors undermine their efficacy as adjuvant behavioral approaches to the medical management of chronic disease. This presentation focuses upon the results of 2 randomized controlled pilot trials evaluating the utility of implementing the GMCB intervention in the treatment of knee osteoarthritis (KOA) and prostate cancer (PC) patients, populations that can benefit significantly from adjuvant intervention. Findings demonstrated that the GMCB intervention yielded superior improvements in physical function, PA and D behavior change, and quality of life outcomes compared to either traditional exercise therapy or standard of care treatment approaches. These promising results provide initial support for the utility of the GMCB intervention in the treatment of KOA and PC patients. The unique challenges that emerged in the process of implementing the GMCB lifestyle intervention will be discussed. Finally, future directions in optimizing the impact of integrating GMCB-based lifestyle interventions in the treatment of KOA and cancer patients/survivors will be addressed.

Symposium 12B

GROUP-MEDIATED COGNITIVE BEHAVIORAL LIFESTYLE INTERVENTIONS FOR CHRONICALLY ILL OLDER ADULTS

Jack Rejeski, PhD

We have demonstrated successful outcomes with group-mediated cognitive behavioral (GMCB) lifestyle interventions for chronically ill older adults that have involved weight loss and/or physical activity. We have now conducted randomized controlled trials with older adults that have CVD, metabolic syndrome, peripheral artery disease and older adults that have limitations with mobility. Each of these populations have required minor modifications in the content of the interventions; however, the basic conceptual framework for the intervention has remained relatively stable. In addition, our trials have involved translational research designs that have spanned from controlled, center-based studies to using community infrastructures. I will summarize key findings related to how studies using the GMCB framework have influenced mobility and various social-cognitive outcomes. In addition, I will present some preliminary data on a current trial that is ongoing within YMCAs. This latter study is unique in that the intervention is being delivered by trained YMCA staff. I will also explain how we are now modifying our treatment approach for both newly funded and future projects that will reduce contact time while taking advantage of m-heath technology. A challenge with these more recent projects will be maintaining the benefits afforded by group interactions. I will demonstrate that GMCB interventions are patient-centered and have a range of benefits that enhance the conduct of randomized clinical trials.

Symposium 12C

UTILITY OF THE GMCB INTERVENTION MODEL: EVIDENCE TO SUPPORT GENERALIZABILITY?

Lawrence Brawley, PhD

The first two presentations in our symposium by my colleagues offered specific examples of the utility of the GMCB intervention to encourage positive health outcomes, and suggested future directions. The third paper will offer a discussant perspective about the multiple studies that have utilized the intervention model. I will outline the theoretical basis for the GMCB and the rationale underlying group-motivated interventions. Examples of the general structure and content of the intervention in three phases–intensive, transition, and follow-up will be linked with theory relative to group and cognitive-behavioural counseling. An overview of 14 years of studies using the intervention model in both asymptomatic and symptomatic populations will be presented to illustrate relative intervention effectiveness for physical function, adherence, and social cognitive beliefs. This summary will help to answer questions such as 1) Do the GMCB studies generally meet recommendations for the use of theory in health behaviour interventions? 2) Does the intervention model have generalizable support on the basis of the evidence? 3) Does the evidence suggest potential mediators that cause effects? 4) Does the intervention model have characteristics that aid knowledge mobilization and translation?

CORRESPONDING AUTHORS: Brian Focht, PhD, Ohio State University, Columbus, OH, 43210; focht.10@osu.edu; Jack Rejeski, PhD, Wake Forest University, Winston-Salem, NC, 27109; rejeski@wfu.edu; Lawrence Brawley, PhD, University of Saskatchewan, Saskatoon, SA, S7N 5B2; larry.brawley@usask.ca

Thursday
April 23, 2015
11:15 AM-12:15 PM

Panel Discussion 01 11:15 AM-12:15 PM

ASSESSING CANCER PREVENTIVE BEHAVIORS AMONG PARENT-ADOLESCENT DYADS: OPPORTUNITIES AND CHALLENGES

Linda Nebeling, PhD, RD, FADA[1], April Oh, PhD, MPH[2], Erin Hennessy, PhD, MPH[3], Amy Yaroch, PhD[4]

[1]Behavioral Research Program, National Cancer Institute, Bethesda, MD; [2]National Cancer Institute, Bethesda, MD; [3]Leidos Biomedical Research, Inc., Frederick, MD; [4]Gretchen Swanson Center for Nutrition, Omaha, NE

The National Cancer Institute's Family Life, Activity, Sun and Healthy Eating (FLASHE) is a new study that through administration of parent-adolescent surveys seeks to examine psychosocial, generational (parent-adolescent) and environmental correlates of cancer preventive behaviors, mainly dietary, physical activity (PA) and sedentary behaviors (as well as sleep, sun-safety and tobacco use). The purpose of this panel is to inform participants about the development of the various iterations of the surveys (both for parents and adolescents) and opportunities for future research. The first speaker will provide an overview of the development of FLASHE, including input from experts (via survey and correspondence), as well as cognitive interviewing which was conducted to determine ease of comprehension of survey items. The second speaker will focus on the FLASHE study approach and data collection methodologies, including challenges of the web based approach among adults and adolescents. Additionally, a sub-study component involving accelerometry and validation of the self-report physical activity questionnaire will be discussed. Novel features such as an inventive sub-study to evaluate the influence of incentives on study participation along with an overview of descriptive results will be highlighted. The third speaker will discuss the dyadic structure of FLASHE and highlight the types of analyses that can be conducted with FLASHE data since FLASHE will be made publically available in mid- to late-2015. Linkages with extant data resources for other secondary analyses will also be described. The panel will be moderated through discussion and Q&A with panelists and attendees. This panel provides a unique opportunity for SBM attendees to learn about data resources that will be publically available and novel research questions that can be addressed using this resource.

CORRESPONDING AUTHORS: Linda Nebeling, PhD, RD, FADA, Behavioral Research Program, National Cancer Institute, Bethesda, MD, 20852; linda.nebeling@nih.gov; April Oh, PhD, MPH, National Cancer Institute, Bethesda, MD, 20852; april.oh@nih.gov; Erin Hennessy, PhD, MPH, Leidos Biomedical Research, Inc., Frederick, MD, 21702; erin.hennessy@fnlcr.nih.gov

Panel Discussion 02 11:15 AM-12:15 PM

TRANSLATING CHILDHOOD OBESITY RESEARCH TO GUIDELINES, POLICY, PROGRAMS, AND PRACTICE

James Sallis, PhD[1], Amelie G. Ramirez, DRPH[2], Eduardo Sanchez, MD, MPH[3], Vince Fonseca, MD, MPH[4]

[1]University of California, San Diego, San Diego, CA; [2]University of Texas Health Science Center at San Antonio, San Antonio, TX; [3]American Heart Association, Dallas, TX; [4]Intellica Corporation, San Antonio, TX

Including a statement in a published paper to "consider the implications for policy" is an insufficient intervention when the goal is to use research to change policy and practice. Behavioral medicine researchers are becoming more sophisticated in "research translation", especially in the childhood obesity area. This panel consists of two researchers, an advocate and former policy maker, and a current policy maker who are experienced in research translation related to childhood obesity prevention. Amelie Ramirez, DrPH, directs *Salud America! The RWJF Research Network to Prevent Obesity Among Latino Children*. In addition to supporting Latino childhood obesity research, *Salud America!* has translated research to a network of 10,000+ researchers, leaders, and other stakeholders through bilingual research reviews, issue briefs, infographics, videos, stories of successful advocacy, and online tools for community change agents. James Sallis, PhD, directs Active Living Research, which funds and communicates research with the goal of creating active communities and reducing disparities in physical activity and childhood obesity. Active Living Research has funded Research Translation Grants, engaged policy makers in annual meetings, produced research summaries and infographics for lay audiences, and trained researchers how to communicate with policy makers. Eduardo Sanchez, MD, is Deputy Chief Medical Officer of The American Heart Association (AHA) and American Stroke Association, which is a major research funder. The AHA also engages in systematic review of the scientific literature to produce scientific statements and clinical practice guidelines to support a vigorous policy advocacy program in every state. Vince Fonseco, MD, MPH, works in both the private and public sectors in positions that allow him to translate research to practice. The Department of Education's Promise grant in San Antonio used evidence-based recommendations (e.g., The Community Guide) to evaluate contracts for community-based services for healthy eating and physical activity. AHA's evidence-based recommendations were used to develop a lifestyle vital sign (healthy eating, BMI, physical activity, tobacco use) for primary care. The panel will identify principles of research translation to encourage attendees to get engaged.

CORRESPONDING AUTHORS: Amelie G. Ramirez, DRPH, University of Texas Health Science Center at San Antonio, San Antonio, TX, 78229; ramirezag@uthscsa.edu; Eduardo Sanchez, MD, MPH, American Heart Association, Dallas, TX, 75231; eduardo.sanchez@heart.org; Vince Fonseca, MD, MPH, Intellica Corporation, San Antonio, TX, 78212; vpfonseca@yahoo.com

Panel Discussion 03 11:15 AM-12:15 PM

TRAINING RESEARCHERS IN BEHAVIORAL TECHNOLOGY AND PERSONAL HEALTH INFORMATICS

Timothy W. Bickmore, PhD, Matthew Goodwin, PhD, Holly B. Jimison, PhD, Misha Pavel, PhD, Shuo Zhou, MS, Zhe Zhang, MS, Oliver O. Wilder-Smith

Northeastern University, Boston, MA

Our aging population, obesity epidemic, and increases in certain conditions such as autism have amplified healthcare expenditures, leading to calls to reemphasize prevention, self-care, and self-management in an attempt to affordably improve overall quality living for Americans. While technology can play a greater role in a more "health" focused healthcare system, many good ideas proposed by computer scientists and engineers are only brought to the prototype stage and published in technical journals. As a result, they frequently fail to gain adoption, precluding any real impact on society. This is often due to a lack of deep understanding of the healthcare system, research and evaluation standards in evidence-based medicine, and/or patient and consumer psychology.To meet this challenge, we need a new generation of transdiscplinary researchers who are trained in both technology and behavioral medicine, and who are socially conscious, design-oriented, and interested in rigorously evaluating the technologies they imagine and build. A few universities have recently started to design and implement academic programs to meet this need.In this panel, four faculty members and four students from Northeastern University's new PhD program in Personal Health Informatics will discuss challenges in designing and implementing such a transdisciplinary program, as well as the design of the program itself and career opportunities for graduates. Specific topics will include: pedagogical and experience-based approaches to teaching and learning computational behavioral science, modeling and data analytics for big health data, mHealth, and conversational health counseling systems; challenges in establishing academic programs that span multiple academic disciplines and that accommodate students from different backgrounds (e.g., technical and clinical); and challenges in recruiting PhD students to a new program that while unique, highly innovative, and in demand sits outside traditional degree conferring departments. Current PhD students will also discuss their impressions of the program and current research projects they are working on, including our collective experiences running a year-long project course implementing health interventions using Google Glass.

CORRESPONDING AUTHORS: Matthew Goodwin, PhD, Northeastern University, Boston, MA, 02115; m.goodwin@neu.edu; Holly B. Jimison, PhD, Northeastern University, Boston, MA, 02115; h.jimison@neu.edu; Misha Pavel, PhD, Northeastern University, Boston, MA, 02115; m.pavel@neu.edu; Shuo Zhou, MS, Northeastern University, Boston, MA, 02115; zhoushuo06@gmail.com; Zhe Zhang, MS, Northeastern University, Boston, MA, 02115; zessiez@gmail.com; Oliver O. Wilder-Smith, Northeastern University, Boston, MA, 02115; wilder-smith.o@husky.neu.edu

Panel Discussion 04 11:15 AM-12:15 PM

GRADUATE STUDENT RESEARCH PANEL DISCUSSION

Barbara Stetson, PhD[1], Georita Frierson, Ph.D.[2]

[1]University of Louisville, Louisville, KY; [2]Howard University, Washington, DC, DC

The Graduate Student Research Panel is a regular feature of the ETCD Council's programming during the Annual Meeting. Faculty with experience in mentoring students in research activities, theses, and dissertations will provide advice and answer questions for attendees on a variety of topics. Although the structure of the panel is deliberatively flexible to allow panel attendees' questions to determine the content, panelists will make opening remarks and be prepared to discuss several aspects of conducting research and developing a research program as a graduate student or post-doctoral trainees. These topics will include but are not limited to the following: choosing a research topic and mentor; designing a project of appropriate scope for your graduate program; working productively with your mentor and committee; managing writing time effectively; balancing coursework, research, and clinical demands; dealing with disagreements within the lab or with your mentor; understanding authorship issues; and identifying funding opportunities for pre- and post-doctoral training. Other topics as raised by panel attendees will also be discussed.

CORRESPONDING AUTHORS: Barbara Stetson, PhD, University of Louisville, Louisville, KY, 40205; barbara.stetson@louisville.edu; Georita Frierson, Ph.D., Howard University, Washington, DC, DC, 20059; georitafrierson@gmail.com

Panel Discussion 05 11:15 AM-12:15 PM

BUILDING AND MANAGING A CLINICAL RESEARCH TEAM

Meghan L. Butryn, PhD[1], Evan Forman, PhD[1], Francis J. Keefe, PhD[2], Nancy E. Sherwood, PhD[3], Victor J. Stevens, Ph.D.[4]

[1]Drexel University, Philadelphia, PA; [2]Duke University Medical Center, Durham, NC; [3]HealthPartners Institute for Education and Research, Bloomington, MN; [4]Kaiser Permanente Center for Health Research, Portland, OR

Strong management and leadership skills create a positive workplace culture in which team members receive high quality mentoring and do work with a high level of productivity, quality, and efficiency. Although training in management and leadership is commonplace in many industries, it is rarely part of formal education or professional development in academia and other settings in which clinical research is conducted. This panel will focus on topics of interest to scientists who currently direct clinical research in behavioral medicine, or who are planning to do so in the future. The panel members will draw upon their years of experience serving as principal investigators and leaders of clinical research teams and will discuss challenges and best practices in three domains: 1) Putting together an A-team: recruiting, selecting, and retaining outstanding research staff and trainees, 2) Mentoring and managing team members: setting the stage for high-quality work and training through inspiration, goal-setting, feedback, and effective meetings, and 3) Managing yourself: keys to staying energized, productive, and innovative as a leader. The moderator will provide the panel members with prompts and questions in these three areas and panel members will also take questions from the audience.

CORRESPONDING AUTHORS: Evan Forman, PhD, Drexel University, Philadelphia, PA, 19104; evan.forman@drexel.edu; Francis J. Keefe, PhD, Duke University Medical Center, Durham, NC, 27710; francis.keefe@duke.edu; Nancy E. Sherwood, PhD, HealthPartners Institute for Education and Research, Bloomington, MN, 55440-1524; nancy.e.sherwood@healthpartners.com; Victor J. Stevens, Ph.D., Kaiser Permanente Center for Health Research, Portland, OR, 97227; victor.j.stevens@kpchr.org

Panel Discussion 06 11:15 AM-12:15 PM

NIH ADHERENCE RESEARCH NETWORK PANEL

Wendy Nilsen, PhD, Michael Stirrat, PhD

National Institutes of Health, Bethesda, MD

NIH Adherence Research Network: A Roundtable Discussion on How to Advance the Science and Practice of AdherenceNIH Adherence Network Program Staff will lead a discussion among participants interested in the area of adherence to medical and behavioral regimens to determine how NIH can move this critical field forward. Special focus will be on what is needed to advance the science of adherence and foster improvements in adherence within clinical practice and community settings. Program staff will also highlight current funding opportunities for adherence research at NIH.The meeting will be broken into the following sessions: - Overview of the NIH Adherence Network – Wendy Nilsen

- Adherence in HIV/AIDS – Mike Stirratt (NIMH)
- Adhere in cardiovascular disease – Susan Czajkowski (NHLBI)
- Adherence in diabetes – Christine Hunter (NIDDK)
- Adherence in Cancer – Janet DeMoor (NCI)
- Discussion with participants on enhancing the science of adherence

CORRESPONDING AUTHORS: Wendy Nilsen, PhD, National Institutes of Health, Bethesda, MD, 20892; nilsenwj@od.nih.gov; Michael Stirrat, PhD, National Institutes of Health, Bethesda, MD, 20582; stirrattm@mail.nih.gov

Panel Discussion 07 11:15 AM-12:15 PM

ADVENTURES IN INTERSECTIONALITY RESEARCH: ISSUES OF THEORY, MEASUREMENT, AND APPLICATION

Valerie A. Earnshaw, PhD[1], Carmen Logie, MSW, PhD[2], Lisa Bowleg, Ph.D.[3], Laura M. Bogart, PhD[1], Sannisha K. Dale, PhD, EdM[4]

[1]Harvard Medical School, Boston, MA; [2]University of Toronto, Toronto, ON, Canada; [3]The George Washington University, Washington, DC; [4]Harvard Medical School/ Massachusetts General Hospital/ Boston Children's Hospital, Dorchester, MA

Rooted in Black feminist theory, the concept of intersectionality was developed to conceptualize how multiple dimensions of marginalization and privilege co-exist and interact within individuals in a way that cannot be teased apart or understood separately. Behavioral medicine researchers increasingly seek to adopt an intersectionality approach within their research. This is particularly true in relation to health disparities, which vary along multiple dimensions of marginalization and privilege. For example, HIV disparities are pronounced along the lines of race, gender, class, and sexual orientation in the US with Black men who have sex with men bearing the greatest burden of the epidemic followed by Black women. HIV research focused on only one or two of these dimensions yields incomplete insight into the lived experiences of risk groups, ultimately hindering successful prevention and treatment efforts. Applications of intersectionality theory to behavioral medicine research remain limited, in part due to challenges inherent in applying intersectionality theory to research methods. The goal of this panel is to foster discussion about these challenges to advance the application of intersectionality theory to behavioral medicine research. Panelists include behavioral medicine researchers who have advanced conceptualizations of intersectionality theory and have applied diverse methodological approaches to understanding the role of intersectionality in health outcomes. The panel will first explore qualitative and quantitative methodological approaches to intersectionality. Panelists will be asked to describe approaches that they have employed within their research and consider the strengths and weaknesses of these approaches. Panelists and audience members will be challenged to brainstorm innovative ways to quantitatively study intersectionality. The panel will then highlight aspects of intersectionality theory given inadequate attention within behavioral medicine research, including structural influences (e.g., racial residential segregation) described by other theoretical perspectives. Panelists and audience members will be encouraged to consider how integrating intersectionality theory with other theories (e.g., syndemics) may advance health disparities research.

CORRESPONDING AUTHORS: Carmen Logie, MSW, PhD, University of Toronto, Toronto, ON, M6P 3A5; logiech@yahoo.com; Lisa Bowleg, Ph.D., The George Washington University, Washington, DC, 20052; lbowleg@email.gwu.edu; Laura M. Bogart, PhD, Harvard Medical School, Boston, MA, 02115; laura.bogart@childrens.harvard.edu; Sannisha K. Dale, PhD, EdM, Harvard Medical School/Massachusetts General Hospital/ Boston Children's Hospital, Dorchester, MA, 02122; skdale@mgh.harvard.edu

Panel Discussion 08 11:15 AM-12:15 PM

INTEGRATION OF DIRECT-TO-CONSUMER TRACKERS INTO PHYSICAL ACTIVITY INTERVENTIONS

Lisa A. Cadmus-Bertram, Ph.D.[1], Leanne Kaye, PhD, MPH, RD[2], Aaron Coleman, B.A.[3], Praduman Jain, M.S.[4]

[1]University of Wisconsin - Madison, Madison, WI; [2]University of North Carolina - Chapel Hill, Sunnyvale, CA; [3]Small Steps Labs, San Diego, CA; [4]FitNinja Inc, Fairfax, VA

The market for direct-to-consumer movement sensors and trackers continues to expand, offering a variety of sophisticated and user-friendly devices, apps, and websites that often outstrip what can be created by academic teams. Rather than create their own website or apps, researchers may therefore opt to leverage existing products to assist participants in behavior change and to collect rich sets of behavioral data. This interactive session will describe commonly-used direct-to-consumer products (e.g., Fitbit, Jawbone Up) and address many of the concerns relevant to investigators, including deciding which tool to use, how to streamline the collection and analysis of large amounts of behavioral data, and how to successfully navigate the challenges of using a commercial product that is subject to updates and modifications outside the investigator's control. Dr. Cadmus-Bertram will present findings from a randomized trial of a physical activity intervention trial using the Fitbit One among postmenopausal women. Dr. Leanne Kaye will discuss her results and experience using the Fitbit Zip in a tailored intervention study among breast cancer survivors. Aaron Coleman, Founder and CEO of Small Steps Labs, will discuss his research tool Fitabase, which aims to change how intervention data are captured from what is traditionally a cumbersome offline process to one that is real-time and dynamic. Mr. Coleman will share tips on data privacy and IRBs, long term participant engagement, data accuracy, and managing relationships with vendors, as well as provide information about other devices, tools, websites and services of interest to behavioral health researchers. Praduman Jain, Founder and CEO of FitNinja, will provide information about the logistics, advantages, and opportunities for integrating data from a wide variety of personal health devices including physical activity trackers, weight scales, and blood pressure monitors. The panel will invite the audience to share their experience and questions related to the use of consumer products as intervention tools.

CORRESPONDING AUTHORS: Leanne Kaye, PhD, MPH, RD, University of North Carolina - Chapel Hill, Sunnyvale, CA, 94086; leekaye@email.unc.edu; Aaron Coleman, B.A., Small Steps Labs, San Diego, CA, 92116; aaron@fitabase.com; Praduman Jain, M.S., FitNinja Inc, Fairfax, VA, 22033; pj@vignetcorp.com

Panel Discussion 09 11:15 AM-12:15 PM

PRETERM BIRTH AND ANXIETY IN LOW AND HIGH RISK WOMEN: SELECTING ANXIETY MEASURES & INTERVENTIONS.

Regina P. Lederman, BS, MNEd, MA, PhD, FAAN[1], Karen Weis, PhD, RNC, FAAN[2], Roberts-Gray Cynthia, B.A., Ph.D[3]

[1]University of Texas Medical Branch, Galeston, TX; [2]U. S. Air Force, San Antonio, TX; [3]Third Coast Research & Development, Inc., Galveston, TX

Although the causes of preterm birth (PTB) are numerous and complex, accumulating evidence indicates pregnancy anxiety is a key risk factor. However, careful consideration is needed to determine which measures of pregnancy-specific anxiety to use in research and clinical assessment to advance the development of appropriate interventions to reduce PTB and increase protection of children's health beginning in utero. This panel will explore both pregnancy-specific and theoretically grounded instruments to assess prenatal anxiety and supportive interventions in low and high risk civilian samples and in military sample populations of pregnant women with deployed husbands/partners in Afghanistan. Future recommendations for research will be provided. The first speaker will present data collection methods for instrument development and selection, including a comparison of the use of focus groups and longitudinal interview and questionnaire collection methods. Validity data for thorough and theoretically based instruments vs. multiple short assessment measures is discussed. The second speaker will present the use of a theoretically based revised shorter prenatal theory-based assessment instrument for military wives, and a qualitative assessment of husband's perceptions regarding the challenges of being an absentee husband and expectant father. Description of a supportive group interview intervention with pregnant military wives (MOMS: Mentors offering Maternal Support), designed to decrease prenatal anxiety and depression and improve birth outcomes and postpartum maternal psychosocial adaptation, is presented. Preliminary results of this targeted 600 sample of women are also presented. The third speaker will suggest proposals for future research foci and designs, particularly the use of thorough theoretically based assessment instruments which may be more diagnostic than short instruments and more informative of intervention trials of different population samples, including low and high risk women, as well as hospitalized women to prevent PTB. The audience will be invited to discuss their experiences with prenatal anxiety assessment and effective intervention programs, and their responses to the proposed prenatal anxiety assessment and intervention methods.

CORRESPONDING AUTHORS: Karen Weis, PhD, RNC, FAAN, U. S. Air Force, San Antonio, TX, 78261; karen.l.weis2.mil@mail.mil; Roberts-Gray Cynthia, B.A., Ph.D, Third Coast Research & Development, Inc., Galveston, TX, 77550; croberts@thirdcoastresearch.com

Panel Discussion 10 11:15 AM-12:15 PM

TEACHING INFORMATION TECHNOLOGY-BASED BEHAVIORAL HEALTH: INTERPROFESSIONAL COLLABORATIVE APPROACH

Ken C. Hopper, MD, MBA[1], Mari Tietze, PhD, RN-BC[2], Peggy J. Mancuso, PhD, RN, CNM, CNE[3], Mary Thompson, PhD[4], Gayle Hersch, PhD, OTR[5]

[1]The Hopper Group, Arlington, TX; [2]Texas Woman's University, Dallas, TX; [3]Texas Woman's University, Mansfield, TX; [4]Texas Woman's University - Dallas, Dallas, TX; [5]Texas Woman's University, Houston, TX

Informatics, defined as the exploration, application, and evaluation of the transformation of data to knowledge and subsequent wise application to human health, is an ideal educational connection among health care professionals from different disciplines. This project explores the application of informatics as an instructional bridge to foster interprofessional education and collaboration among health care professional masters and doctoral students. The students, from physical therapy (PT), nursing, occupational therapy (OT), and nutrition science, aim to provide optimum care delivery among a their team using informatics to support behavioral health interventions. A critical component for the success of this interprofessional educational design is the use of technology to support behavioral health patient care delivery. The use of data and data bases, the creation and use of software applications, the understanding of basic and advanced informatics, the testing and evaluation of interface design, and the application of telehealth technology to reach rural and other isolated patients represent the basic components of this program. PT, OT, nutrition and nursing professionals plan behavioral health care delivery based on the case study that is used throughout the program courses. The community-based psychiatrist advised the students on technology solutions and on approach addressing the patient's behavioral health needs. The case study, which describes a young man recovering from traumatic injuries and his current living environment, calls for the students to collectively address his overall safety, quality of life, and technology needs. Technology essentials used to bring these health professionals together will be described along with research on evidence-based practice health information technology supporting the program courses.

CORRESPONDING AUTHORS: Ken C. Hopper, MD, MBA, The Hopper Group, Arlington, TX, 76011; ken.hopper@thehoppergroup.com; Mari Tietze, PhD, RN-BC, Texas Woman's University, Dallas, TX, 75235; mtietze@twu.edu

Panel Discussion 11 11:15 AM-12:15 PM

ORGANIZING WITH ONTOLOGIES! A PANEL DISCUSSION ON HOW ONTOLOGIES CAN SUPPORT BEHAVIORAL SCIENCE

Eric B. Hekler, PhD[1], Richard P. Moser, PhD[2], Susan Michie, PhD[3], William T. Riley, PhD[4], Timothy W. Bickmore, PhD[5]

[1]Arizona State University, Phoenix, AZ; [2]National Cancer Institute, Bethesda, MD; [3]University College London, London, , United Kingdom; [4]National Institutes of Health, Bethesda, MD; [5]Northeastern University, Boston, MA

An ontology, within the information sciences, is a well-specified structuring of knowledge that provides key building blocks for shared information including a common vocabulary and a mapping of the inter-relationships of different concepts within a given domain. During last year's SBM conference, researchers presented on the development of a behavioral ontology for organizing behavior-change techniques based on the Theoretical Domains Framework. While this development continues, at present, there is still relatively little understanding in the broader behavioral science community about how others might be able to more actively engage in using and further refining the behavioral ontology. In this panel discussion, our panelists will provide practical insights on the possibilities for using and contributing to the behavioral ontology. The first panelist will describe the ontology and discuss practical applications for such an ontology for supporting the development of interventions. The second panelist will describe his work on developing an automated system to screen and intervene on up to 108 health behaviors in parallel, with a particular focus on exploring linkages to the behavioral ontology. The third panelist will describe his work with the Grid-Enabled Measure (GEM) web-based tool at NCI that allows users to vet empirically validated measures of psychosocial constructs. Users also provide meta-data about the constructs associated with these measures and the panelist will show how these data, combined with other information can be used to develop the ontology. The fourth panelist will describe his recently funded project focused on developing a behavior-change techniques prototyping platform, with a particular focus on his strategies for building the system to foster easy sharing of behavior-change techniques across different behavioral interventions, which could enable further specification of the ontology. The moderator will be a senior scientist in the field with active knowledge on the advantages of an ontology for behavioral research.This panel is sponsored by both the SBM Technology SIG and the Theories and Techniques of Behavior Change Interventions SIG.

CORRESPONDING AUTHORS: Eric B. Hekler, PhD, Arizona State University, Phoenix, AZ, 85003; ehekler@asu.edu; Richard P. Moser, PhD, National Cancer Institute, Bethesda, MD, 20892; moserr@mail.nih.gov; Susan Michie, PhD, University College London, London, , WC1E 7HB; s.michie@ucl.ac.uk; William T. Riley, PhD, National Institutes of Health, Bethesda, MD, 20892; wiriley@mail.nih.gov; Timothy W. Bickmore, PhD, Northeastern University, Boston, MA, 02115; bickmore@ccs.neu.edu

Thursday
April 23, 2015
12:45 PM-1:30 PM

Paper Session 01 12:45 PM-1:00 PM

TEMPORAL RELATIONSHIPS BETWEEN SELF-WORTH AND PHYSICAL ACTIVITY IN MIDDLE-AGED WOMEN

Diane Ehlers, MA[1], Jen Huberty, PhD[2], Matthew Buman, PhD[3], Michael Todd, PhD[3], Steven Hooker, PhD[3], Gert-Jan de Vreede, PhD[4]

[1]University of Illinois, Urbana, IL; [2]Arizona State University; [3]Arizona State University, Phoenix, AZ; [4]University of Nebraska at Omaha, Omaha, NE

Although recent research supports the potential roles of self-worth, body image, and non-physical motives for predicting physical activity (PA) in women, no empirical tests of these associations have been conducted. Using ecological momentary assessment, this study explored temporal relationships between daily self-worth and PA in middle-aged women. Text messages were sent 3 times per day for 28 days (i.e., 84 text message prompts) to the smartphones of 63 women aged 30-64 years (*M* age = 49.2 ± 8.2 years). Each prompt included a link to an 11-item mobile survey assessing momentary PA, self-worth (knowledge, emotional, social, physical, and general), and self-efficacy. Women concurrently wore an accelerometer (GENEActiv). Multilevel models were used to examine the predictive influence of knowledge, emotional, social, physical, and general self-worth (separately) on daily activity counts. Daily self-efficacy was also tested due to known relationships among self-efficacy, self-worth, and PA in women. Approximately 34% of the variance in daily counts was within individuals (ICC = 0.66). Average level self-efficacy ($\beta = 0.006, p = 0.004$), daily fluctuations in self-efficacy ($\beta = 0.001$, $p < 0.001$), and daily fluctuations in general self-worth ($\beta = 0.05$, $p = 0.001$) predicted PA. Additionally, there were significant individual differences in the relationship between both daily fluctuations in general self-worth ($\beta = 0.005$, $p = 0.002$) and daily fluctuations in emotion self-worth ($\beta = 0.013$, $p = 0.004$) and PA. Self-efficacy and general self-worth explained an additional 12.6% within-persons variance in PA. These data provide preliminary support for small but significant associations among daily fluctuations in self-efficacy and general self-worth and daily PA in middle-aged women. Although results provide some evidence that the impact of emotional self-worth on PA may differ across women, they provide limited evidence supporting the predictive roles of knowledge, social, and physical self-worth. This area warrants further research, particularly the improvement of self-worth scales, examination of the transient natures of self-efficacy and general self-worth, and identification of strategies to impact these constructs.

CORRESPONDING AUTHOR: Diane Ehlers, MA, University of Illinois, Urbana, IL, 61801; dkehlers@illinois.edu

Paper Session 01 1:00 PM-1:15 PM

USING SOCIAL NETWORKING AND TECHNOLOGY TO ADDRESS PHYSICAL ACTIVITY BARRIERS AMONG OVERWEIGHT WOMEN

Danielle Arigo, PhD[1], Leah Schumacher, B.S.[2], Emilie Pinkasavage[2], Marie Colasanti, B.S.[2], Lindsay Martin, M.A.[2], Stephanie Kerrigan, B.A.[2], Meghan L. Butryn, PhD[2]

[1]The University of Scranton, Scranton, PA; [2]Drexel University, Philadelphia, PA

Regular physical activity (PA) reduces risk for various health problems, yet the majority of U.S. women fall far short of recommended PA levels. Overweight and obese women endorse unique barriers to PA, including lack of motivation and lack of social support. Automated physical activity monitoring technology and its associated social networking capabilities have potential to address these barriers. Yet there is need for innovative, easily-disseminable approaches that can engage these women in their use. Toward this end, the present study had three aims: (1) to test the feasibility and acceptability of using automated PA sensors among overweight and obese women, (2) to examine the benefit of pairing women with a PA partner (introduced via technology-connected social networking), and (3) to explore social comparisons between partners, which may confer added motivation. Overweight and obese women ($n = 12$, $M_{age} = 46$, $M_{BMI} = 32.60$ kg/m^2) participated in a brief PA promotion program, delivered over the internet. Participants completed a psychoeducational module to assist with goal setting. In addition, participants used an automated PA sensor (daily wear = 93%) and communicated with an assigned partner ($M = 8$ exchanges) over four weeks. Average PA increased during the program; daily step totals increased by 4691 ($p < 0.01$, $d = 1.28$), and minutes of aerobic activity increased by 18.62 per week ($p = 0.03$, $d = 0.81$). PA was highest among participants who endorsed stronger overall tendencies to make social comparisons ($r = 0.64$, $p = 0.03$). Participants identified several benefits of partner communication, though direct comparisons with partners were seen as unhelpful in this context. Participants endorsed satisfaction with the program's approach and self-efficacy for maintaining PA gains. Participant feedback also identified specific changes that could improve the effectiveness of future technology-supported and partner-based programs. Additional work is needed to test the added benefit of such programs relative to alternative approaches. However, these findings provide preliminary support for the addition of automated PA sensors and facilitated partner communication via social networking to address overweight and obese women's specific barriers to engagement in PA.

CORRESPONDING AUTHOR: Danielle Arigo, PhD, LicensedPsychologist, The University of Scranton, Scranton, PA, 18510; danielle.arigo@scranton.edu

Paper Session 01 1:15 PM-1:30 PM

FACEBOOK AND TEXT MESSAGING TO DELIVER A PHYSICAL ACTIVITY INTERVENTION TO AFRICAN AMERICAN WOMEN

Rodney P. Joseph, PhD[1], Colleen Keller, PhD[2], Marc A. Adams, PhD[1], Barbara E. Ainsworth, PhD[1]

[1]Arizona State University, Phoenix, AZ; [2]Arizona State University, Phonix, AZ

Background. African American (AA) women report low physical activity (PA) levels and are disproportionally burdened by associated chronic disease conditions; highlighting the need for innovative approaches to promote PA in this underserved population. Technology-based platforms such as social media websites (i.e. Facebook) and text messaging represent potential mediums to intervene and promote physical activity.This presentation will report the results of a randomized pilot trial evaluating a Social Cognitive Theory (SCT)-based, culturally-relevant PA intervention delivered using Facebook and text messages to AA women. Methods. Participants (N=29, *M* Age=35.0±5.0, *M* BMI=31.2±7.9) were randomly assigned to receive one of two 8-week PA interventions: a culturally-relevant intervention delivered by Facebook and text messages (FI) (n=14), or a non-culturally tailored print-based intervention (PI) (n=15) consisting of promotion brochures mailed to their home address. The primary outcome of PA was assessed by ActiGraph GT3X+ accelerometers. Secondary outcomes included questionnaire measured PA, PA-related SCT constructs, and participant satisfaction.Results. Accelerometer measured PA showed that FI participants decreased sedentary time (FI= -74 min/wk vs. PI= +118 min/wk) and increased light intensity (FI = +95 min/wk vs. PI = +59 min/wk) and moderate-lifestyle intensity PA (FI= + 27 min/wk vs. PI= -34 min/wk) in comparison to PI participants (all P's < .05). No between group differences in accelerometer measured moderate-to-vigorous intensity PA were observed (P>.05). Secondary outcomes showed FI had greater improvements in questionnaire measured moderate-to-vigorous intensity PA (FI= +62 min/wk vs. PI= +6 min/wk; P=.015) in comparison to PI participants and greater enhancements in self-regulation (P < .001) and social support from family for PA (P=.044). High satisfaction among FI participants was also reported: 100% reported PA-related knowledge gains and 100% would recommend the program to a friend.Conclusions. Results provide promising preliminary support for the use of social media to deliver a PA program to AA women. Future studies with larger samples are warranted.

CORRESPONDING AUTHOR: Rodney P. Joseph, PhD, Arizona State University, Phoenix, AZ, 85004; rodney.joseph@asu.edu

Paper Session 02 12:45 PM-1:00 PM

"SERIOUSLY?…YOU'RE EATING A SALAD?" TEASING AMONG YOUNG ADULTS AS A NEW CHALLENGE TO HEALTHY EATING

Gwen L. Alexander, MPH, PhD[1], Andrew Taylor, MA[1], Margaret Rukstalis, MD[2]

[1]Henry Ford Health System, Detroit, MI; [2]Geisinger Health Systemm, Danville, PA

Background: Early adulthood is a time of more independence, changes in work, school, social relationships that contribute to lifestyle choices. While preparing for an online intervention to support healthy food choices in this understudied population, focus group comments uncovered teasing related to eating "healthy" as a social barrier. This novel study explores the extent and sources of teasing and encouragement for "eating well" reported by young adults upon enrolling in an online dietary improvement program. Methods: Young adults, aged 21-30 from 2 integrated health systems in urban Michigan and rural Pennsylvania, were randomly selected and invited by mail to enroll in a 12-month online randomized dietary intervention trial, MENU GenY. The baseline survey included "How often do you get teasing or negative comments from people you know when you try to eat healthy? E.g. order a salad or say 'hold the fries'" and assessment of encouragement by family, friends, media to eat well. Chi Square and Mann-Whitney U tests were used to compare subgroups.Results: Of the 909 (705 F, 204 M) responding overall, over 30% (31.46%, n= 286) reported teasing, 30% women, 33% of men, with no differences by education or employment. Teasing varied by marital status (p = 0.004), married reported less teasing (20%) vs. single (33%), engaged (36%) and casual relationship (41%). More teasing was reported by those living with a parent (p < 0. 001), or not working full time (p=0.002). Younger women (21-23) reported more teasing (38.8% vs. older 22.5% (27-30 yr); p < 0.001). African American men reported being teased more than white men (54.5% AfAm vs 30% White, p= 0.05). Fewer women who reported teasing indicated "a lot" of encouragement to eat well from family (23%), friends (22%), and significant other (22%) (p< 0.05). Among women, more teasing occurred with higher BMI (>30) than at lower BMI (p = 0.07). Across all respondents, only 20% were "very confident" they could "eat healthy foods when out with friends". Discussion: We report on a "new" previously unstudied social factor that is widely known within the social environment of young adults. Our findings highlight new directions for interventions during transitional years to encourage better eating.

CORRESPONDING AUTHOR: Gwen L. Alexander, MPH, PhD, Henry Ford Health System, Detroit, MI, 48202; galexan2@hfhs.org

MERITORIOUS PAPER
Paper Session 02 1:00 PM-1:15 PM

THE INFLUENCE OF SOCIAL AND EMOTIONAL REGULATION ON CHILD DIETARY OUTCOMES

Anais Tapia, B.S. in Health Science[1], Enrique Ortega, PhD, MPH[2]

[1]California State University Dominguez Hills, South Pasadena, CA; [2]California State University Dominguez Hills, Carson, CA

Introduction: Past research suggests that positive emotional regulation and management of social interactions may be associated to healthy dietary choices and BMI scores. This study investigated the longitudinal outcomes of emotional and psychosocial regulation on the eating behaviors and body mass index (BMI) of a relatively large sample of children in Northern Italy. Methods: Using a prospective longitudinal study with 3 time points, we investigated the outcomes of emotional instability, pro-social behaviors, and aggressive behaviors on the eating behaviors and BMI of 944 children (52% girls; mean age =9.38; SD=0.89) attending the second (30%), third (53%) and fourth (17%) grades of primary schools in urban and suburban areas of three cities in Northern Italy. The participants were representative of the population of children attending primary school in this part of Italy. Due to the clustering of students within grades and possible intra-school correlation between students, a general linear mixed model was applied in the analysis. Age, gender, parental education and BMI score at baseline were used as covariates in the analysis. Results: Our analyses indicated that the predictors explained 66% of the variance (R^2=.66, F (5,237) = 135.96, p < .001). Results indicated that greater emotional instability at baseline (β = -.023, p < 0.05) and greater amount of aggressive behaviors (β = -.024, p < 0.01) predicted higher BMI scores among our sample at two time points. No significant associations were found between pro-social behaviors and BMI. Conclusions: Aggression showed coherence with higher BMI. Negative emotions and unhealthy eating patterns could predict further obesity problems in children. Such findings could greatly assist in the development of universal prevention efforts of early obesity by targeting important factors that may lead to poor eating practices.

CORRESPONDING AUTHOR: Anais Tapia, B.S. in Health Science, California State University Dominguez Hills, South Pasadena, CA, 91030; tapia_anais@yahoo.com

Paper Session 02 1:15 PM-1:30 PM

SALAD BAR LOCATION AND FRUIT AND VEGETABLE CONSUMPTION IN MIDDLE SCHOOLS: A PLATE WASTE STUDY

Marc A. Adams, PhD, Meg Bruening, PhD, MPH, RD, Punam Ohri-Vachaspati, PhD, RD, Jane C. Hurley, MS

Arizona State University, Phoenix, AZ

Background: The school lunch environment is a prime target for increasing consumption of fresh fruits and vegetables (F&V) in youth because millions of students eat lunches provided by schools. Salad bars are heavily encouraged in schools as a strategy to increase consumption of F&V; however, there is minimal research that examines the placement of salad bars to promote consumption of F&Vs among students. *Objective*: This study compared the amount of fresh F&V self-served, consumed and wasted by middle school students during lunch at schools with differing salad bar placement: inside or outside of the serving line. *Design*: We conducted a cross-sectional plate waste study with probability samples of middle school students (N=533) from six schools in which salad bar placement differed between schools (3 with salad bars inside vs. 3 with salad bars outside of the serving line). Student's fresh F&V items were weighed before and after eating lunch. *Statistical analyses*: Negative binomial regression models regressed amounts of F&V self-selected and consumed onto salad bar placement, adjusting for gender, grade, race/ethnicity, free/reduced status, day of the week and nesting of students within schools. *Results:* Almost all of the students (98.6%) in the schools with salad bars inside of the lines self-served F&Vs compared to only 22.6% of students in the schools with salad bars outside of the lines (adjusted OR=5.38; 95% CI 4.04 – 7.17). Similarly, students at schools with salad bars inside the line had greater odds of consuming any F&Vs compared to students in schools with salad bars outside of the line (adjusted OR=4.83; 95% CI 3.40 – 6.81). On average students with the salad bar outside the line wasted less F&Vs compared to those with salad bars inside the line (30% versus 48%, respectively). *Conclusions*. Few students visited salad bars when located outside of the lunch line. Salad bars inside the lunch line resulted in greater fresh F&Vs self-selected, consumed, and wasted. Results suggest that salad bar placement is an important contextual variable that starts a chain of events for student's F&V consumption. Schools should strive to place salad bars inside the line to increase students' exposure to F&Vs.

CORRESPONDING AUTHOR: Marc A. Adams, PhD, Arizona State University, Phoenix, AZ, 85004; marc.adams@asu.edu

Paper Session 03 12:45 PM-1:08 PM

CHALLENGES TO PREVENTION OF MOTHER TO CHILD HIV TRANSMISSION IN PREGNANT WOMEN IN RURAL SOUTH AFRICA

Deborah Jones, PhD, M.Ed.[1], Ryan Cook, MSPH[1], Karl Peltzer, PhD[2], Shandir Ramlagan, MDev.Stu.[2], Gladys Matseke, MS[2], Andrew Spence, MS[1], Stephen M. Weiss, PhD, MPH[1]

[1]University of Miami Miller School of Medicine, Miami, FL; [2]Human Sciences Research Council, Pretoria, , South Africa

In rural South Africa, only two-thirds of HIV-infected pregnant women seeking antenatal care at community health centers took full advantage of available "prevention of mother-to-child transmission" (PMTCT) services in 2010. This study examines psychosocial barriers to uptake of the antiretroviral treatment and/or prophylaxis PMTCT protocol in rural South Africa and compares challenges specific to recently and previously diagnosed women. HIV-infected women (n = 295) from 6 - 30 weeks pregnant, who had commenced on ARV treatment at least one week earlier were enrolled. Results indicated that 35% reported skipping antiretroviral (ARV) medication in the last month, 50% reported high levels of depression. Alcohol use (chi^2 = 13.13, p < .001), intimate partner violence (IPV; chi^2= 10.54, p = .001) and depression (chi^2 =10.6, p = .001) were associated with an increased risk of non-adherence in the past week. Women with high levels of depression were less likely to have disclosed their HIV status to their partners (chi^2 = 7.33, p = .004). Women were compared by time of diagnosis (during the current pregnancy or previously). PMTCT and reproductive health knowledge was modest, irrespective of time of diagnosis, and associated with adherence among those diagnosed prior to the current pregnancy. Among recently diagnosed women, disclosure and fear of infecting their baby were the primary contributors to depression; among those previously diagnosed, stigma and fear of infecting their babies were the primary contributors. Recent diagnosis was associated with a lower probability that male partners had been asked to test at the antenatal clinic (chi^2 = 5.01, p = .03), and overall, being asked to test was associated with increased rates of HIV disclosure (chi = 47.23, p < .001). Results suggest that stigma, non-disclosure, fear,< depression and lack of knowledge reduce the potential for pregnant women to protect their infants from infection during the antenatal period, highlighting opportunities for intervention in this vulnerable population. Public health interventions designed to increase the uptake of the PMTCT protocol and reproductive health are also needed that respond to the unique challenges faced by newly diagnosed HIV-infected pregnant women. This ongoing study is funded by a grant from NIH, R01HD078187.

CORRESPONDING AUTHOR: Deborah Jones, PhD, M.Ed., University of Miami Miller School of Medicine, Miami, FL, 33136; djones@med.miami.edu

Paper Session 03 1:08 PM-1:30 PM

INCREASING ACCEPTABILITY AND UPTAKE OF MEDICAL MALE CIRCUMCISION IN ZAMBIA: FINAL RESULTS

Stephen M. Weiss, PhD, MPH[1], Deborah Jones, PhD, M.Ed.[1], Robert Zulu, MD[2], Colleen A. Redding, PhD[3], Ndashi Chitalu, MD[2], Ryan Cook, MSPH[1]

[1]University of Miami Miller School of Medicine, Miami, FL; [2]University of Zambia School of Medicine, Lusaka, , Zambia; [3]Cancer Prevention Research Center/ University of Rhode Island, Kingston, RI

Three large scale RCTs have confirmed the protective effect (51-60%) of medical male circumcision (MMC) against HIV infection for men in Eastern and Southern Africa. Although WHO has recommended large scale roll-out of national male circumcision programs in countries with high HIV incidence and low MMC rates, the majority (80%) of uncircumcised men in Zambia have expressed little interest in undergoing MMC. This cluster randomized trial sought to increase the likelihood of men in urban Zambia undergoing MMC following participation in an evidence-based sexual risk reduction behavioral intervention.Methods. 800 uncircumcised, HIV-negative men were recruited from Voluntary Counseling and Testing programs in 10 community health centers in Lusaka, Zambia. Men had the option of inviting their female partners to participate in a comparable program [83% (668) partners participated]. Assessments included readiness to undergo MMC using Prochaska's Stages of Change model (Pre-Contemplation, Contemplation, Preparation, Action, Maintenance).Results. A total of 257 men underwent MMC; 161 in the Experimental condition and 96 in the Control condition (aOR = 2.45 (95% CI 1.24, 4.90; p=.017), adjusted for clustering within clinic. Among those undergoing MMC, condom use increased in the Experimental condition only. For both conditions, there was a significant association between baseline stage and moving to the action stage, indicating that those reporting greater readiness at baseline were more likely to undergo the procedure (Mantel-Haenszel Chi-Square = 8.07, *p* = .005). However, when analyzed by Condition (Experimental vs Control), the association between baseline readiness and undergoing circumcision became non-significant.Discussion. Final results indicated that men participating in the Experimental condition were twice as likely to undergo MMC as their counterparts in the Control condition. For the first time in MMC studies, those undergoing MMCs in the Experimental condition demonstrated a significant increase in condom use at 12 month post-intervention followup; no similar increase was noted for those Control participants who underwent MMC. The importance of including comprehensive sexual risk behavior reduction/MMC promotion behavioral interventions in national scale-up of MMC programs will be discussed. [Supported by NIMH R01MH095593]

CORRESPONDING AUTHOR: Stephen M. Weiss, PhD, MPH, University of Miami Miller School of Medicine, Miami, FL, 33136; sweiss2@med.miami.edu

Paper Session 04 12:45 PM-1:00 PM

EFFECT OF BEHAVIORAL INTERVENTIONS ON NOVEL CARDIOVASCULAR RISK FACTORS IN DIABETES

Jennifer P. Friedberg, PhD[1], Maria Antonia Rodriguez, Ph.D.[1], Sangmin Jung, M.Ed.[1], Binhuan Wang, Ph.D.[2], Rohima Begum, MPH[1], Michael Gelinas, BA[1], Rachel Steinberg, BA[3], Sundar Natarajan, MD, M.Sc.[4]

[1]VA New York Harbor Healthcare System, New York, NY; [2]NYU School of Medicine, New York, NY; [3]UCLA School of Public Health, New York, NY; [4]VA New York Harbor Healthcare System/NYU School of Medicine, New York, NY

Background: Patients with diabetes are at high risk for cardiovascular disease (CVD) and related complications, particularly if they have other risks also. Patients with diabetes and other comorbidities must make behavior changes in multiple areas in order to lower CVD risk. Theory-based telephone interventions show promise to improve treatment adherence and thus cardiovascular risk factors. The purpose of the current study was to explore the effect of Transtheoretical Model (TTM) and Prospect Theory (PT) based interventions on fibrinogen and high-sensitivity C-reactive protein (hs-CRP), two markers of CVD risk, in Veterans with diabetes and hyperlipidemia via a randomized controlled trial.Methods: Participants received 6 monthly phone calls of a framing effects intervention (FEI) for diet, medication and exercise based on PT, a stage-matched intervention (SMI) for diet, medication and exercise based on TTM, or attention placebo (AP) about general health topics not related to diabetes or CVD. Fibrinogen and hs-CRP were measured at baseline and 6 months. Wilcoxon Rank Sum Tests compared fibrinogen and hs-CRP between arms and from baseline to 6 months within arms.Results: We randomized 247 Veterans (FEI=84, SMI=82, AP=81). There were no baseline differences in median fibrinogen (FEI 332.5 mg/dL, SMI 326 mg/dL, AP 327 mg/dL) and median hs-CRP (FEI 0.30 mg/dL, SMI 0.22 mg/dL, AP 0.29 mg/dL) between arms. The median 6-month fibrinogen and hs-CRP levels for FEI, SMI and AP were: 320 mg/dL and 0.23 mg/dL, 323 mg/dL and 0.34 mg/dL, and 326 mg/dL and 0.33 mg/dL respectively. The decrease in median fibrinogen from baseline to 6 months was 6.0 mg/dL for FEI (p=0.01), 1.0 mg/dL for SMI (p=0.91), and 3.0 mg/dL for AP (p=0.64). At 6 months, the change in median hs-CRP was -0.01 mg/dL for FEI (p=0.03), 0.0 mg/dL for SMI (p=0.59) and +0.04 mg/dL for AP (p=0.09). There was a significant difference in change in median hs-CRP from baseline to 6 months between FEI and AP (p=.0037), but no significant difference between AP and SMI or between SMI and FEI.Conclusions: A telephone-delivered Prospect Theory-based intervention reduced fibrinogen and hs-CRP in Veterans with diabetes and comorbid hyperlipidemia. This novel phone intervention shows promise in reducing CVD risk in patients with diabetes and elevated lipids.

CORRESPONDING AUTHOR: Jennifer P. Friedberg, PhD, VA New York Harbor Healthcare System, New York, NY, 10010; jennifer.friedberg@nyumc.org

MERITORIOUS PAPER

Paper Session 04 1:00 PM-1:15 PM

A CLINIC-INTEGRATED BEHAVIORAL INTERVENTION REDUCES HYPOGLYCEMIA IN YOUTH WITH TYPE 1 DIABETES

Benjamin Gee, BA[1], Tonja R. Nansel, PhD[2], Aiyi Liu, PhD[3]
[1]Health Behavior Branch, NICHD, NIH, Bethesda, MD; [2]Eunice Kennedy Shriver National Institute of Child Health and Human Development, Bethesda, MD; [3]NIH, Rockville, MD

INTRODUCTION: Adolescents with type 1 diabetes are at an increased risk for acute complications due to behavioral, developmental, and hormonal changes. OBJECTIVE: To determine the effect of a clinic-integrated behavioral intervention on the incidence of hypoglycemia in youth with type 1 diabetes. METHODS: This was a multi-center, parallel group study with equal randomization. Youth-parent dyads (N= 390) were enrolled in a 2-year, randomized clinical trial. Youth participants were 12.4±1.7 years of age, 49.2% female, with a mean A1c of 8.4±1.2; 33.8% utilized insulin pump therapy. The intervention, which was delivered at each routine clinic visit, was designed to improve diabetes management behaviors by targeting problem-solving skills, parent-child cooperation and communication, and self-regulation behaviors. Hypoglycemic events were classified as those treated by oral ingestion and those treated by parenteral therapy. At each clinic visit, which occurred approximately every 3-4 months, families self-reported events occurring since their previous clinic visit. Analyses included 2-sample t-tests and the cox proportional hazards model for recurrent events to compare the incidence between groups at 1-year intervals. RESULTS: Across the entire 2-year study period, no significant differences were observed between groups in either category of event. However, during the 2nd year of the study, the incidence of events treated by oral ingestion was 13.6 per 100 person-years in the intervention group compared with 27.3 per 100 patient-years in the control group (P=0.02). The hazards ratio of these events during the second year was 0.49 (95% CI: 0.27 –0.90; P=0.02), indicating that participants in the intervention group were 51% less likely to experience a hypoglycemic event relative to the control group. CONCLUSIONS: A clinic-integrated behavioral intervention targeting problem-solving skills reduced the incidence of hypoglycemia in youth with type 1 diabetes. Behavioral interventions targeting problem-solving skills, delivered over a sustained period (>1 year), could be considered as practical, non-pharmacological strategies to reduce hypoglycemia in adolescents with type 1 diabetes.

CORRESPONDING AUTHOR: Benjamin Gee, BA, Biology, Anthropology, Health Behavior Branch, NICHD, NIH, Bethesda, MD, 20892; benjamin.gee@nih.gov

Paper Session 04 1:15 PM-1:30 PM

PREVENTING DECLINES IN GLYCEMIC CONTROL BY TARGETING PARENTAL MONITORING IN TYPE 1 DIABETES

April Idalski Carcone, PhD[1], Deborah Ellis, PhD[2], Steve Ondersma, PhD[2], Sylvie Naar-King, PhD[1], Kathleen Moltz, MD[3]

[1]Wayne State University School of Medicine, Detroit, MI; [2]Wayne State University, Detroit, MI; [3]Children's Hospital of Michigan, Detroit, MI

Parental monitoring of daily diabetes care is a significant predictor of glycemic control; yet, parents commonly withdraw their involvement as youth enter adolescence, particularly non-white caregivers. Brief motivation-enhancing interventions have successfully targeted parental monitoring for children with behavioral difficulties and for health-related behavior change, but have proven difficult to disseminate with fidelity, and have not yet been evaluated for enhancement of parental monitoring among preadolescents with type I diabetes. This study examines the impact of a brief computer-delivered, motivation-enhancing intervention to increase parental monitoring on the glycemic control of urban, African American preadolescents (10-13 years) with type 1 diabetes. A companion intervention targeting youth self-management using the same motivation-building approach was also tested. A total of 67 preadolescents and their primary caregivers were randomly assigned to one of three study arms: In Arm 1, caregivers and youth received the intervention. In Arm 2, caregivers only received the iintervention and iyouth received an attention control intervention. In Arm 3, both caregivers and youth recieved the attention control. Three intervention sessions were delivered at 3-4 month intervals over 9 months. Post-treatment evaluation revealed a significant group difference in which Arm 2 (caregiver intervention only) showed a clinically (HbA$_{1c}$ reduced 0.63%) and statistically (*p*=.01) significant improvement in glycemic control when compared to Arm 3. Arms 1 and 3 demonstrated worsening (+0.23 and +0.26, respectively) glycemic control. These results suggest that a brief computer-delivered, motivation-enhancing intervention to increase parental monitoring may have a positive impact on the glycemic control of urban, African American preadolescents with type 1 diabetes. Targeting both youth and caregivers may have an iatrogenic effect, perhaps because caregivers who realize their child is receiving an intervention might further reduce their involvement.

CORRESPONDING AUTHOR: April Idalski Carcone, PhD, Wayne State University School of Medicine, Detroit, MI, 48201; acarcone@med.wayne.edu

Paper Session 05 12:45 PM-1:00 PM

SMOKING STATUS AND PAIN LEVELS AMONG OEF/OIF/OND VETERANS

Eric C. DeRycke, MPH[1], Julie Volkman, PhD[2], Mary Driscoll, PhD[3], William Becker, MD[4], Cynthia Brandt, MD, MPH[3], Kristin Mattocks, PhD, MPH[5], Sally Haskell, MD[3], Harini Bathulapalli, MSc[3], Joseph Goulet, PhD[3], Lori Bastian, MD, MPH[1]

[1]Veterans Affairs, Newington, CT; [2]Bryant University, Smithfield, RI; [3]Veterans Affairs, West Haven, CT; [4]Veterans Affairs, New Haven, CT; [5]Veterans Affairs, Leeds, MA

OBJECTIVES: Both pain and smoking are highly prevalent among Veterans. Recent studies in non-Veteran populations have reported higher pain levels among current smokers compared to non-smokers and former smokers. We examined the association of current smoking with reported pain levels among Veterans of Operations Enduring Freedom, Iraqi Freedom, and New Dawn (OEF/OIF/OND). METHODS: The sample consisted of OEF/OIF/OND Veterans who had at least one visit to VA (2001-2011) with information in the electronic medical record (EMR) for smoking and pain (n=406,954). The primary outcome measure was pain intensity in the past week, dichotomized as moderate to severe (>=4) or none to mild (0-3), based on a self-reported 11-point pain numerical rating scale. In multivariate logistic regression analyses, the association of current smoking status with self-reported pain was examined, controlling for potential confounders such as age, gender, and mental health diagnoses. RESULTS: Overall, 50,988 women and 355,966 men met inclusion criteria. The study population mean age is 30 years, 33.7% reported clinically actionable pain levels (defined as>4), 37% were current smokers, and 16% former smokers. In multivariate logistic analysis, current smoking [Odds Ratio (OR)=1.26 (95% Confidence Intervals (CI)=1.24-1.28)] and former smoking [OR=1.04 (95% CI=1.02-1.06)] were associated with moderate pain levels, controlling for age, gender, alcohol abuse, major depression, and PTSD. CONCLUSIONS: Similar to non-VA studies, we found an association between pain severity and current smoking. This effect was decreased for former smokers. Results of this study highlight the importance of understanding reported pain levels in OEF/OIF/OND Veterans who continue to smoke at markedly higher rates than civilians. Future research needs to explore the impact of military and lifetime trauma history. An essential next step is determining if smoking cessation is associated with a reduction in pain.

CORRESPONDING AUTHOR: Eric C. DeRycke, MPH, Veterans Affairs, Newington, CT, 06111; eric.derycke@va.gov

Paper Session 05 1:00 PM-1:15 PM

THE PREVALENCE OF CHRONIC PAIN IN OEF/OIF/OND VETERANS WITH POST-TRAUMATIC STRESS DISORDER

Sara N. Edmond, M.A.[1], Eu Gene Chin, MA[2], Lauren Baillie, PhD[3], Amee B. Patel, Ph.D., M.S.Ed.[4], Jeanne M. Gabriele, PhD[5]

[1]University of Mississippi Medical Center / G.V. (Sonny) Montgomery VAMC, Jackson, MS; [2]University of Mississippi Medical Center / G.V. (Sonny) Montgomery Jackson VAMC, Jackson, MS; [3]G.V. (Sonny) Montggomery Jackson VAMC, Jackson, MS; [4]G.V. (Sonny) Montgomery VA Medical Center, Jackson, MS; [5]G.V. (Sonny) Montgomery VAMC, Jackson, MS

An estimated 13-42% of American veterans who served in Operations Enduring Freedom, Iraqi Freedom, and New Dawn (OIF/OEF/OND) suffer from post-traumatic stress disorder (PTSD; Seal et al., 2007). The Veterans Health Administration has implemented national-level initiatives (Karlin & Cross, 2014) to increase Veterans' access to and engagement with evidence-based psychotherapies (EBPs) for PTSD. Comorbid health problems, such as chronic pain, may impede treatment engagement. This study describes rates of chronic pain in OEF/OIF/OND Veterans with PTSD (N=337) and explores the relationship between chronic pain and EBP treatment outcomes. Medical records were reviewed to gather data on pain-related diagnoses and self-reported pain intensity scores (0-10 scale). Overall, 85.6% of Veterans had at least one non-zero pain score in the year prior to their initial PTSD diagnosis, while 70.5% had at least three non-zero pain scores. Among Veterans with a PTSD diagnosis, 42.5% reported moderate pain (greater than 4) and 17.0% reported severe pain (greater than 7), with a mean pain score of 4.57 (SD=2.68). Additionally, 84.5% of the sample had at least one pain-related diagnosis and 37.5% had three or more pain-related diagnoses. About half (49.0%) were diagnosed with back or neck pain and 27.3% with head pain. A subset of these Veterans (n=95) participated in Prolonged Exposure (PE) or Cognitive Processing Therapy (CPT) in a VAMC Evidenced Based Psychotherapy Clinic and reported significant symptom reductions (PCL change score M=13.04, SD=18.06). However, a diagnosis of a head pain condition (e.g., migraines, chronic headaches) was related to less symptom reduction (PCL change score M=15.69 vs. 5.75, t=2.16, p=0.03), suggesting that Veterans with chronic head pain may benefit less from treatment than Veterans without chronic head pain. The high comorbid base rates of chronic pain and PTSD and the significant effect of chronic pain condition on PTSD treatment outcomes highlights the importance of assessing chronic pain symptoms when treating PTSD symptoms. Future research is needed to further explore the role of chronic pain in engagement and responsiveness to treatment for PTSD.

CORRESPONDING AUTHOR: Sara N. Edmond, M.A., University of Mississippi Medical Center / G.V. (Sonny) Montgomery VAMC, Jackson, MS, 39206; sara.edmond@duke.edu

Paper Session 05 1:15 PM-1:30 PM

THE CHALLENGE AND POTENTIAL FOR IMPROVING MEDICALLY UNEXPLAINED SYMPTOMS VIA PROVIDER COMMUNICATION

Leigh Alison Phillips, PhD

Iowa State University, Ames, IA

BackgroundMedically unexplained symptoms (MUS) are commonly treated in primary care, with particularly high rates of MUS observed in returning military veterans. Evidence for potential benefit from provider-communication interventions for MUS is mixed. PurposeWe evaluate the relative potential benefit of provider communications regarding military veterans' MUS-illness representations to providers' interpersonal skills for promoting MUS-treatment adherence and improvement. MethodsVeterans experiencing MUS (n=204) reported on objective communication behaviors and interpersonal skills of their primary care providers; correlation, regression, and bootstrap-mediation analyses were conducted to test hypotheses regarding veteran-reported outcomes. Main outcomes were satisfaction with the provider, illness coherence, experienced improvement in mental and physical health, MUS-treatment adherence and intentions to adhere, and expectations for MUS-related improvement. ResultsOverall, veterans reported infrequent communication by their providers on illness and treatment specifics (62% reported no discussion) but high degrees of provider interpersonal skills. However, communication regarding patients' illness representations of MUS and treatment expectations was significantly related to treatment adherence (β=0.31, p=0.001) and adherence intentions (r(171)=0.20, $p < 0.01$), whereas provider interpersonal skills were not (β=0.17, p=0.06). Both types of communication were uniquely and significantly related to veteran satisfaction (β=0.33, $p < 0.001$ and β=0.33, $p < 0.001$, respectively). ConclusionsAlthough providers' interpersonal skills may be very important in chronic illness contexts, particularly for MUS, for fostering trust in the provider and continuity of care, the current study provides support for the hypothesis that providers may better promote patient adherence to MUS-treatment recommendations through discussing elements of patients' lay models of MUS and treatment expectations with them during consultations. More research is needed on the longitudinal, prospective benefit of such communications, and their mechanisms to MUS improvement, among veterans with existing MUS.

CORRESPONDING AUTHOR: Leigh Alison Phillips, PhD, Iowa State University, Ames, IA, 50011; alisonp@iastate.edu

Paper Session 06 12:45 PM-1:00 PM

ANXIETY AND DEPRESSION IN SEXUAL MINORITY YOUNG ADULTS: IDENTIFYING CONCEALMENT AS A CORRELATE OF INCREASED SYMPTOMATOLOGY

Jeffrey Cohen, B.F.A.[1], Samantha Buchman, M.A., Ed.M.[2], Craig Barr Taylor, MD[3], Christine Blasey, Ph.D.[2], Michelle G. Newman, Ph.D.[4]

[1]PGSP - Stanford PsyD Consortium, Menlo Park, CA; [2]PGSP - Stanford PsyD Consortium, Palo Alto, CA; [3]Stanford University School of Medicine, Stanford, CA; [4]The Pennsylvania State University , University Park, PA

Due to social stigma and minority stress, we hypothesized that sexual minority college students would report greater symptomatology on measures of Generalized Anxiety Disorder (GAD), Panic Disorder, Post Traumatic Stress Disorder (PTSD), Social Anxiety Disorder (SAD), and Depression relative to their heterosexual counterparts. Secondarily, we hypothesized concealment of sexual orientation would predict greater psychiatric symptomatology in sexual minority students. A sample of 1133 completed the GAD Questionnaire IV (GADQ-IV), Panic Disorder Self Report (PDSR), Social Phobia Diagnostic Questionnaire (SPDQ), Post Traumatic Stress Disorders Checklist 5 (PCL-5), and the Beck Depression Inventory II (BDI-II) and indicated their sexual orientation. We then compared the mean scores of sexual minority participants (n = 29) to the mean scores of heterosexuals (n =1104) using a Multivariate Analysis of Variance (MANOVA). The MANOVA indicated sexual minorities had different mean symptomatology scores in comparison to their heterosexual peers (Wilkes' Lambda = .96, p< .00001). Pair wise comparison indicated that sexual minority participants had significantly higher mean symptomatology scores across all outcome measures; GADQIV $\Delta = 2.5$; t = 3.935, p = .002, Cohen's d = .679; PDSR $\Delta = 5.2$; t = 3.696, p = .001, Cohen's d = .823 ; PCL-5 $\Delta = 8.3$; t = 2.150 p = .04, Cohen's d = .464 ; SPDQ $\Delta = 3.1$; t = 3.208 p = .001, Cohen's d = 0.539 ; BDI-II Δ 9.8 = ; t = 4.504 p < .001, Cohen's d = .945. We also tested whether the linear association between concealment of sexual orientation and psychiatric symptoms differed for the populations. In five linear regression models, the following were used as predictors: concealment of sexual orientation, sexual orientation identification, and their interaction. All predictors were centered. Dependent variables were the GADQ-IV, PDSR, PCL-5, SPDQ and BDI – II. There was a statistically significant interaction between orientation and concealment for the SPDQ (p = .034) and the BDI-II (p = .031). In both models, the source of the interaction was a difference in directionality of the correlation. Among sexual minority participants, concealment of sexual orientation was associated with greater Social Anxiety and Depression.

CORRESPONDING AUTHORS: Jeffrey Cohen, B.F.A., PGSP - Stanford PsyD Consortium, Menlo Park, CA, 94025; jeffreycohen@stanford.edu; Samantha Buchman, M.A., Ed.M., PGSP - Stanford PsyD Consortium, Palo Alto, CA, 94304; sjbpsyd@stanford.edu

Paper Session 06 1:00 PM-1:15 PM

SEXUAL ORIENTATION DISPARITIES IN DEPRESSIVE SYMPTOMS, AND SUICIDE IDEATION ACROSS THE LIFE COURSE

Richard Branstrom, PhD

Karolinska Institutet, Stockholm, Sweden

Background: Recent studies have identified substantial mental health disparities between lesbian, gay, and bisexual (LGB) individuals compared to heterosexuals. Sexual orientation health disparities have largely been explained through minority stress theory, which describes the excess stress that LGB individuals experience compared to heterosexual individuals by virtue of their stigmatized sexual orientation. However, possible variation in sexual orientation mental health disparities across the life course remains largely unexplored. Purpose: The aim of the current study was to examine disparities between sexual minority individuals and heterosexuals in symptoms of depression, anxiety, and suicide ideation using a general population sample in Sweden, and to explore potential age differences in such disparities. Method: Between 2010-2013, 186 766 individuals (16-84 years of age) responded to nationwide population-based health surveys. In the sample, 971 (0.6%) individuals self-identified as gay/lesbian and 2 206 (1.3%) self-identified as bisexual. Results: The study showed that disparities in symptoms of depression and anxiety based on sexual orientation are largest among adolescents and young adults, and decrease with increasing age. These differences seemed to partially be explained by higher exposure to stressful events. The study gave some support for the buffering effect of ameliorating factors such as emotional support and social trust on the influence of stressful events on mental health status of LGB individuals. Conclusions: Age emerged as an important effect modifier of mental health disparities based on sexual orientation. More frequency exposure to discrimination, victimization, and threats of violence seems to partially explain these differences. In some cases, LGB respondents reported less access to emotional support and social trust. These results support a developmental model of minority stress and mental health among LGB individuals.

CORRESPONDING AUTHOR: Richard Branstrom, PhD, Karolinska Institutet, Stockholm, 17177; richard.branstrom@ki.se

Paper Session 06 1:15 PM-1:30 PM

SELF-ESTEEM AND SELF-COMPASSION IN GAY AND BISEXUAL MEN: INDIRECT EFFECTS THROUGH DEPRESSION ON CONDOMLESS ANAL SEX

Brett M. Millar, BA[1], Tyrel J. Starks, PhD[2], Christian Grov, PhD, MPH[1], Jeffrey T. Parsons, PhD[2]

[1]Center for HIV Educational Studies and Training (CHEST), City University of New York, New York, NY; [2]Hunter College, CUNY, New York, NY

BACKGROUND: Research has identified depression as a risk factor for sexual risk behavior among gay and bisexual men. In non-sex related studies, both self-esteem and self-compassion have been considered as protective against depression, though recent research indicates that the focus on self-worth and self-versus-other comparison in high self-esteem individuals does not necessarily correlate with optimal outcomes, intra- and interpersonally. In short, high self-esteem can present challenges that high self-compassion does not, though this possibility has not yet been considered in regard to sex risk behavior. METHODS: A sample of 1,211 gay and bisexual men (aged 18-79; mean=40.1 years) across the USA completed an online questionnaire including the Center for Epidemiologic Studies Depression Scale (CES-D), Rosenberg's Self-Esteem Scale, the Self-Compassion Scale (short form), demographic information, and recent casual sexual activity. RESULTS: Path model results revealed that both self-esteem and self-compassion were negatively correlated with depression (β=-0.49, $p < 0.001$, and β =-0.27, $p < 0.001$, respectively). In addition, there was a significant quadratic effect associated with self-esteem, but not with self-compassion, such that depression was highest among those who were lowest and highest on self-esteem (β =0.06, p=0.006). The occurrence of condomless anal sex (CAS) with a casual male sex partner was modeled as a zero-inflated binary outcome. Results showed that depression was associated with increased odds of CAS with at least one casual partner in the previous three months, (β =0.20, p=0.014). Bootstrapping tests of indirect effects revealed that the pathway from self-esteem to CAS was significant as was the indirect pathway from self-compassion to CAS (both p=0.018). CONCLUSIONS: Depression in gay and bisexual men continues to be a risk factor in the occurrence of condomless anal sex with casual partners. While boosting both self-esteem and self-compassion may assist in preventing adverse outcomes, behavioral and counseling interventions should be aware that mental health can suffer at both low and high ends of the self-esteem spectrum.

CORRESPONDING AUTHOR: Brett M. Millar, BA, Center for HIV Educational Studies and Training (CHEST), City University of New York, New York, NY, 10018; bmillar@chestnyc.org

Paper Session 07 12:45 PM-1:00 PM

RELIGIOUSNESS, STRESS, AND INFLAMMATION IN A LOW SES SAMPLE: EVIDENCE FROM ADD HEALTH

Cara Blevins, BA[1], Sara J. Sagui, BA[1], Elizabeth L. Addington, BA[2], Megan Franklin, BA[3]

[1]The University of North Carolina at Charlotte, Charlotte, NC; [2]UNC Charlotte, Charlotte, NC; [3]California State University Los Angeles, Charlotte, NC

Stress and inflammation are known physiological pathways for the development of cardiovascular disease (CVD) and chronic illness which disproportionately affect individuals from low socioeconomic backgrounds. A growing body of research suggests that religiousness may convey health benefits yet little is known about how distinct components of religiousness influence levels of stress and biomarkers of systemic inflammation, such as C-reactive protein. The present study examined high sensitivity C-reactive protein (hsCRP), perceived psychological stress (PPS), and two dimensions of religiosity—behavioral religiousness (i.e., involvement in private and public religious activities) and subjective religiousness (i.e., the importance one attributes to their religion)— at Wave IV of the National Longitudinal Study of Adolescent Health. Participants (N=1383) ranged in age from 25-34 years old (M=29), had relatively low levels of PPS (M=5.83), and hsCRP (M = 2.74 mg/L) levels indicative of intermediate risk for CVD. Multiple regression analyses separately predicted PPS and hsCRP. Analyses revealed that both behavioral (β=-.04, $p < .05$) and subjective (β=-.16, $p < .05$) dimensions of religiousness were unique significant predictors of PPS; however, only the behavioral dimension (β=-.05, $p < .05$) significantly predicted systemic inflammation above and beyond relevant controls (i.e., age, sex, smoking status, recent exercise, and BMI). Results clarify the multidimensional nature of religiousness and its impact on biological and psychological outcomes. Religiousness may protect individuals from low-SES backgrounds from adverse health outcomes such as CVD and chronic illness; however, results suggest that behavioral religiousness (e.g., attending religious services or praying) may convey health benefits above and beyond other components of religiousness, such as the importance of religion or spiritual faith. In other words, it may not be how strongly one believes but, rather, how one practices which contributes to salutary health outcomes This study contributes to research examining the association of religiousness with stress and systemic inflammation and findings may have meaningful implications for behavioral interventions for low-SES individuals.

CORRESPONDING AUTHOR: Cara Blevins, BA, The University of North Carolina at Charlotte, Charlotte, NC, 28223; cblevi14@uncc.edu

Paper Session 07 1:00 PM-1:15 PM

THE INFLUENCE OF RELIGION UPON AMERICAN MUSLIM MAMMOGRAPHY BELIEFS AND PRACTICES

Aasim Padela, MD MSc[1], Farha Marfani, MSPH[2], Zahra Hosseinian, M.A[3], Caitlin Ajax, BA[1], Saleha Mallick, MS[4], Hadiyah Muhammad, MPH[5], Michael Quinn, PhD[3], Ha Vu, MA[1], Monica E. Peek, MD, MPH[1]

[1]The University of Chicago, Chicago, IL; [2]N/A, Kensington, CA; [3]University of Chicago, Chicago, IL; [4]The University of Chicago, Naperville, IL; [5]Initiative on Islam & Medicine, Chicago, IL

Background: Cancer disparities research typically explores outcome differences based on race and ethnicity, and often overlooks the influence of religion across race and ethnicity. Our prior studies suggest that Islamic values similarly impact health behaviors among diverse groups of Muslims. While American Muslims have lower rates of mammography screening when compared to other Americans, the influence of religion upon these disparities is not well understood. Objective: To assess the influence of Islam upon mammography beliefs and practices among American Muslim women. Methods: Muslim women aged 40 and older sampled from Muslim organizations that cater to African American, Arab and S. Asian Muslims completed a survey and participated in focus groups. The survey included measures of fatalism, religiosity, religious discrimination, and modesty. The focus group guide examined women's salient behavioral, normative and control beliefs regarding mammography and the influence of Islam on their screening intention. Results: Of the 240 survey respondents, 72 were Arabs, 71 S. Asians, and 59 African Americans. Of the 50 focus group participants, 14 were Arabs, 16 S. Asians, and 16 African Americans. 107 (37%) had not had mammograms in the past 2 years. Survey analysis with multivariate models showed that positive religious coping (OR=0.21; $p < .05$) and perceived religious discrimination in healthcare (OR=0.74; $p < .05$) were negatively associated with mammography rates. Qualitative analyses revealed that the Islamic concept of amana, the belief that the body is a sacred trust, the accommodation of modesty, and support from family and friends positively impacted mammography screening intention. The notion that family needs are prioritized over women's needs negatively impacted mammography intention. Notably, ethnicity/race did not impact screening rates and themes were similarly voiced across the racial/ethnic divide. Discussion: Religion-related factors influence mammography beliefs and practices among diverse groups of American Muslim women. Potential strategies for a religiously-tailored mosque-based health education intervention include dispelling the belief that Imams and religious leaders are not concerned about women's health. By tailoring Friday sermons to connect the concept of amana to getting screened for a mammogram, congregants will receive messaging about women's health in a religious context. We believe this context to be a particularly powerful approach to strengthen intention towards a health action. Additionally, peer educators within the mosque community can provide tangible, emotional, and social support for women in the mosque to motivate intention towards mammography screening. If successful, this intervention will not only increase the number of women getting a mammogram, but also lay the groundwork to create a culture of health in the mosque community.

CORRESPONDING AUTHOR: Aasim Padela, MD MSc, The University of Chicago, Chicago, IL, 60637; apadela@uchicago.edu

Paper Session 07 1:15 PM-1:30 PM

RELIGIOUS INFLUENCES AS A PREDICTOR OF CANCER-RELATED HEALTH BEHAVIORS AMONG ORTHODOX JEWISH WOMEN

Rifky Tkatch, PhD[1], Louis Penner, PhD[1], Karoline Puder, MD[2], Joel Erblich, PhD[3], Rachel Stawis[2], Mark Manning, PhD[2], Lisa Berry-Bobovski, MA[2], Susan Eggly, PhD[1], Terrance Albrecht, PhD[1]

[1]Wayne State University/Karmanos Cancer Institute, Detroit, MI; [2]Wayne State University, Detroit, MI; [3]Hunter College, CUNY, New York, NY

Background: Data on Orthodox Jewish women indicate higher rates of breast cancer, lower participation in cancer screening, and poor cancer-related health behaviors as compared to other groups. These data do not account for the heterogeneity within this group. Based on previous work in this population, we hypothesized that there would be differences in internal (ILOC) and God (GLOC) health locus of control based on the degree of Orthodox religious identification and that these loci of control would mediate the relationship between degree of Orthodox identification and cancer-related health behaviors (diet/exercise) and recent mammogram.

Method: Using extensive community engagement, a cancer-related health survey was developed for women in a Midwest Orthodox Jewish community. Women (n=450) were randomly selected from a community directory and sent a mailed survey that included questions on Orthodox identification, health behaviors, screening behaviors, and health locus of control. Response rate of the anonymous survey was 58% (n=260). Using community advisory board input, the sample was categorized into three groups indicating degree of Orthodox identification based on synagogue membership. These three groups represent Modern (MO) (n=60), Middle (MI) (n=107), and Ultra (UO) (n=75) (classification ICC =.98).

Results: As expected there were significant group differences for ILOC and GLOC. The UO group had significantly lower levels of ILOC and higher levels of GLOC as compared to the other groups. The MO group had the lowest levels of GLOC. In addition, MO women reported the most days per week of exercise. For women >40, UO women reported lowest level of recent mammograms. Finally, GLOC fully mediated the relationship between religious identification and days of healthy diet and exercise. For women > 40, ILOC partially mediated the relationship between religious identification and recent mammogram

Discussion: These data underscore the importance of considering religious factors when investigating health behaviors in religious groups, and suggest a potential mechanism underlying cancer health and screening behaviors in some insular cultural groups. Health education programs need to be sensitive to the religious and cultural perspectives when addressing women's cancer-related health.

CORRESPONDING AUTHOR: Rifky Tkatch, PhD, Wayne State University/Karmanos Cancer Institute, Detroit, MI, 48201; tkatchr@karmanos.org

Thursday
April 23, 2015
1:45 PM-3:00 PM

Symposium 13 1:45 PM-3:00 PM

IMPROVING HEALTH CARE THROUGH ADVANCING HEALTH ASSESSMENTS AND RESEARCH METHODOLOGY

Mindy L. McEntee, M.S.[1], Leigh Alison Phillips, PhD[2], Laurie Steffen, M.S.[3], Howard Leventhal, PhD[4]

[1]University of New Mexico, Albuquerque, NM; [2]Iowa State University, Ames, IA; [3]University of New Mexico Cancer Center, Albuquerque, NM; [4]Rutgers, New Brunswick, NJ

A primary strength of behavioral medicine lies within its ability to helpfully assess and treat healthcare issues that are complex and multidimensional. The foundational biopsychosocial model, for example, provides a framework within which these intricate and complicated interactions can be understood. However, many commonly used statistical methods, often based on traditional psychometric theory, are of limited utility in such multifaceted settings. For example, many statistical methods are based on assumptions requiring data to be normally distributed, homogeneous, and linear. Over the past decade, there has been an emergence, or at times re-emergence, of analytic methods that are perhaps better suited to the complexity of health and healthcare. The present symposium will provide an overview of three different techniques and provide specific examples of their use in healthcare settings. Dr. Phillips will first present on the utility of polynomial regression in theoretical model testing and intervention design using examples from a variety of clinical issues involving treatment adherence and patient-provider relations. Ms. McEntee will detail an analysis of data from 723 individuals with chronic pain and the utility of Item Response Theory in defining a measure of functioning that attempts to maximize breadth of assessment while minimizing patient burden. The final presentation of Ms. Steffen will present results from multilevel modeling of predictors of daily quality of life in advanced non-small-cell and small-cell lung cancer patients undergoing treatment. Overall, the format of this symposium is geared to achieve two primary objectives: first, to provide information on specific analytic techniques that seem more adequate to the complexity inherent in many behavioral medicine settings and second, to detail the results of studies using these methods in clinical settings. It is hoped that such a format will help to decrease the "research-practice" gap with regard to the use and application of statistical methods in real world clinical settings.

Symposium 13A

BALANCING BREADTH AND BURDEN IN THE ASSESSMENT OF FUNCTIONING IN CHRONIC PAIN: AN ITEM RESPONSE THEORY APPROACH

Mindy L. McEntee, M.S.

The experience of chronic pain has a complex and often widespread impact on functioning. Few measures of functioning offer an assessment broad enough to adequately account for this complexity; the length of those that do is often significant and burdensome. A prime example is the Sickness Impact Profile (SIP): its 136 items provide a rich source of clinical information by indexing multiple aspects of functioning, but at the cost of high patient burden in terms of time and effort. Developed on the basis of classical test theory (CTT), the SIP assumes different dimensions, or factors, are linearly comprised of individual items, though this factor structure has not been supported. The present project investigated an alternate method of modeling patient functioning with the SIP, item response theory (IRT), to develop a shortened form specific to chronic pain, the SIP-CP, which retained the original's breadth of coverage while minimizing response burden and improving psychometric properties. IRT is well suited for item selection because it utilizes nonlinear models for item level (rather than test level) analysis and is not sample dependent like CTT. In total, 723 adults with chronic pain presenting for treatment assessment completed the SIP alongside several questionnaires assessing aspects of clinical functioning. Item characteristic curves for each item of the 12 original SIP subscales were examined; non-contributing items were removed one at a time with each new model evaluated via multivariate fit indices. The resulting SIP-CP was composed of 42 items. Results indicated an acceptable factor structure for total, physical, and psychosocial disability scores. Across a series of linear regressions, the SIP-CP accounted for a similar amount of variance across all measured aspects of clinical functioning as the full length SIP. Thus, in comparison to the SIP, the SIP-CP appears to provide similarly robust clinical information with substantially reduced response burden and better psychometric characteristics in individuals with chronic pain.

Symposium 13B

UTILIZING POLYNOMIAL REGRESSION TO OPTIMIZE THEORY AND TO DESIGN INTERVENTIONS TO PROMOTE CONGRUENCE

Leigh Alison Phillips, PhD

Polynomial regression is a method that can be used in diverse content areas to test theoretical hypotheses regarding the effect of congruence/fit/agreement between two constructs on outcomes of interest. I present new and published data from vastly different content areas in order to demonstrate the use and necessity of polynomial regression to appropriately test and develop subsequent theoretical hypotheses and to optimally design interventions to improve patient care and health outcomes: congruence between primary care providers' and patients' perceptions predict subsequent patient adherence; congruence between stroke survivors' necessity beliefs and concerns about medications predict subsequent adherence and objective stroke risk factors; extrinsic motivation and intrinsic motivation have joint effects on exercise frequency and maintenance; congruence between veterans' perceptions and estimates of the providers' perceptions are significantly associated with satisfaction, past adherence, and intentions to adhere to treatment for medically unexplained symptoms. This presentation will cover the situations in which polynomial regression is required; the measures/methods needed to use polynomial regression; an overview of the analytic procedure; and a translation of the various results to potential intervention approaches. This presentation fits with the symposium theme, because it shows the need for advanced statistics methods to test and develop theory, as well as the importance of designing studies and measures to best utilize the advanced statistical method (polynomial regression in this case).

Symposium 13C

A DAILY DIARY FRAMWORK TO STUDY LIFE AS IT IS LIVED WITH LUNG CANCER

Laurie Steffen, M.S.

The number of people killed each year by lung cancer is comparable to the number killed by breast, colon, pancreas, and prostate cancer combined. Population studies suggest lung cancer patients suffer lower quality of life than other cancer patients; however, empirical research is lacking on predictors of day-to-day changes in lung cancer patients' quality of life. This presentation will demonstrate the feasibility and potential of intensive longitudinal assessment of quality of life in lung cancer patients undergoing treatment for advanced non-small-cell lung cancer and small-cell lung cancer. Patients completed baseline measures and then brief daily diaries for 21 days to document daily disease symptoms, functional impairment from lung cancer, quality of life, and hope. Data collection is ongoing; 30 patients to date show enrollment rates of 82% and daily assessment compliance above 90%. The sample was 81% non-small-cell (stages: 11% IIIA, 22% IIIB, 67% IV) and 19% small-cell (stages: 37% limited, 63% extensive). Provider documented patient performance status was 0 – 2 (PS 0 = 18%, PS 1 = 73%, PS 2= 9%). Females comprised 55% of the sample and 89% of the sample was being treated with chemotherapy alone when they completed the diaries. Multilevel modeling was used to examine the relationship between daily hope, physical symptoms, lung cancer interference with daily life, and quality of life. Models controlled for age, performance status, disease subtype and stage. When patients experienced more disease symptoms than usual, the next day they reported that lung cancer interfered more with their daily activities and limited their social interactions ($b = .36$, $p = .007$). People who reported more disease symptoms across the diary reported that lung cancer interfered more with their daily life and limited their social interactions ($b = .53$, $p = .018$). When people reported that lung cancer interfered more with their daily life than usual, the next day they reported lower daily quality of life ($b= -.09$, $p = .05$). People who focused more on setting goals and prioritizing important activities had higher daily quality of life ($b = .26$, $p = .006$). Results demonstrate the feasibility of daily assessment and underscore the potential of daily diary designs to identify predictors of better functioning among lung cancer patients.

CORRESPONDING AUTHORS: Mindy L. McEntee, M.S., University of New Mexico, Albuquerque, NM, 87120; mmcentee@unm.edu; Leigh Alison Phillips, PhD, Iowa State University, Ames, IA, 50011; alisonp@iastate.edu; Laurie Steffen, M.S., University of New Mexico Cancer Center, Albuquerque, NM, 87108; lsteff10@unm.edu

Symposium 14 1:45 PM-3:00 PM

OPTIMIZING THE EXPRESSIVE WRITING INTERVENTION: CULTURE, INDIVIDUAL DIFFERENCES, AND MIXED METHODS

Qian Lu, MD, PhD[1], Lindsey Rodriguez, Ph.D.[1], Crystal Park, PhD[2], Angie S. LeRoy[1], Celia Ching Yee Wong, MPhil[1], Stephen Lepore, PhD[3]

[1]University of Houston, Houston, TX; [2]University of Connecticut, Storrs, CT; [3]Temple u, Philadelphia, PA

Expressive writing (EW) is a brief intervention designed to improve health by regulating thoughts and feelings. More than 300 expressive writing interventions have been conducted and EW has been demonstrated to promote health and well-being. To fully utilize EW in behavioral medicine, we need to understand how to optimize the expressive writing intervention paradigm. In this symposium, we will illustrate four important factors for optimization: cultural and contextual factors, writing instructions, the role of moderators, and the use of both qualitative and quantitative research methods. Four presenters report findings from diverse populations ranging from people with risky health behaviors, people from diverse cultural backgrounds, people with trauma, people with a rare eye disease, and cancer patients. The first presenter reports the utilization of the expressive writing paradigm in a brief alcohol intervention to reduce drinking. Findings showed that the intervention had different effects as a function of shame related to the event, based on culture, ethnicity, and level of baseline drinking. The second presenter examines how the benefits of EW on facilitating posttraumatic growth vary as a function of writing instructions and individual differences (i.e. avoidance) among Chinese-speaking breast cancer survivors. The third presenter investigates the benefits of EW among people with trauma and how social constraints moderate the effects of EW. The fourth presenter will focus on a qualitative analysis of expressive essays written by people with a rare eye disease, their unique experience and implications for health care. Our discussant will lead a discussion on the future direction of EW research, such as the challenges and opportunities in diverse populations, the consideration of contextual, cultural, and personal factors, the need for more qualitative studies, development of effective writing instructions, as well as successful strategies to optimize the writing paradigm. This symposium will improve understanding of how to provide cost-effective clinical and community preventive services through EW and how to improve health for all through elimination of health disparities.

Symposium 14A

BENEFIT FINDING AND SELF-REGULATION EXPRESSIVE WRITING AMONG CHINESE BREAST CANCER SURVIVORS

Qian Lu, Ph.D. M.D.

Background: Expressive writing is a brief intervention designed to improve health by prompting emotional and cognitive processes through writing. The effects of expressive writing vary depending on sample characteristics and writing instructions. Although expressive writing has been shown to benefit non-Hispanic White cancer survivors, few studies considered the impact of culture and examined how expressive writing benefits ethnic minorities. Previous studies have found that East Asians tend to be more avoidant than Westerners. This study examined how the benefits of expressive writing varied as a function of writing instructions and avoidance.

Methods: A total of 90 Chinese breast cancer survivors who were undergoing chemotherapy in Shanghai were randomly assigned to one of the three groups: a benefit-finding intervention condition to write about positive thoughts regarding their cancer experience, a self-regulation intervention condition to write about their deepest feelings and coping efforts in addition to finding benefits from their cancer experience, and a control group writing about the facts related to their cancer experience. Posttraumatic growth, positive changes after traumatic events, an important indicator of positive adjustment for cancer survivors, was assessed at baseline, one month, and two month follow-ups.

Results: ANCOVA Revealed group differences at the two month follow-up, $F(2, 72) =3.97$, $p=0.02$. The benefit finding group ($M=72.6$, $SE=2.7$) had higher PTG compared with the control group ($M=61.9$, $SE=2.7$), $t=10.6$, $p=0.02$, and neither group differed from the self-regulation group ($M=66.5$, $SE=2.6$). Interaction effects between group (self-regulation versus control) and avoidance emerged on PTG sub-dimensions ($ps < 0.05$). Low avoidance individuals in the self-regulation condition experienced an increase in appreciation of life. We also explored the cultural meaning of PTG through qualitatively analyzing the written essays.

Conclusion: Writing about positive aspects of breast cancer experience was beneficial for Chinese breast cancer survivors. Future studies should examine how to maximize the benefits of expressive writing across cultural groups to promote PTG and other health benefits.

Symposium 14B

CULTURAL DIFFERENCES IN AN EXPRESSIVE WRITING ALCOHOL INTERVENTION: THE ROLE OF SHAME

Lindsey Rodriguez, PhD

Background: This research examines differential efficacy of a brief expressive writing alcohol intervention based on race and level of event-related shame. Theory and research on shame and guilt have generally found that shame is maladaptive and can lead to anxiety, depression, and problematic alcohol use. However, research on cultural differences suggests that shame may be adaptive for individuals of collectivistic, Asian cultures. Previous research evaluating expressive writing as a brief alcohol intervention has shown promising results such as reduced drinking intentions and increased readiness to change drinking behavior. The present study hypothesized that feelings of shame would be associated with greater alcohol use generally, and that this effect might differ for Caucasians compared to Asian individuals. We also explored whether this effect differed based on level of baseline alcohol use.

Methods: Two hundred sixty-four undergraduates (74% female) who drank at least one alcoholic beverage in the past month completed measures of demographics, baseline drinking, event-related shame and guilt, pre- and post-writing affect, and drinking intentions. Many students in the negative condition wrote about events that elicited shame.

Results: Content written around shame provided insight into their reflections on their drinking experience. As expected, results revealed a significant three-way interaction among race, shame, and baseline drinking, $t(256)=3.92$, $p < .001$. Independent of affect and event-related guilt, shame was *not* associated with drinking intentions for light drinking Caucasians, but was associated with reduced drinking intentions for both heavy drinking Caucasians and light drinking Asians. However, for heavy drinking Asians, shame was associated with *increased* drinking intentions.

Conclusion: The present study extends previous work by including a cultural component to better understand the relationships between shame, culture, and drinking behavior in an expressive writing alcohol intervention.

Symposium 14C

SOCIAL CONSTRAINTS MODERATE THE EFFECTS OF EXPRESSIVE WRITING AND MEANING MAKING INTERVENTIONS

Crystal Park, PhD

Introduction: Myriad studies have tested the efficacy of expressive writing on health and well-being in coping with stressful experiences. Findings have generally been supportive but mixed, suggesting that moderating variables may influence the effects of writing. Further, making meaning has been proposed to be the primary mechanism of effect, yet has rarely been directly tested. We compared a standard expressive writing condition to an explicit meaning making condition and a control writing condition and examined social constraints and engagement in the task as potential moderators.

Method: Participants were 471 college students prescreened to have experienced a DSM-level trauma. Participants were randomized to conditions and wrote about their assigned topics once per week for a month, all online. Assessments were made pre- and post-writing at four month follow-up. Questionnaires including social constraints, anxiety and depression. Task engagement was reliably coded by independent raters.

Results: No main effects were demonstrated for any of the 3 writing conditions and no effects were found for task engagement. However, repeated measures ANCOVA predicting anxiety revealed that the effect of expressive writing was moderated by social constraints, = .05, such that expressive writing was more beneficial for those with high social constraints. Parallel effects were also found for depression, (2, 267) = 3.16, = .04. The opposite effects were found for the meaning-making writing condition, suggesting that those lower in social constraints benefitted more from explicit meaning making.

Conclusion: The salutary effects of expressive writing may be stronger for those with higher social constraints. For such individuals with more limited opportunities to disclose and discuss their stressors with others, expressive writing may be more beneficial, yet for those with lower social constraints, meaning making may accelerate effective coping.

Symposium 14D

THE STARGARDT'S EXPERIENCE: A QUALITATIVE INVESTIGATION OF LIVING WITH A RARE EYE DISEASE

Angie S. LeRoy, BS

Background: In the current qualitative investigation, we aim to better understand individuals' experiences with Stargardt's, a rare degenerative eye disease. We present qualitative analyses conducted using participants' essays written as part of a study examining the effectiveness of expressive writing in reducing negative health outcomes among those with Stargardt's. In an effort to obtain a representative sample of Stargardt's patients, recruitment occurred via local, international, and online support groups, and via 399 retina specialists. In this previously published study, participants who wrote about their stressful experiences with Stargardt's disease (experimental condition) reported improved psychological health at a three week follow-up, and improved physical health at a six week follow-up compared to those who wrote about mundane details of their day (control condition).

Methods: The current study investigated the expressive writing essays written by the 22 participants in the experimental condition. Essay content was analyzed for common themes via a qualitative thematic content analysis, derived from principles of both Grounded Theory and Phenomenological Analysis.

Results: Participants reported frustration with the diagnosis process and often felt misunderstood, even by their care providers. Other themes included loss of independence, frequent social embarrassment, and the negative impact of Stargardt's on their personal and professional lives. Positive experiences included utilization of effective coping strategies and social support networks.

Discussion: Implications for researchers and practitioners are provided, to influence intervention design and comprehensive care. Use of qualitative methods can enhance our understanding of the experience among those with rare diseases.

CORRESPONDING AUTHORS: Qian Lu, MD, PhD, University of Houston, Houston, TX, 77004; qlu.ucla@gmail.com; Lindsey Rodriguez, Ph.D., University of Houston, Houston, TX, 77024; lindsey.rodriguez1@gmail.com; Crystal Park, PhD, University of Connecticut, Storrs, CT, 06355; crysdara@aol.com; Angie S. LeRoy, University of Houston, Houston, TX, 77098; angie.s.leroy@gmail.com

Symposium 15 1:45 PM-3:00 PM

ADVANCES IN INTERSECTIONALITY: METHODOLOGICAL APPROACHES, RESEARCH FINDINGS, INTERVENTION STRATEGIES

Valerie A. Earnshaw, PhD[1], Carmen Logie, MSW, PhD[2], Lisa Bowleg, Ph.D.[3], Laura M. Bogart, PhD[1], Sannisha K. Dale, PhD, EdM[4]

[1]Harvard Medical School, Boston, MA; [2]University of Toronto, Toronto, ON, Canada; [3]The George Washington University, Washington, DC; [4]Harvard Medical School/ Massachusetts General Hospital/ Boston Children's Hospital, Dorchester, MA

There is growing recognition of the importance of adopting intersectional approaches when studying the effect of stigma (social devaluation and discrediting) on mental and physical health outcomes. Whereas traditional stigma approaches focus on stigma associated with one socially devalued characteristic in isolation (e.g., race only), intersectionality approaches seek to explore interdependence among multiple co-occurring socially devalued characteristics (e.g., race, sexual orientation, and HIV-status) and consider how unique experiences associated with co-occurring characteristics contribute to health outcomes. Despite recognition of the importance of adopting intersectionality approaches, however, empirical understandings of the role of intersectionality in health outcomes and intervention strategies for people experiencing stigma associated with multiple socially devalued characteristics remain limited. The proposed symposium brings together five presentations on intersectionality research to address these gaps and spotlight advances in intersectionality research. Presentations will represent diverse methodological approaches (quantitative, qualitative) and populations of interest (lesbian, bisexual, and queer women; Black men; HIV-positive Black men who have sex with men; residents of a diverse, economically disadvantaged community). They will further provide novel empirical insights into the role of intersectionality in a range of mental and physical health outcomes (depressive symptoms, stress, coping, HIV risk behavior, overall health). The final presentation will review the development and preliminary results of an intervention to improving coping with stigma associated with multiple socially devalued characteristics among HIV-positive Black men who have sex with men.

Symposium 15A

EXPLORING INTERSECTIONAL DISCRIMINATION WITHIN A COMMUNITY SAMPLE: A LATENT CLASS ANALYSIS

Valerie A. Earnshaw, PhD

Intersectionality research often explores the experience of discrimination associated with multiple co-occurring socially devalued characteristics. Researchers have traditionally followed a deductive approach to determining which clusters of characteristics to study, often guided by specific health disparities (e.g., Black men who have sex with men at risk for HIV). Although this approach can lead to important insights, it has left a gap in understanding how characteristics associated with discrimination cluster within diverse community settings. In the current investigation, we adopt an inductive approach by exploring how these characteristics cluster in a low-resource urban setting in the US. Data were drawn from a community health survey conducted with adults of randomly selected households in New Haven, CT. The analytic sample included 675 adults who reported experiencing discrimination and made at least one attribution for discrimination. Latent class analysis was employed to derive classes of individuals based on their attributions for discrimination. A seven-class model represented the best fit for the data. Class 1 (29.3% of sample) primarily attributed discrimination to race/ethnicity; class 2 (17.0%) to an average of 4 characteristics spanning a range of characteristics; class 3 (15.1%) to appearance, language, and/or weight; class 4 (14.5%) to income; class 5 (12.4%) to age; class 6 (6.2%) to an other characteristic not provided by the scale; and class 7 (5.4%) to an average of 7 characteristics spanning a range of characteristics. Results highlight that class 2 participants reported greater frequency of discrimination and more stress than other classes of participants. Our discussion centers on the unique contribution of this inductive analytic approach to understanding intersectionality, including its potential for identifying classes of individuals experiencing discrimination associated with multiple socially devalued characteristics.

Symposium 15B

INTERSECTIONALITY AND SYNDEMICS AMONG LESBIAN, BISEXUAL AND QUEER WOMEN IN TORONTO, CANADA

Carmen Logie, MSW, PhD

Objective: Sexual minority health disparities have been situated in contexts of social inequity. For instance, higher rates of mental health concerns among lesbian, bisexual and queer women (LBQ) women in comparison with heterosexual women are associated with sexual stigma. Intersectional approaches to stigma underscore the synergistic effects of social exclusion produced through multiple forms of marginalization. Syndemics refers to the interaction between social inequities and multiple co-occurring health problems. We explored intersecting forms of marginalization with syndemic production among LBQ women in Toronto, Canada.Methods: We conducted an internet-based survey with a peer-driven recruitment sample of LBQ women in Toronto. We assessed the impacts of marginalization (sexual stigma, economic insecurity) and protective factors (social support) on three health outcomes: low self-esteem, low self-rated health (SRH), and depression symptoms. A syndemic variable was created to indicate experiencing 2 or more of these health outcomes. We conducted multivariate logistic regression analyses to explore correlates of experiencing each health problem and the syndemic condition.Results: Two-thirds (67.2%) of participants (n=466) reported economic insecurity. Income insecurity was associated with significantly higher rates of perceived sexual stigma, enacted sexual stigma, and lower rates of social support. Over two-thirds (40.6%) of respondents reported experiencing a syndemic condition. The social and structural variables (sexual stigma, economic insecurity, low social support) were significantly associated with the syndemic factor and most were associated with each health outcome (depression symptoms, self-esteem, SRH).Conclusions: Multiple dimensions of social exclusion were correlated with deleterious health outcomes, congruent with an intersectional approach to syndemics theory. Stigma regarding poverty may exacerbate other forms of social exclusion such as sexual stigma. Low social support was associated with economic insecurity and sexual stigma, reflecting social isolation processes central to both stigma and poverty. These findings call attention to intersecting structural and social contexts of health among LBQ women.

Symposium 15C

“AS A BLACK MAN, I GOT 99 PROBLEMS AND I AIN’T THINKING ABOUT HIV”: INTERSECTIONALITY AND HIV RISK

Lisa Bowleg, PhD

Background: The HIV/AIDS epidemic has been severe for Black men in the U.S., particularly those who live in Washington, DC. Research focused on how Black men’s multiple intersecting social identities (e.g., race, gender, sexual identity, SES) at individual and social-structural levels and attendant stigma are associated with Black men’s sexual HIV risk is rare, however. Intersectionality, with its emphasis on mutually constituted social identities, stigma, and effects of micro and macro factors is an important, albeit understudied, analytical framework for understanding sexual HIV risk. Informed by intersectionality, this qualitative study examined three research questions: (1) Where does HIV risk rank among Black men’s top priorities?; (2) How do Black men conceptualize their sexual HIV risk?; and (3) What are the implications of Black men’s intersectionality for interventions? Methods: Focus group participants were 83 mostly heterosexual-identified (90%) Black men (ages 18-48) recruited from socioeconomically diverse neighborhoods in Washington, DC. We conducted thematic analysis of the data.Results: Analyses highlighted that: (1) compared with social-structural (e.g., unemployment, incarceration, police surveillance/harassment), concerns about HIV risk ranked low; (2) participants tended to blame others for sexual risk, but rarely problematized *their* sexual risk behaviors; and (3) interventions that directly address issues relevant to Black men’s intersectionality, stigma and HIV prevention could be effective. Conclusions: The study’s findings: (1) advance knowledge about the role of Black men’s experiences of intersectionality, stigma, and sexual HIV risk; and (2) highlight how an intersectionality and stigma-based approach can more effectively inform future HIV prevention research and interventions for Black men and Black communities.

Symposium 15D

EXPLORING STRATEGIES FOR COPING WITH DISCRIMINATION FROM INTERSECTING IDENTITIES IN HIV + BLACK MSM

Laura M. Bogart, PhD

Background: Black men who have sex with men (MSM) living with HIV are at the nexus of three intersecting, devalued identities from which they experience discrimination. Black-related, HIV-related, and gay-related discrimination experienced by HIV-positive Black MSM has been associated with worse medication adherence and health outcomes. Limited research exists on strategies that HIV-positive Black MSM use to cope with discrimination from intersecting identities.Method: We conducted a qualitative study to gather information on strategies that HIV-positive Black MSM use to cope with institutional, interpersonal, and traumatic discrimination related to being Black, HIV-positive, and perceived as gay. Forty HIV-positive Black MSM participated in qualitative semi-structured interviews. Interviews were audio-recorded and transcribed. Using grounded theory and facilitated by qualitative analysis software, narratives were coded for experiences with discrimination. Results: Participants more frequently spoke about Black-related institutional discrimination (e.g., by law enforcement) and HIV- and gay-related interpersonal discrimination (e.g., by friends/family). Participants discussed several common ways of coping across intersectional identities, including using strategic avoidance (not engaging with perpetrators) and externalized blame (placing responsibility on perpetrators). As compared to other ways of coping, participants more frequently discussed using selective disclosure (planning who to tell about serostatus) for HIV-related discrimination, strategic avoidance for Black-related discrimination, and externalized blame for gay-related discrimination. Selective disclosure (planning who to tell about serostatus) was uniquely used to cope with HIV-related discrimination, versus other discrimination types.Conclusion: Our findings may inform the development of interventions that aim to enhance existing adaptive coping strategies among HIV-positive Black MSM.

Symposium 15E

STILL CLIMBIN': AN INTERVENTION TO ENHANCE COPING WITH DISCRIMINATION FOR HIV-POSITIVE BLACK MSM

Sannisha K. Dale, PhD, EdM

Background: Compared to Whites, HIV-positive Black men who have sex with men (MSM) have poorer medication adherence and health outcomes. Some research suggests that discrimination due to their intersecting devalued identities (Black, HIV, gay) may facilitate these disparities. Our team developed a culturally tailored intervention for this population to enhance effective coping strategies for discrimination based on these intersecting identities.Method: HIV-positive Black MSM (N=11) participated in an 8-session pilot group intervention, facilitated by two Black MSM (licensed social worker, HIV-positive community health worker). The two-hour sessions used cognitive behavior therapy (CBT; tracking thoughts, emotions, and behavior in response to discrimination experiences) and dialectical behavioral therapy (DBT; mindfulness, chain analysis, situating responses in relation to life goals/values) strategies. Sessions focused on building group cohesion; discussing concepts of identity, discrimination, and intersectionality; examining and evaluating coping responses to discrimination; identifying existing functional coping skills; learning and applying the CBT Model to enhance coping with discrimination; overcoming barriers to using effective coping strategies (such as seeking social support); addressing medical mistrust; and acknowledging structural discrimination.Results: In a process evaluation, across all sessions, 88-100% of participants said that they liked the sessions, felt comfortable in the group, and learned new information and skills. In exit interviews, participants shared that the intervention increased their awareness of different forms of discrimination (e.g., overt vs. subtle) and enhanced existing skills to cope with discrimination for intersecting identities.Conclusion: Findings from this pilot provide preliminary support for intervention acceptability and feasibility. The protocol is currently being assessed in a small RCT.

CORRESPONDING AUTHORS: Valerie A. Earnshaw, PhD, Harvard Medical School, Boston, MA, 02115; valerie.earnshaw@childrens.harvard.edu; Carmen Logie, MSW, PhD, University of Toronto, Toronto, ON, M6P 3A5; logiech@yahoo.com; Lisa Bowleg, Ph.D., The George Washington University, Washington, DC, 20052; lbowleg@email.gwu.edu; Laura M. Bogart, PhD, Harvard Medical School, Boston, MA, 02115; laura.bogart@childrens.harvard.edu; Sannisha K. Dale, PhD, EdM, Harvard Medical School/Massachusetts General Hospital/ Boston Children's Hospital, Dorchester, MA, 02122; skdale@mgh.harvard.edu

Symposium 16 1:45 PM-3:00 PM

COMMUNICATING COMPLEX CANCER-RELATED PROTOCOLS USING CONVERSATIONAL AGENTS

Timothy W. Bickmore, PhD[1], Shuo Zhou, MS[1], Zhe Zhang, MS[1], Michael Paasche-Orlow, MD, MPH[2], David Ahern, PhD[3]

[1]Northeastern University, Boston, MA; [2]Boston Medical Center, Boston, MA; [3]Brigham and Women's Hospital, Boston, MA

Protocols for oncology treatment or cancer-related clinical trials can be very complex, especially for patients with low health literacy. Computer animated agents that simulate face-to-face conversation represent a promising approach for conveying this kind of complex health information to patients. These systems can produce verbal and nonverbal conversational behaviors that signify understanding and mark significance, and can convey information in redundant channels of information (e.g., hand gestures, such as pointing, facial display of emotion, and eye gaze), to maximize comprehension much in the way effective health providers communicate. They can adapt their messages to the particular needs of patients and to the immediate context of the conversation. Computer agents can provide health information in a consistent manner and in a low-pressure environment in which patients are free to take as much time as they need to thoroughly understand the information. Such systems can be used to augment the interactions patients have with their health providers and with the research staff members. This is particularly important as health providers and research staff members frequently fail to elicit patients' questions, and patients with limited health literacy are even less likely than others to ask questions.This symposium presents a series of related efforts to use conversational agents to explain cancer-related information to patients, including the explanation of informed consent documents for cancer screening and oncology trials, and a conversational agent that helps individuals find cancer-related clinical trials in which they may be interested.Discussant: Dr. David Ahern, PhD, National Cancer Institute, Brigham & Women's Hospital

Symposium 16A

AUTOMATED SUPPORT FOR CANCER CLINICAL TRIALS USING CONVERSATIONAL AGENTS

Timothy W. Bickmore, PhD

Given the complexity of many oncology clinical trial protocols, individuals with inadequate health literacy may have an especially difficult time finding trials they may want to volunteer for, as well as difficulty understanding and adhering to study protocols once enrolled. To help individuals find clinical trials, we have developed a conversational agent-based search engine, in which the conventional web-based search engine experience is reframed as an extended conversation, in which users are first interviewed about their requirements and preferences, then shown candidate trials, with the agent providing as much assistance along the way as possible. We are conducting a between subjects randomized experiment, comparing the agent (AGENT) to the web-based National Cancer Institute clinical trials search engine (CONTROL) in a cohort of patients with cancer. Participants perform two search tasks: 1) searching for a trial for themselves; 2) search for a trial for someone else with specified eligibility criteria, as a standardized test. To date, 51 participants have completed the protocol, aged 59.2 years (SD 10.4), 61% male, 39% low health literacy (using REALM), 14% reported never using a computer before and another 33% reported only using one a few times, and 29% reported never using a web-based search engine and another 28% reported only using one a few times. In Task 1, 75% of low literacy users found a trial they were interested in using the AGENT, compared to 62.5% in CONTROL. No low literacy participants were able to complete Task 2 using the conventional search engine, compared to 41.7% using the AGENT. Low literacy participants felt significantly less pressure to enroll using the AGENT compared to CONTROL. All participants reported significantly higher satisfaction with AGENT compared to CONTROL, spent more time using the AGENT (12.6 vs. 9.8 minutes on Task 1; 9.7 vs. 6.5 minutes on Task 2), but reported a significantly more positive attitude towards the amount of time spent in AGENT vs. CONTROL for Task 2. The preliminary results indicate that the agent interface is significantly more usable by individuals with low health literacy compared to a conventional keyword-based search interface, and that regardless of literacy, all participants were more satisfied with the agent.

Symposium 16B

USING EYE TRACKING TO DRIVE AUTOMATED PROACTIVE ASSISTANCE WITH CANCER-RELATED PROTOCOLS

Shuo Zhou, MS

Research over the last 40 years has demonstrated reliable relationships between gaze behavior while reading, and understanding of the material being read. We have developed an automated system that leverages these relationships in a system that offers proactive assistance to individuals as they read an informed consent document when it detects they are struggling with particular words or sections. Based on prior work showing that animated agents that simulate face-to-face conversation were particularly well-accepted by individuals with low health literacy, we started with conversational agent system designed to explain informed consent documents, and augmented it with input from an eye tracker (Tobii X60). In this system, the agent appears to hold the document and can point to it while explaining the content to patients. If a patient gazes at a health-related term for longer than 600ms, or "looks for help" by gazing at the agent for longer than 1000ms, the agent proactively offers an explanation of the term. Following an explanation (or if the user gazed away from the document), the agent would look at the document and briefly gesture at the location the user left off in an attempt to re-orient them to the document. The gaze-augmented agent was evaluated in a pilot study involving 16 participants (38% low health literacy), in which it was compared to the same system with the gaze features ablated, and a version without any agent, in a 3-arm within-subjects experiment involving the explanation of a colorectal screening clinical trial. Results indicate the approach is feasible and accepted, although the timing parameters need to be dynamically adjusted.

Symposium 16C

PEDAGOGICAL STRATEGIES FOR AUTOMATIC EXPLANATION OF COMPLEX CANCER PROTOCOLS TO PATIENTS

Zhe Zhang, MS

Informed consent documents for cancer-related clinical trials can be very difficult to understand, especially for individuals with low health literacy. We have conducted a design experiment to evaluate different strategies that a conversational agent can use to explain these documents to prospective volunteers, specifically varying the amount of information that users hear about a clinical trial. Three explanation strategies were compared in a counterbalanced within-subjects experiment: short overview only (SHORT), overview plus a detailed reading of the informed consent document (DETAILED), and an adaptive strategy in which users are given comprehension checks of each major section of the document with detailed review contingent upon their understanding (TAILORED). In all conditions, participants were subsequently able to review the informed consent document on their own prior to assessment. Seventy-four individuals, aged 44.2 (sd 23.1), 67.6% female, 25.7% low health literacy (using REALM) have participated to date. There were no significant differences on tested comprehension by condition, but there was a significant difference by literacy, F(1, 69)=7.79, p=.007. There was a significant interaction between condition and literacy on self-reported satisfaction, such that high literacy individuals liked the detailed strategy the least, while low literacy individuals liked it the most, F(2,144)=3.12, p < .05. Finally, low literacy participants rated satisfaction with all versions of the agent higher compared to high literacy participants, F(1,72)=4.13, p < .05. The results indicate that when engaging in complex topics, computer animated agent systems may need to include different pedagogical strategies that can adapt in an automated fashion to the user's learning needs.

CORRESPONDING AUTHORS: Timothy W. Bickmore, PhD, Northeastern University, Boston, MA, 02115; bickmore@ccs.neu.edu; Shuo Zhou, MS, Northeastern University, Boston, MA, 02115; zhoushuo06@gmail.com; Zhe Zhang, MS, Northeastern University, Boston, MA, 02115; zessiez@gmail.com; David Ahern, PhD, Brigham and Women's Hospital, Boston, MA, 02115; david.ahern@nih.gov

Symposium 17 1:45 PM-3:00 PM

FROM AVAILABILITY TO ADVERTISEMENT: FACTORS PROMOTING FREQUENT INDOOR TANNING AMONG YOUNG ADULTS

Dawn Holman, MPH[1], Sherry L. Pagoto, PhD[2], Nancy Asdigian, PhD[3], Joel J. Hillhouse, Ph.D.[4], Lori A. Crane, PhD, MPH[5], Alan Geller, MPH, RN[6]

[1]Centers for Disease Control and Prevention, Division of Cancer Prevention and Control, Atlanta, GA; [2]University of Massachusetts Medical School, Worcester, MA; [3]Colorado School of Public Health, Aurora, CO; [4]East Tennessee State University, Johnson City, TN; [5]Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO; [6]Department of Social and Behavioral Sciences, Harvard School of Public Health, Boston, MA

Indoor tanning devices needlessly expose users to ultraviolet radiation, a known carcinogen, thus increasing their risk of developing skin cancer. While public health efforts to reduce harms from indoor tanning often focus on protecting minors, less work has been done to address this high-risk exposure among young adults. Nearly one-third of white women aged 18-25 engage in indoor tanning each year, and rates of melanoma are on the rise among this age group as well as older age groups. These statistics highlight the urgent need for efforts to reduce indoor tanning among young adults. This symposium will feature four presentations about the many factors that promote frequent use of indoor tanning among young adults in the United States. In the first presentation, Dr. Sherry Pagoto will present observational data on the availability of indoor tanning devices on U.S. college campuses and in off-campus housing. Dr. Nancy Asdigian will give the second presentation in which she will present data on the operating practices, availability, costs, and use of indoor tanning at locations other than tanning salons such as fitness centers and apartment complexes (referred to here as secondary locations). Building on the conversation about indoor tanning at secondary locations, Dr. Joel Hillhouse will present data from a nationally-representative survey about use of secondary tanning facilities among young adult women and psychosocial correlates of tanning in these locations. In the fourth presentation, Dr. Lori Crane will shift the discussion from availability to advertisement, presenting data on the social media promotional practices of indoor tanning salons which encourage frequent indoor tanning. Mr. Alan Geller will lead a critical discussion of the four presentations and highlight ways in which these research findings can be used to identify strategies to reduce indoor tanning among young adults.

Symposium 17A

AVAILABILITY OF TANNING BEDS ON U.S. COLLEGE CAMPUSES

Sherry L. Pagoto, PhD

Indoor tanning is widespread among young adults in the US despite alarming evidence establishing it as a serious risk factor for skin cancer.While colleges enroll a large proportion of this at-risk group, the availability of tanning salons on or near college campuses has not been formally evaluated. The purpose of the present study was to evaluate the availability of indoor tanning facilities on US college and university campuses (colleges) and in off-campus housing surrounding but not owned by the college. We also explored payment options for tanning and differences in indoor tanning on and/or near campus by geographic region and college characteristics. The top 125 US colleges/universities listed on US News and World Report comprised the sample. Investigators searched the colleges' and housing websites and contacted them by phone inquiring about tanning services. Results revealed that 48% of colleges had indoor tanning either on campus or in off-campus housing. On-campus indoor tanning was available in 12% of colleges while indoor tanning in off-campus housing was found for 42% of colleges. Campus cards could be used to purchase tanning locally for 14.4% of colleges. The vast majority of off-campus housing complexes with indoor tanning (96%) allowed free unlimited access to tanning in the rental agreement. Colleges in the South and Midwest were more likely to have indoor tanning on campus or in off-campus housing than colleges in the Northeast and West. Colleges with smoke-free policies and schools of public health were not less likely to have indoor tanning on-campus or in off-campus housing. Reducing the availability of indoor tanning in and around college campuses would seem an important public health target.

Symposium 17B

UNCOVERING HIDDEN U.V. TANNING IN SIX U.S. CITIES

Nancy Asdigian, PhD

Background: Few studies of indoor tanning have focused on U.V. tanning facilities in fitness centers, salons, apartments, and university residences. This investigation addresses that gap by collecting data on the availability of 'secondary tanning facilities' in six U.S. cities; the use of those facilities by young adults; and their costs, operating practices, and licensure status.

Methods: We selected the four zip code areas with the highest proportion of 18-24 year old whites in six cities diverse in geography, climate, and level of tanning regulation. Internet searches were used to find all potential UV tanning facilities in selected areas, and telephone interviews determined the availability of tanning, operating practices, and pricing. Licensure status was established by reviewing lists provided by regulatory agencies. Use of secondary facilities was estimated from an online survey of young adult indoor tanners in the six cities.

Results: Across all cities, secondary tanning facilities were less common than indoor tanning salons and were found most often in large apartment complexes, university residences, and gyms. Secondary facilities (46%) were more likely than salons (0%) to offer free U.V. tanning. When charged, costs were lower in secondary facilities than in salons, both for individual sessions =$7.00 vs. $18.10, respectively) and for monthly memberships =34.42 vs. 49.00, respectively). Differences in other operating practices were also identified. 43% of secondary tanning facilities were unlicensed compared to 32% of salons. Among young adult indoor tanners, 46% had tanned in one or more secondary facility in the past year – most commonly in a gym (27%) or apartment (18%). 18% used a secondary facility as their main tanning location.

Conclusions: The availability and lower cost of tanning in secondary tanning facilities, combined with the lack of safety/health regulations often in effect for primary tanning locations, is alarming, and suggests that consumer protection policies addressing these facilities are needed

Symposium 17C

PREVALENCE AND CORRELATES OF TANNING BED USE IN LOCATIONS OTHER THAN TANNING SALONS

Joel J. Hillhouse, PhD

Skin cancer, with 3.5 million US cases yearly, is an important public health problem. The risk of melanoma, the most deadly form of skin cancer, is doubled by indoor tanning (IT) before 35 years old, with the risk further increased 1.8% for each tanning bed use per year. IT research as well as policy initiative to regulate IT have primarily focused on tanning in salons. However, tanning beds can be found in a variety of other locations such as apartment buildings, gyms and homes. To date, no research has examined the prevalence or psychosocial correlates of tanning bed use in these non-salon locations. This study fills this gap by exploring these questions in a nationally representative young adult (18-25 years old) female sample. Female participants (N = 812), recruited through GfK Knowledge Networks, completed a survey that included information on their tanning history and current tanning use including what locations they have used and are currently using. We also collected information on region, age, ethnicity, income and education as well as a variety of psychosocial correlates (reasons for tanning, tanning dependence, attitudes, appearance motivation, BMI, and smoking status). Prevalence rates were derived nationally and for each region. Forty-one percent of indoor tanners report using tanning beds in locations other than salons with the most common location being a gym followed by a beauty salon. Non-salon use was more common in non-Metro areas (53% vs 39%), and appears to be more common in the Midwest and South. Individuals who use non-salon tanning locations were compared with those who exclusively use salons on demographic and psychosocial variables.

Symposium 17D

SOCIAL MEDIA PROMOTIONAL PRACTIVES OF UV TANNING SALONS IN SIX U.S. CITIES

Lori A. Crane, PhD, MPH

Background: Indoor UV tanning is categorized as a carcinogen by the WHO. Systematic data on promotional practices are sparse and advertising is unregulated at the national level. Methods: Six U.S. cities were selected to provide diversity in geography, climate, and tanning regulation. Facebook, Twitter and email accounts were established for a 22 year-old white female tanner in each city. The online personality “liked” tanning salons and followed them on Facebook, Twitter, and Yippit, and joined email listservs. Messages were collected over 5 weeks in fall 2013 and content analyzed. An online survey of 309 young adult frequent tanners 10 indoor tanning sessions in the past year) was conducted in the same 6 cities in 2014.

Results: Tanning salons were heavy users of social media, with 662 messages captured (73% Twitter, 19% Facebook, 4% salon email, and 4% Daily Deal coupon). 35% of messages were devoid of tanning-related content in either words or images, and appeared to serve as a way to keep the tanning salon on the “radar” of the consumer. These messages typically included amusing photos, jokes, or references to media personalities. 48% of messages had words related to tanning. Sunless tanning (17%) was promoted more often than UV tanning (9%), but many of the messages promoted tanning without specifying the type (28%). 32% of messages mentioned price reductions. 28% of the messages made reference to an upcoming holiday, with many specifically promoting being tan for the holiday (17%). Few messages included a beauty claim (4%), mood or mental health claim (1%), importance of a base tan to prevent sunburns (1%), reinforced norms of beauty (13%), or used sex appeal (5%). The online survey revealed that among frequent tanners, 5% found their main tanning location through an online advertisement, 6% through an online search, and 4% through an online deal program such as Groupon. 37% “like” their main tanning location on Facebook, 14% follow it on Twitter, and 38% receive coupons from it through email and/or or text messages.

Conclusions: Tanning salons use social media strategies to establish “friendships” with customers and offer pricing deals that promote customer loyalty and high frequency tanning. These data will be used to inform counter-advertising strategies.

CORRESPONDING AUTHORS: Sherry L. Pagoto, PhD, University of Massachusetts Medical School, Worcester, MA, 01655; sherry.pagoto@umassmed.edu; Nancy Asdigian, PhD, Colorado School of Public Health, Aurora, CO, 80045; nancy.asdigian@ucdenver.edu; Joel J. Hillhouse, Ph.D., East Tennessee State University, Johnson City, TN, 37604; drhillhouse@tanningproject.org; Lori A. Crane, PhD, MPH, Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO, 80045; lori.crane@ucdenver.edu

Symposium 18 1:45 PM-3:00 PM

MULTIPLE HEALTH RISK BEHAVIORAL INTERVENTIONS: SIMULTANEOUS OR SEQUENTIAL AND FOR WHICH BEHAVIORS?

Terry M. Bush, PhD[1], Bonnie Spring, PhD, ABPP[2], Mark D. Litt, PhD[3], David Hyman, MD, MPH[4]

[1]Alere Wellbeing, Seattle, WA; [2]Northwestern University Feinberg School of Medicine, Chicago, IL; [3]University of Connecticut Health Center, Farmington, CT; [4]Baylor College of Medicine, Houston, TX

It is estimated that 80% of health care costs in this country could be prevented with lifestyle changes in smoking, sedentary activity, obesity, unhealthy diets and excessive alcohol consumption. While treatments for each have been proven effective, best practices for addressing co-occurring risk behaviors remain uncertain. In many cases it is suspected that the treatment of two or more health issues simultaneously will put a strain on patients and reduce the efficacy of the treatments. This seminar presents research on sequential vs simultaneous treatments for unhealthy behaviors. Presenters from different disciplines will discuss their research and points of view in light of the evolving body of knowledge on health behavior/risk reduction interventions. Speaker 1 will present two trials of smoking cessation and weight management delivered either simultaneously or sequentially via a population based setting of tobacco quitlines. Speaker 2 will present data on concurrent vs. delayed smoking cessation treatment for alcohol-dependent persons. Speaker 3 will discuss research among smokers with hypertension, intervening on three health risk behaviors (smoking, high dietary sodium intake and sedentary lifestyle) individually, sequentially, or simultaneously. Our chair will discuss the presentations, highlight points of convergence and divergence in the evidence, and summarize implications for translating research into practice. The studies presented in this symposium will address the importance and feasibility of treating multiple health behaviors concurrently. Results like those presented here will have implications for clinical practice and for research into multiple health behaviors.

Symposium 18A

TRANSLATING RESEARCH TO PRACTICE: SIMULTANEOUS OR SEQUENTIAL TREATMENT FOR WEIGHT AND SMOKING?

Terry M. Bush, PhD

Background: A clustering of health risk behaviors such as poor nutrition, inactivity and smoking is common and leads to preventable disease and disability. Two thirds of smokers calling quitlines are overweight or obese and concerned about gaining weight. Successful interventions that address weight gain in the context of tobacco cessation programs have shown that smokers can quit smoking without excessive weight gain. However, the programs are intensive and not widely adopted. Translating such interventions for greater population outreach is needed. Methods: We describe two randomized trials that addressed smoking and weight via a telephone tobacco quitline.

Study 1 translated an efficacious intervention for maladaptive weight concerns in an RCT that compared tobacco treatment alone (TOB) or in combination with weight concerns counseling (WC). Ongoing

Study 2 aims to replicate a 3-arm efficacy trial testing tobacco cessation alone or combined with simultaneous or sequential weight management. Results:

Study 1 (n=2000): the intervention had a weight suppressive effect without harm to abstinence; 51% TOB; 30% WC reported gaining weight after quitting (p=0004) and perceived amount of weight change also differed: -3.4 pounds among the WC vs. +1.8 pounds among TOB (p= .01). WC group also reported fewer weight concerns (p< .0001). Quit rates did not differ.

Study 2 (n=1,914) demonstrates that intensive weight control interventions can be adapted for delivery through standard quitlines using existing staff and protocols and is well received by smokers. Quitlines from 11 worksites and 3 states are participating. Of 6, 656 screened, 3,806 (57%) were eligible, 3173 (83%) were interested, 29% of those screened (1914/6656) were randomized. Preliminary call completion data reveals high numbers of disconnected phone numbers and dropouts: 110 dropped from the study during treatment primarily due to limited time or lack of interest in working on weight. Conclusions: Quitlines are ideal settings for reaching large populations of smokers to implement evidence based treatments. Greater understanding of treatment engagement processes are needed to maximize effectiveness and impact.

Symposium 18B

CONCURRENT V. DELAYED SMOKING CESSATION FOR ALCOHOL-DEPENDENT SMOKERS: EFFECTS ON DRINKING AND RISK

Mark D. Litt, Ph.D.

Objective. The primary aim of this study was to compare the effects of alcohol treatment along with concurrent smoking treatment or delayed smoking treatment on drinking and on process measures related to alcohol relapse risk. *Method*. Alcohol dependent smokers (N = 151) who were enrolled in an intensive outpatient alcohol treatment program and were interested in smoking cessation were randomized to a concurrent smoking cessation (CSC) intervention or to a delayed smoking cessation (DSC) intervention scheduled to begin three months later. Daily assessments were obtained using an Interactive Voice Response (IVR) system for 12 weeks after the onset of smoking treatment in the CSC condition, and before beginning smoking treatment in the DSC condition. *Results*. Seven-day CO-verified smoking abstinence in the CSC condition was 50% at 2 weeks and 19% at 13 weeks compared to 2% smoking abstinence at both time periods for the DSC condition. Drinking outcomes were not significantly different for CSC vs. DSC treatment conditions. On daily IVR assessments, CSC participants had significantly lower positive alcohol outcome expectancies relative to DSC participants. Analysis of daily data using multilevel modeling with time-varying covariates showed that daily smoking abstinence was significantly associated with lower alcohol consumption, lower urge to drink, lower negative affect, lower positive alcohol outcome expectancies, greater alcohol abstinence self-efficacy, greater alcohol abstinence readiness to change, and greater perceived self-control demands across the 12-weeks from the start of concurrent alcohol-tobacco treatment. *Conclusions*. Addition of smoking cessation treatment to alcohol treatment did not result in increased drinking. Daily process results provide support for recommending smoking intervention concurrent with intensive outpatient alcohol treatment.

Symposium 18C

SIMULTANEOUS VERSUS SEQUENTIAL COUNSELING FOR MULTIPLE BEHAVIOR CHANGE

David Hyman, MD, MPH

Clinical practice guidelines for secondary prevention of cardiovascular disease require counseling regarding multiple behaviors, including physical activity, dietary intake, smoking, and others. Research to date has provided little information on the most effective ways to approach multiple behavioral change counseling in high risk, primary care patient populations. Methods: We implemented a randomized trial to test the hypothesis that a behavioralcounseling program based on Stages of Change was more effective at eliciting multiple behavior change in middle-aged, adult smokers with hypertension when each of three health risk behaviors (smoking, high dietary sodium intake and sedentary lifestyle) was addressed individually and sequentially, than when all three behaviors were addressed simultaneously. Eligible participants, recruited from an African-American primary care clinic population, were randomized to one of three conditions: 1) one in-clinic counseling session on all three behaviors every six months, supplemented by motivational interviewing by telephone over an 18-month period; 2) a similar counseling protocol that addressed a new behavior every six months; 3) referral to< >existing health education classes (“usual care”). The primary endpoint was the proportion of participants who met at least two behavioral criteria after 18 months (urine negative for cotinine, 24-hour urine sodium < 100 mmol/L, and an increase of 10,000 pedometer steps per week over baseline). The hypothesized effect sizes were 40% in sequential, 20% in simultaneous and 5% in “usual care.” Results: 289 individuals (67% female, mean age 53.3 years) were randomized, and 230 (79.6%) completed the study. At 18 months, 7% in simultaneous, 5% in sequential and 6% in usual care met the primary endpoint. Analysis of secondary outcomes suggested that simultaneous counseling motivated more change in single behaviors than sequential counseling. Conclusions: Primary care populations are unlikely to change multiple high risk behaviors with carefully designed, yet low-intensity, interventions. Counseling regarding multiple adverse health behaviors simultaneously may be more effective in triggering change in at least one behavior than addressing each behavior individually.

CORRESPONDING AUTHORS: Terry M. Bush, PhD, Alere Wellbeing, Seattle, WA, 98104; terry.bush@alere.com; Mark D. Litt, PhD, University of Connecticut Health Center, Farmington, CT, 06030; Litt@uchc.edu; David Hyman, MD, MPH, Baylor College of Medicine, Houston, TX, 77096; Dhyman@bcm.edu

Symposium 19 1:45 PM-3:00 PM

EXAMINING PROBLEMATIC SUBSTANCE USE IN CHRONIC PAIN: SMOKING, ALCOHOL, AND PRESCRIBED OPIOIDS

Kevin E. Vowles, PhD[1], Emily Law, PhD[2], Katie Witkiewitz, PhD[1]

[1]University of New Mexico, Albuquerque, NM; [2]University of Washington School of Medicine & Seattle Children's Hospital, Seattle, WA

Chronic pain carries with it a significant healthcare burden – it is frequent, disruptive, and costly. In many treatment settings, there are additional, significant, concerns with regard to the frequency and impact of problematic substance use on chronic pain. Unfortunately, this area lacks clarity from a data-based perspective. For example, the impact of legal substances, such as alcohol and tobacco, on patient physical and emotional functioning is relatively unknown. In addition, with regard to the use of prescribed opioids in the treatment of chronic pain, much has been made of their potential for both benefit *and* harm on patient functioning, yet the prevalence of problematic opioid use is essentially unknown, with recent reviews suggesting prevalence ranges from 0%-50%. The overarching objective of this symposium is to enhance precision and clarity in the area of substance use in chronic pain. First, Dr Law will present the results of a comparison of adolescents with and without chronic pain with regard to frequency of alcohol and tobacco use and the intersection of such use with psychosocial and pain-related functioning. Second, Dr Witkiewitz will describe the association between pain and alcohol treatment outcomes across two large multi-site treatment trials for alcohol use disorder. Finally, Dr Vowles will describe the results of an updated and expanded systematic review of problematic opioid use among chronic pain patients, where different types of problematic use and differences in the methods of reviewed studies were coded and analyzed in the estimation of prevalence rates. While substance use in chronic pain remains a complex issue, this symposium is organized to provide direct guidance for clinicians, researchers, and policy makers working in this area with regard to scope, impact, and data-based recommendations.

Symposium 19A

RATES OF OPIOID MISUSE, ABUSE, AND ADDICTION IN CHRONIC PAIN: A SYSTEMATIC REVIEW AND DATA SYNTHESIS

Kevin E. Vowles, PhD

Opioid use in chronic pain treatment is complex, as patients may derive both benefit *and* harm. The identification of individuals currently using opioids in a problematic way is of importance at present given the substantial recent increases in prescription rates and consequent increases in morbidity and mortality. The present review provides updated and expanded information with regard to rates of problematic opioid use in chronic pain. Because previous reviews have indicated significant variability in this literature, several steps were taken to enhance precision and utility. First, problematic use was coded using explicitly defined terms, referring to different patterns of use (i.e., misuse, abuse, and addiction). Second, average prevalence rates were calculated and weighted by sample size and study quality. Third, the influence of differences in study methodology was examined. In total, data from 38 studies were included. Rates of problematic use were quite broad, ranging from < 1% to 81% across studies. Abuse was reported in only a single study. Across most calculations, rates of misuse averaged between 21% and 29% (range 95% CI’s: 13% - 38%) and rates of addiction averaged between 8% and 12% (range 95% CI: 3% - 17%). Only one difference emerged when study methods were examined where rates of addiction were lower in studies that identified prevalence assessment as a primary, rather than secondary, objective. While significant variability remains in this literature, this review provides guidance with regard to possible average rates of opioid misuse and addiction and also highlights areas in need of further clarification. Learning Objectives: Describe sources of variability in current estimates of rates of problematic opioid use in chronic pain. Identify methods used to decrease the influence of variability in this area and describe their effectiveness in doing so. Interpret the rates of problematic opioid use calculated in the current review and their potential relevance to clinical practice.

Symposium 19B

ALCOHOL AND TOBACCO USE IN YOUTH WITH AND WITHOUT CHRONIC PAIN

Emily Law, PhD

Alcohol and tobacco use often begin in adolescence when chronic pain is most likely to emerge, yet research has not characterized tobacco and alcohol use in treatment-seeking youth with chronic pain. Due to the negative social impact of living with chronic pain (Eccleston et al., 2008; Forgeron et al., 2010), these adolescents may have fewer opportunities to use illicit substances than youth without chronic pain. Adolescents with chronic pain also have elevated depressive symptoms (Kashikar-Zuck et al., 2008), a known risk factor for substance use. Using data from a recently completed survey study, this presentation will: 1) compare rates of alcohol and tobacco use in youth with and without chronic pain and, 2) examine psychosocial and pain-related predictors of adolescent alcohol and tobacco use. Participants included 186 adolescents between the ages of 12-18 years (95 with mixed chronic pain conditions from a pediatric pain clinic; 91 without chronic pain from the community). Adolescents with chronic pain were less likely to use alcohol compared to adolescents without chronic pain (7.4% vs. 22%), and as likely to use tobacco (9% vs. 8%). Across groups, youth with higher depressive symptoms, less loneliness, and lower activity limitations were more likely to endorse substance use. Exploratory analyses indicated that youth without chronic pain were more likely to endorse substance use if they reported higher depressive symptoms and less loneliness. In contrast, the only risk factor that emerged from our model for the chronic pain group was activity limitations, with greater activity limitations protecting against substance use among youth with chronic pain. These results suggest that chronic pain may not increase risk for tobacco and alcohol use in adolescents. Research is needed to understand use of other substances in this medically vulnerable population.

Symposium 19C

ASSOCIATION BETWEEN PAIN AND ALCOHOL TREATMENT OUTCOMES: THE ROLE OF NEGATIVE AFFECT

Katie Witkiewitz, PhD

Alcohol lapses, defined as drinking beyond one's limit after a period of abstinence or maintenance of a moderate drinking goal, have been estimated to be as high as 90% in the first year following treatment. Nearly all recent models of the alcohol relapse process have proposed an interaction between biological, psychological, environmental, and social factors in predicting relapse. Yet, to date, very few studies have acknowledged the common experience of physical pain and pain interference, as predictors of alcohol treatment outcomes. The primary goal of the current study was to examine the association between pain and alcohol treatment outcomes in secondary data analyses of data from two multi-site clinical trials for alcohol use disorder (AUD): the COMBINE study (n = 1383) and the United Kingdom Alcohol Treatment Trial (UKATT; n = 742). Results indicated that pain latent factor scores, defined by both pain interference (COMBINE and UKATT) and pain intensity (UKATT), significantly predicted time-to-first lapse, time-to-first heavy drinking lapse, and probability of occasional and frequent heavy drinking following AUD treatment in two separate clinical trials. Results from parallel process growth models indicated that pain and negative affect are closely associated among individuals who received treatment for AUD and that negative affect significantly mediated the association between pain and drinking frequency and intensity following treatment. The social behavior network therapy condition in the UKATT study attenuated the associations, such that greater pain interference and intensity did not predict significantly greater drinking frequency and greater pain interference and intensity did not predict as strong of an association with negative affect, as compared to the motivation enhancement condition. Clinical implications and future research directions will be discussed.

CORRESPONDING AUTHORS: Kevin E. Vowles, PhD, University of New Mexico, Albuquerque, NM, 87131; k.e.vowles@gmail.com; Emily Law, PhD, University of Washington School of Medicine & Seattle Children's Hospital, Seattle, WA, 98125; emily.law@seattlechildrens.org; Katie Witkiewitz, PhD, University of New Mexico, Albuquerque, NM, 87131; katiew@unm.edu

Symposium 20 1:45 PM-3:00 PM

BRAIN STRUCTURE AND FUNCTION AS PREDICTORS OF PHYSICAL ACTIVITY AND DIETARY BEHAVIORS

Erin A. Olson, PhD[1], John R. Best, PhD[2], Swathi Gujral, B.S., B.A[3], Cassandra Lowe, M.Sc.[4], Sean P. Mullen, PhD[5], Edward McAuley, PhD[6]

[1]Harvard Medical School, Boston, MA; [2]University of British Columbia, Vancouver, BC, Canada; [3]University of Pittsburgh, Pittsburgh, PA; [4]University of Waterloo, Waterloo, ON, Canada; [5]University of Illinois at Urbana-Champaign, Urbana, IL; [6]University of Illinois Urbana Champaign, Urbana, IL

Despite established benefits of physical activity and nutritious diet, many individuals find adherence to activity and nutrition guidelines difficult. Adherence rates are low even in vulnerable populations (i.e. older adults, individuals with diabetes) for whom behavioral adherence is crucial to long-term health and well-being. An emerging field in behavioral medicine integrates neuroscience into our understanding of health behavior and argues that fully understanding behavioral adherence requires examining its neuro-cognitive underpinnings. Indeed, executive function skills such as inhibition, attention, task switching, and working memory are necessary for successful behavior change. The purpose of this symposium is to present theoretical paradigms and empirical support for integrating neurocognitive perspectives into modern behavioral medicine. The symposium will begin with examining theoretical frameworks and progress to presenting intervention research. First, a theoretical model integrating social-cognitive theory and neurocognitive approach to physical activity behavior in older adults with type 2 diabetes will be presented. Secondly, longitudinal path relationships between executive function and physical activity will be explored, illustrating that deterioration in executive function is correlated with physical activity reduction. Thirdly, data will be presented suggesting that greater gray matter volume predicts physical activity participation in structured exercise programs. Fourthly, effects of brain stimulation on food cravings and appetitive snack food consumption will be discussed. Finally, the effects of an RCT involving a 4-week multi-modal computerized and kinetic cognitive training program (vs. attention-control health education videos) on subsequent adherence to a 4-month exercise training program will be discussed. This symposium is co-sponsored by the SBM Diabetes and Physical Activity SIGs.

Symposium 19C

ASSOCIATION BETWEEN PAIN AND ALCOHOL TREATMENT OUTCOMES: THE ROLE OF NEGATIVE AFFECT

Erin A. Olson, PhD

Despite the proven benefits of physical activity (PA) to treat and prevent diabetes (T2D), most individuals with T2D do not meet PA recommendations. PA is a complex behavior requiring substantial motivational and cognitive resources. The purpose of this study was to examine social cognitive and neuropsychological determinants of PA behavior in older adults with T2D. The hypothesized model theorized that baseline self-regulation and executive function would indirectly influence PA through self-efficacy (SE). Older adults with T2D (M_{age}=61.8± 6.4) completed either an 8-week PA intervention (n=58) or an online metabolic health education course (n=58) and a follow-up at six months. The primary outcome was PA at month six. Baseline assessments included executive function and self-regulation. SE was assessed at week two. The model fit the data well (χ^2=178.357(144), $p < .05$, CFI=.946, RMSEA=.046, SRMR=.067) with self-regulation directly predicting SE (β=.26, $p < .05$), which in turn predicted physical activity (β =.18, $p < .05$). Working memory predicted SE (β=-.14, $p < .05$) and trended towards predicting physical activity via SE (β=-.03, p=.11). Measures of cognitive flexibility (β=.14; $p < .05$) and interference cost (β=-.11, $p < .05$) directly predicted PA. Baseline PA (β=.59, $p < .01$) and intervention group assignment, with marginal significance (β=-.10, p=.09), predicted follow-up PA. The model accounted for 56.7% of the variance in PA at month six. Findings provide preliminary support of the hypothesized model and indicate that select executive functions (i.e. working memory, interference and cognitive flexibility) predicted PA six months later. The data indicate that executive functions may influence PA differently; working memory predicted PA through SE while cognitive flexibility and interference directly predicted PA. These results underscore the importance of integrating social- and neuro-cognitive approaches to understanding PA behavior in older adults with T2D. Future research warrants the development of interventions targeting executive function, self-regulatory skill development, and SE enhancement.

Symposium 20B

LONGITUDINAL RELATIONS BETWEEN EXECUTIVE FUNCTION AND PHYSICAL ACTIVITY IN OLDER FALLERS

John R. Best, PhD

Executive function (EF) refers to the cognitive processes important for goal oriented and controlled behavior, and may be important to maintenance of various health behaviors, including physical activity (PA), during aging. The current study sought to identify the longitudinal associations between EF and PA over a one-year period in older community-dwelling adults who had experienced a fall in the previous year. Participants were 199 older adults (M_{age}= 81.6, *SD* = 6.5, 63% female) who had been referred by a medical professional to the Vancouver Falls Prevention Clinic as a result of seeking medical attention for a fall in the previous 12 months. Participants were assessed at two time points: baseline and one-year follow-up. At each time point, EF was assessed using five standard EF tasks and PA was self-reported using the International Physical Activity Questionnaire. Structural equation modeling created a latent EF variable at each time point and examined the longitudinal associations between EF and PA over one year. The final model longitudinal model containing covariates fit the data well (χ^2/df = 1.15, Comparative Fit Index = .99, and Root Mean Square Error of Approximation = .03). After controlling for demographic characteristics and general cognitive functioning, EF and PA were correlated at baseline (β= .24, $p < .01$), and deterioration in EF over the year correlated with reductions in PA over the sample period of time (β = .41, p = .05). Neither baseline EF nor baseline PA predicted change in the other variable over the one-year period (*p*s > .20). These results are interpreted from the perspective of a theoretical model that suggests bidirectional connections between EF and PA.

Symposium 20C

GREATER GRAY MATTER VOLUME PREDICTS EXERCISE ADHERENCE IN OLDER ADULTS

Swathi Gujral, B.S., B.A

Exercise is an important factor in maintaining physical and cognitive health throughout the lifespan. However, adherence to exercise regimens is poor with approximately 50% of older adults dropping out within 6 months, which makes it difficult to observe exercise-induced biological changes.Unfortunately, there are few known predictors for exercise adherence, but it is likely that a combination of social-cognitive factors, including self-efficacy, social support, personality traits, executive functions, and self-regulation all relate to exercise adherence. Importantly, all of these factors may rely upon the structural integrity of brain networks. In this study we tested whether grey matter volume prior to the initiation of an exercise intervention would predict adherence to the intervention. Participants included 159 adults aged 60-80 that were randomly assigned to either a moderate-intensity aerobic walking condition or a non-aerobic stretching and toning condition. Participants engaged in supervised exercise 3 times per week for 12 months. Structural magnetic resonance images were collected on individuals before randomization and used for analysis. An optimized voxel based morphometry (VBM) protocol was used to analyze gray matter volume using FSL.We used ordinary least squares regression models with bootstrappingusing the Bootstrap Regression Analysis of Voxelwise Observations (BRAVO) toolbox to test the association between voxel-based grey matter volume and exercise adherence. We found a broad array of regions that significantly predicted exercise adherence ($p < .01$), including medial prefrontal cortex, superior parietal cortex, inferior temporal cortex, and cerebellum. Greater volume in these regions explained 20% of variance in adherence, above and beyond variance explained by self-efficacy. Our results suggest that greater gray matter volume predicts more successful adherence to a 12-month supervised exercise regimen.

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Symposium 20D

TESTING THE CAUSAL STATUS OF THE EF-DIETARY BEHAVIOR LINK USING CORTICAL STIMULATION TECHNIQUES

Cassandra Lowe, MSc

Background: Prior observational studies have demonstrated that individuals with weaker executive functions (EF) are more likely to over consume appetitive (but unhealthy) snack foods; however, the causal status of this association has not been conclusively tested. The present study was designed to determine whether or not modulation of brain centres that support EF, via cortical stimulation procedures, results in corresponding changes in snacking behaviours. Methods: Transcranial magnetic stimulation (TMS; a non-invasive neuroscience used to temporarily modify brain activity) was used to decrease cortical activity in the left dorsolateral prefrontal cortex (DLPFC); participants received both active and sham stimulation. Food cravings were assessed before and after each stimulation session, and following each stimulation session participants completed three EF measures (Stroop, Stop-Signal, and Go No/Go), and a bogus taste test. Results: Results indicated that participants reported significantly stronger increases in food cravings on the reinforcement-anticipation aspects of food cravings following active as compared to sham stimulation ($t(20)$=2.776, p=.012). Additionally, participants consumed significantly more appetitive snack foods following active as compared to sham stimulation ($F(1,20)$=9.450, p=.006). Finally, performance on the Stroop task was significantly impaired following active as compared to sham stimulation ($F(1,20)$=5.261, p=.033), and the stimulation effect on Stroop task performance mediated the stimulation effects on appetitive food consumption (β=.730, t=3.215, p=.005). Conclusion: Together these findings demonstrated that EF strength, vis-à-vis the connection between DLPFC activity and EFs, modulates both subjective food cravings, and snack food consumption. These results suggest that individuals with weak EFs are more likely to over consume high caloric snack foods, which in turn increases the likelihood they will become obese.

Symposium 20E

CORTEX: A RANDOMIZED CONTROLLED TRIAL TO TEST COGNITIVE TRAINING EFFECTS ON 4-MO EXERCISE ADHERENCE

Sean P. Mullen, PhD

Convergent evidence from the scientific literature and fitness industry show poor adherence rates among middle-aged adults to structured exercise programs. In theory, this age group has depleted self-regulatory capacity from multiple life roles.The aim of CORTEX was to test whether cognitive training (CT) could have health behavior transfer effects, enhancing exercise self-regulatory strategy deployment. Middle-aged adults (45-64; M=53.82; 79% female; 78.2% White (vs. 15.1% Black/African-American, 3.4% Asian, 3.3% other; 68.1% college graduate; 63.9% married) were recruited from Central Illinois to participate in a 5-month study. Participants were tested at baseline (a large battery of psychosocial, neuropsychological, and physical functioning assessments) and then randomly assigned to receive 20 hours of pre-exercise training, via *Gaming* (computerized tasks and exergaming; n=59) or attention-control health educational *Videos* (n=60), after which they were post-tested, given a 4-month membership to a local fitness facility, access to a supervised weekly exercise program, and follow-up testing. Primary outcomes included *exercise adherence* (class attendance, exercise dropout rate), *engagement* (scanned keycard visitations, online educational module completion), and *self-efficacy* (i.e., to exercise regularly, overcome barriers to physical activity, and maintain balance). Results from a one-way MANCOVA (Wilk's Lambda .905, F=2.85, $p < .05$), even after adjusting for demographics, support our primary hypothesis, indicating pre-exercise CT had a small-to-medium effect on subsequent 4-month attendance (M = 50.51, *S.E.*= 2.85 vs. M = 42.32, *S.E.* = 2.82, $p < .05$, η^2 =.04) and visitations (M = 36.44, *S.E* = 2.81 vs. M = 27.36, *S.E.* = 2.79, $p < .05$, η^2 =.04), and a medium-to-large effect on dropout (8 vs. 22; $p < .01$, η^2 =.10). A trend towards greater completion of online modules was also found (45.70% vs. 32.90%, p=.055). Exercise-related self-efficacy beliefs were also highest in *Gaming* ($p < .05$). The results of this study have implications for the design of future exercise interventions for adults, particularly the order and timing of implementation strategies. "Booster interventions" prior to the start of exercise may optimize subsequent involvement.

CORRESPONDING AUTHORS: Erin A. Olson, PhD, Harvard Medical School, Boston, MA, 02131; erinolson@hsl.harvard.edu; John R. Best, PhD, University of British Columbia, Vancouver, BC, V6T 1Z3; john.best@ubc.ca; Swathi Gujral, B.S., B.A, University of Pittsburgh, Pittsburgh, PA, 15260; shemacha@gmail.com; Cassandra Lowe, M.Sc., University of Waterloo, Waterloo, ON, N2L 3G1; cassandra.lowe@uwaterloo.ca; Sean P. Mullen, PhD, University of Illinois at Urbana-Champaign, Urbana, IL, 61801; spmullen@illinois.edu

Symposium 21 1:45 PM-3:00 PM

GIVING PATIENTS INCIDENTAL INFORMATION FROM GENOMIC SEQUENCING: INSIGHTS FROM THE CSER CONSORTIUM

Christine Pellegrini, PhD[1], Scott Roberts, PhD[2], Ashley N. Tomlinson, LSW[3], Laura Rodriguez, PhD[4]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]University of Michigan, Ann Arbor, MI; [3]University of Pennsylvania, Philadelphia, PA; [4]National Human Genome Research Institute, Bethesda, MD

Clinical use of genomic sequencing is increasing, driven by improvements in the costs of sequencing, knowledge about genetic causes of disease, and potential for better diagnosis and treatment of genetic diseases. Because genomic sequencing generates data on all or most of a patient's genome (rather than one or a few genes at a time, as with targeted genetic testing), it can contain unexpected information about health risks unrelated to the main reason for sequencing. This "incidental" information varies in its clinical and personal utility and presents challenges for both providers (who must decide whether to analyze and report it) and patients (who must decide whether to learn the information and how to act on it). Yet, it also presents potential targets for behavioral interventions to promote better health, including those focused on disease prevention. The Clinical Sequencing Exploratory Research (CSER) Consortium was funded by the National Human Genome Research Institute to begin building a knowledge base to enable ethical, effective use of genomic sequencing in clinical settings. Presenters in this Health Decision Making SIG-sponsored symposium represent 3 CSER Consortium sites with diverse study populations, including both adult and pediatric patients with various diseases, presenting unique challenges involving incidental genomic information. The presenters will discuss categories of incidental information available to their study populations, challenges affecting patient decision making, and study findings regarding how patients understand and make decisions about getting incidental information. The first speaker will discuss these issues in the context of a study of patients with advanced or refractory sarcoma or rare cancers undergoing sequencing intended to guide "personalized" treatment decisions. The second speaker will focus on family decision making in a study of adolescent patients undergoing sequencing for diagnosis of pediatric genetic disorders. The third speaker will discuss these issues as they apply to adults who sought sequencing in the context of a "diagnostic odyssey" to explain their symptoms. The discussant will comment on the study findings and place them in the broader context of policy and ethical use of sequencing.

Symposium 21A

PATIENT DECISION MAKING ABOUT NON-MEDICALLY ACTIONABLE INCIDENTAL GENOMIC FINDINGS IN NCGENES

Christine Rini, PhD

The NCGENES study—part of NHGRI's Clinical Sequencing Exploratory Research Consortium—is being conducted to inform clinical use of diagnostic genomic sequencing. One study component focuses on providing evidence to inform debate surrounding return of incidental genomic information. Out of concern for potential harm, some argue that we should only return this information if it is clearly medically actionable. Others argue that patients want and are not harmed by non-medically actionable incidental information (NMA-IF). Adult patients participating in NCGENES are randomized to either (1) a control group given only diagnostic and medically actionable incidental information or (2) a decision group given that information and the option to request 6 categories of NMA-IF. This talk focuses on 44 patients currently randomized to the decision group (82% female, 91% White, and varied in terms of education and income). We will describe our categories of NMA-IF, how we prepare patients to make informed decisions about learning them, challenges affecting their decision making, and insights into how they approach it. For instance, their initial interest in learning NMA-IF is high: 80% say they probably or definitely will request at least some NMA-IF. Most are interested in learning their pharmacogenomics (71%), carrier status (61%), risk for common diseases (59%), risk for Alzheimer's disease (59%), and risk for rare but serious genetic diseases (55%). Nearly half are interested in learning their risk for very rare, severe progressive diseases (e.g., ALS; 46%). On average, they anticipate moderately high regret if they choose not to learn these types of NMA-IF (between "somewhat" and "quite a bit"), but less regret if they chose to learn this information (between "a little bit" and "somewhat"). Anticipated regret for getting or not getting NMA-IF is not related to demographics, literacy, numeracy, or knowledge; however, having had genetic testing in the past is associated with less anticipated regret for getting NMA-IF. Patients who want NMA-IF must call to request that we generate it. Despite initial high interest, only 30% have made this call, most often requesting all categories. Implications for clinical care and policy will be discussed.

Symposium 21B

PATIENTS' UNDERSTANDING AND EXPECTATIONS ABOUT USE OF NEXT GENERATION SEQUENCING IN ONCOLOGY

Scott Roberts, PhD

Background: Next generation sequencing (NGS) holds great promise in oncology and other medical disciplines, as individual genomic profiles can inform diagnosis and treatment by identifying underlying molecular causes of disease. For the full potential of NGS to be realized, however, its capabilities and limitations will need to be clarified for patients, with discussion of potential incidental findings. Methods: We surveyed 51 adult patients with advanced or refractory cancer (mean age = 58 years (SD = 13); 53% male; 45% college graduates) who were undergoing sequencing as part of the NIH-funded Michigan Oncology Sequencing (MI-ONCOSEQ) project. Surveys were administered after patients had consented to sequencing and undergone DNA sequencing (via tumor biopsy and blood draw), but before they had received their test results. Survey items assessed their knowledge and expectations regarding NGS, including beliefs about incidental findings that might be generated. Results: Participants generally had good knowledge of basic facts about genome sequencing, (e.g., 88% recognized that "sequencing may give people information about their chances of developing conditions other than cancer"). Although they rated their own scientific knowledge of genetics relatively low (median = 2.0 on a 0-6 scale), most (86%) presumed they would be able to understand their physicians' explanations of sequencing results. Most endorsed beliefs that sequencing results would enable them to enroll in a clinical trial (78%) and would yield information about the cause of their cancer (78%). Despite explanations from genetic counselors and study coordinators to the contrary, many participants (62%-76%) also seemed to assume that incidental findings relevant to a variety of non-cancerous health conditions (e.g., diabetes) would automatically be returned to them. Conclusions: Even in this relatively well-educated sample, many patients held significant misconceptions about the current use of NGS in cancer care, including unrealistically high expectations about its benefits and its potential for yielding actionable incidental findings. Findings suggest a need to develop innovative educational resources for to aid patient understanding and shared decision making in this rapidly emerging area of medicine.

Symposium 21C

"I WANT TO KNOW, BUT I DON'T": ADOLESCENT INVOLVEMENT IN SEQUENCING INCIDENTAL FINDING DECISIONS

Ashley N. Tomlinson, LSW

As part of the NHGRI Clinical Sequencing Exploratory Research program, the CHOP PediSeq project is investigating the process and outcomes of offering whole exome sequencing for diagnosis of pediatric disorders. Families participating in PediSeq are offered the option of receiving incidental findings (IFs) unrelated to the child's presenting condition, including results related to childhood and adult onset medically actionable conditions and carrier status. Little is known about how families, particularly those with adolescents, make decisions about IFs. In this study, we recruited children with unexplained hearing loss, cardiac arrhythmias, mitochondrial disease, and intellectual disability. Families completed an informed consent (IC) session with study physicians and/or genetic counselors. Sessions were recorded and lasted up to 90 minutes. For this analysis, we identified 18 sessions, drawn from the cardiac and mitochondrial disease cohorts, that included adolescents aged 12-19. Investigators coded transcripts by session content and analyzed all data related to discussion of IFs. In most cases, younger adolescents (12-15) were not engaged in family decisions about IF result selections. They were sometimes asked by parents or providers about their opinions, but rarely responded in detail and tended to agree with parent decisions. By contrast, older adolescents were often very involved with family decisions around IFs. Decisions tended to involve significant discussion and were made in an egalitarian style or the child was identified as the primary decision-maker. Some families struggled to make decisions about IFs, with challenges including parent-adolescent disagreement, adolescent uncertainty about readiness to learn IFs, and parental desire to protect the adolescent from potential negative consequences of learning IFs. Some families opted to take the results selection form home to continue discussion outside of the IC session. Ultimately, 88% of families opted to learn all IF results. Our findings suggest that providers working with families with older adolescents may need to facilitate discussion of the pros and cons of IFs in the sessions and allow some families to defer making decisions about IFs.

CORRESPONDING AUTHORS: Christine Pellegrini, PhD, Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; c-pellegrini@northwestern.edu; Scott Roberts, PhD, University of Michigan, Ann Arbor, MI, 48109-2029; jscottr@umich.edu; Ashley N. Tomlinson, LSW, University of Pennsylvania, Philadelphia, PA, 19104; ashley.tomlinson@uphs.upenn.edu

Symposium 22 1:45 PM-3:00 PM

ADVANCES IN DYADIC RESEARCH: EXPLORING NEW DELIVERY FORMATS, INTERVENTION TARGETS & HEALTH BEHAVIORS

Michael A. Diefenbach, PhD[1], Hoda Badr, PhD[1], Cardinale Smith, MD[1], Nathan Goldstein, MD[1], Jorge Gomez, MD[2], William Redd, PhD[1], Tracey A. Revenson, PhD[3], Phapichaya Chaoprang Herrera, MA[1], Cindy Knauer, RN, MS[1], Ash Tewari, MD[1], Simon Hall, MD[1], Gertaud Stadler, Ph.D.[4], Matthew Riccio, Ph.D.[5], Urte Scholz, Ph.D.[4], Sibylle Ochsner, Ph.D.[5]

[1]Icahn School of Medicine at Mount Sinai, New York, NY; [2]I, New York, NY; [3]Hunter College and the Graduate Center, City University of NY, New York, NY; [4]Columbia University, New York, NY; [5]University of Zurich, Zurich, , Switzerland

Cancer has long been recognized as a disease that not only affects the individual but also his/her intimate partners and family members who often provide support and caregiving. Over the past two decades, a burgeoning literature involving dyadic interventions targeting the patient and his/her partner or caregiver has emerged. This research has evolved from workshops that address distress and adjustment after a breast cancer diagnosis, to programs that target a variety of cancers and caregivers and support a range of patient and caregiver care needs across the cancer prevention and control continuum (e.g., adhering to recommended prevention regimens, facilitating transition to post-treatment status, and coping with patient functional decline at the end of life). Likewise, dyadic interventions have increasingly employed more varied formats and channels for intervention delivery, utilized more sophisticated analytic strategies, and focused on a wider array of outcomes.

In this symposium, three speakers from major medical centers in the Northeastern United States will introduce cutting edge developments in dyadic intervention research. These novel approaches vary by disease site, delivery channel, intensity of the intervention, intervention target (spouse vs. other caregiver) and guiding theoretical framework. Speaker 1 will present data from a study that examined the feasibility, acceptability and preliminary efficacy of a telephone-based psychosocial intervention targeting advanced lung cancer patients and their caregivers. Speaker 2 will present data from a 2-part feasibility study of an in-person intervention to enhance catheter care among prostate cancer patients post-surgery (part 1) and prepare dyads to cope with likely sequelae of the disease and its treatment (part 2). Speaker 3 will present data from a daily diary study to examine the role of companionship in supporting smoking quit attempts among smoker-nonsmoker couples. An internationally renowned dyadic researcher will serve as the discussant and provide integrative remarks. In sum, the proposed symposium will provide an overview of cutting-edge developments in theory-based dyadic research, utilizing different delivery approaches, varying levels of intervention dosing and targeting different health behaviors and outcomes.

Symposium 22A

BRIEF INTERVENTION TO IMPROVE QOL AND COUPLE FUNCTIONING AFTER PROSTATE SURGERY

Michael A. Diefenbach, PhD

BACKGROUND: Spouses and intimate partners are the primary providers of care-giving and support for prostate cancer (PC) patients, yet often are left out of discharge plans and interventions. In the short term, after PC surgery, patients and partners routinely leave the hospital with insufficient knowledge to manage medical complications and to engage in effective post-surgical home care. In the long-term, couples often are ill-prepared to cope with changes in bladder and sexual function and display poor communication about sensitive issues. OBJECTIVES: We developed and pilot-tested a brief 2-part couples-based educational intervention focusing on post-surgical care and couples communication over the first six months after surgery. METHODS: Formative qualitative interviews with 4 couples and additional 4 patients were conducted. Results of these interviews guided the development of written materials given to couples and the content of the in-person intervention. The dyadic intervention was directed at couples and how they can cope and manage the illness as a team. Part 1 of the intervention, led by a nurse prior to surgery addressed safe catheter care over the next 7-10 days, specifically the prevention of complications. Part 2, led by a psychologist, was conducted 7-10 days post-surgery at the time of catheter removal. It included couples activities to maintain bladder and sexual function (i.e., Kegel exercises) and to enhance communication and intimacy (communication training; intimacy enhancing exercises). RESULTS: To date 6 couples (M=64 years; SD=7.8) have completed both parts of the intervention. Follow-up interviews assess acceptability and usage of intervention components. Results suggest that the intervention integrates well into the clinic. Patients report that the catheter care instructions were easy to understand and useful. Similarly, the intervention components of part 2 were rated highly by both patients and spouses. CONCLUSION: A brief couples-based intervention to enhance adjustment after prostate cancer surgery is feasible and acceptable to couples and clinicians who are providing care. It may serve as an example of a brief, minimal intervention that is easily disseminated to patients within a busy clinic.

Symposium 22B

DYADIC PSYCHOSOCIAL INTERVENTION FOR ADVANCED LUNG CANCER PATIENTS AND THEIR FAMILY CAREGIVERS

Hoda Badr, PhD

BACKGROUND: Advanced lung cancer (LC) patients and their family members report low self-efficacy for self-care/caregiving and high rates of distress, yet few programs exist to address their supportive care needs during treatment. OBJECTIVE: This pilot study examined the feasibility, acceptability, and preliminary efficacy of a 6-session telephone-based dyadic psychosocial intervention that we developed for advanced LC patients and their caregivers. The program is grounded by Self-determination Theory (SDT), which emphasizes the importance of competence (self-efficacy), autonomy (sense of choice/volition), and relatedness (sense of belonging/connection) for psychological functioning. Primary outcomes were psychological functioning (depression/anxiety) and caregiver burden. Secondary outcomes were the SDT constructs of competence, autonomy, and relatedness. METHODS: Thirty-nine advanced LC patients who were within one month of treatment initiation (baseline) and their caregivers (51% spouses/partners) completed surveys and were randomized to the intervention or usual medical care. Eight weeks post-baseline, they completed follow-up surveys. RESULTS: Solid recruitment (60%) and low attrition rates demonstrated feasibility. Strong program evaluations (M=8.6 out of 10) and homework completion rates (88%) supported acceptability. Participants receiving intervention evidenced significant ($p < .0001$) improvements in depression, anxiety, and caregiver burden relative to usual medical care. Large effect sizes (d>1.2) favoring the intervention were also found for patient and caregiver competence and relatedness, and for caregiver autonomous motivation for providing care. CONCLUSION: These findings support intervention feasibility, acceptability, and preliminary efficacy. By empowering families with skills to coordinate care and meet the challenges of LC together, this intervention holds great promise for improving palliative/supportive care services in cancer.

Symposium 22C

ROLE OF COMPANIONSHIP FOR RELATIONSHIP AND HEALTH BEHAVIOR CHANGE: DAILY DYADIC STUDY RESULTS

Gertaud Stadler, PhD

BACKGROUND: Close relationships are sources of companionship (i.e., pleasurable social interaction) and social support. Despite evidence for independent contributions of both constructs to relationship and health outcomes, social support has been studied extensively while companionship has received far less attention. OBJECTIVES: To provide evidence from a dyadic longitudinal study for the important role of companionship. METHODS: Both partners of committed couples (N = 99) filled out daily diaries for 32 days, starting 10 days before and 21 days after a self-set quit date for the smoking partner. Companionate activities and support receipt occurred frequently. RESULTS: Daily fluctuations in companionship and support made independent contributions toward explaining emotional well-being and relationship satisfaction. On days with higher companionship smokers were more satisfied with their relationship (within-person effect: 0.60, $p < .05$). Smokers with higher typical levels of companionship across the diary period were more satisfied with their relationship (between-person effect: 0.68, $p < .05$). Companionship was related to smoking before and after the quit attempt. Smokers with higher companionship levels smoked less before the quit attempt (-3.5 cigarettes for 1-unit higher companionship out of an average of 14 cigarettes, $p < .05$) and after the quit attempt (-1.5 cigarettes for 1-unit higher companionship out of an average of 5 cigarettes, $p < .05$). CONCLUSION: The findings underscore the need for studying the links between companionship as well as support to relationship and health outcomes.

CORRESPONDING AUTHORS: Michael A. Diefenbach, PhD, Icahn School of Medicine at Mount Sinai, New York, NY, 10029; michael.diefenbach@mountsinai.org; Hoda Badr, PhD, Icahn School of Medicine at Mount Sinai, New York, NY, 10029; hoda.badr@mssm.edu; Gertaud Stadler, Ph.D., Columbia University, New York, NY, 10032; stadler@psych.columbia.edu

Symposium 23 1:45 PM-3:00 PM

GETTING THE POINT ACROSS: COMMUNICATING ABOUT THE SOCIAL DETERMINANTS OF HEALTH AND HEALTH BEHAVIOR

Steven H. Woolf, MD, MPH[1], Jason Purnell, PhD, MPH[2], Dana March, PhD[3]

[1]Virginia Commonwealth University, Richmond, VA; [2]Washington University in St. Louis, St. Louis, MO; [3]Columbia University, New York, NY

With the nation's attention focused on urgent economic, social, and fiscal issues, the public health and health promotion communities have a timely opportunity to raise awareness about the health implications of these decisions. Current debates at the national, state, and local level involving government, business, and community decisions will impact social determinants of health and health behavior in dramatic ways, but both the public and policymakers often fail to "connect the dots" and recognize the health implications. These decisions affect classic social determinants such as education, income, and employment but other equally important conditions in neighborhoods and the physical and social environment that affect socioeconomic status, equity, social mobility, and health behavior.

Communication is an underdeveloped skill set for many in health promotion, which has historically been more successful in preaching to the choir than in crafting a message that resonates with audiences that are unfamiliar with the core concepts or academic language used by health experts. Principles of communication, marketing, and advertising have powerful applications in public health and health promotion but are not widely taught. The need to perfect these skills has always existed, but the challenges and opportunities have increased with the advent of new media that expand the breadth, speed, and risks of communication. The opportunity for messages to go viral or alter public thinking with thoughtful execution of communication campaigns is a new phenomenon for the public health and health promotion communities to master.

In this session, three academic institutions will discuss their partnerships with experts in communication and policy, respectively, to fashion outreach campaigns to raise awareness about social determinants of health. These campaigns have connected successfully with high-level audiences at the national, state, and local level and have adopted innovative new approaches to exploit social media, graphic design, online platforms, and other tools to shape compelling messages for target audiences. Presenters will discuss their strategies, show examples of their products, share statistics on the success of their campaigns, and reflect on the ingredients for success.

Symposium 23A

CONNECTING THE DOTS: AN INITIATIVE TO RAISE PUBLIC AWARENESS ABOUT SOCIAL DETERMINANTS OF HEALTH

Steven H. Woolf, MD, MPH

Background: The Virginia Commonwealth University Center on Society and Health is an academic research center that seeks to raise awareness about factors outside of health care that shape health outcomes. The center emphasizes outreach to help policymakers, the public, and the media "connect the dots": seeing how social, economic, and other "non-health" policies are connected to health outcomes and health care costs.Methods: The Connecting the Dots Initiative is a portfolio of projects that includes the Education and Health Initiative, the Income and Health Initiative, and other efforts to communicate with policymakers at the national, state, and local level—in government and the private sector—and to elicit feedback on how to continuously improve communication strategies. The approach blends (1) science, (2) policy expertise, (3) targeted communication, and (4) community engagement and generates a suite of materials—from issue briefs to videos, online resources, and social media—to deliver the content to the desired audiences.Results: The initiative has reached policymakers in Congress and the executive branch, national policy organizations, state and local governments, health care systems, businesses and employers, foundations, academia, and the media. Products include issue briefs, Congressional testimony and briefings, videos, animation, web platforms, and other products that will be displayed at the session.Conclusions: A need exists for the public health community to master the translation of evidence into policy/practice. This requires a concerted effort that pairs scientific scholarship with communication skills and knowledge of the policy and business worlds in which policy is shaped.

Symposium 23B

FOR THE SAKE OF ALL: ENGAGING CROSS-SECTOR AUDIENCES TO ADDRESS HEALTH DISPARITIES IN ST. LOUIS, MO

Jason Purnell, PhD, MPH

Background: African Americans bear disproportionate burdens of disease, disability, and death in St. Louis, Missouri. Health disparities are closely linked to social determinants of health (SDH) like education and income, but public understanding of these relationships remains limited. *For the Sake of All* is an ongoing community education and engagement project designed to expand the consideration of health disparities beyond medical care and personal responsibility; to inform policy makers and the public regarding SDH; to present data on the impact of persistent disparities; and to recommend a set of actionable policy and programmatic strategies for addressing health disparities. Methods: A Community Partner Group was convened to advise on the content of five policy briefs detailing the impact of poverty, education, mental health, segregation, and chronic disease on health outcomes and policy recommendations. Briefs were released from August-December 2013, were professionally designed, and adhered to health literacy standards. A final report was released at a community conference in May 2014. Results: Findings demonstrate a strong local response, thanks in part to media partnerships and broad community engagement. As of September 2014, the project web site had been viewed 19,418 times by 8,425 unique visitors; there were over 60 instances of television, print, and online media coverage; and more than 65 community leaders and organizations had been directly engaged. Lessons learned and the results of briefings with state and local policy makers will also be shared. Conclusion: The combination of data presentation, coordinated communication, community engagement, and a policy focus offers a framework by which other communities may develop a dialogue regarding health disparities and the social determinants of health.

Symposium 23C

ELEVATING THE PUBLIC HEALTH CONVERSATION: THE2X2PROJECT.ORG

Dana March, PhD

Often absent in medicine and public health is the effective translation of research. The 2×2 project aims to inform the public health conversation through timely and effective communication of emerging public health science. Our goal through the 2×2 project is to engage a lay audience who can shape public health conversations. The 2x2 project seeks to cover current and significant public health issues, and to illuminate the public health import of current events across news cycles. Launched in September 2012, the2x2project.org has built a strong consistent readership, primarily of educated, technologically savvy 18-34 year olds. Content, which includes data briefs, expert commentaries, news analyses, long-form pieces, and special features, is published 2-4 times per week on the site. Individual pieces have enjoyed over 10,000 views, and an active and ongoing social media campaign using Twitter and Facebook enhances content reach. A key feature of the 2x2 project is its training program, the Communicating Health and Epidemiology Fellowship (CHEF) trains both scientists and communicators to fulfill the translation mission of the Project. Cohorts of 4 fellows complete a year-long cooperative training program designed to arm them with excellent translational communication, social media (e.g. the 2x2 project fellows and staff live-tweeted the 2013 APHA Annual Meeting), and content production skills. By blending communication skills with scientific expertise in public health and harnessing the power of online tools, innovative training, and content with current relevance, we can become better equipped to elevate the public health conversation, thereby moving forward the field of public health.

Symposium 23D

CONNECTING THE DOTS: AN INITIATIVE TO RAISE PUBLIC AWARENESS ABOUT SOCIAL DETERMINANTS OF HEALTH

Steven H. Woolf, MD, MPH

Background: The Virginia Commonwealth University Center on Society and Health is an academic research center that seeks to raise awareness about factors outside of health care that shape health outcomes. The center emphasizes outreach to help policymakers, the public, and the media "connect the dots": seeing how social, economic, and other "non-health" policies are connected to health outcomes and health care costs. Methods: The Connecting the Dots Initiative is a portfolio of projects that includes the Education and Health Initiative, the Income and Health Initiative, and other efforts to communicate with policymakers at the national, state, and local level—in government and the private sector—and to elicit feedback on how to continuously improve communication strategies. The approach blends (1) science, (2) policy expertise, (3) targeted communication, and (4) community engagement and generates a suite of materials—from issue briefs to videos, online resources, and social media—to deliver the content to the desired audiences. Results: The initiative has reached policymakers in Congress and the executive branch, national policy organizations, state and local governments, health care systems, businesses and employers, foundations, academia, and the media. Products include issue briefs, Congressional testimony and briefings, videos, animation, web platforms, and other products that will be displayed at the session.Conclusions: A need exists for the public health community to master the translation of evidence into policy/practice. This requires a concerted effort that pairs scientific scholarship with communication skills and knowledge of the policy and business worlds in which policy is shaped.

CORRESPONDING AUTHORS: Steven H. Woolf, MD, MPH, Virginia Commonwealth University, Richmond, VA, 23298; swoolf@vcu.edu; Jason Purnell, PhD, MPH, Washington University in St. Louis, St. Louis, MO, 63130; jpurnell@wustl.edu; Dana March, PhD, Columbia University, New York, NY, 10032; dm2025@columbia.edu

Symposium 24 1:45 PM-3:00 PM

REDUCING HEALTH DISPARTIES USING MHEALTH TOOLS

Gillian Barclay, DDS, PhD[1], Jimi Huh, PhD[2], Wendy Nilsen, PhD[3], Donna Spruijt-Metz, MFA, PhD[4]

[1]Aetna Foundation, Hartford, CT; [2]University of Southern California, Los Angeles, CA; [3]National Institutes of Health, Bethesda, MD; [4]Center for Economic and Social Research, University of Southern California, Los Angeles, CA

Mobile and wireless health (mHealth) has been hyped as way to improve health, improve healthcare and reduce costs. The literature has not been quite as supportive as originally predicted, but data are growing to show that mHealth may be an effective way for monitoring and changing behavior to improve health. What has been ignored in much of the mHealth literature is the potential for mHealth to reduce health disparities. mHealth has breached much of the digital divide in that now than 90% of American adults have a cell phone and almost 60% now have a smartphone. In contrast to computers using broadband connections, smart phones, which are in fact miniature computing systems, are fastest growing in the African-American and Hispanic communities. Further, unlike the previously documented digital divide in computing, the uptake of these cell phones has been strong even in the lowest income homes. In fact, now one-quarter of American homes do not even have a traditional land line and use mobile telephone only. The ubiquity of cell phones and the innate ability to customize cell phones to meet the needs of individual users, increases mHealth potential as a tool to address health disparities. This panel will examine the rationale for mHealth in addressing health disparities.

Symposium 24A

DEVELOPING A TAILORED, ADAPTIVE SMOKING CESSATION PROGRAM USING MHEALTH, MULTILEVEL PRINCIPLES

Jimi Huh, PhD

Background: Korean American emerging adults (18-25 yo, "KAEA") are at increased risk of smoking cigarettes and environmental exposure to tobacco. Smoking rates of Korean males are among the highest relative to those for any major ethnic group in California; the period of emerging adulthood has been associated with an elevated risk of substance use including tobacco. However, studies specifically addressing tobacco use among KAEA are currently lacking. Approach: Our project, *MySmoke*, aims to 1) use a 7-day Ecological Momentary Assessment (EMA) implemented on smartphones to better understand the effects of individual, sociocultural and locational contexts on cigarette use among KAEA daily smokers, and 2) subsequently develop and pilot an adaptive Ecological Momentary Intervention (EMI) tailored to the cessation needs of KAEA daily smokers. We also have been actively collecting qualitative data to help designing the intervention that will be tailored for their needs. Results: From the EMA phase of the study, we learned 1) that negative affect contributes to momentary urge to smoke and that greater levels of urge to smoke were reported when being with Korean peers (vs. alone). We also showed 2) that higher levels of stress and craving led to more cigarettes smoked on that day, but only for those with greater levels of nicotine addiction. Our geospatial data analyses also revealed 3) that there are temporal and spatial patterns associated with smoking. Combined, the EMA phase of *MySmoke* informed us that smoking cessation among Korean American emerging adults will heavily depend on modifying culturally-based norms and social spaces regarding smoking cigarettes and cessation aides. Of practical importance, many smoker participants actually reported *using* their smartphones (e.g., playing games, "bored") *while* they smoke cigarettes. Contents of intervention are currently being developed by conducting a series of interview and focus groups. Discussion: Given the ubiquity of smartphone use among this young population, smartphones are extremely appropriate medium for intervention delivery. Informed by our EMA, we have identified some of the key factors that need to be considered in building an effective, culturally-tailored, adaptive EMI cessation program targeted at KAEA.

Symposium 24B

THE RATIONALE FOR USING MHEALTH TO ADDRESS HEALTH DISPARITIES

Wendy Nilsen, PhD

Mobile and wireless health (mHealth) has the potential to reduce health disparities. Past research on reducing health disparities has been, efficacious in the small groups in which it was tested, but not sustainable or scalable to the population in need. mHealth tools have capabilities that may make them ideal for addressing these issues and health disparities in general. This presentation will explore the four factors that make the use of mHealth important in addressing health disparities. The first factor is the demographics of cell phone and tablet usage. Secondly, the customizability and usability of consumer technology for health, makes creating tailored user-centered research much more feasible and inexpensive than previously possible. The third factor relies on mHealth's ability for collecting rich longitudinal data. Using passive sensing and digital traces to create inferences about such things as behavior and mood may make it possible to decrease participant burden in research. Finally, the ubiquity of mobile phones makes it likely that research in this area will be able to address the lack of representativeness that is common in many current randomized clinical trials. By increasing participation of members of groups experiencing health disparities, we can improve the quality of the research and enhance the generalizability of the findings. Learning Objectives:- Upon completion, participants will be know the four factors that make mHealth valuable in reducing health disparities.

Symposium 24C

REDUCING HEALTH DISPARITIES WITH REAL-TIME ADAPTIVE MHEALTH INTERVENTIONS

Donna Spruijt-Metz, MFA, PhD

Rich streams of continuous data, available through existing and emerging technologies, are providing us with the new opportunities that to intervene on health-related behavior in real time. Real-Time Adaptive Interventions (RTAIs) can be momentary, dynamic, contextualized, and longitudinal. Research in the field of education shows that children learn more efficiently when they receive feedback in the moment, contiguous to performed behavior. This talk will address the opportunity to reach minority youth and their families with new technologies and momentary interventions using two examples from obesity treatment and prevention in minority youth. Several opportunities and challenges will be addressed. One involves tailoring and timing of messages to change behavior in real time. What kind of feedback do different children (age, gender, ethnicity, socioeconomic status) need to change behaviors? How can we adjust our current behavioral theories to take into account dynamic behavior as well as cultures that value the collective over the individual? What is the best schedule, the best modality, the best kind of message, the optimal length and content? Do we reinforce, reward, criticize? Another challenge is this: How do we identify the most effective delivery 'moments"? How do we combine the best of behavioral economics with the best of affective science to balance intrinsic and extrinsic rewards? How do we optimize quickly for different behaviors (which will have different determinants)? A major challenge in obesity research has proven to be maintaining health behavior change. Although interventions to change health behaviors have shown some success, the field of health behavior change has been, for the most part, ineffective in helping people *maintain* healthy behaviors. This talk will finish with outlining the opportunities and challenges for using real-time technologies for maintenance of healthy obesity-related behaviors in minority youth as they grow into young adulthood.

CORRESPONDING AUTHORS: Jimi Huh, PhD, University of Southern California, Los Angeles, CA, 90032-3628; jimihuh@usc.edu; Wendy Nilsen, PhD, National Institutes of Health, Bethesda, MD, 20892; nilsenwj@od.nih.gov; Donna Spruijt-Metz, MFA, PhD, Center for Economic and Social Research, University of Southern California, Los Angeles, CA, 90004; dmetz@usc.edu

Symposium 25 1:45 PM-3:00 PM

CHALLENGES AND OPPORTUNITIES OF WORKING WITH THE AIR FORCE

G. Wayne Talcott, PhD[1], Melissa A. Little, PhD, MPH[2], Rebecca Krukowski, PhD[2], Karen Derefinko, PhD[2], Robert Klesges, PhD[2], John Ebbert, MD[3], Lauren Colvin, M.S.[2], Thomas Fridtjof, PhD[4], Phyllis Richey, PhD[2], Marion Hare, MD, MS[2], Karen Johnson, MD, MPH[2], Mehmet Kocak, PhD[2], Jennifer Balderas[1], Teresa Waters, PhD[2], Brittany Linde, PhD[5]

[1]University of Tennessee Health Science Center, Lackland AFB, TX; [2]University of Tennessee Health Science Center, Memphis, TN; [3]Mayo Clinic, Rochester, MN; [4]University of Tennessee Health Science Center, memphis, TN; [5]University of Tennessee Health Science Center, San Antonio, TX

There is a common misconception that U.S. military personnel are fit, lean, and healthy; on the contrary, 51% of military personnel are overweight and 12% are obese. Furthermore,excess weight and inadequate fitness can prevent promotion or even lead to discharge from military service. Every military member has an annual work performance appraisal that includes a fitness test. However, there have been few studies examining obesity interventions in the military. This symposium will describe the study design and intervention development, the 4-month pilot study, and the ongoing full trial (n=204) for the "Fit Blue" study, a randomized controlled behavioral weight loss trial taking place at Lackland Air Force Base, San Antonio, TX. This study compares two adapted versions of the evidence-based Look AHEAD Intensive Lifestyle Intervention, a counselor-initiated condition and a self-paced condition. Participants complete assessments (weight, abdominal circumference, attitudes and behaviors associated with weighing, diet, physical activity sleep, and motivations for weight loss) at baseline, and at 4-month and 12-month follow-up. In addition, Air Force Fitness Test scores will be obtained for all participants, for the most recent fitness test completed prior to starting the intervention and the fitness tests completed during and/or immediately after the intervention. Finally, measures of treatment adherence and costs of intervention implementation are collected. In the presentation, we will also describe the unique steps taken to adapt the intervention to the military environment as well as the distinct opportunities and challenges in conducting health promotion research in the military. If successful, this intervention could be disseminated broadly across the military. While this intervention is designed for a military population, the diversity of the study population can inform obesity efforts in both civilian and military settings.

Symposium 25A

REENGAGING SMOKERS FOLLOWING PARTICIPATION IN A SMOKING QUIT LINE IN THE MILITARY

Melissa A. Little, PhD, MPH

Military personnel have among the highest rates of tobacco use in the US and are considered an underserved population. A quit line targeted to the military for ultimate dissemination is needed, not only because of the high risk and underserved nature of the military, but also because the DoD is the nation'slargest employer and this population is understudied, vulnerable, and high risk. While quit lines are efficacious, cessation rates are modest and relapse is marked, and many efficacious stop-smoking programs in civilian populations do not demonstrate efficacy when evaluated in a military population. Furthermore, there are no studies evaluating methods of reengaging smokers who call quit lines and either fail to quit smoking or relapse. In this symposium we will describe two smoking quit line interventions we have conducted in the US military. First, we will present results and lessons learned from our study testing the efficacy of a tobacco quit line comparing proactive (counselor-initiated) and reactive (participant-initiated) interventions in 1298 Tricare beneficiaries, including active duty military personnel, their dependents, Reservists, and retirees. Our military proactive quit line produced superior cessation rates at a one-year follow-up compared to a reactive quit line (continuous abstinence rates of 33.3% and 24.9%, respectively, $p < .01$). But similar to civilian quit lines, we observed marked decay of sustained cessation rates from the end of treatment to the one-year follow-up, particularly in the Proactive Condition (53.8% to 33.3%). We will discuss how these findings led us to our current tobacco quit line testing different methods for reengaging smokers who relapse or fail to quit by the end of the proactive quit line intervention. Lastly, we will discuss how our results can be generalized to all civilian tobacco quit lines."The opinions expressed on this document are solely those of the author(s) and do not represent an endorsement by or the views of the United States Air Force, the Department of Defense, or the United States Government."

Symposium 25B

CONDUCTING A TRANSLATION OF THE LOOK AHEAD WEIGHT LOSS INTERVENTION IN THE UNITED STATES AIR FORCE

Rebecca Krukowski, PhD

There is a common misconception that U.S. military personnel are fit, lean, and healthy; on the contrary, 51% of military personnel are overweight and 12% are obese. Furthermore,excess weight and inadequate fitness can prevent promotion or potentially lead to discharge from military service. Every military member has an annual work performance appraisal that includes a fitness test. However, there have been few studies examining obesity interventions in the military. As part of this symposium, we will describe the study design and intervention development, the 4-month pilot study, and the ongoing full trial (n=204) for the "Fit Blue" study, a randomized controlled behavioral weight loss trial taking place at Lackland Air Force Base, San Antonio, TX. This study compares two adapted versions of the evidence-based Look AHEAD Intensive Lifestyle Intervention, a counselor-initiated condition and a self-paced condition. Participants complete assessments (weight, abdominal circumference, attitudes and behaviors associated with weighing, diet, physical activity sleep, and motivations for weight loss) at baseline, and at 4-month and 12-month follow-up. In addition, Air Force Fitness Test scores will be obtained for all participants, for the most recent fitness test completed prior to starting the intervention and the fitness tests completed during and/or immediately after the intervention. Finally, measures of treatment adherence and costs of intervention implementation are collected. In the presentation, we will also describe the unique steps taken to adapt the intervention to the military environment as well as the distinct opportunities and challenges in conducting health promotion research in the military. If successful, this intervention could be disseminated broadly across the Department of Defense. While this intervention is designed for a military population, the diversity of the study population can inform obesity efforts in both civilian and military settings."The opinions expressed on this document are solely those of the author(s) and do not represent an endorsement by or the views of the United States Air Force, the Department of Defense, or the United States Government."

Symposium 25C

BRIEF ALCOHOL PREVENTION/INTERVENTION IN A MILITARY SETTING

Karen Derefinko, PhD

Alcohol misuse is a particular problem in the US Military. The Millennium Cohort Study sampled over 77,000 troops (active duty and Reserve/Guard) and found that 18.5% of respondents reported a history of alcohol problems, and 7–8% reported current heavy drinking (i.e., > 14 and 7 drinks/week for men and women, respectively). Overall, young adults in the military drink more than demographically similar civilians, resulting in increased numbers of "alcohol-related incidents," a military designation that includes a variety of illegal behaviors that occur under the influence of alcohol. Given their brevity, low cost, and efficacy across multiple studies, brief alcohol interventions are an extremely promising method for intervening with problem drinking in the military. Although effective brief interventions have been developed, extensively tested, and disseminated across various civilian settings, few studies have looked at military populations, which are at increased risk for alcohol misuse and problems. This symposium will describe the development of a universally-implemented, one-session alcohol prevention session currently utilized by the United States Air Force, as well as the challenges that have arisen regarding assessment of the efficacy of this program given non-confidentiality of information in military settings. Further, the addition of a one-time "booster" session shortly before the end of a training period will be discussed as a potential extension of the current program. It is believed that the addition of a booster session at a key transition period in individuals' military careers will significantly increase the protective effects of the brief intervention program and reduce the number of subsequent alcohol-related incidents. The symposium will conclude with the discussion of the benefits of administering a state-of-the-art brief intervention to a large at-risk population, as well as the challenges faced when assessing alcohol use in this population."The opinions expressed on this document are solely those of the author(s) and do not represent an endorsement by or the views of the United States Air Force, the Department of Defense, or the United States Government."

CORRESPONDING AUTHORS: Melissa A. Little, PhD, MPH, University of Tennessee Health Science Center, Memphis, TN, 38163; mlittl18@uthsc.edu; Rebecca Krukowski, PhD, University of Tennessee Health Science Center, Memphis, TN, 38105; rkrukows@uthsc.edu; Karen Derefinko, PhD, University of Tennessee Health Science Center, Memphis, TN, 38163; kderefin@uthsc.ed

Thursday
April 23, 2015
3:15 PM-4:45 PM

Paper Session 08 3:15 PM-3:33 PM

WHO GAINS WEIGHT BEFORE BEHAVIORAL WEIGHT LOSS TREATMENT AND DOES IT IMPACT TREATMENT SUCCESS?

Stephanie Kerrigan, B.A., Colleen Kase, BA, Katherine Schaumberg, PhD, Evan Forman, PhD, Michael Lowe, PhD, Meghan L. Butryn, PhD

Drexel University, Philadelphia, PA

Prior work has demonstrated that individuals with restrained eating or binge eating often increase food intake prior to a prescribed diet (Urbszat, et al., 2002; Eldredge, et al., 1994). This effect has been associated with poorer weight loss outcomes in those without binge eating (West, et al., 2011). This study aimed to investigate baseline characteristics and subsequent weight loss of individuals enrolling in a behavioral weight loss program who experience pretreatment weight gain. Similar to prior work (West, et al., 2011), participants ($n = 246$) were divided into two groups: those who gained > 3 lbs between their initial study visit and treatment start ($n = 60$, Mgain = 5.76 lbs) and those who did not ($n = 186$). Time ($M = 40.7$ days) between initial visit and treatment start, during which there was no prescribed weight control advice, did not differ by group ($p = .62$). Baseline differences by group and weight at initial visit and Weeks 1, 10, and 20 of treatment were evaluated. Individuals with pretreatment weight gain were higher in susceptibility to food cues (Power of Food Scale; $p=.04$), external disinhibition (Three-Factor Eating Questionnaire; $p < .01$), emotional eating (TFEQ; $p = .04$), and controlled motivation due to external pressure (Treatment Self-Regulation Questionnaire; $p < .01$) and avoidance of shame (TSRQ; $p = .02$); this group had less self-efficacy for weight loss when faced with physical discomfort (Weight Efficacy Lifestyle Questionnaire; $p < .01$) and social pressure (WEL; $p = .03$). Weight losses from treatment Week 1 to Week 10 ($p = .72$) and Week 1 to Week 20 ($p = .93$) did not differ by group. However, when weight loss was examined from the time of the initial visit, those with pretreatment weight gain had significantly smaller weight losses at Week 10 (3.3% vs 5.7%, $p < .001$) and Week 20 (8.3% vs. 11.0%; $p < .01$). Results indicate that individuals who gain weight prior to treatment are a distinct subset of individuals. The pattern of weight loss is notable, suggesting that these individuals do not "catch up" to their peers during initial treatment. Future work should evaluate longer-term outcomes and whether earlier intervention can protect against this gain in vulnerable individuals. Researchers should consider at what time point "pretreatment" weight should be measured.

CORRESPONDING AUTHOR: Stephanie Kerrigan, B.A., Drexel University, Philadelphia, PA, 19104; kerrig42@gmail.com

CITATION PAPER
Paper Session 08 3:33 PM-3:51 PM

RANDOMIZED TRIAL OF A MEN-ONLY WEIGHT LOSS PROGRAM: THE RETHINKING EATING AND FITNESS TRIAL

Melissa M. Crane, MA[1], Dianne S. Ward, EdD[1], Lesley D. Lutes, PhD[2], J. Michael Bowling, PhD[1], Deborah F. Tate, PhD[1]

[1]University of North Carolina at Chapel Hill, Chapel Hill, NC; [2]East Carolina University, Greenville, NC

Background: Despite the high prevalence of overweight and obesity among men, they represent only 27% of participants in behavioral weight loss research. Qualitative evidence suggests that existing programs are unappealing to men, and effective programs that are individualized, flexible and a better match for men's preferences are needed.Methods: A randomized trial tested the efficacy of the REFIT (Rethinking Eating and FITness) weight loss program compared to a waitlist control. The intervention was delivered via two face-to-face sessions followed by online sessions for 10 weeks and monthly sessions for 3 months. REFIT encouraged participants to create calorie deficits by making six 100-calorie changes to their eating each day, without detailed diet monitoring, while also increasing physical activity. To further increase the program's appeal, individualization and autonomy were promoted by allowing participants to customize lesson order and specific behaviors to focus on each week. Assessments included measurement of weight, waist circumference, and body composition. Autonomous motivation was measured using the Treatment Self-Regulation Questionnaire.Results: Participants (N=107, age 44.2±11.4 years, BMI 31.4±3.9 kg/m^2, 76.6% white) were randomized into the study and 94.4% of participants completed the 3-month assessment. There were no differences between the groups at baseline (p's>0.12). The REFIT group lost significantly more weight than the waitlist group (4.7±4.3 vs. 0.6 ±2.1 kg; p < 0.001). The REFIT group also had greater reductions in waist circumference (-3.8±3.3 vs. -0.7±2.1 cm) and percent body fat (-2.8±3.1 vs. -0.4±2.2 percent; p's < 0.001) and greater increases in autonomous motivation over time (p=0.02). All intervention participants completed the face-to-face sessions and an average of 8.9 (±1.9) of 10 of the online sessions during the first three months.Discussion: REFIT produced a 4.7 kg weight loss after 3-months with reductions in waist circumference and body fat, and increased autonomous motivation using a novel approach to caloric reduction and increased autonomy. This new treatment holds promise as an alternative to traditional behavioral therapy for men.

CORRESPONDING AUTHOR: Melissa M. Crane, MA, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27514; mmcrane@email.unc.edu

Paper Session 08 3:51 PM-4:09 PM

ENVIRONMENTAL PREDICTORS OF WEIGHT LOSS/GAIN IN A LONGITUDINAL STUDY USING EMA

Lora E. Burke, PhD, MPH[1], Steve Rathbun, PhD[2], Asim Smailagic, PhD[3], Dan Siewiorek, PhD[3], Linda J. Ewing, PhD RN[4], Dara Mendez, PhD, MPH[5], Yaguang Zheng, MSN, PhDc[1], Juliet M. Mancino, MS, RDN, CDE[1], Lei Ye, BMed[6], Saul Shiffman, PhD[7]

[1]University of Pittsburgh School of Nursing, Pittsburgh, PA; [2]University of Georgia, Athens, GA; [3]Carnegie-Mellon University, Pittsburgh, PA; [4]University of Pittsburgh School of Medicine, Pittsburgh, PA; [5]University of PIttsburgh Graduate School of Public Health, Pittsburgh, PA; [6]University of Pittsburgh Graduate School of Public Health, Pittsburgh, PA; [7]University of Pittsburgh, Pittsburgh, PA

Ecological momentary assessment (EMA) assesses individuals' current experiences, behaviors, and moods as they occur in real time and in their own environment. We are using EMA to study relapse after intentional weight loss in a 12-mo. study that includes standard behavior weight loss treatment. Assessments were conducted at randomly-scheduled times, approximately 4 times/day during the waking hours to assess momentary states, e.g., location, context, and behaviors.Weight was assessed every 1-2 weeks in the clinic. We examined patterns of weight gain/loss as a function of the mean levels of momentary variables (e.g., eating or not; social setting) during the first 23 weeks. The sample (N = 150) was predominantly female (90.7%), had a mean age of 51 yrs., completed, on average, 16 years of education, and had a mean body mass index of 34. We used simple and multivariate linear regression models to predict daily average weight gain/loss as a function of various environmental variables, e.g., if the individual was alone or with others. A linear model found that social setting predicted weight gain/loss (p = 0.0027). Estimated daily rates of weight gain were highest when subjects were *with others who are eating* at a rate of 0.72 lb/day, and subjects lost weight when they *could not see others eating*, with rates ranging from 0.31 lb/day when they were *with others* to 0.13 lb/day when *completely alone.* Exposure to others eating or not eating was summarized as follows: *with others who were eating* 8.6% of the time, *within sight of others who were not eating* 19.1% of the time, *with others but not within sight of people eating* 35.4% of the time, and *completely alone* 34.2% of the time. Thus, individuals were in the highest risk situation of *being with others who are eating* approximately 9% of the time and in the lower risk situation of *not being within sight of others who are eating* 88.7% of the time. These data highlight an important condition that increases one's risk for slips or lapses, social situations that entail eating with others. While the occurrence of these situations comprises less than 10% of a person's time, the impact is significant. These findings can be used with interventions to support individuals managing conditions that increase their risk for lapse or relapse during or following a course of intentional weight loss.

CORRESPONDING AUTHOR: Lora E. Burke, PhD, MPH, University of Pittsburgh School of Nursing, Pittsburgh, PA, 15261; lbu100@pitt.edu

Paper Session 08 4:09 PM-4:27 PM

THE SELF TRIAL: A SELF-EFFICACY BASED BEHAVIORAL INTERVENTION TRIAL FOR WEIGHT LOSS MAINTENANCE

Lora E. Burke, PhD, MPH[1], Linda J. Ewing, PhD RN[2], Lei Ye, BMed[3], Mindi Styn, PhD[4], Yaguang Zheng, MSN, PhDc[1], Edvin Music, MSIS, MBA[1], India Loar, MPH[1], Juliet M. Mancino, MS, RDN, CDE[1], Christopher C. Imes, PhD, RN[1], Lu Hu, MSN[1], Rachel Goode, MSW[5], Cynthia A. Danford, PhD, RN[1], Susan M. Sereika, PhD[1]

[1]University of Pittsburgh School of Nursing, Pittsburgh, PA; [2]University of Pittsburgh School of Medicine, Pittsburgh, PA; [3]University of Pittsburgh Graduate School of Public Health, Pittsburgh, PA; [4]Styn Scientific Editing and Consulting, Ellwood City, PA; [5]University of Pittsburgh, Pittsburgh, PA

The ongoing challenge in the treatment of obesity is to identify strategies to improve long-term weight loss maintenance. Standard behavioral treatment (SBT) protocols have been used in clinical trials for nearly two decades with little improvement in the rates of weight loss maintenance. However, there is increasing evidence that self-efficacy is a factor that influences weight loss maintenance. We hypothesized that an intervention enhancing self-efficacy related to lifestyle changes would improve weight loss maintenance at 12 & 18 months. The Self Efficacy Lifestyle Focus (SELF) Trial was a 2-group, 18-month clinical trial targeting weight loss maintenance. Individuals who met eligibility criteria were randomized to either an SBT intervention for weight loss with standard energy and fat goals (SBT) or SBT supplemented with 1:1 sessions implementing self-efficacy (SE) enhancement strategies (SBT+SE). Both arms participated in group sessions with the frequency of sessions reducing from weekly to monthly the first year; then, every 6 weeks for months 13-18. SBT+SE participants met 1:1 with their interventionist every 2 weeks for 12 months to review progress and establish new goals; thereafter the sessions were held at least monthly. Weight loss maintenance was determined by comparing % weight change from baseline to 12 months and baseline to 18 months relative to baseline values. The sample (N=130) was 83% female, well-educated, with a mean age of 53 years and BMI of 33 kg/m^2. Using linear mixed modeling of % change in weight over time, we observed no significant group-by-time interaction or group effect on % weight change at 12 or 18 months. However, there was a significant time effect for % weight change (p=.002) and a significant weight change for both groups at each time point (p's < .001). The SBT+SE group had no significant difference in % weight change between 12 months (8.29%) and 18 months (7.91%), indicating that the SBT+SE group maintained their weight loss at 18 months (p=.06); while the SBT group had a significantly lower weight loss at 18 months (5.96%) compared to 12 months (6.95%), indicating that the SBT group had a significant weight regain at 18 months (p=.005). The self-efficacy enhancement strategies may have contributed to the larger weight loss maintenance observed in the SBT+SE group.

CORRESPONDING AUTHOR: Lora E. Burke, PhD, MPH, University of Pittsburgh School of Nursing, Pittsburgh, PA, 15261; lbu100@pitt.edu

Paper Session 08 4:27 PM-4:45 PM

MODELING INTERACTIONS BETWEEN BRAIN FUNCTION, BEHAVIOR, AND WEIGHT LOSS SUCCESS

Amanda N. Szabo-Reed, Ph.D.[1], Hung-Wen Yeh, Ph.D.[2], Laura Martin, Ph.D.[2], Rebecca Lepping, Ph.D.[2], Joshua N. Powell, A.B..[2], Joseph E. Donnelly, Ed.D.[1], Cary R. Savage, Ph.D.[2]

[1]University of Kansas Medical Center, Lawrence, KS; [2]University of Kansas Medical Center, Kansas City, KS

Public health recommendations suggest that taking 70,000 steps per week or more can have a positive influence on weight loss (WL); however, the influence of self-regulation, planning and brain function on promoting this behavior is unknown. N=67 overweight and obese adults participated in a 3M (month) intervention to determine the influence of brain function, measured in a baseline scan, on WL (3M). Steps taken each week via pedometer and then averaged over the 3M intervention. We hypothesized that brain function regulates health behaviors (e.g., average weekly steps), which in turn determines WL. Brain regions related to WL were identified by robust regression with bootstrapping and cluster thresholding from a food vs nonfood photo paradigm. This paradigm has a previously been established relationship with WL and cognitive control. Path analysis with bootstrapping was then used to investigate the hypothesized structural model. Robust regression of the baseline scan identified two brain regions, left and right prefrontal cortex (L- and R-PRFC), that were significantly related to future WL. Path analysis revealed paths in standardized correlations: (1)RPFC to steps (r=0.44, p < 0.0001), (2)RPFC to WL (r=0.31,p=0.009), (3) LPRFC to WL (r=0.26, p=0.02), and (4) steps to WL (r=0.16, p=0.17). LPFC doesn't appear to relate to steps. Fit indices suggested that the identified model was an adequate fit to the data (chi squared= 1.49, p=.22, CFI=.989, RMSEA= .084, 95% CI (0, 0.345)). These findings suggest that steps effect on weight loss may be due to brain activation in RPFC, at least partially. In conclusion, this research indicates that brain activation in a region of the brain related to planning and self-regulation is important and may influence the performance of a behavior that is related to WL within the context of a WL intervention. More research is necessary to determine whether such brain-behavior interactions can be modified/ trained (i.e., cognitive training) to increase WL success.

CORRESPONDING AUTHOR: Amanda N. Szabo-Reed, Ph.D., University of Kansas Medical Center, Lawrence, KS, 66045; aszabo2@ku.edu

Paper Session 09 3:15 PM-3:33 PM

USING CROWDSOURCING TO INFORM PUBLIC HEALTH POLICY DECISIONS: A STUDY OF INDOOR TANNING WARNINGS

Mays Darren, PhD, MPH[1], Andrea C. Johnson, MPH[1], Sarah E. Murphy, BA[1], Jay M. Bernhardt, PhD, MPH[2], Kenneth P. Tercyak, PhD[1]

[1]Georgetown University Medical Center, Lombardi Comprehensive Cancer Center, Washington, DC; [2]Moody College of Communication, University of Texas at Austin, Austin, TX

Public health policies to prevent indoor tanning are critical to reduce the disease burden of skin cancer. Unfortunately, evidence to inform tanning prevention policies remains limited, especially research on how to optimally design point of sale communications about the risks associated with tanning to maximize their impact. This study investigated the use of crowdsourcing, a low-cost and efficient approach for gathering public input, as a method for optimizing the impact of indoor tanning warning messages among high-risk, young adult women. Non-Hispanic white women ages 18 to 30 who tanned at least once in the past year completed a Human Intelligence Task (HIT) through Amazon Mechanical Turk. The HIT included questions about tanning attitudes and behaviors and assessed intentions to tan and intentions to avoid tanning in response to 5 warning messages presented in random order. A control warning was comprised of text only and created based on the Food and Drug Administration's 2014 update to required warnings for tanning devices. Experimental warnings included images and were framed to emphasize either the risks of tanning (loss-framed) or the benefits of avoiding tanning (gain-framed). In a two-day period, 1,473 individuals responded to the HIT; 159 (11%) responses were removed in data cleaning and 52% of remaining respondents were eligible and completed the HIT ($n = 682$, M age 24.3). In multivariable analyses, gain-framed warnings did not differ from the control warning on intentions to tan or intentions to avoid tanning (p's $> .05$). Loss-framed warnings significantly reduced intentions to tan and increased intentions to avoid tanning compared to control and gain-framed warnings (p's $< .01$). Crowdsourcing can be used to efficiently gather public input to empirically inform public health policy decisions. The data indicate the impact of indoor tanning warnings can be enhanced by incorporating graphic imagery and stronger messaging of the health risks of tanning.

CORRESPONDING AUTHOR: Mays Darren, PhD, MPH, Georgetown University Medical Center, Lombardi Comprehensive Cancer Center, Washington, DC, 20007; dmm239@georgetown.edu

Paper Session 09 3:33 PM-3:51 PM

SUPPORT FOR INDOOR TANNING POLICIES AMONG YOUNG WOMEN WHO TAN: A MIXED METHODS STUDY

Mays Darren, PhD, MPH[1], Andrea C. Johnson, MPH[1], Sarah E. Murphy, BA[1], Suraj S. Venna, MD[2], Michael B. Atkins, MD[3], Kenneth P. Tercyak, PhD[1]

[1]Georgetown University Medical Center, Lombardi Comprehensive Cancer Center, Washington, DC; [2]Medstar Washington Hospital Center, Washington, DC; [3]Lombardi Comprehensive Cancer Center, Washington, DC

Skin cancer is the most common malignancy in the US despite the fact that many cases are preventable by reducing UV radiation exposure. Indoor tanning increases the risk of skin cancer and is especially prevalent among young women. Policy interventions are increasingly being leveraged to prevent indoor tanning, and communications to raise awareness and garner support for policy change are critical as governments consider implementing prevention policies. In an ongoing mixed-methods study of indoor tanning among young adult women in the Washington, DC area, this analysis examined support for tanning policies and correlates of support to inform public health communications. Participants were 185 non-Hispanic white women ages 18 to 30 (M 23.1, SD 2.9) who tanned at least once in the past year and completed an assessment of tanning behaviors, attitudes and beliefs, and policy support. A subgroup of 30 women also completed in-depth interviews examining policy perceptions. A majority of women supported minimum-age restrictions (73%) and stronger point of sale risk communications (78%), while 9% supported a total tanning ban. In multivariable analyses adjusting for tanning attitudes and behaviors, beliefs that the short-term benefits of tanning are worth it despite risks were associated with less policy support ($B = -0.33$, $P < .001$). Interviews confirmed young women's support for prevention policies and revealed the perspective that tanning is a choice to be made by adults who are informed of the potential risks and individuals under age 18 should not be allowed to use tanning facilities. These findings show that young women who use tanning beds support tanning prevention policies, including minimum age restrictions and stronger messaging about the risks of tanning. Public health communications emphasizing the significant long-term risks and correcting misperceptions about the benefits of tanning may be effective to foster support for prevention policies.

CORRESPONDING AUTHOR: Mays Darren, PhD, MPH, Georgetown University Medical Center, Lombardi Comprehensive Cancer Center, Washington, DC, 20007; dmm239@georgetown.edu

Paper Session 09 3:51 PM-4:09 PM

CORRELATES OF SUN PROTECTION BEHAVIORS AMONG LATINO PARENTS AND ADOLESCENTS IN THE UNITED STATES

Laura Dwyer, PhD[1], April Oh, PhD, MPH[2], Erin Hennessy, PhD, MPH[3], Amy Yaroch, PhD[4], Linda Nebeling, PhD, RD, FADA[5]

[1]National Cancer Institute, Rockville, MD; [2]National Cancer Institute, Bethesda, MD; [3]Leidos Biomedical Research, Inc., Frederick, MD; [4]Gretchen Swanson Center for Nutrition, Omaha, NE; [5]Behavioral Research Program, National Cancer Institute, Bethesda, MD

The U.S. Surgeon General's Call to Action to Prevent Skin Cancer calls for strategies to promote sun protection behaviors. Priority areas for future study include sun protection research among families and racial and ethnic minorities. This study expands current understanding by examining the association between nativity, language use, and other demographic correlates with sun protection behaviors among parents and adolescents (ages 12-18) in the Family Life, Activity, Sun, Health, and Eating (FLASHE) study. This presentation will also incorporate dyadic-level analysis to explore the role of parental behaviors on adolescent behaviors and vice versa.FLASHE is a national web-based panel survey, led by the National Cancer Institute. In multivariable regressions with the parent and teen samples (N parent = 1667; N teen = 1578), sex, age, education, and race/ethnicity corresponded to several sun protection behaviors. However, the only association between acculturation and behavior was among parents, such that speaking only English was associated with less hat use ($B = -.28$, $p = .04$). We conducted subsample analyses to examine associations between acculturation and behavior specifically among Latinos, controlling for other demographics. Among Latino teens (n= 160) and parents (n = 120), speaking English only was marginally associated with lower sunscreen use (Bs $\leq -.37$, $ps \leq .08$). Among Latino parents, speaking English only was associated with lower hat use ($B = -.51$, $p = .03$). Latino parents who were born outside of the US reported greater sunscreen use ($B = .57$, $p = .04$).Finally, we found evidence that some correlations *among* behaviors varied by language use and nativity. For example, among Latino parents and adolescents who spoke English only, sunscreen use was positively associated with indicators of clothing use and time spent in the sun ($ps < .05$). This pattern of associations was similar to that seen with the full study samples. However, among Spanish-speaking Latinos, associations between sunscreen and sun exposure were weaker ($ps = .10$; .42). Our findings suggest the need for further understanding into the interplay between culture, demographics and sun protection behaviors among parent-adolescent dyads. Such work can inform efforts to design tailored sun protection messaging and interventions for Latinos.

CORRESPONDING AUTHOR: Laura Dwyer, PhD, National Cancer Institute, Rockville, MD, 20850; laura.dwyer@nih.gov

MERITORIOUS PAPER
Paper Session 09 4:09 PM-4:27 PM

IDENTIFYING LATENT CLASSES OF HISPANIC CHILDREN IN A SKIN CANCER PREVENTION INTERVENTION

Kimberly Miller, MPH[1], Jimi Huh, PhD[1], Jennifer B. Unger, PhD[1], Jean Richardson, DrPH[1], David H. Peng, MD, MPH[2], Myles Cockburn, PhD[1]

[1]University of Southern California, Los Angeles, CA; [2]Keck School of Medicine of USC, CA

Introduction: Invasive melanoma is increasing in U.S. Hispanics, especially in high UV regions. More information is needed regarding the sun protection patterns of Hispanics, particularly for children and adolescents who incur high UV exposures, to develop tailored skin cancer primary prevention interventions. Methods: We used latent class analysis to examine patterns of sun protective behaviors in a cross-sectional sample of Hispanic elementary students participating in a sun safety intervention in Los Angeles (N=972). Five indicators in two environments (school and home) representing multiple methods of sun protection were selected for the model. Covariates included gender, level of acculturation, family engagement with child's sun protection, skin phototype, and skin's sensitivity to sunburn. Results: Results suggested a four-class model best fit the data. Based on observed patterns, classes were labeled in approximate order of increasing risk as class 1: multiple protective behaviors (28%), class 2: clothing and shade (32%), class 3: pants only (15%) and class 4: low/inconsistent protective behaviors (25%). Children who reported high parental engagement with sun protection were significantly more likely to be classified in higher protecting classes (classes 1 and 2). Girls were more likely to be classified in the highest protecting class (class 1); however, they were also more likely to be classified in the pants only class (class 3), a lower protecting class. Skin sensitivity to sunburn was associated with membership in a lower protecting class (class 4). Skin phototype and level of acculturation were not associated with class membership. Conclusion: The differences amongst these classes reveal the variability of Hispanic children's sun protective behaviors as well as characteristics associated with their use patterns. These findings have implications for the design and delivery of future sun protections targeting Hispanic children, as interventions tailored to specific subgroups may be more useful in achieving meaningful behavior change in this at-risk population.

CORRESPONDING AUTHOR: Kimberly Miller, MPH, University of Southern California, Los Angeles, CA, 90042; kim.miller@med.usc.edu

Paper Session 09 4:27 PM-4:45 PM

ASSESSING REAL TIME VARIATION IN SUN PROTECTION DECISIONS AMONG MELANOMA FIRST-DEGREE RELATIVES

Jennifer Hay, PhD[1], Elyse Shuk, MA[1], Rebecca R. Loeb, MS[2], Susan Holland, MA, MPS[3], Jack E. Burkhalter, PhD[1], Yuelin Li, PhD[1]

[1]Memorial Sloan Kettering Cancer Center, New York, NY; [2]Memorial Sloan Ketting Cancer Center, New York, NY; [3]MSKCC, NYC, NY

First-degree relatives (FDRs) of melanoma patients are at increased melanoma risk yet inconsistently use sun protection. Cumulative self-report measures (usual protective behaviors in the sun) do not adequately capture within-subject variations, nor do they capture variation in the environmental or social context that dictates whether individuals use sun protection at a particular time. In ethnographic research we identified decision factors related to sun protection, and then developed an interactive voice response system to assess sun protection decision making twice-daily (12:30pm, 5pm) over a 2-week summer period. We recruited melanoma FDRs (N=59) with at least 1 hour of direct outdoor exposure each morning and afternoon (due to outodoor employment, vacations, or retirement) across the 2-week period. Most varied in their use of sunscreen (71%), and shade-seeking (81%). Adjusted logistic GEE models indicated the following decision factors were significantly associated with sunscreen use on particular occasions: having time to apply it (OR: 3.22, 95% CI: 1.87-5.57), social encouragement (OR: 1.93. 95% CI: 1.07-3.49), having sun on the face (OR: 1.68, 95% CI: 1.20-2.36), being outside for a longer period of time (OR: 1.68. 95% CI: 1.20-2.35), being out during peak times (OR: 1.57. 95% CI: 1.17-2.12), sunny hot weather (OR: 1.55, 95% CI: 1.06-2.26), and physical activity (OR: 1.44, 95% CI: 1.04-2.00). Cloudy weather was a barrier to sunscreen use (OR: 0.73, 95% CI: 0.54-0.99). Decision factors significantly associated with shade-seeking were: shade being conveniently availabe (OR: 2.62, 95% CI: 1.95-3.53), sunny hot weather (OR: 1.83, 95% CI: 1.30-2.58), and feeling hot (OR: 1.60, 95% CI: 1.14-2.25); no significant barriers emerged for shade-seeking. Findings show that intra-individual variations in distinct decisional processes are important to inconsistent sun protection among melanoma FDRs. Addressing these factors is critical to achieving sun protection maintenance.

CORRESPONDING AUTHOR: Jennifer Hay, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, 10022; hayj@mskcc.org

Paper Session 10 3:15 PM-3:33 PM

EFFECTS OF TAI-CHI ON FUNCTIONING, SYMPTOMS, & MOVEMENT COORDINATION ON PATIENTS WITH SCHIZOPHRENIA

Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA[1], Ted C.T. Fong, MPhil[2], Adrian H.Y. Wan, PhDCandidate[3], Friendly S.W. Au Yeung, MSocSc[4], Pantha Joey C.Y. Siu, MSocSc[5], Cathy P.K. Wong[6], Winnie Y. H. Ng[7], Phyllis H.Y. Lo, MSW, MPhil[8], Irene K. M. Cheung, MSW[2], Cecilia LW Chan, PhD[9], Siu Man Ng[10], Eric Chen, FRCPsych, FHKAM[11]

[1]The University of Hong Kong, Hong Kong, China, Peoples Rep; [2]The University of Hong Kong, Hong Kong, Hong Kong; [3]Centre on Beahvioral Health, HKU, Hong Kong, Hong Kong; [4]HKSKH Welfare Council/ The Providence Garden for Rehab, Hong Kong, Hong Kong; [5]Department of Social Work & Social Administration, HKU, Hong Kong, Hong Kong; [6]The Providence Garden for Rehab, Hong Kong, Hong Kong; [7]HKSKH Welfare Council/ The Providence Garden for Rehab, Hong Kong, , Hong Kong; [8]Centre on Behavioral Health, HKU, Hong Kong, , Hong Kong; [9]The University of Hong Kong, Hong Kong (SAR), China, Peoples Rep; [10]Department of Social Work & Social Administration, HKU, , Hong Kong; [11]Department of Psychiatry, HKU, Hong Kong, Hong Kong

Background: Patients with schizophrenia require long-term care and management of psychotic symptoms via anti-psychotic medication, which may induce side effects and reduce patients' functioning. Tai-chi is an Eastern mind-body health exercise that emphasizes motor coordination. The present study aimed to examine the effects of Tai-chi intervention on the cognitive and motor deficits of patients with schizophrenia.Methods: A 3-arm randomized control trial was conducted to recruit 151 residential patients with schizophrenia (mean age = 54.0 years, *SD* = 8.5) who were randomized into Tai-chi, exercise, or waitlist control groups. Both the Tai-chi and exercise groups were given 12 weeks of specific intervention on top of the standard medication and care. All participants were assessed in terms of the Positive and Negative Syndrome Scale, Barthel's Activities of Daily Living Index, and Neurological Evaluation Scale at baseline, at 12 weeks (post-intervention) and at 24 weeks (maintenance). Latent growth modeling was used to assess the intervention effects on daily living function, symptom management, and movement coordination.Results: Participants in the three groups did not significantly differ on demographics and baseline status of the outcome variables. Both the Tai-chi and exercise groups showed significant improvement ($p < .05$) in daily living function over the control group over time. Compared to the control group, participants in the Tai-chi group revealed significant decreases in motor deficits ($p < .01$) in terms of balancing, motor coordination and sequencing. No intervention effects were found ($p > .05$) for Tai-chi on management of the psychotic symptoms.Discussions: These results suggest that Tai-chi psychotherapy may have some therapeutic effects in reducing the motor deficits and improving the daily functioning of residential patients with schizophrenia.

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CORRESPONDING AUTHOR: Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA, The University of Hong Kong, Hong Kong, 852; tinho@hku.hk

Paper Session 10 3:33 PM-3:51 PM

CHANGES IN SERUM BIOMARKERS OF AGING ARE ASSOCIATED WITH RELAXATION PRACTICE DURING STRESS MANAGEMENT.

Iris Emerman[1], Daniella Bianchi-Frias, PhD[2], Karly M. Murphy, MS[1], Pamela Yang[3], Jessica Armer, BS[4], Bonnie A. McGregor, PhD[1]

[1]Fred Hutchinson Cancer Research Center, Seattle, WA; [2]FHCRC, Seattle, WA; [3]Fred Hutchinson Cancer Research Center, Lynnwood, WA; [4]Fred Hutchinson Cancer Research Center, Federal Way, WA

Chronic stress has been associated with shortened telomeres, implying that psychological stress can have a negative effect on the aging process (Epel, 2004). The purpose of the present study was to examine the effect of psychological stress on two age-associated biomarkers, interlukin-6 (IL-6), an inflammatory cytokine associated with both age and stress (Kiecolt-Glaser, 2003; Haden et al., 2000), and macrophage inhibitory cytokine-1 (MIC-1), a biomarker associated with aging and mortality (Wiklund et al., 2010). Serum and psychological data from 41 women reporting elevated stress and a family history of breast cancer were collected as part of a larger cognitive behavioral stress management (CBSM) intervention study. ELISAs were used to measure serum concentrations of IL-6 and MIC-1 before and after the 10-week intervention or wait list control condition. A repeated measures MANCOVA revealed that relaxation practice moderated the effect of the intervention on both IL-6 and MIC-1, with participants who spent more time practicing over the course of the intervention having a greater decrease in concentration of MIC-1 (Pillai's Trace = 0.190, p = 0.028) and of IL-6 (Pillai's Trace = 0.157, p = 0.055) than participants who practiced less or who were part of the control group. All analyses controlled for age, BMI, depressive symptoms, and perceived stress reported by participants before the intervention. These results are consistent with our previous research, which found that high practice participants in this intervention group reported greater psychological benefits, including decreased levels of stress and depressive symptoms compared to low practice or control group women (McGregor et al., 2014, under review). Thus, increased relaxation practice within the intervention was associated with a greater decrease in biomarkers of age.

CORRESPONDING AUTHOR: Karly M. Murphy, MS, Fred Hutchinson Cancer Research Center, Seattle, WA, 98103; kmmurphy@fhcrc.org

Paper Session 10 3:51 PM-4:09 PM

MENTAL IMAGERY IMPROVES OUTCOMES FOR THOSE WITH POST-TRAUMATIC STRESS DISORDER: A SYSTEMATIC REVIEW

Peter Giacobbi, Jr., M.S., Ph.D.[1], Anna-Marie Jaeschke, M.S.[1], Jonathan Stewart, M.S.[1], Meagan E. Stabler, PhD(c)[2], Jean L. Siebert, MLS MBA[3], George A. Kelley[1]

[1]West Virginia University, Morgantown, WV; [2]West Virginia School of Public Health, Morgantown, WV; [3]West Virginia University Health Sciences Center, Morgantown, WV

Objectives: Post traumatic stress disorder (PTSD) impacts millions of people from all age groups worldwide. PTSD results from exposure to a "terrifying event" and is characterized by recurrent, intrusive, and unwanted thoughts of the event, flashbacks, and upsetting dreams. Guided imagery (GI) is a non-pharmacological approach with potential for improving outcomes for those with PTSD. The purpose of this study was to systematically review the impact of GI on PTSD and related outcomes.

Methods: Selection criteria included studies published between 1964 and 2013 in which adult participants with PTSD participated in randomized controlled trials (RCTs) that used GI as an intervention. Studies were identified by searching nine electronic bibliographic databases. Risk of bias was assessed using the Cochrane Risk of Bias Assessment Instrument. The length, nature, and reported outcomes were coded and stored in an electronic database.

Results: Nine studies representing 522 adults met inclusion criteria. Exposure to GI ranged from one hour to 14 weeks and was administered by Ph.D's in Psychology with 7 studies. Four studies adopted theoretical frameworks while no theories were discussed in the literature reviews of the remaining five. Authors in 7 studies (77.8%) reported positive improvements in PTSD symptoms as measured by standardized surveys, improved sleep quality, reduced nightmare frequency, mood, hormonal responses, and anxiety. One study showed no improvements in nightmare frequency while another showed positive results for those receiving pharmacological therapy plus GI. Risk of bias was present in several studies and these assessments provided crucial insights into the efficacy of guided imagery interventions for PTSD.

Conclusions: PTSD sufferers with access to the level of care reviewed in several of the 9 studies may benefit from GI. The public health reach of these services is limited and suggests the need for community-based trials. GI may be suitable for difficult to reach populations and can be administered using telephone or web-based applications.

CORRESPONDING AUTHOR: Peter Giacobbi, Jr., M.S., Ph.D., West Virginia University, Morgantown, WV, 26508; peter.giacobbi@mail.wvu.edu

Paper Session 10 4:09 PM-4:27 PM

PROMOTING AND RESTORING EMOTIONAL WELL-BEING: EFFECTS OF CLAY ART THERAPY FOR DEPRESSED PATIENTS

Joshua K. M Nan, ATR, RSW[1], Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA[2]

[1]University of Hong Kong, HONG KONG, China, Peoples Rep; [2]The University of Hong Kong, Hong Kong, China, Peoples Rep

Objectives: Depression creates huge socioeconomic problems globally and will become the most serious cause of disability in 2030 (WHO, 2008). Integrative verbal/nonverbal psychosocial interventions on depression have documented benefits of better understanding and communication of feelings and thoughts, improvement of general mental health condition and increase of self-confidence in depressed patients. As one of the integrative arts therapy models, Clay Art Therapy (CAT) combines sensory, kinesthetic and psychological treatment components in supporting patients with psychological distress. The present study aims to evaluate the effects of CAT on depressed patients which have been rarely reported in the literature.

METHODS:The study adopted a randomized control design in which 79 depressed patients from outpatient clinics were randomly allocated into the CAT intervention group (CAT) and non-directive Visual Art control group (VA). Both groups composed of six 2.5-hour weekly sessions. Intervention efficacy was measured by the Chinese version of the 12-item General Health Questionnaire (GHQ12). Data were collected at baseline, end of treatment (T1) and three weeks after (T2).

RESULTS: Results of repeated measures ANOVA showed significant difference between CAT and VA, $F(1, 59) = 6.028$, $p = .017$. Participants in CAT had a rapid drop of scores from baseline (M=21.93, SD=7.54) to T1 (M=15.00, SD=8.82) with a significant mean decrease of 6.93 (95% CI, 3.26 to 10.59), $t(40) = 3.82$, $p < .000$. The change from baseline to T2 (M=13.10, SD=7.69) was also significant and the score had a significant decrease of 8.83 (95% CI, 5.63 to 12.03), $t(40) = 5.59$, $p < .000$. Change of scores in between the three time points of measurement in VA was insignificant.

CONCLUSION: The results suggest that participants can benefit more from CAT than VA on reduction of depressive signs and improvement of general mental health. Treatment effects can be maintained for three weeks. CAT can potentially be used on depressed patients. Other psychosocial benefits and the machanisms of the therapy is worthy of further investigation.

CORRESPONDING AUTHOR: Joshua K. M Nan, ATR, RSW, University of Hong Kong, HONG KONG, 00000; kinmanblue@gmail.com

CITATION PAPER
Paper Session 10 4:27PM-4:45 PM

ENHANCING EXERCISE-BASED CARDIAC REHABILITATION WITH STRESS MANAGEMENT TRAINING

James Blumenthal, PhD[1], Andrew Sherwood, PhD[1], Patrick Smith, PhD[1], Lana Watkins, PhD[1], Stephanie Mabe, MS[1], Alan Hinderliter, MD[2]

[1]Duke University, Durham, NC; [2]Department of Medicine, UNC School of Medicine, chapel hill, NC

Objective: To evaluate the potential benefits of stress management training (SMT) when combined with standard exercise-based cardiac rehabilitation (CR) in patients enrolled in CR.Methods: 151 patients referred to exercise-based cardiac rehabilitation (CR) underwent baseline evaluations including a battery of questionnaires to assess stress (i.e., Beck Depression Inventory, State-trait Anxiety Inventory, General Health Questionnaire, Perceived Stress Scale, and PROMIS Anger Scale), cardiovascular risk factors (i.e., blood pressure, lipids) and CVD biomarkers (e.g., C-reactive protein, heart rate variability, baroreflex sensitivity). Patients were then randomized to either exercise-based CR or CR+SMT for 12 weeks. At post-intervention, all assessments were repeated, and patients were followed for up to 4 years for clinical events.Results: Patients randomized to CR+SMT achieved greater reductions in a composite psychometric index of stress compared to standard CR ($p = .034$). Both groups achieved similar improvements in aerobic capacity and CVD risk factors, although CR+SMT exhibited greater leisure time activity following treatment ($p < 0.05$). There were 32 clinical events over a median follow-up of 2 years. Time-to-event analyses revealed that the CR+SMT group had fewer events during follow-up compared to the CR alone group (HR = 0.36 [95%CI 0.15, 0.90], $p = .029$). Mediation analyses revealed that post-treatment stress also was associated with clinical events ($p = .016$) and that controlling for post-treatment stress partially attenuated the relationship between treatment and clinical events (HR = 0.42 [95%CI 0.17, 1.06], $p = .067$).Conclusion: SMT provides added benefit to traditional exercise-based CR by improving quality of life and reducing the risk for adverse clinical events.

CORRESPONDING AUTHOR: James Blumenthal, PhD, Duke University, Durham, NC, 27710; blume003@mc.duke.edu

Paper Session 11 3:15 PM-3:33 PM

GENDER DIFFERENCES IN AFFECTIVE RESPONSE TO BIS/BAS SENSITIVITY ON ADOLESCENT HEALTH RISK BEHAVIORS

Karlene Cunningham, PhD[1], Lori A.J Scott-Sheldon, PhD[2], Kate B. Carey, PhD[3], Tanya Eckert, PhD[4], Aesoon Park, Ph.D.[5], Peter A. Vanable, PhD[4], Michael P. Carey, PhD[6]

[1]Psychiatry and Human Behavior, Alpert Medical School, Brown University, Providence, RI; [2]The Miriam Hospital and Brown University, Providence, RI; [3]Brown University School of Public Health, Providence, RI; [4]Syracuse University, Syracuse, NY; [5]Syracuse Univerity, Syracuse, NY; [6]The Miriam Hospital & Brown University, Providence, RI

Background: Sensitivity to reward (i.e., behavioral activation system, BAS) and punishment (i.e., behavioral inhibition system, BIS) has long been investigated as an underlying motivator of behavior. A growing body of research links this sensitivity to the propensity of certain affective responses. Additionally, prominent in the literature are gender differences in affective responses to distress. Few studies, however, examine how affective responses mediate the relation between reward/punishment sensitivity and health behaviors. Fewer investigate these associations with adolescents, who are at greater risk of poor outcomes related to unhealthy behavior. The purpose of this study was to examine whether the association between reward/punishment sensitivity and health risk behavior was mediated by affective responses (e.g., depression/anger) and if this association differs by gender. Methods: Data were drawn from a prospective, community-based study of 250 urban adolescents. Participants (57% female, 48% African-American) were between age 13 and 17 ($M = 14.51$; $SD = 0.73$). Sensitivity to reward and punishment were measured using the BIS/BAS scales (Carver & White, 1994) and affective responses (i.e., depression/anger) were measured using validated measures (Kroenke, Spitzer, & Williams, 2003; Radloff, 1977). Health risk behavior was measured as a composite of "ever use" of alcohol, marijuana, and cigarettes as well as "ever engaged" in sexual behavior (range = 0 - 4, $M = 1.68$ $SD = 1.45$). Multiple group structural equation modeling evaluated the relationship between sensitivity to reward/punishment, affective response (i.e., depression or anger) and health risk for adolescent boys and girls.Results: The association between sensitivity to reward/punishment and health risk behavior was mediated by affective responses, but those responses varied by gender. Specifically, depression mediated the association for girls (BIS =0.18, p =.004; BAS = -0.10, p = .04). Model fit indices indicate satisfactory fit when the model was stratified by gender (χ^2 (358) = 397.24, ns; RMSEA = .03, 95% CI [.00, .05]; CFI = .92).Conclusion: Both sensitivity to reward/punishment and gendered affective responses may help to identify youth at risk of engaging in unhealthy behaviors as well as potentially inform risk interventions.

CORRESPONDING AUTHOR: Karlene Cunningham, PhD, Psychiatry and Human Behavior, Alpert Medical School, Brown University, Providence, RI, 02906; karlene_cunningham@brown.edu

Paper Session 11 3:33 PM-3:51 PM

ALCOHOL USE AND SEXUAL RISK BEHAVIORS AMONG ADOLESCENTS WITH MENTAL ILLNESS: A META-ANALYSIS

Karlene Cunningham, PhD[1], Lori A.J Scott-Sheldon, PhD[2], David Martinez, PhD[3], Xinmiao Tan, ScM[4], Kate B. Carey, PhD[5], Michael P. Carey, PhD[6]

[1]Psychiatry and Human Behavior, Alpert Medical School, Brown University, Providence, RI; [2]The Miriam Hospital and Brown University, Providence, RI; [3]University of San Francisco, San Francisco, CA; [4]Brown University, NEW BRITAIN, CT; [5]Brown University School of Public Health, Providence, RI; [6]The Miriam Hospital & Brown University, Providence, RI

Background: Alcohol use is associated with increased sexual risk-taking behavior, which puts individuals at increased risk for HIV. Individuals with mental illness report higher sexual risk-taking behaviors than those without MI, but this research has been limited primarily to adult samples. The purpose of this meta-analysis was to examine the prevalence of alcohol use and sexual behaviors that increase the risk for HIV among mentally ill adolescents.

Methods: Electronic databases were searched to identify relevant studies. Studies were included if the study sampled adolescents (≤18 years of age) diagnosed with a mental illness, and evaluated both alcohol use and sexual risk behaviors (e.g., sexual activity, number of partners, condom use). Studies available by December 2013 were included. Overall weighted mean effect sizes were calculated and analyzed using logits then converted back into percentages. A random-effects model was used.

Results: Of the 2,755 studies identified through the comprehensive electronic database searches, 14 met inclusion criteria. Study samples included 3,016 mentally ill adolescents ($M = 15$ years old; 53% female; 58% white). Most studies recruited adolescents from inpatient or outpatient treatment settings (79%); one study recruited adolescents from a juvenile detention facility (7%). Findings indicate that a substantial proportion of mentally ill adolescents use alcohol (68%; 95% CI = 0.56, 0.79), are sexually active (69%; 95% CI = 0.60, 0.76), and report having multiple sexual partners (39%; 95% CI = 0.33, 0.45). Only half of the adolescents reported ever using condoms (51%; 95% CI = 0.30, 0.61) or using condoms during their last sexual event (53%; 95% CI = 0.38, 0.67). Of the five studies assessing sexually transmitted diseases (STIs), 15% (95% CI = 0.05, 0.36) of the adolescents reported having an STI during their lifetime. Sample characteristics moderated the prevalence of alcohol use and sexual risk behaviors.

Conclusions/Implications: Adolescents with mental illness report high rates of alcohol and sexual behaviors that put them at risk for HIV and other STIs. Interventions targeting alcohol use and sexual risk behaviors among mentally ill adolescents are needed.

CORRESPONDING AUTHOR: Karlene Cunningham, PhD, Psychiatry and Human Behavior, Alpert Medical School, Brown University, Providence, RI, 02906; karlene_cunningham@brown.edu

Paper Session 11 3:51 PM-4:09 PM

THE INFUENCE OF PARENTING AND RELIGIOSITY ON ADOLESCENT SEXUAL RISKY BEHAVIORS

Katherine Rodriguez[1], Enrique Ortega, PhD, MPH[2]

[1]California State University Dominguez Hills, downey, CA; [2]California State University Dominguez Hills, Carson, CA

Abstract

Introduction: Longitudinal studies have indicated an association between family religiosity and adolescent risky sexual behaviors with few investigations testing the influence of the interaction of parenting models with religious instruction on adolescent risky sexual behaviors. This study investigated the concomitant effect of parenting and religious beliefs on two adolescent sexual risk indicators: number of sexual partners and age of sexual initiation. We also tested the potential moderating effect of parenting between the association of religious beliefs and adolescent risk behaviors.

Methods: The sample consisted of 299 Dutch high school adolescents (48% female), ages 15-19 years (mean age = 17.4 (S.D. = 1.4)), living in the northeast of Holland. Multiple linear regressions were used to explore the associations of among religious service attendance, reliance on prayer, belief in god, parental support, parental strictness and two indicators of adolescent sexual risk: number of sexual partners and age of sexual initiation. Age, gender were used as covariates in the analysis.

Results: Our analyses indicated that the predictors explained 68% of the variance (R^2=.69, F (7,13) = 4.110, $p < .05$). Results indicated that greater number of sexual partners was associated to greater parental support (β = .373, $p < 0.05$), greater reliance on prayer (β = .902, $p < 0.01$). Greater indications of belief in god were associated to (β = -.835, $p < 0.05$) lower number of sexual partners. Lower ages of beginning sexual activity were associated with greater indications of belief in god (β = -.536, $p < 0.05$). No significant associations were found when testing the potential role of parental support as a moderator.

Conclusions: While the health benefits of parenting and religious beliefs are known, further investigation is needed which could allow investigators to understand how these interact to prevent adolescent sexual risk behaviors. The positive role of religiosity on risky health behaviors requires further study to uncover processes of influence on adolescent behaviors. Such findings could greatly assist in the development of universal sexual risk prevention efforts among adolescents.

CORRESPONDING AUTHOR: Katherine Rodriguez, California State University Dominguez Hills, downey, CA, 90242; krodriguez76@toromail.csudh.edu

Paper Session 11 4:09 PM-4:27 PM

INTERVENTION TO DEVELOP NURSES AS SEXUAL HEALTH BEHAVIOR CHANGE AGENTS: A MIXED-METHODS STUDY

Diane Santa Maria, DrPH, MSN, RN, APHN-BC, Stacy Crandall, PhD, MSN, MPH

University of Texas School of Nursing, Houston, TX

Background. Adolescence is a crucial period that influences the uptake of health behavior. While few adolescents report discussing sexual health with a healthcare provider, youth most frequently identify providers as the first people they would ask about health issues such as STIs. With about 3 million nurses working in the U.S., RNs are the largest providers of public health, delivering essential services in communities, schools, and public health clinics and are often called upon to deliver sex education. While nurses have positive attitudes toward health promotion practices in general, they often feel ill-equipped to assume the role of an adolescent sexual health educator.Methods. Using a mixed-methods study, a quantitative quasi-experimental pre-post test and qualitative focus group design, we conducted a pilot study with 31 student nurses to determine the impact of receiving education and implementation of an evidenced-based adolescent sexual health intervention on sexual health educator confidence and skills.Results. We found high baseline levels of sexual health educator confidence, perceived youth susceptibility to sexual behaviors, intentions to educate patients; and significant improvements in outcome expectations of parent-child sexual health education (mean diff= 2.62, t= 3.44, $p < 0.00$), attitudes about sexual health education (mean diff= -4.58, t= -6.24, $p < 0.00$), beliefs about parental monitoring (mean diff= 23.45, t= 11.78, $p < 0.00$), and experience in providing sexual health education to parents (mean diff= 14.42, t= 9.19, $p < 0.00$). Using thematic content analysis, 3 main themes emerged; increased preparation as adolescent sexual health educators, research knowledge, and lack of education.Conclusion. Incorporating adolescent sexual health education into hands-on public health nursing clinical can prepare nurses to assume the role of adolescent sexual health educators, an essential task for nurses working with youth and parents in community, clinic, and acute care settings. The shift in health care toward primary health care delivery systems requires that nurses collaborate and work in community settings. Engaging student nurses in community-based research is an effective model for teaching community practice and increases both research knowledge and skills.

CORRESPONDING AUTHOR: Diane Santa Maria, DrPH, MSN, RN, APHN-BC, University of Texas School of Nursing, Houston, TX, 77030; diane.m.santamaria@uth.tmc.edu

Paper Session 11 4:27 PM-4:45 PM

CHILDHOOD LANGUAGE ABILITIES PREDICTING ADOLESCENT RISK BEHAVIORS

Sabrina Ford, PhD[1], Laura Betancourt, PhD[2], Nancy Brodsky, PhD[3], Hallam Hurt, MD[2]

[1]Michigan State University College of Human Medicine, East Lansing, MI; [2]Children's Hospital of Philadelphia, Philadelphia, PA; [3]University of Pennsylvania, Philadelphia, PA

The relationship between language function and antisocial behavior in adolescence is well described. Yet, few studies examine the correlation between language abilities, and often co-occurring, sexual risk behavior and substance use. This study examines the relationship between language function in childhood and Antisocial Behavior (AB), Substance Use (SU), and Sexual Behavior (SB) in adolescence. METHODS: African American children of low SES were assessed for language function between the ages of 2.5 to 12 years to predict AB, SU, and SB between the ages of 9 to 15. Six language measures (LM) and 15 yes/no risk behavior items from the Youth Health Risk Behavior Inventory (YHRBI) and Achenbach Survey of Empirically Based Assessment (ASEBA) were administered to the children. Logistic regressions were utilized to examine relationships between LMs and risk behaviors. RESULTS: 50 participants completed all LMs and items from the YHRBI and ASEBA. 1) Logistic regressions revealed that higher expressive LM at seven years of age was associated with increased likelihood of SU and SB ($p < .01$), and lower receptive LM at ages 7 and 12 years were associated with increased likelihood of AB and SB ($p < .05$). 2) Backward stepwise logistic regressions examined which LMs were most predictive of individual items of AB, SU, and SB and demonstrated that higher expressive LM at age 7 was related to higher likelihood that an adolescent would report SU ($p < .01$) and intercourse ($p < .01$). Lower receptive LMs at age 7 and 12 were related to higher likelihood that an adolescent would report fighting ($p < .05$) and intercourse ($p < .01$). CONCLUSIONS: Increased expressive abilities were associated with increased likelihood of SU and intercourse. We speculate that youth adept at expressive language are more likely to engage in social risk behavior such as negotiating acquisition of substances and intercourse. Decreased receptive function was associated with increased reporting of fighting and intercourse. Adolescents with lower receptive function may be challenged to negotiate social situations, resulting in conflicts. Further research is needed to elucidate how expressive and receptive language influences adolescent risk, and in turn, inform risk prevention programs.

CORRESPONDING AUTHOR: Sabrina Ford, PhD, Michigan State University College of Human Medicine, East Lansing, MI, 48824; sabrina.ford@hc.msu.edu

Paper Session 12 3:15 PM-3:38 PM

COMPARING COLLEGE STUDENT AND NON-COLLEGE EDUCATED YOUNG ADULT E-CIGARETTE USERS

Marshall Cheney, PhD, Mary Gowin, MPH, Taylor Wann, BS

University of Oklahoma, Norman, OK

Young adults have the highest rate of e-cigarettes use, but little is known about patterns of use or how vaping behaviors and beliefs differ for college students and non-college educated young adults. Individual interviews (n=32) were conducted with young adults ages 19-29. Young adults were asked about patterns of use, concurrent use of other tobacco products, their identity as a vaper, influences on the decision to vape, how people viewed them differently when they vaped, beliefs about safety and health impacts of vaping, and how they get information about vaping and judge its accuracy. Interviews were recorded and transcribed. Results from interviews showed most non-college educated young adult used vaping to quit smoking, while many college students tried vaping without first smoking. Non-college educated young adults still smoked sometimes, yet no longer identified themselves as smokers. They reported a cycle of smoking and vaping. Some who had transitioned to vaping went back to smoking when their e-cigarette broke, whenever they ran out of vaping liquid, or when around other smokers. College students discussed vaping more as a hobby or cultural phenomenon, purchasing more expensive e-cigarette models to produce larger vapor clouds, and spent more money on vaping than non-college educated. Some young adults enjoyed vaping in designated no smoking locations in defiance of rules, but most said that they did not vape inside public buildings or in restaurants out of respect for others. College students discussed vaping in class and around campus, and revealed techniques for concealing vaping while indoors. Non-college educated young adults said when they wanted information on vaping they would rely on vapor store staff or "trust Google" to give them accurate information. They considered vaping information on the internet accurate if something was said in two or more places, regardless of source. College students displayed more critical thinking about vaping information. Young adults, particularly non-college educated, who vape may consume large amounts of nicotine through vaping, and are vulnerable to currently unknown health risks of vaping. College-educated and non-college educated young adults have different motivations, beliefs, and use patterns which will influence prevention efforts.

CORRESPONDING AUTHOR: Marshall Cheney, PhD, University of Oklahoma, Norman, OK, 73019; marshall@ou.edu

Paper Session 12 3:38 PM-4:00 PM

HOW RISKY ARE E-CIGARETTES? SMOKERS' BELIEFS ABOUT THE HEALTH RISKS OF MULTIPLE TOBACCO PRODUCTS

Jessica K. Pepper, PhD[1], Sherry L. Emery, MBA, PhD[2], Kurt M. Ribisl, PhD[3], Christine M. Rini, PhD[4], Noel Brewer, PhD[5]

[1]UNC Center for Regulatory Research on Tobacco Communication, Chapel Hill, NC; [2]University of Illinois at Chicago, Chicago, IL; [3]UNC Gillings School of Global Public Health, Chapel Hill, NC; [4]University of North Carolina, Chapel Hill, Chapel Hill, NC; [5]University of North Carolina at Chapel Hill, Chapel Hill, NC

Introduction: Although traditional cigarettes remain the most popular tobacco product in the U.S., use of non-cigarette tobacco products (NCTPs) is increasing, especially for electronic cigarettes (e-cigarettes). The belief that e-cigarettes and other NCTPs are less harmful than cigarettes may be contributing to their popularity. We sought to understand smokers' perceptions of the likelihood of developing health problems from using traditional cigarettes, e-cigarettes, snus, dissolvable tobacco, and smokeless tobacco.Methods: In March 2013, a U.S. national sample of 6,607 adult smokers completed an online survey assessing their perceptions of the chances that using cigarettes and NCTPs would cause them to develop lung cancer, oral cancer, and heart disease.Results: Smokers viewed e-cigarettes as less likely to cause lung cancer, oral cancer, and heart disease compared to cigarettes (all $p < .001$). The comparison was robust for all demographic groups, including both e-cigarette users and non-users. In between-group comparisons, smokers rated e-cigarettes as less harmful than the other NCTPs for all three health conditions.Conclusions: The consistent perception that e-cigarettes are less harmful than cigarettes and other NCTPs may be due to positive media and advertising messages about e-cigarettes. Smokers may also view e-cigarettes as an innovation with several relative advantages over the traditional product (i.e., cigarettes) in accordance with the Diffusion of Innovation framework. Should future randomized controlled trials demonstrate the e-cigarettes are helpful for smoking cessation, practitioners may encourage their use as a quit tool among smokers by building on perceptions about their harm. As e-cigarette technology changes and their popularity grows, future research should examine changes in perceived health harms of e-cigarettes and whether perceptions affect the trajectories of use of regular and electronic cigarettes.

CORRESPONDING AUTHOR: Jessica K. Pepper, PhD, UNC Center for Regulatory Research on Tobacco Communication, Chapel Hill, NC, 27599; jkadis@unc.edu

Paper Session 12 4:00 PM-4:23 PM

HOW DOES GOAL ORIENTATION IMPACT E-CIGARETTE USE?

Jessica K. Pepper, PhD[1], Kurt M. Ribisl, PhD[2], Sherry L. Emery, MBA, PhD[3], Noel Brewer, PhD[4]

[1]UNC Center for Regulatory Research on Tobacco Communication, Chapel Hill, NC; [2]UNC Gillings School of Global Public Health, Chapel Hill, NC; [3]University of Illinois at Chicago, Chicago, IL; [4]University of North Carolina at Chapel Hill, Chapel Hill, NC

Background: Rates of e-cigarette use among U.S. adults are increasing rapidly, yet most who try e-cigarettes stop using them. We sought to understand why U.S. adults start and stop using e-cigarettes. We also examined whether individuals who try e-cigarettes for goal-oriented reasons (e.g., smoking cessation, to avoid smoke-free places) differ from those who try for non-goal-oriented reasons (e.g., curiosity).Methods: A U.S. national sample of 3,878 adults who reported ever trying e-cigarettes completed an online survey in March 2013.Results: The three most common reasons for trying were curiosity (non-goal-oriented; 53%); because a friend or family member used, gave, or offered e-cigarettes (non-goal-oriented; 34%); and quitting or reducing smoking (goal-oriented; 30%). The most common reasons for stopping e-cigarette use were that respondents were just experimenting (49%), using e-cigarettes did not feel like smoking cigarettes (15%), and users did not like the taste (14%). Nearly two-thirds of people (65%) who started using e-cigarettes later stopped using them, but rates of discontinuation varied by goal-orientation. Those whose main reason for trying was not goal-oriented (e.g., curiosity) were more likely to discontinue use than those whose main reason was goal-oriented (e.g., quitting smoking) (81% vs. 45%, $p < .001$).Conclusions: Our results suggest there are two categories of e-cigarette users: those who try for goal-oriented reasons and typically continue using and those who try for non-goal-oriented reasons and then typically stop using. Researchers should measure e-cigarette use behavior in a way that distinguishes these user types, for example by setting a threshold of minimum use in order to be defined as an "e-cigarette user." Public health practitioners may need different strategies for reaching goal-oriented and non-goal-oriented users with messages about e-cigarette safety and appropriate use.

CORRESPONDING AUTHOR: Jessica K. Pepper, PhD, UNC Center for Regulatory Research on Tobacco Communication, Chapel Hill, NC, 27599; jkadis@unc.edu

Paper Session 12 4:23 PM-4:45 PM

PERCEIVED HARM OF SECONDHAND E-CIGARETTE VAPORS AND POLICY SUPPORT TO RESTRICT PUBLIC VAPING

Susan Mello, PhD[1], Andy SL. Tan, MPH, PhD[2], Ashley Sanders-Jackson, PhD[3], Cabral Bigman, PhD[4]

[1]Northeastern University, Boston, MA; [2]Dana-Farber Cancer Institute, Population Sciences Division, Center for Community Based Research; Harvard School of Public Health, Department of Social and Behavioral Sciences, Boston, MA; [3]Stanford University, Stanford Prevention Research Center, Palo Alto, CA; [4]University of Illinois at Urbana-Champaign, Urbana, IL

Background: Awareness of secondhand cigarette smoke risks predict public support for clean air policies. While debate over whether to ban e-cigarette use (vaping) in public spaces continues, many perceive secondhand e-cigarette vapors (SHV) to be relatively harmless. Little attention has been paid to the impact of these perceptions on support for policies to restrict vaping in public venues. We hypothesized that higher perceived harm of SHV to personal health would be associated with stronger support for vaping restrictions.Methods: Data are from 1449 U.S. adults in a national online panel (10/2013-12/2013). Using multiple regression, we predict a 3-item scale of support for e-cigarette restricting policies in public spaces (i.e., restaurants, bars/casinos/clubs, and parks; Cronbach's alpha = .74) using a 2-item scale measuring concern and perceptions of harm to personal health from breathing SHV. Analyses adjusted for demographic covariates, smoking status and e-cigarette use, and were weighted to represent the U.S. adult population. Results: Perceived harm of SHV to personal health was associated with support for restricting e-cigarette use in public spaces (b=.18, 95% CI=.16, .198). Current smokers (vs. non-smokers), those who directly observed others vaping, and those with some college education (vs. high school or less) demonstrated less support for such policies.Conclusions: Perceived harm of SHV to personal health could affect policy support for restricting e-cigarette use in public. Implications for tobacco regulation and education campaigns are discussed.

CORRESPONDING AUTHOR: Susan Mello, PhD, Northeastern University, Boston, MA, 02115; s.mello@neu.edu

MERITORIOUS PAPER
Paper Session 13 3:15 PM-3:33 PM

PROSPECTIVE ASSOCIATIONS BETWEEN PHYSICIAN ADVICE AND SUBSTANCE USE IN A YOUTH COHORT

Benjamin Gee, BA[1], Kaigang Li, PhD[2], Denise Haynie, PhD, MPH[2], Ronald J. Iannotti, PhD[3], Bruce Simons-Morton, PhD[2]

[1]Health Behavior Branch, NICHD, NIH, Bethesda, MD; [2]National Institute of Child Health and Human Development, Bethesda, MD; [3]University of Massachusetts Boston, Boston, MA

INTRODUCTION: The most salient threats to U.S. adolescents are unhealthful behaviors, including risk behaviors such as drinking alcohol and smoking tobacco. Although physician advice is widely regarded as a potent strategy for changing adult behavior, surprisingly little research exists supporting its role in reducing substance use in adolescents and young adults. PURPOSE: To examine the association between physician advice and use of alcohol and tobacco in youth.METHODS: Data were analyzed from three waves of the NEXT Generation Study, a nationally-representative cohort of US high school students. Included were assessments from 11th (W2) and 12th (W3) grade, and the following year (W4). Participants who had seen a physician within the past 3-12 months completed items on receiving physician advice (associated risks and behavior reduction) about alcohol and tobacco. Participants reported 30-day alcohol use, binge (5+ drinks/occasion), and tobacco use. Logistic regression was used, controlling for substance use in the previous wave, gender, race and family affluence.RESULTS: The weighted prevalence of risk advice across W2, W3, and W4 was: 42%, 47%, 52% for drinking and 44%, 49%, 54% for smoking, respectively. Participants receiving alcohol risk advice were significantly less likely to drink alcohol (OR=0.57; CI=0.40–0.79) at W3, or binge drink at W3 (OR=0.60; CI=0.38–0.95) and W4 (OR=0.48; CI=0.24–0.97). Participants receiving smoking risk advice were less likely to report smoking at W3 (OR=0.47; CI=0.29–0.77) and W4 (OR=0.24; CI=0.12–0.48). Prevalence of behavior reduction advice was 18%, 22%, 22% for drinking, and 19%, 23%, 24% for smoking, across W2, W3, and W4 respectively. At W2, participants receiving reduction advice were significantly less likely to binge drink (OR=0.45; CI=0.23–0.86) or smoke (OR=0.41; CI=0.22–0.77).CONCLUSIONS: In a nationally-representative cohort study, physician advice was significantly associated with lower rates of binge drinking and smoking in youth, suggesting potential clinical utility. Type of advice may matter. Further study on the utility of physician advice to address risk behaviors in youth is warranted.

CORRESPONDING AUTHOR: Denise Haynie, PhD, MPH, National Institute of Child Health and Human Development, Bethesda, MD, 20852; haynied@exchange.nih.gov

Paper Session 13 3:33 PM-3:51 PM

DO HOSPITAL PROVIDERS ASK ABOUT PHYSICAL ACTIVITY?—AN ASSESSMENT OF THREE ACADEMIC HOSPITALS

Cody Goessl, MS, ATC[1], Susan Meacham, PhD, RD[2]

[1]Virginia Tech , Blacksburg, VA; [2]Via College of Osteopathic Medicine, Blacksburg, VA, Blacksburg, VA

Introduction: The objectives of Healthy People 2020 have emphasized the need to improve the percentage of diabetic patients receiving physical activity counseling or education with each office or exam visit (Healthy People 2020). Hospital health care providers are in a position to get an understanding of the health status of many diabetics by collecting a thorough lifestyle and social history assessment, as well as considering values obtained in any laboratory testing (ie. HbA1C, HDL/LDL levels, etc.). The purpose of this study is to determine how often providers/preceptors asked about patient's physical activity and to consider how their students may emulate the same exam questioning procedures as future providers.Methods: Eight hundred seventy seven (n = 877) medical records were obtained from three hospitals throughout the state of Virginia. Each medical record was analyzed for the prevalence of chronic diseases utilizing International Classification for Disease, 9th edition (ICD-9) codes. Cases were furthered investigated for lifestyle/social history, history and physical exam notes, and any laboratory testing completed. All survey data was collected to a database through Qualtrics, LLC where IBM SPSS Version 22 analyzed for frequencies and percentage rates.Results: Of the 877 patient records reviewed, 39.2% (n= 343), 41.8% (n=367), and 47.1% (n=413) had a relative with a past history of diabetes, hypertension and cardiovascular disease, respectively. Among laboratory tests ordered among all the patients, 51.6% (n= 495) had high blood glucose levels and only 9.59% (n= 92) had their A1C levels analyzed. Furthermore, 25.5% (n= 224) of all records indicated diagnosis of diabetes mellitus (ICD-9 Code 250). In our study, 79.6% of the health care providers did not ask about any physical activity. Conclusion: These results are of concern due to the role these hospitals have in mentoring future health care providers. It has been observed that active observational learning can increase the likelihood of adoption in future independent clinical practices (Epstein, et.al). In total, questioning and educating about physical activity is necessary to reduce chronic disease rates, promote patient-provider communication, and encourage future providers to practice preventive medicine.

CORRESPONDING AUTHOR: Cody Goessl, MS, ATC, Virginia Tech, Blacksburg, VA, 24060; cgoessl@vt.edu

Paper Session 13 3:51 PM-4:09 PM

IDENTIFYING FACTORS TO TARGET TO INCREASE INITIATION OF BEHAVIORAL WEIGHT LOSS TREATMENT

Megan A. McVay, PhD[1], William S. Yancy, MD[1], Christine N. Scott, MS[2], Sandra Allen, RD[1], W. Clint McSherry, PhD[1], Corrine I. Voils, PhD[3]

[1]Durham VA, Durham, NC; [2]Loma Linda VA, Loma Linda, CA; [3]Durham Veterans Affairs Medical Center and Duke University Medical Center, Durham, NC

Background: Behavioral weight loss treatments are increasingly offered at low- or no-cost by health care organizations. However, their impact is limited by low program initiation. To inform efforts to increase weight loss treatment initiation, we aimed to identify 1) patient preferences for treatment features, 2) common barriers to initiating treatment, and 3) patient psychosocial factors and patient-provider interaction factors associated with intentions to initiate treatment.Methods: Participants were outpatients at 4 VA facilities who were referred at a recent medical appointment to the VA-based weight loss program, MOVE!. Participants were interviewed by telephone within 3 weeks of referral to measure variables of interest using validated measures as available.Results: Participants (n=199) were 59% African American, 22% had a bachelor's degree or higher, and mean BMI was 36.9 kg/m^2. Participants reported greater preference for the following treatment features: 1-on-1 (58%) vs group sessions; mixed-gender groups (79%) vs single-gender groups; use of a mobile phone app (58%) vs no phone app; focus on managing mood (69%) vs no focus on mood; and in-person (68%) vs telephone-based (15%) or internet-based (17%) treatment. The most highly endorsed barriers to treatment use were travel distance to clinic (M=2.4, SD=2.2), cost of transportation (M=2.5, SD=2.0), timing of sessions (M=2.5, SD=2.2), and disliking group format (M=2.5, SD=2.0). Intention to initiate MOVE! was associated with dietary self-efficacy (*r*=.15, p=.03), perception that the healthcare provider used a collaborative communication style when discussing weight (*r*=.25, p=.0007), and perceived social norms of other Veterans and patient's family/friends related to MOVE! use (*r*=.30, p= < .0001). Intentions were not significantly associated with anxiety severity, perceived MOVE! effectiveness, or perceptions that treatment impinges on autonomy (p>.05).Discussion: Results support the possible value of flexible scheduling and offering remote and individual treatment options as well as group treatment options to increase initiation of behavioral weight loss treatment. Social norms, dietary self-efficacy, and provider communication style are additional targets for efforts to increase treatment initiation.

CORRESPONDING AUTHOR: Megan A. McVay, PhD, Durham VA, Durham, NC, 277001; megan.mcvay@va.gov

Paper Session 13 4:09 PM-4:27 PM

DESIGN AND IMPLEMENTATION OF A STATE-WIDE PRIMARY CARE PROGRAM FOR INTENSIVE WEIGHT MANAGEMENT

Melissa N. N. Harris, MPA[1], Valerie H. Myers, PhD[2], Ricky D. Brock, RD[1], Patricia S. Boyd, BA[1], Donna H. Ryan, MD[1], Timothy Church, MPH, MS, PhD, MD[1], Phillip J Brantley, PhD[1]

[1]Pennington Biomedical Research Center, Baton Rouge, LA; [2]Klein Buendel, Inc., Golden, CO

Over 39% of the U.S. population are obese (BMI >30 kg/m2). The Intensive Medical Intervention Translational (IMIT) is a treatment arm of the Heads Up Study, a weight management program for members of Louisiana's Office of Group Benefits. IMIT is the implementation of an intensive medical intervention (IMI) in primary care practices throughout the state. IMIT treats severely obese adults using a low calorie liquid diet (LCD) for 16 weeks coupled with lifestyle change groups. In the real-world setting, physicians have the ability to utilize a successful weight loss program to combat obesity and chronic disease management. Few studies have successfully implemented a weight loss translational program of this magnitude in a health care setting. In the IMI program, 530 participants (82.5% female, 54.3% Caucasian, age=51.0 + 10.1, BMI=43.4 kg/m2 + 6.4) have been enrolled. To date, average weight loss at 6 months (n=371) is approximately 38.4 lbs with 14.4% weight loss and at 1 year (n=269) an average weight loss of 30.2 lbs with 11.4% weight loss. In an effort to provide a state-wide weight loss program, 6 satellite clinics were identified, contracts were signed, and training was completed. Of the 6 sites, 5 are actively screening participants. After initial eligibility is assessed via web and phone screening, participants are selected to continue screening at a satellite clinic nearest them. To date, 168 participants have been sent to an active site, 92 have completed the first screening visit, and 71 have been enrolled (81.7% female, 66.2% Caucasian, age=54.5 + 8.3, BMI=42.1 kg/m2 + 5.8). Average weight loss at the completion of the LCD is 37.2 lbs (n=9). Approximately 662 additional participants have completed initial eligibility and are awaiting further screening at one of the satellite clinics. Additional data on the initial weight loss, weight loss maintenance, program compliance, and satisfaction are forthcoming. Additional analyses will assess translational feasibility and effectiveness on weight loss outcomes.

CORRESPONDING AUTHOR: Melissa N. N. Harris, MPA, Pennington Biomedical Research Center, Baton Rouge, LA, 70808; melissa.harris@pbrc.edu

Paper Session 13 4:27 PM-4:45 PM

THE TEEN CHAT TRIAL: TEACHING PCPS MI TO IMPROVE WEIGHT DISCUSSIONS WITH OVERWEIGHT ADOLESCENTS

Kathryn I. Pollak, PhD[1], Cynthia J. Coffman, PhD[2], James A. Tulsky, MD[3], Stewart C. Alexander, PhD[4], Truls Ostbye, MD, PhD[3], David Farrell, MPH[5], Pauline Lyna, MPH[1], Rowena J. Dolor, MD, MPH[6], Alicia K. Bilheimer, MPH[1], Michael E. Bodner, PhD[7], Terrill Bravender, MD, MPH[8]

[1]Duke University, DURHAM, NC; [2]Biostatistics and Bioinformatics, DURHAM, NC; [3]Duke University, Durham, NC; [4]Communication Sciences, West Lafayette, IN; [5]People Designs, Durham, NC; [6]Associate Professor, Durham, NC; [7]Associate Professor, Langley, BC, Canada; [8]University of Michigan, Ann Arbor, MI

Purpose: Physicians are encouraged to help overweight adolescents attain a healthy weight by counseling them to improve nutrition and increase physical activity. When physicians use Motivational Interviewing (MI) techniques, adult patients change their weight-related behaviors. We tested an Internet-based intervention and a printed Summary Report to prompt physicians to use MI when discussing healthy weight strategies with overweight adolescents. Methods: We enrolled 46 pediatricians and family physicians. In the Baseline phase, we audio recorded 176 encounters between physicians and their overweight adolescent patients. Then, half of the physicians were randomized to an individually tailored, theory-based intervention that included audio clips from their own encounters. In the Post-Intervention Phase, we audio recorded 202 encounters with a new set of adolescent patients. Subsequently, in the Summary Report Phase, we audio-recorded a new set of 149 encounters and provided physicians (both arms) with a Summary Report before each encounter detailing adolescent's self-reported data on six behaviors that contribute to obesity. We coded all conversations for the use of MI in weight-related discussions and used linear mixed-effects models to examine arm differences in use of MI techniques. Results: Post-Intervention Phase: MI Spirit and Empathy scores were 0.4 and 0.5 points higher on 5-point Likert scales for intervention physicians compared to controls (95% CI, 0.1 to 0.7; p=0.02 and 95% CI, 0.1 to 0.8; p=0.02, respectively). Similarly, the number of open questions was 1.5 times higher among the intervention physicians (95% CI, 0.7, 2.3; p < 0.001). Arm differences were even larger in the Summary Report Phase: MI Spirit and Empathy scores were both 0.7 points higher for intervention physicians compared to controls (95% CI, 0.4 to 1.1; p < 0.001 and 95% CI, 0.3 to 1.1; p < 0.001, respectively). Intervention physicians asked more open questions and had more MI adherent statements than controls (95% CI, 0.1, 1.9; p=0.02 and 95% CI, 0.0, 2.3; p=0.04, respectively). Conclusion: An individually tailored web-based intervention paired with a Summary Report significantly improved primary care physicians' use of MI when discussing weight-related topics with overweight adolescents.

CORRESPONDING AUTHOR: Kathryn I. Pollak, PhD, Duke University, DURHAM, NC, 27705; kathryn.pollak@duke.edu

Paper Session 14 3:15 PM-3:33 PM

EFFECTS OF VOLUNTEER PEER SUPPORT IN DIABETES WITH DEPRESSIVE SYMPTOMS

Yulia Khodneva, MD, PhD[1], Monika M. Safford, MD[2], Joshua S. Richman, MD, PhD[1], Christopher Gamboa, MPH[1], Andrea Cherrington, MD[2]

[1]UAB, Birmingham, AL; [2]University of Alabama at Birmingham, Birmingham, AL

Depression in diabetes (DM) is common and associated with poor health outcomes. Peer support DM interventions include encouraging interactions that could improve depressive symptoms. We examined intervention effects for those with and without depressive symptoms in a peer support trial.The 1-year ENCOURAGE trial included 424 persons with DM living in rural Alabama. Intervention participants worked with community volunteers who encouraged participants to engage in daily self-management; control arm participants received usual care. Outcomes included A1c, body mass index (BMI) and quality of life (QoL) with EuroQuol-5D (range 0.0-1.0). Depressive symptoms were assessed with the Patient Health Questionnaire (PHQ-8, range 0-24). Generalized Additive Models (GAM) examined control-intervention differences in changes in A1c, BMI, and QoL for those with PHQ-8 ≥5 and PHQ-8 < 5.The 355 included participants with follow-up data were aged 60.2 ±12.1 years, 87% African American, 75% female, and 39% insulin-treated. At baseline, 52% of intervention (n=168) and 48% of control (n=187) participants had PHQ-8 >5 (p=0.37). Compared to intervention participants with PHQ-8 < 5, those with PHQ-8 >5 had higher DM distress (2.6 ±1.4 vs 1.6 ±0.8, p < 0.01) and lower QoL (0.6 ±0.2 vs 0.8 ±0.1, p < 0.01), respectively. Compared to control participants with PHQ-8 < 5, those with PHQ-8 >5 had higher DM distress (2.7 ±1.2 vs 1.6 ±0.8, p < 0.01), QoL (0.7 ±0.2 vs 0.8 ±0.1, p < 0.01), and insulin use (48% vs. 30%, p=0.01), respectively. In an overall GAM adjusting for imbalance across trial arms and time-related covariates, intervention participants experienced a maximum 0.85 greater reduction in PHQ-8 score than control participants (p=0.01). In stratified analyses, those with PHQ-8 >5 had unchanged A1c, lost weight (maximal change in BMI -4.6 kg/m^2, p=0.03) and improved QoL (maximal change 0.35, p=0.04). Those with PHQ-8 2, p=0.05), but did not improve QoL (maximal change 0.08, p=0.06). Peer support improved depressive symptoms for all, but resulted in greater weight loss and gains in QoL for those with baseline depressive symptoms compared to those without. Peer support holds promise for the treatment of comorbid DM and depression.

CORRESPONDING AUTHOR: Yulia Khodneva, MD, PhD, UAB, Birmingham, AL, 35205; khodneva@uab.edu

Paper Session 14 3:33 PM-3:51 PM

ASSESSING THE IMPACT OF PEER SUPPORT ON PATIENT-CENTERED OUTCOMES AMONG LATINOS WITH DIABETES

Andrea Cherrington, MD[1], Guadalupe X. Ayala, PhD, MPH[2], Ming Ji, PhD[3]

[1]University of Alabama at Birmingham, Birmingham, AL; [2]Graduate School of Public Health, San Diego State University, San Diego, CA; [3]University of South Florida, Birmingham, AL

Background and objective: Peer support may have a potent effect on patient centered outcomes in the context of diabetes management. We evaluated the impact of a peer support intervention on patient centered outcomes including depression, diabetes distress, and self-rated health.Methods: This study was conducted in partnership with *Clínicas de Salud del Pueblo,* Inc. Three hundred and thirty-six patients were randomly sampled from the clinic roster, screened for eligibility and recruited to participate. Baseline assessments were conducted via face-to-face interviews and included validated measures of quality of life (EQ-5D), depression (PHQ8), diabetes distress (Polonsky DDS) and self-rated health. Patients were randomly assigned to either an intervention or usual care control condition. Intervention participants received 12 months of peer support from one of 34 trained, volunteer peer leaders who provided support to five to eight patients each using a number of modalities including one-on-one and group support. At 6- and 12-months post baseline, all assessment protocols were repeated. Each outcome was examined using generalized linear mixed effects models to examine group, time, and group-by-time effects. Results: Participants had a mean age of 56 (SD=12), 63% were female, 60% were married, 25% were employed, 43% had a 6th grade education or less. At baseline 60% had mild to moderate depressive symptoms (PHQ>5). Over time, adjusting for clustering and baseline differences, both intervention and control participants demonstrated modest but significant improvements in quality of life (B=0.0004, p < 0.05), diabetes distress (B=-0.0006, p < 0.05), and self- rated health (B=-0.0021, p < 0.05), but not depressive symptoms (B=0.00002, p>0.05). There were no significant differences over time between intervention and control participants. This may be explained by the lower-than-planned intervention dose (four contacts versus eight planned).Conclusion: In this sample of US Latinos with type 2 diabetes, participation in a peer support intervention delivered through a federally qualified health center resulted in improved quality of life and reductions in diabetes distress but outcomes did not differ by treatment arm. Future studies should examine how to maximize intervention contact in rural communities.

CORRESPONDING AUTHOR: Andrea Cherrington, MD, University of Alabama at Birmingham, Birmingham, AL, 35294-4410; acherrington@uabmc.edu

Paper Session 14 3:51 PM-4:09 PM

INTERVENTION EFFECTS ON REGULATION, EFFICACY AND PHYSICAL ACTIVITY IN DIABETIC OLDER ADULTS

Erin A. Olson, PhD[1], Edward McAuley, PhD[2]

[1]Harvard Medical School, Boston, MA; [2]University of Illinois Urbana Champaign, Urbana, IL

Type 2 diabetes (T2D) has become a major public health priority, especially in older adulthood. Despite evidence of the benefits of physical activity to control disease, alleviate symptoms, and improve quality of life, most individuals with T2D do not meet physical activity recommendations. Study purpose was to test the efficacy of a brief intervention targeting self-efficacy and self-regulation to increase physical activity levels in older adults with T2D.Older adults with T2D (M_{age} = 61.8 ± 6.4) completed either an 8-week theory-based, physical activity intervention (n = 58) or an online metabolic health education course (n = 58). The intervention consisted of on-site walking exercise and four group workshops designed to teach behavior modification strategies within a social cognitive framework. Measures of self-efficacy, self-regulatory strategy use and physical activity were collected at baseline, post-intervention, and follow-up.Repeated measures analysis of variance revealed a group by time effect for self-regulation [$F(2,88) = 14.021$, $p < .001$, $\eta^2 = .24$] and self-efficacy [$F(12,77) = 2.322$, $p < .05$, $\eta^2 = .26$] with increases in the intervention group immediately post-intervention and four-months later. Results indicated short-term increases in physical activity in the intervention group ($d = .82$, $p < .01$), which were partially maintained at the six-month follow-up ($d = .27$, $p < .01$).Results indicated that the brief, titrated intervention was successful at increasing physical activity in the short-term and was less successful at maintaining physical activity levels in older adults with T2D. Similar intervention effects were observed in self-efficacy and self-regulation, constructs key to successful behavior change. Future research warrants adjusting intervention strategies to increase long-term change.

CORRESPONDING AUTHOR: Erin A. Olson, PhD, Harvard Medical School, Boston, MA, 02131; erinolson@hsl.harvard.edu

Paper Session 14 4:09 PM-4:27 PM

CAN WE TALK? DISCUSSING AND ADDRESSING BARRIERS TO DIABETES MANAGEMENT DURING A BUSY MEDICAL VISIT

John Billimek, PhD, Dara H Sorkin, PhD, Quyen Ngo-Metzger, MD MPH, Sheldon Greenfield, MD, Sherrie H Kaplan, PhD MPH

University of California, Irvine, Irvine, CA

For low-income patients with type 2 diabetes, contextual factors including challenging life circumstances (e.g. financial pressures) and unfavorable beliefs about the diabetes management regimen (e.g. concerns about side effects) contribute to poorer self-management behaviors and outcomes. To examine how these issues are discussed and addressed by doctors and patients, we analyzed audio recordings of medical visits, in English and Spanish, and medical records for a low-income, ethnically diverse sample of patients with type 2 diabetes (N=387) who consented to the Reducing Racial Disparities in Diabetes Coached Care study (R2D2C2). First, medical records were screened to identify patients with "red flags", such as poorly controlled blood sugar (A1c) that would indicate to the physician that the patient may be struggling with their regimen. For patients with a red flag, audio recordings of the visit were analyzed by two coders using a validated coding method. Each recording was coded to indicate whether (1) an underlying contextual factor was discussed as a possible contributor to the poor outcome and (2) whether the visit resulted in a "contextualized plan of care", in which therapy would be modified or new resources introduced to help the patient address the contextual factor. Coders demonstrated excellent inter-rater reliability (all Kappa>0.9). Logistic regression was used to determine whether obtaining a contextualized plan of care was associated with improved blood sugar control on the next recorded laboratory test. Of the 164 visits in which a red flag was identified, at least one contextual factor was discussed in 89 (54%) visits. A contextualized plan of care addressing the contextual factor was produced in 66 (40%) of the red flagged visits. Examples of successful versus unsuccessful approaches to discuss contextual factors were identified. Among patients with a "level 1 red flag" (A1c>9%), a greater proportion of patients who received a contextualized plan of care showed improved A1c after the visit compared to those whose plan was not contextualized (75% vs. 43%, p=.009). In a busy medical visit, contextual factors are left unaddressed the majority of the time, but for patients with poor glycemic control, addressing these issues may benefit the patient.

CORRESPONDING AUTHOR: John Billimek, PhD, University of California, Irvine, Irvine, CA, 92617; jbillimek@gmail.com

Paper Session 14 4:27 PM-4:45 PM

THE EFFECT OF A COMMUNITY-BASED DIABETES PREVENTION PROGRAM ON SELF-EFFICACY

Jeffrey A. Katula, PhD, MA[1], Heidi Dotson, MS[1], Mara Z. Vitolins, DrPH, MPH, RD[2], Caroline Blackwell, BS[2], Scott Isom, MS[2], Doug Case, PhD[2], David Goff, Jr., MD, PhD[3]

[1]Wake Forest University, Winston-Salem, NC; [2]Wake Forest School of Medicine, Winston-Salem, NC; [3]University of Colorado-Denver, Aurora, CO

The purpose of this study was to examine the impact of the Healthy Living Partnerships to Prevent Diabetes (HELP PD) lifestyle weight loss intervention on several measures of self-efficacy. HELP PD tested a 24-month translational, community-based adaptation of the Diabetes Prevention Program (DPP) in a sample of overweight or obese participants with elevated fasting blood glucose (FBG) levels (95 mg/dl < FBG < 125 mg/dl). 301 participants were randomized to either a community-based, community health worker (CHW)-led lifestyle weight loss intervention (LWL) or an enhanced usual care condition (UCC). The LWL was a group-based translation of the original DPP and consisted of weekly sessions for 24-weeks and monthly sessions for 18 months. The LWL was based on social cognitive theory and designed to induce weight loss through alterations in energy balance (i.e., decreased caloric intake and increased caloric expenditure). Self-efficacy was assessed using a measure of dietary self-efficacy (DSE) and task specific exercise self-efficacy (EXSE) at baseline and every 6-months for 24-months. ANCOVAs that controlled for baseline self-efficacy and examined between group differences in changes in self-efficacy indicated that the LWL participants experienced significantly greater increases in self-efficacy from baseline to 6 months (DSE $p< 0.01$; EXSE $p < 0.01$) and 12 months (DSE $p < 0.01$; EXSE $p < 0.01$) compared to the UCC, but there were no significant between group differences in 24-month change. These findings show that CHWs have the capacity to deliver a DPP translational intervention and positively impact psychosocial processes that underlie behavior change.

CORRESPONDING AUTHOR: Jeffrey A. Katula, PhD, MA, Wake Forest University, Winston-Salem, NC, 27109; katulaj@wfu.edu

Paper Session 15 3:15 PM-3:33 PM

ADHERENCE TO MULTIPLE-BEHAVIOR SELF-MONITORING IN DIABETES WITH PHONE & PAPER DIARIES: A PILOT STUDY

Jing Wang, PhD, MPH, RN[1], Nikhil S. Padhye, PhD[2]

[1]University of Texas Health Science Center at Houston School of Nursing, Houston, TX; [2]University of Texas Health Science Cener at Houston School of Nursing, Houston, TX

Adherence to self-monitoring of diet and physical activity (PA) has been studied in behavioral lifestyle interventions for diabetes and obesity, however, none studied multiple-behavior self-monitoring adherence to include weight and glucose self-monitoring and examined associations among these self-monitoring adherence variables. We conducted a 6-month pilot intervention study testing the use of a smartphone versus a paper diary for self-monitoring of diet, PA, weight, and blood glucose in a behavioral lifestyle intervention for diabetes and obesity. The phone group (n=10) used a smart phone with 2 applications, while the paper group (n=6) was given paper diaries for self-monitoring. Adherence to self-monitoring of diet, PA, glucose, and weight were calculated as dichotomous variables and analyzed in R. Chi-squared tests were used to examine group difference. Cramer's V statistic was used to examine associations among four self-monitoring adherence variables within each group. The sample (age: 58.9 ±5.4 years, 69% female) is comprised of primarily African Americans from an underserved community. On average, the phone group had at least one self-monitoring entry for diet, PA, weight, and glucose on 96.6%, 37.3%, 49.7%, and 72.7% of the days, respectively; while the corresponding adherence rates for the paper group were 8.1%, 1.2%, 2.5%, and 2.5%.] Non-parametric chi-squared tests showed that there was a significant difference between the phone and paper group in their adherence to all four self-monitoring variables ($p < 0.001$). In the smartphone group, there were moderate associations between adherence to self-monitoring of weight and glucose (Cramer's $V = 0.396$) and between adherence to self-monitoring of diet and PA (Cramer's $V = 0.315$), while all other associations were small. In the paper diary group, there were strong associations between adherence to self-monitoring of diet, weight, and glucose (Cramer's $V > 0.7$ for all pairwise associations), while all other associations were small or moderate.]Preliminary findings suggest that using a smart phone can result in better adherence to self-monitoring of all four behaviors than using a paper diary, and paper diary users have stronger associations between self-monitoring of multiple behaviors, but this stems largely from lapses in self-monitoring of all behaviors.

CORRESPONDING AUTHOR: Jing Wang, PhD, MPH, RN, University of Texas Health Science Center at Houston School of Nursing, Houston, TX, 77030; jing.wang@uth.tmc.edu

Paper Session 15 3:33 PM-3:51 PM

PATTERNS OF SELF-WEIGHING BEHAVIOR AND WEIGHT CHANGE IN A WEIGHT LOSS TRIAL

Yaguang Zheng, MSN, PhDc[1], Cynthia A. Danford, PhD, RN[1], Susan M. Sereika, PhD[1], Linda J. Ewing, PhD RN[2], Juliet M. Mancino, MS, RDN, CDE[1], Christopher C. Imes, PhD, RN[1], Lora E. Burke, PhD, MPH[1]

[1]University of Pittsburgh School of Nursing, Pittsburgh, PA; [2]University of Pittsburgh School of Medicine, Pittsburgh, PA

Regular self-weighing has been associated with weight loss/maintenance in adults enrolled in a behavioral weight loss intervention; however, few studies have examined patterns of adherence to a self-weighing protocol. Also, the frequency of self-weighing necessary for successful outcomes remains unclear. Hence, the objectives of this study were to 1) identify the patterns of self-weighing behavior measured by a Wi-Fi-enabled scale; and 2) describe the weight change by self-weighing patterns. This was an analysis of data from a 12-month behavioral weight loss intervention study. Each subject was given a Wi-Fi scale and instructed to weigh daily. The scale transmitted weight values to a central server. The sample (N=89) was predominantly female (89.9%), White (82%), with a mean age of 51.9±9.3 years, 16.6±2.5 years of education, and had a mean BMI of 33.6±4.5 kg/m^2. Overall, self-weighing frequency declined from 5.7 to 3.6 days/week over 12 months. Further analysis was conducted using group-based trajectory modeling to identify distinct classes of trajectories based on the number of days participants self-weighed. Three patterns of self-weighing were identified in this sample: *high/consistent* (65.4% self-weighed 5-6 days/week regularly); *moderate/declined* (22.3% declined from 4-5 to 2 days/week); *minimal/declined* (12.4% declined from 5-6 to 0 days/week). In terms of weight change, the *high/consistent* group lost 9.82% at 6 months and 10.10% at 12 months. The *moderate/declined* group lost on average 5.06% and 5.23% weight at 6 and 12 months, respectively. The *minimal/declined* group lost 2.42% weight at 6 months but regained 1.84% above the baseline weight at 12 months. This is the first study to reveal distinct patterns of self-weighing behavior with regular self-weighing leading to consistent weight loss and maintenance. Our data reveal that the majority of participants were able to sustain a habit of daily self-weighing; however, one third of the sample was not. Thus, it is important to identify the barriers to this strategy in these sub-groups that could help inform the development of interventions to enhance self-weighing for a sustained period. Building on the use of the Wi-Fi scales and its delivery of data in real time, delivery of feedback and adherence-enhancing messages in real time should next be considered.

CORRESPONDING AUTHOR: Yaguang Zheng, MSN, PhDc, University of Pittsburgh School of Nursing, Pittsburgh, PA, 15261; yaz40@pitt.edu

Paper Session 15 3:51 PM-4:09 PM

THE TRACKING STUDY: POST-INTERVENTION WEIGHT CHANGE BY WEIGHING FREQUENCY CONDITION

Jennifer A. Linde, PhD, Carly R. Pacanowski, Phd, RD, Kara L. Gavin, MPH

University of Minnesota, Minneapolis, MN

Observational evidence from weight control trials and community studies suggests that greater frequency of self-monitoring via tracking weight is associated with better weight outcomes; however, this has not been examined in depth in a large-scale randomized trial. The goal of the Tracking Study is to test variations on weighing frequency during weight loss during a standard 12-month behavioral weight loss program with a 12-month assessment-only follow-up. Adults (n=339) were recruited and randomized to a daily, weekly, or no weighing condition. The weight loss program was designed to integrate each tracking instruction with standard behavioral weight loss techniques (goal setting, self-monitoring, stimulus control, dietary and physical activity enhancements, lifestyle modifications); participants in weighing conditions were provided with wireless Internet technology (wifi-enabled digital scales and touchscreen personal devices) to facilitate weight tracking during the study. The program met for 32 sessions over the course of one year, on a schedule of 24 weekly sessions for the first six months, four biweekly sessions over the next two months, and ending with four monthly sessions. Participants completed surveys at baseline and 12 months, and were weighed by study staff at baseline and 12 months. Mean age of participants was 46.5 ± 10.2 years; mean baseline body mass index (BMI) was 33.0 ± 3.6 kg/m2. Sixty-five percent of participants were women, 68% were married or partnered, and 64% were college graduates. At baseline, groups were comparable on all demographic variables, including starting body weight. Attendance averaged 67.2% across groups. Objective scale data indicate average weighing frequency of 4.8 times per week for daily weighers versus 0.9 times per week for weekly weighers. Using a general linear model that controlled for baseline weight, results for 12-month weight change demonstrated a pattern of dose-response association by weighing frequency (-7.97 kg vs. -7.69 kg vs. -6.77 kg, respectively); the pattern and strength of the association varied by gender. Results suggest that self-weighing has the potential to enhance weight loss within a 12-month intervention.

CORRESPONDING AUTHOR: Jennifer A. Linde, PhD, University of Minnesota, Minneapolis, MN, 55454; linde074@umn.edu

Paper Session 15 4:09 PM-4:27 PM

USE OF THE FITBIT TO MEASURE ADHERENCE TO A PHYSICAL ACTIVITY INTERVENTION IN POSTMENOPAUSAL WOMEN

Lisa A. Cadmus-Bertram, Ph.D.[1], Bess H. Marcus, PhD[2], Ruth Patterson, PhD[2], Brittany Morey, MPH[3], Barbara L. Parker, M.D.[2]

[1]University of Wisconsin - Madison, Madison, WI; [2]University of California, San Diego, La Jolla, CA; [3]University of California, San Diego, Gardnerville, NV

Background: Direct-to-consumer trackers and devices have potential to enhance theory-based physical activity interventions by offering an enjoyable way to help participants self-monitor their behavior. A major secondary benefit of these devices is the opportunity to objectively track adherence to physical activity goals across all intervention days, rather than relying on self-report or a small number of objective accelerometry wear periods. Purpose: To assess the trajectory of objectively-measured physical activity change across a 16-week intervention, as measured by a direct-to-consumer tracker. Methods: Participants were 25 overweight/obese, postmenopausal women enrolled in the intervention arm of a randomized controlled physical activity intervention trial. Each participant received a 16-week low-touch, technology-based intervention that used the Fitbit physical activity tracker and website. The overall study goal was 150 min/week of moderate-vigorous intensity physical activity (MVPA) and 10,000 steps/day; however goals were set individually for each participant and updated at Week 4 based on progress. Adherence data were collected by the Fitbit and aggregated by Fitabase (Small Steps Labs, San Diego, CA). Participants also wore an ActiGraph GT3X+ accelerometer for 7 days prior to the intervention and again during Week 16. Results: Participants logged ≥10 hrs/day of Fitbit wear on 88% of the 112 intervention days, with a slight but non-significant decline in wear from a mean of 5.7±2.2 days in Week 1 to 4.7±2.4 days in Week 16 (p=.18). They averaged 7,540±2,373 steps/day during the intervention, compared to 5,906 ±1,968 steps during the baseline ActiGraph assessment (p=.01). At Week 4, 72% of women chose to maintain or increase their MVPA goal. 80% of participants maintained or increased their step goal. Peak adherence was observed during Weeks 1-4 followed by only a small decline of 8% for steps (p=.06) and 14% for MVPA (p=.05). Conclusions: These data indicate that a sophisticated, direct-to-consumer activity tracker encourages high levels of self-monitoring that are sustained over 16 weeks. Further study is needed to determine how to motivate additional gains in physical activity and evaluate the long-term utility of the Fitbit tracker as part of a strategy for chronic disease prevention.

CORRESPONDING AUTHOR: Lisa A. Cadmus-Bertram, Ph.D., University of Wisconsin - Madison, Madison, WI, 53706; cadmusbertra@wisc.edu

Paper Session 15 4:27 PM-4:45 PM

MODELING DAILY DIETARY SELF-MONITORING USING INTENSIVE LONGITUDINAL DATA

Christine Pellegrini, PhD[1], David E. Conroy, PhD[2], Angela Pfammatter, PhD[2], Siobhan M. Phillips, PhD, MPH[2], H. Gene McFadden, B.A.[2], Bonnie Spring, PhD, ABPP[1]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]Northwestern University, Chicago, IL

Background: Dietary self-monitoring is a key component of successful behavioral weight loss interventions; however influences on the stability of self-monitoring adherence are unknown. We examined within-person variations in dietary self-monitoring (number of food items, calories, fat grams) during a 6 month technology-supported weight loss trial as a function of time-varying factors such as fatigue with intervention strategies and the seasonal and social calendar. We hypothesized that self-monitoring would decline over the weekend compared to weekdays, over the winter compared to summer, and as time in study increased. Method: Obese adults (n=32) underwent a 6-month technology-supported weight loss intervention. As part of the multicomponent intervention, participants received a smartphone and app and were instructed to self-monitor daily dietary intake throughout the intervention. Multilevel modeling was used to examine within person variation over the 6 month period in daily calories, fat, and number of foods self-monitored in the smartphone app for all days on which ≥1 food item was recorded. Results: Participants (m=40.1 years [SD = 10.7] and BMI m=34.8[2.8]) were 87.5% female, 40.6% Black. As the length of time in the study increased, participants who provided dietary data (n=31) recorded fewer calories, fat, and food items (p=0.03, p=0.03, $p < 0.001$, respectively). Daily fat, calories, and number of food items self-monitored showed no consistent associations with the seasonal calendar. Calorie ($p < 0.001$) and fat ($p < 0.001$) consumption were greater on days when people self-monitored more items. Participants self-monitored fewer food items on social weekends compared to other days ($p < 0.05$). Conclusion: Adults participating in a technology-supported weight loss intervention self-monitored less on the weekends and as time in the study progressed. These results are consistent with our hypotheses, with the exception that dietary self-monitoring did not vary based on the season. Factors that influence these variations warrant further study in order to identify methods to increase adherence to smartphone supported dietary self-monitoring on weekends and as the time in the intervention progresses.

CORRESPONDING AUTHOR: Christine Pellegrini, PhD, Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; c-pellegrini@northwestern.edu

MERITORIOUS PAPER

Paper Session 16 3:15 PM-3:33 PM

LUNG CANCER SCREENING: WHAT DO HIGH-RISK SMOKERS KNOW AND BELIEVE?

Lisa Carter-Harris, PhD, RN, ANP-C[1], DuyKhanh P. Ceppa, MD[2], Nasser H. Hanna, MD[2], Susan M. Rawl, PhD, RN, FAAN[3]

[1]Indiana University School of Nursing, Indianapolis, IN; [2]Indiana University School of Medicine, Indianapolis, IN; [3]Indiana University (IUPUI), Indianapolis, IN

Aims: Lung cancer is the leading cause of cancer-related deaths worldwide and is associated with very low survival rates. Tobacco smoking is the primary risk factor; long-term smokers are at greatest risk. Guidelines for screening high-risk smokers have recently been developed. With this new screening recommendation, understanding variables that may or may not influence screening participation is essential. Because decisions to participate in cancer screening are made by individuals, exploring high-risk smokers' knowledge and beliefs about screening is a necessary first step to increasing lung cancer screening participation in appropriate individuals. The purposes of this study were to: (1) describe high-risk smokers' perceptions of lung cancer, risk factors, and screening; and (2) obtain feedback from high-risk smokers about the relevance, clarity, comprehensiveness, and appropriateness of newly developed instruments to measure lung cancer screening beliefs (perceived risk, perceived benefits, perceived barriers, and self-efficacy).
Methods: Four focus groups were conducted (N=26); two groups of high-risk smokers who had recently had lung cancer screening with low dose computed tomography (LDCT) (n=12) and two groups of high-risk smokers who had never been screened (n=14). Data were collected via digital audio recordings and transcribed verbatim. Data were analyzed using content analysis.
Results: Regardless of prior screening, high-risk smokers described environmental and occupational exposure as the greatest risk factors for lung cancer, in addition to tobacco smoking. Unscreened participants were unsure what constituted lung cancer screening while those who had been screened identified chest radiograph, in addition to LDCT, as ways to screen for lung cancer. Regardless of prior lung cancer screening experience, knowledge levels about risk factors and screening were low. Participant reactions to draft instruments were generally positive and valuable feedback for revision of scale items was provided.
Conclusions: Lung cancer risk and current screening recommendations are not fully understood among high-risk smokers. Future research is needed to explore the impact of individual health beliefs about lung cancer and screening on lung cancer screening behavior.

CORRESPONDING AUTHOR: Lisa Carter-Harris, PhD, RN, ANP-C, Indiana University School of Nursing, Indianapolis, IN, 46202; lcharris@iu.edu

Paper Session 16 3:33 PM-3:51 PM

UNMET BASIC NEEDS AND BEHAVIORAL INTERVENTIONS IN VULNERABLE POPULATIONS: A COMPARISON OF STRATEGIES

Matthew Kreuter, PhD[1], Amy McQueen, PhD[2], Sonia Boyum, MA[1], John Fu, MD, PhD[3]

[1]Washington University, School of Social Work, St. Louis, MO; [2]Washington University, School of Medicine, St. Louis, MO; [3]Saint Louis University, College for Public Health and Social Justice, St. Louis, MO

BACKGROUND:In the face of unmet basic needs, low SES adults are less likely to obtain needed preventive care including cancer screening. Interventions that can address basic needs while promoting health behaviors are needed. METHODS:A random sample of 2-1-1 callers was invited to participate in a cancer risk assessment, and if eligible, receive up to 3 health referrals (i.e., mammography, pap testing, colonoscopy, HPV vaccination for self or daughter, smoking cessation, and developing smoke-free home policies). Participants were randomized to one of three intervention groups: verbal referral only (N=365), referral + tailored print materials (N=372), or referral + navigator (N=353). At baseline, participants reported their likelihood in the next month of having sufficient: personal physical safety, neighborhood safety, food, money for necessities, money for unexpected expenses, housing, and living space. At 1 month follow up, participants were asked if they contacted any of the health referrals. Mplus analyzed latent classes of the 7 basic needs items. Logistic regression examined the association between the classes and contacting a health referral by study group. RESULTS:Most participants were women (85%), African American (59%) or White (30%) with incomes < $15K (70%). The average age was 43.9 years (SD=13), 29% had less than a high school education, and 39% had no health insurance. Over half the sample was not adherent to the cancer control behaviors except pap testing (27%). A 3 class solution fit the data best (lowest BIC; LMR=35.52, p=.17) and identified low (9%), intermediate (69%), and high (22%) levels of unmet basic needs. For those with low unmet needs, contacting the health referral was greater among tailored vs. verbal intervention groups (OR=4.43, 95%CI: 1.27-15.44). Contacting the health referral was greater for navigator vs. tailored intervention groups with intermediate (1.72; 1.16-2.56) and high (2.99; 1.36-6.57) unmet basic needs and vs. verbal intervention groups with intermediate (2.20; 1.45-3.34) and high (2.57; 1.21-5.44) unmet needs. CONCLUSION:Heterogeneity was observed in the unmet basic needs in this low income sample. Individuals with greater unmet basic needs may especially benefit from the assistance and support from a navigator to act on health referrals.

CORRESPONDING AUTHOR: Amy McQueen, PhD, Washington University, School of Medicine, St. Louis, MO, 63110; amcqueen@dom.wustl.edu

Paper Session 16 3:51 PM-4:09 PM

EXAMINING PREDICTORS OF COLORECTAL CANCER SCREENING: A CLASSIFICATION TREE ANALYSIS

Gregory M. Dominick, PhD[1], Mia A. Papas, PhD[1], Michelle L. Rogers, PhD[2], William Rakowski, PhD[2]

[1]University of Delaware, Newark, DE; [2]Brown University, Providence, RI

Background: Identifying predictors of colorectal cancer screening (CRCS) is vital for targeting cancer control and prevention efforts. Classification tree analysis (CTA) is a potentially powerful analytic tool that identifies critical factors associated with CRCS among distinct population subgroups. This study used CTA to identify key predictors of CRCS for exclusive population subgroups. *Methods*: Data were collected from the 2007 Health Information National Trends Survey (HINTS). CTA was employed to determine multiple influences of demographic (n=11), psychosocial (n=6), and numeracy (n=3) domains on CRCS status for adults >50 years of age (N = 3,769). *Results*: Overall CRCS rate was 67%. Level of doctor avoidance was a critical factor creating three groups that then led to the subsequent formation of 21 distinct subgroups. These included: 1) avoid doctor, not for fear of illness or dying (n = 625 (17%), 4 subgroups); 2) avoid doctor, fear illness/death (n = 366 (10%), 2 subgroups); 3) do not avoid doctor (n = 2,778 (74%), 15 subgroups). Four subgroups had CRCS rates below 50%, representing 19% of the study sample (n = 708). Respondents with the lowest CRCS rate (26%, n = 97) avoided the doctor not for fear of illness or dying, were younger (50-64 years), and did not have a regular healthcare provider (HCP). Respondents with the highest CRCS rate (95%) did not avoid the doctor, had a regular HCP, did not smoke, were between 65 and 74 years of age, reported being in good health, were married, and preferred numbers when communicating health information. *Discussion*: Doctor avoidance was an important behavioral influence on CRCS adherence and presents a challenge to current CRCS approaches that often rely on physician referral. Use of CTA to identify unique characteristics within distinct population subgroups has merit for tailoring future intervention strategies. Community-based approaches may be a feasible approach for reaching individuals who avoid routine doctor visits.

CORRESPONDING AUTHOR: Gregory M. Dominick, PhD, University of Delaware, Newark, DE, 19716; gdominic@udel.edu

Paper Session 16 4:09 PM-4:27 PM

TELECARE PROMOTES COLONOSCOPY WHEN COST IS A BARRIER IN FAMILIES AT INCREASED RISK

Anita Kinney, PhD[1], Laurie Steffen, M.S.[2], Barbara Damron, Ph.D., RN, FAAN[3], Lisa Pappas, MStat[4], Watcharaporn Boonyasiriwat, Ph.D.[5], Scott Walters, Ph.D.[6], Kenneth Boucher, Ph.D.[7], Marc Schwartz, Ph.D.[8], Sandra Edwards, M.A.[4], Wendy Kohlmann, MS, CGC[9], Kristina Flores, PhD[3]

[1]University of New Mexico, Albuquerque NM, NM; [2]University of New Mexico Cancer Center, Albuquerque, NM; [3]University of New Mexico, Albuquerque, NM; [4]University of Utah, Salt Lake City, UT; [5]Chulalongkorn University, Bangkok, , Thailand; [6]University of North Texas Health Science Center, Fort Worth, TX; [7]University of Utah Health Sciences Center, Salt Lake City, UT; [8]Georgetown University, Washington, DC; [9]Huntsman Cancer Institute, Salt Lake City, UT

BACKGROUND: Promoting colonoscopy among those at increased familial risk is one way to reduce colorectal cancer (CRC) morbidity, yet colonoscopies are underutilized among this population. For behavioral interventions to have a substantive impact on this problem, their efficacy must be evaluated within the context of population barriers such as cost. We tested the efficacy of a remote, personalized cancer risk communication intervention guided by a fear-management model and motivational interviewing (TeleCARE), compared to a mailed educational brochure for improving colonoscopy use among at-risk relatives of patients with CRC. We also examined subgroup differences according to participant-cited cost barriers and the impact of a low-intensity cost barrier strategy. METHODS: Family members (481: TeleCARE = 232 and comparison = 249) of CRC patients who were not up-to-date with risk appropriate CRC screening were randomly assigned by family unit and assessed at baseline, 1, 9, and 15 months post-intervention. At 9-months, a cost resource letter listing resources for free or reduced-cost colonoscopy was mailed to participants who had not yet had a colonoscopy and had indicated that cost was a barrier. Generalized mixed logistic regression models accounted for the family cluster effect and evaluated the impact of the interventions on colonoscopy use at the 15-month assessment among those for whom we had cost-barrier data (TeleCARE = 176; comparison = 207) RESULTS: By 15 months, 41% of TeleCARE participants had a medically-verified colonoscopy, compared to 23% of participants in the brochure group. When cost was not a barrier, the TeleCARE group was almost four times as likely as the comparison group to obtain a colonoscopy (odds ratio (OR) = 3.66; 95% confidence interval (CI): 1.85, 7.24; $P < .001$). When cost was a barrier, the TeleCARE group was nearly twice as likely (OR = 1.99; 95% CI: 1.12, 3.52; $P = .0189$) to obtain a colonoscopy. The low-intensity cost-resource letter did not increase colonoscopy uptake. (OR = .80; 95% CI: .52, 1.23; $P = .31$). CONCLUSION: Remote interventions such as TeleCARE may bolster risk appropriate colorectal cancer prevention among relatives of CRC patients regardless of whether or not they identify cost barriers. Larger effects may be observed when cost is not a barrier. (Trial # NCT01274143)

CORRESPONDING AUTHOR: Anita Kinney, PhD, University of New Mexico, Albuquerque NM, NM, 87122; aykinney@salud.unm.edu

Paper Session 16 4:27 PM-4:45 PM

COLORECTAL CANCER SCREENING OPTIONS: ARE PEOPLE HAVING THE CONVERSATIONS THEY WANT TO MAKE THE DECISION THAT IS RIGHT FOR THEM?

Resa M. Jones, MPH, PhD[1], Pamela J. Mink, PhD[2], Qin Shen, MS[1], Kara P. Wiseman, MPH[1], Diane L. Bishop, MPH[1]

[1]Virginia Commonwealth University, Richmond, VA; [2]Allina Health, Minneapolis, MN

Introduction: Many campaigns to increase colorectal cancer screening (CRCS) adherence focus exclusively on one testing modality without assessing or addressing patient preferences. The objective of this study was to assess the prevalence of control preference in decision making and CRCS test preference in the general population and determine the association between discussing CRCS test options, test preference, and test-specific adherence.Methods: In December 2012, a cohort of adults ages 50-75 years was randomly selected from residents of 6 Minnesota communities (N=2,150). Mailed, self-administered questionnaire items included control preference in making health decisions, discussion of CRCS options, CRCS test preference, and CRCS adherence. The response rate was 74%. Descriptive statistics and multinomial logistic regression were conducted among average-risk adults (n=1,384).Results: Respondents were 74% 50-64 years, 53% female, and 75% adherent to CRCS recommendations. Over 91% wanted to have a conversation or participate in shared decision making about health decisions; however, 49% had never discussed CRCS test options. About 53% preferred colonoscopy, 18% preferred fecal occult blood test (FOBT) and 27% had no test preference. Those who discussed both FOBT and colonoscopy were 14 times more likely to be adherent to FOBT (95% CI: 4.85, 39.92) compared to not discussing any test; however, it did not impact colonoscopy adherence. Those who preferred FOBT and colonoscopy respectively, were significantly more likely to be adherent to their preferred test (FOBT OR: 5.01; colonoscopy OR: 4.24).
Conclusions: While an overwhelming majority of respondents want to participate in shared decision making, evidence suggests that these conversations are not occurring in practice for CRCS. Discussing CRCS options can help people reach a preference-congruent decision. Community-based interventions that capitalize on partnerships with primary care and recognize that a "one size fits all" approach does not work have great potential to increase CRCS adherence.

CORRESPONDING AUTHOR: Resa M. Jones, MPH, PhD, Virginia Commonwealth University, Richmond, VA, 23298-0212; rmjones2@vcu.edu

Paper Session 17 3:15 PM-3:33 PM

“PROTECT THEIR FUTURE” VIDEO INTERVENTION IMPROVES PARENTAL INTENTIONS TO VACCINATE ADOLESCENTS

Elisia Cohen, PhD[1], Katharine J. Head, PhD[2], Richard Crosby, PhD[1], Adam J. Parrish, MA[1], Donald W. Helme, PhD[1], Jenna E. Reno, MA[1], Kevin Wombacher, MA[1], Audrey Bachman, BA[1]

[1]University of Kentucky, Lexington, KY; [2]Indiana University-Purdue University Indianapolis, Indianapolis, IN

Rates of HPV and influenza vaccination remain low in poor, medically underserved Appalachian communities. This study will present the results of the first video efficacy study of the Rural Cancer Prevention Center's "Protect Their Future” intervention. The intervention was designed to improve adherence to age-appropriate adolescent vaccination outcomes in a medically underserved community. The intervention was delivered by video by iPads to parents of adolescents. 99 parents in the intervention completed pre- and post-test surveys via custom-developed audio-assisted iPad interview software. Evaluation of the video’s strong perceived message effectiveness was evaluated with high reliability (alpha = .93). After watching the video, parents who had at least one adolescent child who had not been vaccinated with HPV, were 6.25 times more likely to intend to have their adolescent male child receive HPV vaccination, compared to parents who did not ($p < .001$). Similarly, parents who had at least one adolescent child who had not been vaccinated against HPV, were 1.38 times more likely to intend to have their adolescent female child receive HPV vaccination ($p < .001$). Parents’ beliefs in the vaccine’s efficacy also improved after viewing the video ($t = 1.88$, $p = .06$). Parents of adolescents were also significantly more likely to intend to have their adolescents immunized for influenza ($t = 2.516$, $p = .014$) after watching the video. The “Protect their Future” video intervention demonstrates an approach to improving adolescent immunization education that can be appropriately scaled and culturally-tailored to improve intention to complete all age appropriate vaccinations in other populations.

CORRESPONDING AUTHOR: Elisia Cohen, PhD, University of Kentucky, Lexington, KY, 40506-0042; elisia.cohen@uky.edu

Paper Session 17 3:33 PM-3:51 PM

FOR WHOM ARE PHYSICIANS RECOMMENDING THE HPV VACCINE?

Mary A. Gerend, PhD[1], Melissa A. Shepherd, MA[2], Mia Liza A. Lustria, PhD[2], Janet E. Shepherd, MD[2]

[1]Feinberg School of Medicine, Northwestern University, Chicago, IL; [2]Florida State University, Tallahassee, FL

Background: Human papillomavirus (HPV) vaccination prevents infection with types of HPV responsible for most cases of cervical cancer, anal cancer, and genital warts. Rates of HPV vaccine uptake have been low with an estimated 35% and 2% of female and male young adults, respectively, receiving ≥1 dose. Although physician recommendation is one of the strongest predictors of vaccine uptake, it is not clear for whom physicians are recommending the vaccine. To help guide intervention efforts, this study investigated socio-demographic predictors of physician recommendation for HPV vaccination. Methods: Young adults (N = 223) aged 18-26 were recruited online through Craig's List ads posted in the 25 largest U.S. cities (one ad per week) from September 2013 to March 2014. Participants completed a survey that assessed demographics (age, gender, race/ethnicity, relationship status, education, income), sexual history (ever had sex, number of lifetime partners, previous HPV infection), political affiliation, religious background, and whether they had received any doses of HPV vaccine. Participants also reported whether a doctor or other medical care provider had recommended the HPV vaccine to them. Results: Fifty-three percent reported receiving a recommendation for HPV vaccine from a health care provider and about half (49%) had received ≥1 dose of HPV vaccine. Physician recommendation was the strongest correlate of uptake with 91% of vaccinated (vs. 22% of unvaccinated) participants reporting that they had received a recommendation, χ^2 (1, N = 204) = 98.12, p < .001. Patients who were younger, female, white, had higher education, had health insurance, were in an exclusive romantic relationship, were more liberal, and who voiced no current religious preference were more likely to have received a recommendation from a physician to get vaccinated. Independent predictors of physician recommendation included age, gender, and race. Conclusions: Younger, female participants from more traditionally privileged social backgrounds were more likely to report that a physician had recommended the vaccine.Findings underscore the key role of the health care provider in promoting HPV vaccination and have important implications for future HPV vaccine interventions with young adults.

CORRESPONDING AUTHOR: Mary A. Gerend, PhD, Feinberg School of Medicine, Northwestern University, Chicago, IL, 60611; mary.gerend@northwestern.edu

Paper Session 17 3:51 PM-4:09 PM

EXAMINING CORRELATES OF HPV VACCINE INTENTION IN HISPANIC MOTHERS WITH DAUGHTERS AGED 11-17

Daisy Y. Morales-Campos, PhD[1], Deborah Parra-Medina, PhD[1], Cynthia M. Mojica, PhD[2]

[1]Institute for Health Promotion Research, UTHSCSA, San Antonio, TX; [2]Institute for Health Promotion Research, The University of Texas Health Science Center at San Antonio, San Antonio, TX

Background: Cervical cancer incidence and mortality are higher for Hispanic women along the Texas-Mexico border. Incidence could be reduced if Hispanic girls received the HPV vaccine, which prevents cervical cancer, before they became sexually active. However, few Hispanic girls compared to U.S. girls receive all three HPV vaccine doses (31% vs 36%). Parents are crucial to the success of HPV vaccine uptake efforts. The purpose of this study is to examine the reliability of perceived susceptibility, perceived severity, perceived benefits and barriers, self-efficacy, attitudes toward HPV vaccination, and subjective norms scales and determine if they correlate to mothers' intention to vaccinate their daughters aged 11-17.Methods: We utilized baseline data from a program utilizing *promotoras* to deliver health education to Hispanic mothers to increase HPV knowledge and promote HPV immunization. Our analyses utilized data from mothers of never vaccinated girls (n=371). First, using Cronbach alpha, we assessed the reliability of each scale. Second, we used Pearson's correlation coefficient to examine if the scales were correlated with mothers vaccine intention.Results: Analyses revealed that the scales for susceptibility, severity, and subjective norms were not significantly correlated to intention and had low internal consistency [except for susceptibility scale (alpha= 0.72)]. Only the self-efficacy scale showed high internal consistency (alpha=0.92) and was significantly correlated to intention (r=.346, p= < 0.01), as was the perceived benefits and barriers scale (r=.159, p= < 0.01).Conclusions: Although we selected English-language survey items from the literature and national surveillance tools and translated them to Spanish, preliminary findings suggest that most of the scales did not adequately measure the constructs in Spanish-speaking populations. Only the self efficacy scale, which was previously validated among Spanish-speaking Hispanics, had high internal consistency. The perceived susceptibility scale also showed good reliability. These findings inform future research on HPV vaccination by providing insight into which constructs are correlated with vaccine intention and which scales have good internal consistency among Spanish-speaking populations.

CORRESPONDING AUTHOR: Daisy Y. Morales-Campos, PhD, Institute for Health Promotion Research, UTHSCSA, San Antonio, TX, 78229; moralescampo@uthscsa.edu

MERITORIOUS PAPER

Paper Session 17 4:09 PM-4:27 PM

DYADIC HEALTH BELIEFS THAT INFLUENCE PARENTS' AND SONS' WILLINGNESS TO RECEIVE HPV VACCINE

Jennifer Moss, MSPH[1], Paul Reiter, PhD[2], Noel Brewer, PhD[3]

[1]University of North Carolina, Durham, NC; [2]The Ohio State University, Columbus, OH; [3]University of North Carolina at Chapel Hill, Chapel Hill, NC

Background.Parents and adolescents make healthcare decisions together, including whether or not to seek the human papillomavirus (HPV) vaccine. However, little research has examined how they make these decisions, including the correlations and unique contribution of each dyad members' health beliefs. Given the suboptimal levels of HPV vaccine coverage among boys in the U.S., we examined parents' and sons' beliefs about HPV to understand how they form vaccination decisions. Methods.Data came from the 2010 HPV Immunization in Sons (HIS) Study of a national sample of 412 parents and their adolescent sons, ages 11-17. We conducted dyadic multivariate logistic regression to test the simultaneous effects of both parents' and sons' HPV beliefs on their willingness to have the son receive the vaccine.Results. Less than half of parents and sons were willing to have the son receive HPV vaccine (43% and 29%, respectively). Parents' and sons' HPV beliefs were highly correlated (range of r's=.12-.52, all p < .05). Two HPV beliefs were associated with both parents' and sons' vaccination willingness: perceived importance of protecting the son's future partner from HPV-related illness (parent: OR=2.85, 95% CI=1.73, 4.70; son: OR=1.95, 95% CI=1.23, 3.07) and anticipated regret of the son contracting HPV without vaccination (parent: OR=1.72, 95% CI=1.24, 2.40; son: OR=1.51, 95% CI=1.04, 2.19). Other important correlates of vaccination willingness included parents' and sons' expected pain and parents' anticipated regret of fainting from vaccination.Conclusions.Parents' and sons' HPV vaccination willingness was higher if they valued vaccination as a way to prevent the son and the son's future partner from HPV. Other health beliefs had independent contributions to the decision-making process for each member of the dyad. In order to increase HPV vaccination willingness, promotional programs should emphasize the vaccine's ability to protect the son and his future partner from infection and assuage concerns about short-term side effects of vaccination.

CORRESPONDING AUTHOR: Jennifer Moss, MSPH, University of North Carolina, Durham, NC, 27707; jlmoss@email.unc.edu

Paper Session 17 4:27 PM-4:45 PM

ASSESSING THE QUALITY OF PHYSICIAN COMMUNICATION ABOUT HPV VACCINE: FINDINGS FROM A NATIONAL SURVEY

Melissa Gilkey, PhD[1], Parth Shah, PharmD[2], Megan Hall, MPH[2], Noel Brewer, PhD[3]

[1]Harvard Medical School / Harvard Pilgrim Health Care, Boston, MA; [2]University of North Carolina, Chapel Hill, NC; [3]University of North Carolina at Chapel Hill, Chapel Hill, NC

Purpose. Our failure to meet national goals for HPV vaccine coverage will translate into 35,000 preventable cervical cancer cases over the lifetime of today's 12-year-old girls. Because improving the quality of physicians' HPV vaccine recommendations is critical to raising coverage, we sought to describe HPV vaccine communication practices in a national sample of primary care physicians.Methods. Pediatricians and family physicians (n=776) completed our online survey in 2014. We assessed the quality of their HPV vaccine communication on dimensions including strength of endorsement (i.e., how important they said the vaccine was), consistency (whether they recommended it routinely for adolescents ages 11-12, as per practice guidelines), and urgency (whether they recommended same-day vaccination). We also assessed physicians' perceptions of using a direct, "presumptive" recommendation approach that research in early childhood vaccination suggests may be especially effective.Results. Most physicians reported recommending tetanus, diphtheria, and pertussis (Tdap) (95%) and meningococcal vaccines (87%) as highly important for adolescents, but fewer strongly endorsed HPV vaccine (73%, both p < .001). A sizeable minority of physicians did not routinely recommend HPV vaccination for 11- to 12-year-old girls (26%) or boys (39%), and over one-third (39%) reported using a risk-based approach to selectively recommend the vaccine. Only 51% of respondents usually recommended same-day HPV vaccination. Relatively few physicians believed that presumptive recommendations would instill confidence in parents (25%) or lead to same-day vaccination (37%). About half (51%) believed that such an approach would cause mistrust.Conclusions. Our findings suggest that primary care physicians communicate about HPV vaccine in ways that may convey ambivalence, with many physicians in our national sample reporting that they recommend the vaccine weakly, inconsistently, or without urgency. As one of the first studies to assess specific dimensions of recommendation quality, these findings can inform the many state and national initiatives that aim to improve communication about HPV vaccine so as to address the persistent underuse of a powerful tool for cancer prevention.

CORRESPONDING AUTHOR: Melissa Gilkey, PhD, Harvard Medical School / Harvard Pilgrim Health Care, Boston, MA, 02445; gilkey@email.unc.edu

Paper Session 18 3:15 PM-3:33 PM

THE DEVELOPMENT AND PRELIMINARY EVALUATION OF A SMS SYSTEM FOR FACILITATE COPING WITH CHEMOTHERAPY

Kuang-Yi Wen, PhD[1], Suzanne Miller, PhD[1], Allura LeBlanc, Mary Daily, Jennifer Shih, Lori Goldstein, Stephanie Raivitch, Minsun Lee, Ph.D.[2]

[1]Cancer Prevention and Control/Fox Chase Cancer Center, Philadelphia, PA; [2]Fox Chase Cancer Center Temple Health, Philadelphia, PA

As a core component of cancer care, the use of chemotherapy in the ambulatory care setting is likely to increase considerably with projected increases in the incidence of breast cancer and. However, chemotherapy may improve overall survival; it is also often associated with substantial treatment-related toxic effects that negatively affect HRQOL. Patients are responsible for making complex decisions about what to do or when to contact the providers in the event of new, escalating or unexpected side-effects. To fill this void, we are in the process of developing and evaluating an innovative and automated text messaging program, designed to facilitate breast cancer patient's symptom monitoring and self-management in the home setting during adjuvant chemotherapy. Fifteen patients who were undergoing or had recently finished the chemotherapy treatment completed a needs assessment and mobile text messaging preference interview. All women interviewed reported variable side effects ranging from changes in olfactory and gustatory functioning, nausea, vomiting, diarrhea, fatigue, decreased cognitive functioning, neuropathy, and depressive symptoms. Majority of women prefer to receive no more than two text messages per day and preferred text messages that are personalized based on treatment schedule and symptoms given that they felt their side effects changed throughout the course of chemotherapy. Hundreds of text messages have been developed based on findings of the needs assessment interviews, literature and evidence-based content review, and our guided cognitive behavioral theory. Drafted messages and pre-defined sequences of symptom assessment messages with tailored tips are currently undergoing health literacy evaluation, provider panel review, and patient user testing interview (n=15). Once the messages are being finalized and the text messaging system infrastructure being implemented, a usability testing with another 10 breast cancer patients with 1-week intervention will be conducted before we launch the pilot RCT study (n=120). By the time of SBM 2015, we will have collected all the formative evaluation and iterative intervention developmental data including the usability testing phase for reporting in the conference.

CORRESPONDING AUTHOR: Kuang-Yi Wen, PhD, Cancer Prevention and Control/Fox Chase Cancer Center, Philadelphia, PA, 19446; kuang-yi.wen@fccc.edu

Paper Session 18 3:33 PM-3:51 PM

BENEFITS OF COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA (CBT-I) ON DEPRESSION IN CANCER SURVIVORS

Anita R. Peoples, PhD[1], Joseph A. Roscoe, PhD[2], Charles E. Heckler, PhD, MS[2], Charles Kamen, PhD, MPH[2], Luke Peppone, PhD, MPH[1], Michelle Janelsins, PhD, MPH[1], Marie Flannery, PhD, RN, AOCN[3], Karen Mustian, PhDMPH[1], Gary Morrow, PhD, MS[1]

[1]University of Rochester Medical Center, Rochester, NY; [2]University of Rochester, Rochester, NY; [3]University of Rochester, Fairport, NY

Background: Depression is a significant complication of cancer and its treatment that can persist long after completion of treatments, resulting in reduced quality of life. Insomnia is both a risk factor and component of depression, allowing for the possibility that improvement of insomnia may reduce associated depression. These secondary analyses examine the association of depression with insomnia over time and whether CBT-I treatments for cancer survivors who have insomnia also reduce depression. Method: Analyses were performed on 67cancer survivors (mean age 56, 90% female, 69% breast cancer) from a RCT study examining CBT-I efficacy for insomnia. Depression was assessed by the Patient Health Questionnaire (PHQ-9) and Inventory of Depressive Symptomatology (IDS) while insomnia was assessed by the Insomnia Severity Index (ISI), at consent, after the 7-week intervention (post), and three months later (follow-up). Simple change scores from consent to post and consent to follow-up were calculated for all measures for patients who did (N=35) or did not (N=32) receive CBT-I. Pearson's correlations and ANCOVA were performed. Results: For patients receiving CBT-I, mean scores at consent, post and follow-up were (PHQ9: 6.5, 3.2 and 2.2; IDS: 18.7, 12.2 and 11.4; ISI: 14.9, 4.5 and 3.8). Corresponding scores for patients not receiving CBT-I were (PHQ9: 7.7, 5.8 and 5.9; IDS: 21.6, 18.6 and 17.4; ISI: 14.9, 11.3 and 11.6). Depression measures were significantly associated with insomnia at all time points with R's ranging from 0.47 to 0.82, all p's < 0.001. Changes in insomnia over time were significantly correlated with concurrent changes in depression with R's ranging from 0.57 to 0.64, all p's < 0.001. ANCOVA controlling for scores at consent showed greater decrease in all three measures at post and follow-up in the CBT-I group compared to non-CBT-I group (all p's≤0.005). Conclusions: In cancer survivors with insomnia, changes in insomnia over time are strongly associated with concurrent changes in depression, and CBT-I successfully reduces both symptoms.

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CORRESPONDING AUTHOR: Anita R. Peoples, PhD, University of Rochester Medical Center, Rochester, NY, 14642; anita_peoples@urmc.rochester.edu

Paper Session 18 3:51 PM-4:09 PM

CAREGIVER VERSUS PATIENT REPORTED OUTCOMES IN PREDICTING SURVIVAL IN THE CONTEXT OF ADVANCED CANCER

Jennnifer L. Steel, PhD[1], David A. Geller, MD[1], Mary Amanda Dew, PhD[2], Michael H. Antoni, PhD[3], Butterfield Lisa, PhD[2], Wallis Marsh, MD[1], Karlie Kirk[1], Allan Tsung, MD[1], Kevin H. Kim, PhD[2]

[1]University of Pittsburgh School of Medicine, Pittsburgh, PA; [2]University of Pittsburgh, Pittsburgh, PA; [3]University of Miami, Miami, FL

Background: Decades of research has shown that health related quality of life (HRQL) predicts survival in patents diagnosed with cancer, even those with advanced stages of cancer. The aims of the proposed study was to employ Classification and Regression Tree (CART) analyses to predict patient survival using patient and caregiver reported outcomes (PROs and CROs) as well as biomarker data previously shown to predict of survival.

Method: A total of 261 patients and 179 family caregivers were included in a secondary data analyses. Using CART two separate analyses were performed with patient only and patient and caregiver data. Patient data included HRQL, depression, pain, and fatigue, Cytokines that have been linked with survival across cancer types were also included in the analyses (IL1alpha, IL1beta, IL2, IL4, IL5, IL6, IL8, IL10, IL12, IL15, TNFalpha, IFNgamma, GCSF, and TGF) as well as lymphocyte subsets including individual and combinations of CD3, CD16, CD56, and CD69 and specifically Natural Killer (NK) cell number. Caregivers reported on the patients' HRQL, pain, depression, fatigue and the caregivers' stress, depression, sleep quality, substance use, patient-caregiver relationship, substance use, trauma, anticipatory grief, and post traumatic growth.

Results: The majority of patients were male (73%), Caucasian (86%) and primary diagnoses hepatocellular or cholangiocarcinoma (64%). The majority of caregivers were female (84%) and Caucasian (85%). Most of the family caregivers were spouses or intimate partners (72%). For the analyses that included only PROs, high levels of symptoms and non-detectable levels of IL-1alpha were found to predict survival with only two steps. However, when PROs, biomarker, and CROs data were included in the analyses, the caregivers' report of patient HRQL was a better predictor of patient survival.

Conclusion: Caregivers' report of patient related outcomes, were found in this cohort of advanced cancer patients, to be a better predictor of survival than PROs and patients' serum levels of cytokines and lymphocyte subsets, including NK cell numbers.

CORRESPONDING AUTHOR: Jennnifer L. Steel, PhD, University of Pittsburgh School of Medicine, Pittsburgh, PA, 15213; steeljl@upmc.edu

Paper Session 18 4:09 PM-4:27 PM

A PROSPECTIVE BIOPSYCHOSOCIAL INVESTIGATION INTO CAREGIVING FOR HEAD AND NECK CANCER PATIENTS

Chandylen Nightingale, PhD, MPH[1], Barbara Curbow, PhD[2], Deidre Pereira, PhD[3], John Wingard, MD[3], Giselle Carnaby, PhD, MPH[3]

[1]Wake Forest School of Medicine, Winston-Salem, NC; [2]University of Maryland, College Park, MD; [3]University of Florida, Gainesville, FL

PURPOSE: Head/neck cancer (HNC) is a leading cause of cancer-related morbidity and death, yet little research has explored the biopsychosocial impact of HNC caregiving. This study evaluated (1) change in diurnal cortisol rhythm among HNC caregivers (CGs) from the initiation (T1) to week 5 (T2) of chemoradiation (radiation +/- chemotherapy) (CRT), and (2) the relationship between CG burden and patient (PT) and CG quality of life (QOL) with CG diurnal cortisol rhythm over CRT. It was hypothesized that cortisol slope would become flatter (more dysregulated) at T2 and greater CG burden and poorer PT and CG QOL would be associated with a flatter cortisol slope.METHODS: PT-CG dyads completed instruments at T1 (n = 32) and T2 (n = 29) including the Functional Assessment of Cancer Therapy Head and Neck (PT QOL), the Caregiver Quality of Life Cancer (CG QOL), and the Caregiver Reaction Assessment (CG burden) (schedule, family support, finances, health, esteem). Cortisol concentrations were assessed from salivary samples collected twice daily on three consecutive days at T1 and T2. Cortisol slopes (unstandardized betas) were calculated by regressing cortisol concentrations on collection times. A paired samples t-test was used to test change in cortisol slope from T1 to T2. Linear regression analyses were used to predict T1/T2 cortisol slopes from each correlated T1/T2 burden and QOL variable individually (controlling for age and gender).RESULTS: Consistent with hypothesis one, cortisol slope became significantly flatter at T2. In contrast, hypothesis two was partially supported. At T1, greater CG schedule burden was associated with a flatter cortisol slope ($\beta = .35$, $p = .05$). In addition, lower PT functional QOL ($\beta = -.41$, $p = .05$) and lower overall CG QOL at T1 ($\beta = -.39$, $p = .04$) were each separately associated with a flatter cortisol slope at T2. These relationships indicated that greater CG schedule burden, and lower overall CG QOL and PT functional QOL were each associated with a flatter cortisol slope.

CONCLUSIONS: Findings confirm dysregulation in diurnal cortisol rhythm in CGs, which is associated with CG schedule burden and PT and CG QOL. Results suggest a mind-body interaction. Interventional resources developed for HNC CGs may help to prevent negative health outcomes associated with dysregulated cortisol.

CORRESPONDING AUTHOR: Chandylen Nightingale, PhD, MPH, Wake Forest School of Medicine, Winston-Salem, NC, 27127; cnightin@wakehealth.edu

Paper Session 18 4:27 PM-4:45 PM

DEVELOPMENT OF AN EHEALTH SYSTEM TO CAPTURE AND ANALYZE PATIENT SENSOR AND SELF-REPORT DATA TO IMPROVE CANCER SURVIVORSHIP CARE

Lynne Wagner, PhD[1], Michael Bass, M.S.[1], Jason Nawyn, SM, AB[2], Stanis Billy, BSc[3], Fahd Albinali, Ph.D.[3]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]MIT Media Laboratory, Boston, MA; [3]EveryFit, Inc., Boston, MA

Purpose: To develop a device agnostic platform to passively monitor physiological indices and patient-reported outcomes (PROs) among adults with cancer to inform clinicians and to provide patients with customizable, evidence-informed supportive care and rehabilitation services.Methods: A system ("COMPASS") which included a wristband device and a smartphone application to display physiological and PRO data was developed, tested by the study team, and refined. The wristband passively monitored physiological indices of interest (eg. heart rate, movement, activity level) and administered PROs via a smartphone application. PROs were measured using NIH PROMIS tools. Semi-structured interviews were conducted with 10 oncology clinicians (MDs, RNs, PhDs) from various specialties (Neuro-oncology, medical oncology, surgical oncology, cancer rehabilitation, supportive oncology) to assess the needs of clinicians for remote monitoring of patient health and potential applications for COMPASS in oncology care. Three adults with cancer were provided with a prototype of COMPASS (wristband and smartphone) for pilot testing and completed semi-structured interviews after using the device for 7 days.Results: The most common clinician-reported uses for COMPASS included monitoring: physical activity, fatigue (n=9), sleep quantity (n=8), gait unsteadiness and falls, medical adherence, vitals (n=7), lymphedema and weight (n=5). Clinicians were most interested in capturing PROs routinely to assess: fatigue (n=9), pain, neuropathy, depression, anxiety (n=5) and nausea (n=2). Patients (n=3) reported that the provision of physiological and PRO data would improve the quality of medical care. Discussion: Clinicians reported COMPASS would be clinically useful through remotely monitoring physiological domains of interest and through capturing PRO data to correspond with changes in physiological functioning (eg. assess fatigue following decreased activity). Clinicians discussed many potential applications for COMPASS to inform cancer care. Patients demonstrated adherence with wearing the COMPASS device and reported interest in providing their medical team with physiological and PRO data. COMPASS will be evaluated with 50 patients. COMPASS will be demonstrated during this presentation.

CORRESPONDING AUTHOR: Michael Bass, M.S., Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; michael-bass@northwestern.edu

Paper Session 19 3:15 PM-3:33 PM

THE EFFECT OF AN AFFECT-BASED EXERCISE INTERVENTION ON IMPLICIT ATTITUDES TOWARD EXERCISE

Austin S. Baldwin, Ph.D.[1], Julie L. Kangas, M.A.[1], Jasper A.J. Smits, Ph.D.[2], Michael W. Otto, Ph.D.[3]

[1]Southern Methodist University, Dallas, TX; [2]University of Texas, Austin, TX; [3]Boston University, Boston, MA

Background: Past research suggests that improving exercise-related affect may be an effective approach to increasing regular exercise behaviors (Ekkekakis, 2009). One reason may be that affective experiences during exercise influence implicit attitudes toward exercise. Recent work has established that implicit attitudes are predictive of future exercise (Conroy et al., 2010) and can change according to new experiences (Castelli et al., 2010; Prestwich et al., 2010). We predicted that previously inactive participants who were instructed to exercise at an intensity that remained affectively pleasant would experience a more positive change in their implicit attitudes toward exercise than those instructed to exercise at a prescribed intensity. Methods: Participants (N=84) were recruited from the Dallas and Boston areas. The current analyses included only participants who met criteria for being inactive (i.e., < 60 moderate-to-vigorous physical activity in the last week; N=64). Participants were randomized to one of two conditions: to exercise at an intensity that remained affectively pleasant or to exercise at a prescribed intensity for the next week. Those in the affectively-guided condition were instructed to exercise at an intensity that remained pleasant (i.e., at or above a "0" on the Feeling Scale [FS]; Hardy & Rejeski, 1989), and those in the prescribed intensity condition were instructed to exercise in the moderate intensity range (64-76% of their maximum heart rate). Participants completed the Single Category Implicit Association Task (SC-IAT; Conroy et al., 2010) at the baseline visit and following one week of exercise. Analyses included baseline IAT scores to properly model change in IAT scores. Results: As predicted, participants in the affectively-guided condition had significantly more positive IAT scores after one week (M=.57, SD=.34) than participants in the prescribed intensity condition (M=.30, SD=.52); t = -2.21, p=.03, d = .61. Implications: The findings indicate that directing people to regulate their exercise intensity based on affect rather than a prescribed intensity range results in more positive implicit attitudes toward exercise. Theoretical and clinical implications will be discussed.

CORRESPONDING AUTHOR: Austin S. Baldwin, Ph.D., Southern Methodist University, Dallas, TX, 75275; baldwin@smu.edu

Paper Session 19 3:33 PM-3:51 PM

DESIGNING FOR ADHERENCE: THE CASE OF A SOCIAL, PEDOMETER-POWERED WALKING INTERVENTION

Josee Poirier, PhD, Nathan K. Cobb, MD

MeYou Health LLC, Boston, MA

We present a multimodal (web, email, text messaging) walking intervention designed to enhance and maintain adherence in a real-world population. The device-agnostic program combines with wireless devices such as pedometers, accelerometers, or mobile phone apps to track walking behavior and increase physical activity over time. The intervention takes an "open social" population approach that encourages participants to invite friends and family to use the program at no cost. These real-world relationships join new, online connections to provide a rich social network that provides support, norming, and accountability. Game mechanics guide the participant through a structured yet fun experience that does not depend on participant initiative or motivation: regular prompts and celebrations encourage participants to take action to reach their goals. Finally, participants receive daily personalized goals that adapt to their current physical activity level to offer a realistic and accessible challenge, and that automatically adjust over time as their walking patterns evolve. Combined, these strategic design choices result in both high retention rates (72% at 30 days; 62% at 90 days) and high engagement rates in their first 30 days in the intervention (Adherence: participants wore their device 61% of the time on average [79% median]. Engagement: participants opened intervention emails and/or visited the website on 9.7 days on average.) Further data on interaction with features designed to drive social support, social norms and social accountability and their impact on adherence and engagement will be presented.

CORRESPONDING AUTHOR: Josee Poirier, PhD, MeYou Health LLC, Boston, MA, 02210; josee@meyouhealth.com

Paper Session 19 3:51 PM-4:09 PM

INCREASING PHYSICAL ACTIVITY IN NEW MOTHERS VIA CUSTOMIZABLE ONLINE EXERCISE VIDEOS: MOMZING RESULTS

Cheryl L. Albright, PhD, MPH[1], Lynne R. Wilkens, DrPH[2], Kara Saiki, MPH[3], Anne Tome, MS[2], Rob Martin, BS[4], Andrea Dunn, PhD[4]

[1]University of Hawaii at Manoa, Honolulu, HI; [2]University of Hawaii Cancer Center, Honolulu, HI; [3]University of Hawaii, School of Nursing, Honolulu, HI; [4]Klein Buendel, Inc., Golden, CO

MomZing, an online program designed for new mothers (2-8 months postpartum), contained 98, 10-minute streaming videos that demonstrated yoga, cardio, or strengthening exercises at one of 3 intensity levels (light/moderate/hard) and the choice to actively exercise with their baby or alone. Exercises with a baby were created specifically for an infant's weight and included mother-infant bonding activities. A 12-week randomized trial compared effectiveness of MomZing videos to standard "Mom and baby" fitness DVDs. Outcomes were minutes/week of moderate-to-vigorous physical activity (MVPA) and percent meeting the national recommendation of 150 MVPA min/week (% met). We recruited 499 healthy, postpartum women from across the U.S. who completed 3 online surveys at baseline, 4 and 12 weeks. We randomized 249 women to DVD condition and 250 to MomZing; means were 29.8 years for age, 4.5 months for baby's age, 14.7 pounds for baby's weight, 27.3 for BMI and 77.5 min/wk for baseline MVPA, with 82% white and 76% lactating. Women in both conditions increased their MVPA min/wk over 12 weeks, but there were no differences in the minutes increased by condition. However, the MomZing condition showed greater increases in the % met (increase=43% over 12 weeks) than for the DVD condition (increase=30%; p=0.007). Moderators of the treatment effect on % met were age of baby (p=0.02: women with babies < 3 months increased the most), and mother's baseline BMI category (women with BMI 25-30 increased more than with BMI>30; p=0.01). Reported use of the assigned technology was not higher for women in MomZing compared to DVD condition (66% for both). Finding the time to exercise, given the demands of caring for an infant, particularly for women who are obese, can be difficult for new mothers to achieve. These results demonstrate how an innovative, customizable Google TV technology met the needs of this vulnerable population, and they were able to successfully use it to increase their MVPA.

CORRESPONDING AUTHOR: Cheryl L. Albright, PhD, MPH, University of Hawaii at Manoa, Honolulu, HI, 96822; cherylal@hawaii.edu

Paper Session 19 4:09 PM-4:27 PM

EFFECTS OF A DVD-DELIVERED EXERCISE INTERVENTION ON MAINTENANCE OF PHYSICAL ACTIVITY IN OLDER ADULTS

Jason Fanning, MS[1], Elizabeth A. Awick, MS[2], Thomas R. Wojcicki, PhD[3], Sarah A. Roberts, B.S.[2], Robert Motl, PhD[1], Edward McAuley, PhD[2]

[1]University of Illinois at Urbana-Champaign, Urbana, IL; [2]University of Illinois Urbana Champaign, Urbana, IL; [3]Bellarmine University, Louisville, KY

Previous research supports the efficacy of a 6-month DVD-delivered flexibility, toning, and balance (FTB) physical activity (PA) program for older adults. Specifically, FTB participants demonstrated increased levels of PA at the end of the intervention compared with a control group, and the greatest increases were seen in those older than 70 years of age. In the present study, we examined the degree to which intervention-related increases in moderate-to-vigorous PA (MVPA) were maintained after 6 months of no-contact follow up. Older adults (N=307, M_{age}=71 years) were recruited to participate in a 6 month DVD-delivered PA program followed by a 6-month follow up period. Participants were randomly assigned to the FTB group, which received a DVD-delivered program containing six progressive exercise sessions, or a control condition that received a DVD discussing various topics related to healthy-aging. MVPA was assessed objectively via accelerometry at baseline, month 6, and month 12. Repeated measures analysis of covariance indicated a significant time x group x age interaction [F(1,219)=11.242, *P* = .001=.049] when controlling for baseline activity levels. Bonferonni adjusted post hoc tests revealed that younger FTB participants (aged 64-70 years) maintained MVPA levels after follow up while older FTB (aged 71-86 years) participants experienced significant declines (*P*=.04). Among control participants, the younger cohort (aged 64-70 years) experienced significant declines in MVPA at follow up (*P*=.004) while the older cohort (aged 71-95 years) demonstrated no significant change. These results suggest that a DVD-delivered PA program can aid maintenance of MVPA in younger members of this population. With the removal of researcher support, however, other maintenance strategies targeting our oldest participants should be identified.

CORRESPONDING AUTHOR: Jason Fanning, MS, University of Illinois at Urbana-Champaign, Urbana, IL, 61801; fanning4@illinois.edu

Paper Session 19 4:27 PM-4:45 PM

MAINTENANCE OF SELF-ESTEEM FOLLOWING A DVD-DELIVERED PHYSICAL ACTIVITY PROGRAM FOR OLDER ADULTS

Elizabeth A. Awick, MS[1], Jason Fanning, MS[2], Thomas R. Wojcicki, PhD[3], Sarah A. Roberts, B.S.[1], Robert Motl, PhD[2], Edward McAuley, PhD[1]

[1]University of Illinois Urbana Champaign, Urbana, IL; [2]University of Illinois at Urbana-Champaign, Urbana, IL; [3]Bellarmine University, Louisville, KY

We previously reported that a 6-month, home-based, DVD-delivered physical activity (PA) program focused on flexibility, toning, and balance (FTB) significantly increased domains of self-esteem in older adults. Specifically, the domains of physical self-worth (PSW) and physical condition (COND) both increased significantly immediately after the 6-month intervention compared to the attentional control group. In the present study, we examined maintenance effects for self-esteem and its sub-domains 6 months after the end of the intervention. Older, low active adults (n=307) were randomized to either the FTB DVD group or the control group who were provided with a DVD on healthy aging. The Rosenberg Self-Esteem Scale was used to assess overall self-esteem. Physical self-worth and the three sub-domains of self-esteem (physical condition, perception of attractive body, and perception of physical strength) were measured using the Physical Self-Perception Profile. All variables were assessed pre-, post- and 6 months post-intervention. There was a significant group by time multivariate interaction [F (4, 226)=2.98, p=0.02, η^2=0.05], which was explained by significant group by time interactions for PSW (p=0.018, η^2=0.02) and COND (p=0.002, η^2=0.04) after controlling for baseline assessments. Post-hoc analyses indicated that PSW and COND decreased significantly from the end of the intervention to the 6-month follow-up in the FTB group, but were unchanged in the control group. Values for both PSW and COND remained higher at follow-up for the FTB conditions, but these differences were not significant. Together these results suggest that although the FTB group evidenced decreased self-esteem domains from the end of the intervention to follow up, individuals still had an overall benefit from the DVD and maintained significantly higher levels compared to baseline [F(4,232)=9.73, p=0.00, η^2=0.14]. Both groups indicated overall improvements suggesting the materials were beneficial in improving self-esteem over time. Our findings suggest the need for continued support from researchers after the cessation of PA programs to maintain improvements gained during the intervention.

CORRESPONDING AUTHOR: Elizabeth A. Awick, MS, University of Illinois Urbana Champaign, Urbana, IL, 61801; awick1@illinois.edu

Paper Session 20 3:15 PM-3:33 PM

THE SYSTEMS THINKING SCALE FOR ADOLESCENT BEHAVIOR CHANGE: DEVELOPMENT AND PSYCHOMETRIC EVALUATION

Shirley Moore, RN, PhD, Vilailert Komton, MSN, CNS, RN, Clara Adegbite-Adeniyi, BA

Case Western Reserve University, Cleveland, OH

The purpose of this study was to develop and conduct psychometric testing of the Systems Thinking Scale for Adolescent Behavior Change (STS-AB). Our team is currently investigating the mediating role of systems thinking in enhancing healthy eating and exercise in adolescents. Interventions targeting health behavior change often involve assisting participants to identify and make changes in the habitual systems in their daily routines. Although the skills to change these habitual systems involve systems thinking (the ability to recognize patterns, interactions and interdependencies in a set of activities), no current measure exists to assess the extent to which systems thinking is a mechanism in health behavior change. A panel of experts in systems thinking was used to develop an initial item set that was tested for understandability, content validity and stability in a small sample (N= 24) of adolescents enrolled in a weight management program. Test-retest reliability of the STS-AB was .48, p < .05. Systems thinking scores were higher in children who received systems thinking training as compared to children not receiving training. In a larger study of 359 urban adolescents enrolled in a weight management program aged 10-13 (58% girls; 80% African American), factor analysis, reliability, and validity of the 16-item STS-AB were assessed. Exploratory factor analysis of the STS-AB indicated a 1-factor solution with good factor loadings, ranging from .40 to .62. The internal consistency reliability coefficient was .87. Evidence of construct validity was supported by significant correlations with established measures of other variables commonly associated with health behavior change (motivation and self-efficacy for diet and physical activity). The STS-AB is a valid and reliable measure of systems thinking for health behavior change in adolescents that can assist investigators to examine the extent to which systems thinking is a mechanism in health behavior change.

CORRESPONDING AUTHOR: Shirley Moore, RN, PhD, Case Western Reserve University, Cleveland, OH, 44106; smm8@case.edu

CITATION AND MERITORIOUS PAPER

Paper Session 20 3:33 PM-3:51 PM

USING A SMARTPHONE APPLICATION TO CAPTURE SEDENTARY BEHAVIOR AND MULTITASKING AMONG ADOLESCENTS

Yue Liao, MPH, Eldin Dzubur, MS, Genevieve F. Dunton, PhD, MPH

University of Southern California, Los Angeles, CA

Introduction: Excessive time spent in sedentary behavior is emerging as an independent risk factor for chronic disease. However, most studies that examine the effects of sedentary behavior do not differentiate whether sedentary time is spent in one or multiple behaviors. It is important to better understand what adolescents do during their sedentary time in order to design interventions to reduce these activities. For example, interventions targeting TV time may not be effective at reducing overall sedentary behavior unless concurrent technology use (e.g., mobile device use) is also targeted. This study aimed to use Ecological Momentary Assessment data collected from a smartphone application to describe the patterns of sedentary behavior and multitasking among adolescents in their daily lives. Methods: Electronic surveys were randomly delivered by a smartphone app across 14 days among 51 adolescents (ages 14-19, 55% female, 57% Hispanic, and 39% overweight/obese). Each electronic survey assessed type, duration, and body position of all activities performed in the past 30 minutes. “Sitting” or “lying down” were defined as sedentary behavior. The smartphone app allowed participants to select multiple activities to indicate that they were multitasking. Analysis only included prompts with at least one self-reported sedentary activity. Multilevel analysis was conducted to test whether the probability of multitasking (yes/no) differs by demographic variables. Results: Ninety percent (range= 68%-100%) of these prompts had at least one sedentary activity reported. Participants reported being sedentary position most commonly while reading/doing homework (98%), followed by using technology (TV/phone; 95%), eating/drinking (92%), and hanging out (68%). Of all the sedentary prompts, 85% reported one activity, and 15% reported multiple activities. The probability of multitasking while using technology was greater for females than males (beta = .37, p = .03), and for obese than overweight participants (beta = 2.13, p = .02). Discussion: Smartphone app could be used as a self-report tool to assess multiple sedentary behaviors among adolescents. Future studies should explore the trends and potential health risks for multiple sedentary behaviors in a larger sample.

CORRESPONDING AUTHOR: Yue Liao, MPH, University of Southern California, Los Angeles, CA, 90032; yueliao@usc.edu

Paper Session 20 3:51 PM-4:09 PM

OBJECTIVELY MEASURED ACTIVITY PATTERNS IN BREAST CANCER SURVIVORS COMPARED TO CONTROLS

Siobhan M. Phillips, PhD, MPH[1], Kevin W. Dodd, PhD[2], Jeremy Steeves, PhD, MPH[3], James McClain, PhD, MPH[2], Catherine Alfano, PhD[2], Edward McAuley, PhD[4]

[1]Northwestern University, Chicago, IL; [2]National Cancer Institute, Rockville, MD; [3]University of Wisconsin Milwaukee, Milwaukee, WI; [4]University of Illinois Urbana Champaign, Urbana, IL

Background: Physical inactivity and sedentary behavior are related to poorer health outcomes in breast cancer survivors. Most studies examining these behaviors have relied on self-report measures and focused on moderate-to-vigorous intensity physical activity (MVPA) and/or sedentary behavior with less consideration given to objectively measured activity and lower intensity activities.

Purpose: To compare accelerometer-measured physical activity of various types (total, light, lifestyle, MVPA) and sedentary behavior between breast cancer survivors and non-cancer controls.

Methods: A simulation-based approach of independent sample t-tests adjusting for multiple comparisons were used to compare participation in each type of activity and sedentary behavior between breast cancer survivors [n=398; $M(\mathrm{SD})_{\mathrm{age}}$=56.95 (9.11)] and block-matched population-based controls without a history of cancer from the National Health and Nutrition Examination Survey (NHANES) 2003-2006 [n=1120; $M(\mathrm{SD})_{\mathrm{age}}$=54.88 (16.11)]. Potential moderating effects of body mass index (BMI), age, and education were also examined.

Results: Breast cancer survivors registered fewer daily minutes of total (282.8 v. 346.9) light (199.1 v. 259.3) and lifestyle (62.0 v. 71.7) activity and more daily minutes of MVPA (21.6 v. 15.9) and sedentary behavior (555.7 v. 500.6) than controls (p<0.001 for all). These relationships were largely consistent across levels of BMI, age and education. Breast cancer survivors were estimated to spend, on average, 66.4% of their waking time sedentary and 31.1% and 2.6% of their time in light/lifestyle activity and MVPA, respectively.

Conclusions: Breast cancer survivors are more sedentary and participate in less low intensity activity than controls. Although breast cancer survivors participated in more MVPA, these levels were not consistent with public health recommendations. Future research should explore why these differences exist and explore potential benefits of targeting low intensity activities and reducing sedentary time.

CORRESPONDING AUTHOR: Siobhan M. Phillips, PhD, MPH, Northwestern University, Chicago, IL, 60610; smphillips@northwestern.edu

Paper Session 20 4:09 PM-4:27 PM

USING VISUALIZATION-AIDED TRAJECTORY PATTERN VALIDATION IN A LONGITUDINAL DIETARY DATA

Hua Fang, Ph.D[1], Zhaoyang Zhang, M.S.[1], Honggang Wang, Ph.D[2], Yunsheng Ma, MD, PhD[3]

[1]University of Masschusetts Medical School, Worcester, MA; [2]University of Massachussets Dartmouth, Dartmouth, MA; [3]University of Massachusetts Medical School, Worcester, MA

Introduction: Identifying valid trajectory patterns is a critical step to ensure the validity of patients' outcome tests but this research is underdeveloped. Longitudinal dietary data are highly correlated, multi-dimensional with missing data. Mining trajectory patterns can help characterize dietary profiles by capturing temporal and individuals' variations. A visualization-aided trajectory pattern validation method was developed to assist in validated pattern recognition.

Method: Using data from a dietary intervention trial (N=240; Age$_{\_M}$ = 52 years; BMI$_{\_M}$= 35 kg/m^2; Female: 72%), we compared three methods for dietary trajectory pattern recognition: validity-index-only, single-imputation-only and our visualization-aided validation method which was built on an enhanced projection pursuit and multiple imputation (MI) algorithms. Participants with metabolic syndrome were recruited and randomized to two arms following: 1) the American Heart Association (AHA) dietary guidelines that target multiple dietary goals, or 2) a single dietary change that focuses exclusively on increasing fiber. Dietary data were collected via 24-hour recalls at baseline, 3, 6, 12 months after randomization. In addition to the real data, we simulated data using parameters from the trial to verify the results. The identified dietary patterns were related to our physiological outcomes (e.g., weight loss, HDL and insulin resistance). Results: Visualization-aided method teased out more important (5 patterns) and accurate trajectory patterns while avoiding trivial patterns (6 patterns) detected by validity-index-only method. Besides, this method reduces the imputation uncertainty resulting from the single-imputation method, and therefore increased the pattern recognition accuracy and the validity of our outcome tests. Five dietary patterns were identified and related to five levels of weight and waist changes, insulin resistance and HDL over the one year study period. Two risky dietary patterns and associated food components were detected for subjects with worse physiological outcomes. Conclusion: This visualization-aided method is tractable and correlated with our intervention outcomes. The utility of this method will further be explored in adaptive design and other behavioral interventions.

CORRESPONDING AUTHOR: Hua Fang, Ph.D, University of Masschusetts Medical School, Worcester, MA, 01605-0002; hua.fang@umassmed.edu

CITATION PAPER
Paper Session 20 4:27 PM-4:45 PM

DESCRIBING REAL-TIME SUBSTANCE-USE DETECTION FROM BIG BIOSENSOR DATA: A CASE STUDY OF COCAINE USERS

Hua Fang, Ph.D[1], Kelley Wittbold, MD[2], Shicheng Weng, M.S.[3], Carreiro Stephanie[4], Jianying Zhang[4], Rachel Mullins[5], Edward Boyer[6]

[1]University of Masschusetts Medical School, Worcester, MA; [2]University of Massachusetts Medical School, Boston, MA; [3]UMass Medical School, Southborough, MA; [4]University of Massachusetts Medical School, ; [5]University of Massachusetts Medical School, Norwood, MA; [6]University of Masschusetts Medical School,

Introduction: Biosensors are increasingly promoted for use in behavioral interventions. The vast amount of data generated from their applications in real-time event monitoring appears informative, but the primary values of such big data come from its processing and analysis. Our study attempts to assess real-time substance-use detection of biosensors using parameter trajectory pattern description.

Method: Our approach was demonstrated on a NIH-funded study (iMStrong) where data were assembled from fifteen cocaine-dependent patients under treatment. The bracelet biosensors collected data from three surrogates (electrodermal activity, skin temperature, and three motion dimensions) of sympathetic nervous system, generating five attributes for each patient. The data were large not in terms of the sample size but the number of attributes, which were repeatedly measured up to twenty times per second for 30-45 days. We computed the day-by-day parameters (e.g., mean, median, maximum and minimum) and generated the parameter trajectories to depict and capture bio-physiologic changes caused by SNS arousal for each patient. Sets of unusual peaks and valleys (e.g., skin temperature abruptly away from 37 °C) were filtered out and matched with patients' urine specimen values, and their self-reports on drug use.

Results: This parameter trajectory description method reserves and captures abrupt SNS changes even among millisecond data. Although the cocaine use detection is the primary purpose of this case study, these biosensors also detected other drug use events among these cocaine dependents. Fifty-eight substance-use events (e.g., cocaine, Tetrahydrocannabinol, Benzodiazepine, opiates, Methamphetamine use detected by the biosensors) were captured by our method and verified by the lab urine tests. Twelve cocaine-use events were matched with patients' self-reports. One patient's urine test indicated negative but self-reported his cocaine use about four days ago. Despite this inconsistency, our method verified his cocaine-use using the real-time biosensor data stream.

Conclusion: Our objective parameter trajectory description method can assist in real-time biosensor data analytics for detecting drug abuse episodes in behavioral science and drug abuse.

CORRESPONDING AUTHORS: Hua Fang, Ph.D, University of Masschusetts Medical School, Worcester, MA, 01605-0002; hua.fang@umassmed.edu; Kelley Wittbold, MD, University of Massachusetts Medical School, Boston, MA, 02120; kelley.wittbold@umassmed.edu

Thursday
April 23, 2015
6:00 PM-7:00 PM

6:00 PM-7:00 PM B001

SEXUAL SATISFACTION IN PATIENTS WITH ADVANCE CANCER

Nicole Amoyal, PhD[1], Lauren Nisotel, BS[1], Lara Traeger, PhD[2], Jamie Stagl, MA[3], Joseph Greer, PhD[3]

[1]Massachusetts General Hospital, Boston, MA; [2]Massachusetts General Hospital/ Harvard Medical School, Boston, MA; [3]Massachusetts General Hospital / Harvard Medical School, Boston, MA

Introduction: Sexual dysfunction can result from cancer and treatment. Patients receiving oral chemotherapy (OC) have less outpatient clinic visits, thus fewer opportunities to meet with their medical team to discuss sexual side effects. In this study, we examined correlates of sexual satisfaction in a sample of adults taking OC for advanced cancer. Methods: As part of a larger survey study examining adherence to OC, participants completed self-report questionnaires examining quality of life (FACT-G), symptom distress (SDS), mood (HADS), cancer worries (CWI), social support (SSQ), and treatment satisfaction (FACT-TS). Results: The sample included 84 participants (Mean age = 58 (SD = 13.1); 57% Female, 96% White). A minority (35.7%, N=30) declined to complete the FACT-G sexual satisfaction item (SSI), especially those who were older (F (1, 82) = 22.06; p = .00) and married/cohabitating ($\chi^2 = 10.59$; p = .03). Among participants who completed SSI, 63% reported at least some sex life dissatisfaction (average report = "somewhat satisfied"). When adjusting for age, gender, and relationship status, SSI was associated with quality of life (QOL) (β = .57, t(53) = 4.62, p = .00); symptom distress (β = -.47, t (53) = -3.6, p = .001); satisfaction with appearance (β = -.28, t (53) = -2.14, p = .04); depression (β = -.48, t (53) =-3.7, p = .001); worries about chemotherapy (β = -.31, t (53) = -2.31, p = .03); and satisfaction with clinician explanations of treatment (β = 3.23, t (53) = 2.26, p = .03). SSI was not related to cancer type, anxiety, or social support. Discussion: Results indicate that sexual satisfaction is correlated with integral factors associated with OC adherence (QOL, depression, treatment satisfaction), regardless of gender and cancer type, but is less likely to be disclosed if patients are older and in a significant relationship. Results support that greater assessment is needed to understand sexual dissatisfaction in patients with cancer to guide intervention development and dissemination. While patients overwhelmingly prefer OC, sexual satisfaction is an important factor related to quality of life after cancer and should be addressed. Longitudinal research is needed to understand directionality of relationships between sexual dissatisfaction and cancer.

CORRESPONDING AUTHOR: Nicole Amoyal, PhD, Massachusetts General Hospital, Boston, MA, 02114; namoyal@mgh.harvard.edu

6:00 PM-7:00 PM B002

COUPLE-BASED HATHA YOGA PROGRAM FOR LUNG CANCER PATIENTS RECEIVING RADIOTHERAPY AND THEIR CAREGIVERS

Kathrin Milbury, PhD[1], Smitha Mallaiah, MA[2], Amy Spelman, PhD[2], Alejandro Chaoul, PhD[2], Cindy Carmack, PhD[3], Lorenzo Cohen, PhD[2]

[1]The University of Texas M D Anderson Cancer Center, Houston, TX; [2]The University of Texas MD Anderson Cancer Center, Houston, TX; [3]MD Anderson Cancer Center, Houston, TX

BackgroundAlthough lung cancer leads to more debilitating physical and psychological sequelae than other cancer sites, the role of mind-body medicine in the symptom management (e.g., fatigue, distress, sleep disturbances) of lung cancer patients is largely unknown. Moreover, in the context of patient care, the needs of family caregivers are rarely addressed. The purpose of this study was to establish feasibility and preliminary efficacy of a couple-based Hatha Yoga (CBY) intervention in lung cancer patients and caregivers.Method In this single-arm feasibility trial, patients with stage I-III non-small cell lung cancer undergoing radiotherapy and their caregivers participated in a 15-session CBY program consisting of breathing and joint loosening exercises, physical postures and meditations that focused on the interconnectedness of the dyad. We assessed pre/post intervention levels of cancer-related distress (IES), fatigue (BFI), sleep disturbances (PSQI), benefit finding (BFS), overall mental and physical QOL (SF-36), and relational closeness (PAIR). We also tracked feasibility data and participants completed program evaluations. ResultsWe approached 28 eligible dyads of which 15 (53%) consented and 9 (60%) completed the intervention. No adverse events were reported. Patients (mean age: 73 yrs., 63% female, all stage III) and caregivers (mean age: 62 yrs., 38% female, 63% spouses) completed a mean of 10 sessions (range: 4-14) and 95.5% of them rated the program as very useful. Paired t-tests revealed a significant increase in patients' mental QOL (d=84, P=.04) and a significant decrease in caregivers' sleep disturbances (*d*=1.44, P=.02). Although not statistically significant, for patients, effect sizes for change scores were medium for benefit finding and small for distress (*d*=.65 and .37, respectively). For caregivers, medium effects were found for physical QOL (d=.50). Other means were in the expected hypothesized direction for change. ConclusionThis novel supportive care program appears to be a safe, feasible, acceptable, and subjectively useful for lung cancer patients and their caregivers and lends support for further study in a larger randomized controlled trial.

CORRESPONDING AUTHOR: Kathrin Milbury, PhD, The University of Texas M D Anderson Cancer Center, Houston, TX, 77030; kmilbury@mdanderson.org

6:00 PM-7:00 PM B003

COURSES AND PREDICTORS OF SEXUAL AND HORMONAL FUNCTION IN PROSTATE CANCER: A CONTROLLED COMPARISON

Brian D. Gonzalez, PhD[1], Kristine A. Donovan, PhD[1], Heather Jim, PhD[1], Brent J. Small, PhD[2], Steven K. Sutton, PhD[1], Melissa Rose, MHA, MPH[1], Philippe E. Spiess, MD, MS, FACS[1], Mayer Fishman, MD, PhD[3], Paul B. Jacobsen, PhD[1]

[1]Moffitt Cancer Center, Tampa, FL; [2]University of South Florida, Tampa, FL; [3]Moffitt Cancer Center, Tampa, FL

Background: Men receiving androgen deprivation therapy (ADT) for prostate cancer are at risk for worsening sexual and hormonal function. However, few studies have examined the impact of ADT on sexual and hormonal function, and none have prospectively compared men receiving ADT to men not on ADT. This study examined the course of changes in sexual and hormonal function among men receiving ADT and explored potential demographic, clinical, and psychosocial predictors of impairment to sexual and hormonal function. Methods: Prostate cancer patients were assessed before or within 21 days of starting ADT (ADT+ group; n=60; age *M* = 68 years, age range: 49 – 90) and 6 and 12 months later. Age- and education-matched prostate cancer patients treated with prostatectomy only (ADT- group; n=85; age *M* = 68 years, age range: 50 - 92) and men without cancer (CA- group; n=87; age *M* = 69 years, age range: 47 – 86) were assessed at similar intervals. Participants completed self-report measures of sexual and hormonal function, bother from sexual and hormonal function, intensity of hot flashes, and interference from hot flashes. Results: Group by time interactions were observed when comparing the ADT+ group to controls on measures of sexual and hormonal function, bother from sexual and hormonal function, interference from hot flashes, and intensity of hot flashes (*p*s < .001). The ADT+ group reported worsening sexual and hormonal function, greater bother from sexual and hormonal function, worse interference from hot flashes, and greater intensity of hot flashes over time (*p*s ≤ .004), whereas in control groups these outcomes improved (*p*s ≤ .04) or did not change over time (*p*s ≥ .06). In the ADT+ group higher baseline Gleason scores were associated with greater declines in hormonal function as well as bother from sexual and hormonal function (*p*s ≤ .04). Age was not associated with changes in sexual and hormonal function or bother from sexual and hormonal function. Conclusion: Men treated with ADT, particularly those with elevated Gleason scores, were more likely to report worsening sexual and hormonal function over time and to be bothered by their sexual and hormonal function. These clinically-important findings are relevant to patient education regarding the risks and benefits of ADT.

CORRESPONDING AUTHOR: Brian D. Gonzalez, PhD, Moffitt Cancer Center, Tampa, FL, 33612; brian.gonzalez@moffitt.org

6:00 PM-7:00 PM B004

COVERAGE OF THE LINK BETWEEN HPV AND ORAL CANCER IN UK MEDIA PUBLICATIONS

Rachael Dodd, MSc, Jo Waller, PhD, Laura A. Marlow, PhD

University College London, London, United Kingdom

Background: The etiological role played by human papillomavirus (HPV) in some oral cancers has been highlighted in media publications from the United Kingdom (UK), particularly following an interview in which actor Michael Douglas discussed oral sex and his oral cancer; however little is known about the content of UK media publications discussing this issue.
Methods: UK media publications (2001-2014) were searched for content addressing the link between oral cancer and HPV using the search terms 'oral cancer' and 'human papillomavirus' or 'HPV' in the online database LexisNexis®. Of 252 articles, 67 were eligible (>100 words referred to the link between oral cancer and HPV) for analysis using framework and content analysis to determine the main themes and how often these themes were reported.Results: No UK media publications reported news of the link between HPV and oral cancer until 2001. After this, the main topics of discussion included: HPV as a cause of oral cancer, the sexually transmitted nature of HPV (particularly oral sex), the need to vaccinate boys as well as girls against HPV and Michael Douglas' claim that his throat cancer was caused by HPV. Many of the articles also referenced the link between HPV and cervical cancer. Peaks in coverage were found when research emerged demonstrating an increase in mouth cancer cases (March 2012), when Michael Douglas announced his throat cancer was caused by HPV and oral sex (June 2013), and also following campaigns to vaccinate boys (February 2014). Some tabloids sensationalised the link between HPV and oral cancer, using phrases such as the 'sex virus' and referred to cancer as the 'Big C'. Factual information about HPV and evidence of reference to academic research was provided in some of the articles.Conclusions: The link between HPV and oral cancer has received some coverage in UK publications, but this was often not accompanied with detailed information. The risk of oral sex was regularly discussed which has the potential to increase the public's concern about this sexual behaviour.

CORRESPONDING AUTHOR: Rachael Dodd, MSc, University College London, London, WC1E 6BT; r.dodd@ucl.ac.uk

6:00 PM-7:00 PM B005

CULTURAL ADAPTATION OF THE INFLATABLE COLON TO PROMOTE COLORECTAL CANCER SCREENING AMONG HISPANICS

Mario Gutierrez-Casale, MD[1], Janeth Sanchez, MPH[1], Mayra Lovas, MPH[2], Christina Vaquera[3], Rebecca Palacios, PhD[1]

[1]New Mexico State University, Las Cruces, NM; [2]New Mexico State University, Lovington, NM; [3]New Mexico State University, Mesilla Park, NM

Background. Colorectal cancer (CRC) is the second leading cause of cancer-related deaths in the US among men and women. However, CRC can be successfully treated if detected early. Hispanics exhibit disparities in CRC mortality largely due to lower screening rates, with less than half of the Hispanics 50 years of age and older ever being screened for CRC. Low levels of CRC knowledge and awareness, along with socioeconomic (e.g., health care; health literacy) and cultural (e.g., fatalism, fear, machismo, language) factors contribute to low screening rates among Hispanics and other underserved populations. These are significant barriers not only to CRC screening, but also to early diagnosis and treatment. The inflatable colon (IC) is an innovative, visual, and interactive educational resource designed to engage and educate communities at risk for CRC. The IC-CRC educational tool and its evaluation materials were recently adapted to address cultural barriers and risk factors in Hispanic populations. This qualitative study assessed the face validity, literacy levels, language equivalency, and cultural relevancy of the IC-CRC educational tools and assessments. Methods. Study participants included *promotores* from Southern New Mexico and NMSU staff who were at least 50 years of age and Hispanic, which are representative of the communities located in Southern New Mexico and the US-Mexico border region. Measures. The Inflatable Colon Assessment Survey 2 (ICAS2) assessed CRC knowledge, self-efficacy, cancer fatalism, fear of cancer/screening procedure, perceived benefits of screening, machismo, social norms, medical mistrust, acculturation, health literacy, behavioral intentions to be screened and satisfaction. Procedure. Participants completed a brief survey, received the IC-CRC educational tour, completed the ICAS-2, and participated in a focus group. Participants then evaluated the educational tour and individual items in the ICAS-2. Results. Participants identified content and items that were difficult to understand and required simplification. Feedback was also provided on language equivalency and cultural relevancy. Conclusion. This study facilitated further adaptation of the Inflatable Colon tour and ICAS 2 given feedback from the border Hispanic community.

CORRESPONDING AUTHOR: Mario Gutierrez-Casale, MD, New Mexico State University, Las Cruces, NM, 88001; mariogtz@nmsu.edu

6:00 PM-7:00 PM B007

DECISION REGRET ABOUT FERTILITY PRESERVATION AMONG YOUNG ADULT FEMALE CANCER SURVIVORS

Catherine Benedict, PhD, Bridgette Thom, MS, Joanne Kelvin, CNS

Memorial Sloan Kettering Cancer Center, New York, NY

Many young adult female cancer (YAFC) survivors (18-39 years old) want to have children in the future and are concerned about their fertility. However, the majority do not undergo fertility preservation (FP) prior to treatment. This study evaluated decision regret among YAFC survivors who did not preserve their fertility before receiving gonadotoxic cancer treatment.Methods: Retrospective, cross-sectional survey of cancer survivors' pre-treatment fertility-related experiences. Analyses were limited to those who were 18-39 years old at diagnosis, and included descriptive statistics and ANCOVAs.Measures: Items developed by the research team and the Decision Regret Scale (DRS).Results: Survivors (N=173) were an average of 35 years old (SD=5.2) and 2 years (SD=1.4) post-treatment. At the start of treatment, 92% were premenopausal, 81% were partnered, 44% had at least one child, and 84% wanted (more) children or were unsure. 52 women (30%) underwent FP before treatment. Among premenopausal women who did not undergo FP, primary reasons included: lack of time (39%), emotional distress (31%), did not want more children (28%), cost (25%), and belief in "what is meant to be will be" (24%). Controlling for relevant covariates, decision regret (M=25.0, SD=21.8) was greater for women who endorsed lack of time (p=.001) or emotional distress (p=.02), whereas "did not want more children" related to less regret ($p < .001$). Most women who did not undergo FP felt it was the right decision (62%); however, 15% regretted their decision and 19% would not make the same choice again.Conclusions: A substantial minority of YAFC survivors who do not undergo FP may experience decision regret after treatment. Decision regret may indicate heightened fertility-related distress, and lead to poorer physical and psychological health and lower quality of life as seen in other patient populations. Due to the risk of premature ovarian failure and infertility in patients who receive gonadotoxic therapy, women who maintain ovarian function after treatment, but are not yet ready to start a family, may benefit from post-treatment FP. Interventions may help YAFC survivors cope with infertility or pursue alternative family-building strategies. Limitations include retrospective, cross-sectional design.

CORRESPONDING AUTHOR: Catherine Benedict, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, 10022; benedicc@mskcc.org

MERITORIOUS POSTER
6:00 PM-7:00 PM B008

DECISION TO PURSUE INTENSIVE TREATMENT IN ADVANCED CANCER PATIENTS

Kaitlin Touza, B.A.[1], Daniella Bano, B.A.[1], Larry Cripe, MD[2], Kevin Rand, PhD[1]

[1]Indiana University - Purdue University of Indianapolis, Indianapolis, IN; [2]Department of Medicine Division of Hematology/Oncology IU School of Medicine, Indiana University Hospital, IU Simon Cancer Center, Indianapolis, IN

Many advanced cancer patients receive intensive treatment near the end of life (EOL), which is associated with negative outcomes, including worse quality of life, greater distress and bereavement in caregivers, and greater health care costs. Moreover, intensive treatment does not meaningfully improve survival for many cancers. Patient and physician characteristics and prognostic understanding are known to be associated with treatment preferences, but these factors do not fully explain EOL care decisions. Personality traits associated with goal pursuits may explain decision-making in advanced cancer. The aim of this study was to examine the ability of goal-related personality traits to predict intensive treatment in advanced cancer patients near the EOL. Surveys were completed by 80 patients with incurable lung or gastrointestinal cancer, measuring hope, optimism, and goal flexibility. After their deaths, patient medical records were examined for evidence of intensive treatment near EOL. Time between initiation of last chemotherapy regimen and death correlated with optimism, $r(34)=-.53, p < .001$, agency, a component of hope, $r(34)=-.40$, $p < .05$; and goal reengagement, a component of goal flexibility, $r(34)=-.36$, $p < .05$. Time between last chemotherapy administration and death correlated with optimism, $r(48)=-.29$, $p < .05$; agency, $r(48)=-.39$, $p < .05$; and goal reengagement, $r(48)=-.43$, $p < .05$. In a regression analysis, optimism significantly predicted starting a new chemotherapy regimen closer to death ($\beta=-.53, t(31)=-3.56$, $p < .001$), and receiving chemotherapy closer to death ($\beta=-.29$, $t(48)=-2.16$, $p < .05$). A multiple regression with hope and goal reengagement predicting time from last chemotherapy administration to death was also significant, R2 =.29, adjusted R2 =.25, $F(3,46)=6.32$, $p < .001$. Although normally associated with adaptive functioning, higher levels of hope, optimism, and goal flexibility may lead advanced cancer patients to choose more intensive treatments near EOL.

CORRESPONDING AUTHOR: Kaitlin Touza, B.A., Indiana University - Purdue University of Indianapolis, Indianapolis, IN, 46202; ktouza@iupui.edu

6:00 PM-7:00 PM B009

DELIVERING A MOBILE MINDFULNESS INTERVENTION TO ENHANCE BREAST CANCER SUPPORTIVE CARE

Kristen D. Rosen, MPH[1], Harvir Virk, B.A.[2], Samantha Paniagua, B.A.[2], Darley Guzman[2], Melissa Valerio, PhD, MPH[3], Jennifer S. Potter, PhD, MPH[2], Corina i. Rodriguez[2]

[1]The University of Texas Health at San Antonio, San Antonio, TX; [2]The University of Texas Health Science Center at San Antonio, San Antonio, TX; [3]UT School of Public Health at Houston San Antonio Regional Campus, San Antonio, TX

Background. Advances in breast cancer therapies and detection have improved survival rates, leading to a focus on attending to survivors' quality of life (QOL). While evidence demonstrates psychosocial interventions, such as mindfulness training, may improve QOL, many women are unable to participate in conventional mindfulness training. Utilizing mobile platforms as a novel delivery method may improve adoption and uptake of these interventions. This presentation describes findings from a pre-pilot evaluation of a mobile app-delivered mindfulness training intervention developed for this clinical population. Methods. We invited 23 women attending breast cancer supportive care (stakeholders) to beta test an app-delivered mindfulness intervention. Stakeholders attended an orientation session to complete baseline questionnaires, install the app to their mobile devices, and learn about the concept of mindfulness. Participants then tested the intervention for four weeks, at which time they returned to complete follow-up questionnaires and debrief. Debrief discussions focused on experience and feedback for improving the intervention. Questionnaires assessed mindfulness, quality of life across all domains, and pain-related interference and severity. Results. Overall, 20 women completed the study. On average, stakeholders were 55 years old (SD=8.3) and a majority (60%) of participants were Hispanic (n=12). Overall, findings indicated that mobile app delivery of a mindfulness-based intervention is feasible and appropriate for this clinical population. However, participants identified design and content concerns requiring modification (e.g., improve visibility; allow customization; add dynamic features). Further, paired-samples t-tests conveyed theoretically consistent trends across mindfulness and spiritual quality of life constructs. Conclusions. Continuous stakeholder engagement provided valuable insight into consumer perspectives. Findings from the discussion groups indicate that while the app-delivered intervention is feasible and acceptable, substantive changes to the design and delivery are required to facilitate adoption and uptake. Our findings may also have implications for the development of mobile-based psychosocial interventions for breast cancer.

CORRESPONDING AUTHOR: Kristen D. Rosen, MPH, The University of Texas Health at San Antonio, San Antonio, TX, 78229; rosenk3@uthscsa.edu

6:00 PM-7:00 PM B010

DEVELOPING A SURVIVORSHIP NEEDS ASSESSMENT TOOL FOR HEAD AND NECK CANCER SURVIVORS AND CAREGIVERS

Katherine R. Sterba, PhD, MPH[1], Jane Zapka, ScD[1], Nancy R. LaPelle, PhD[2], Ashley A. Laursen, BSN, RN[1], Amy M. Buchanan, MPH[1], Keisuke Shirai, MD/MSCR[3], Terry Day, MD[1]

[1]Medical University of South Carolina, Charleston, SC; [2]University of Massachusetts Medical School, Marlborough, MA; [3]Medical Univ of South Carolina, Charleston, SC

Technological advances have increased opportunities for assessment of patient-reported outcomes in oncology clinics. Due to significant post-treatment challenges in head and neck cancer (HNC), addressing unmet needs at the end of treatment may be beneficial. Using qualitative methods, we characterized views about recovery challenges in survivors, caregivers and multidisciplinary HNC clinicians and gathered feedback to guide the development of a web-based survivorship needs assessment planning tool for use in generating care plans. Interviews were conducted with survivors completing treatment 4-30 months ago (N=17, 59% male, mean age=59) and their primary caregivers (N=14, 57% female, mean age=61). Focus groups were conducted with clinicians (N=14). After expert panel ratings and technology development, we pretested an iPad-based tool and care plan for acceptability. Content analysis was used to explore themes and delivery preferences were summarized. Survivors, caregivers and clinicians consistently highlighted the importance of assessing *symptoms* (e.g., dry mouth, speech/swallowing difficulties, weight loss), *emotional and social concerns* (e.g., depression, recurrence fears, adaptation after cancer, finances) and *health behaviors* (e.g., diet, smoking). Caregivers described being overwhelmed and intensely focused on survivors' nutrition and trach/feeding tube care while clinicians emphasized financial and access concerns. Most participants were enthusiastic about the tool and emphasized the need for a flexible care plan design due to variability in patient and caregiver needs. Over 90% reported high comfort using, reading and navigating questions on a tablet and were in strong agreement that the care plan would help families practically and emotionally. Coordination with follow-up visits was recommended to address travel and time barriers. While survivors and clinicians recommended waiting 1-6 months after treatment, caregivers preferred earlier intervention. Results pinpointed optimal end-of-treatment domains for routine assessment, including symptoms, post-treatment concerns and health behaviors, and support the feasibility of implementing a survivorship needs assessment planning tool in the HNC clinic using a flexible approach matched to dyad characteristics.

CORRESPONDING AUTHOR: Katherine R. Sterba, PhD, MPH, Medical University of South Carolina, Charleston, SC, 29425; sterba@musc.edu

6:00 PM-7:00 PM B011

DEVELOPMENT OF THE PARKLAND-UT SOUTHWESTERN COLONOSCOPY PATHOLOGY REPORTING SYSTEM

Celette Sugg Skinner, PhD[1], Samir Gupta, MD[2], Ethan Halm, MD[3], Shaun G. Wright, BS[4], Katharine McCallister, BA[1], Wendy Bishop, MS[1], Christian Mayorga, MD[5], Deepak Agrawal, MD[6], Brett Moran, MD[6], Joanne Sanders, MS[7], Amit Singal, MD[8]

[1]Department of Clinical Sciences and Harold C. Simmons Cancer Center, UT Southwestern Medical Center, Dallas, TX, Dallas, TX; [2]San Diego Veterans Affairs Health Care System, San Diego, CA; Division of Gastroenterology, Department of Internal Medicine, and Moores Cancer Center, La Jolla, CA, San Diego, CA; [3]Department of Clinical Sciences, Harold C. Simmons Cancer Center, Department of Internal Medicine, UT Southwestern Medical Center, Dallas, TX, and Parkland Health & Hospital System, Dallas, TX, Dallas, TX; [4]Parkland Health & Hospital System, Dallas, TX; [5]Department of Internal Medicine, UT Southwestern Medical Center, and Parkland Health & Hospital System, Dallas, TX, Dallas, TX; [6]Department of Internal Medicine, UT Southwestern Medical Center and Parkland Health & Hospital System, Dallas, TX, Dallas, TX; [7]Department of Clinical Sciences, Harold C. Simmons Cancer Center, UT Southwestern Medical Center, Dallas, TX, Dallas, TX; [8]Department of Clinical Sciences, Harold C. Simmons Cancer Center, Department of Internal Medicine, Parkland Health & Hospital System, UT Southwestern Medical Center, Dallas, TX, Dallas, TX

Background: Colorectal cancer screening begins a process whereby adenomatous polyps can be identified early and removed to reduce incidence and mortality. Effectiveness of this process is limited by suboptimal screening and surveillance among patients with prior polyps. Whereas more than one-third of patients with advanced adenomas fail to receive a follow-up colonoscopy within 5 years, overuse of surveillance colonoscopy has been documented in more than a quarter of patients with low-risk findings (e.g., non-adenomatous polyps). Reducing underuse and overuse of surveillance colonoscopy is a major focus of healthcare reform. Decision support tools have been developed to match colonoscopy findings to recommendations but, to date, none has generated tailored reports of recommendations to patients and their referring providers. Methods: In our urban, safety-net system, we developed and implemented the *Parkland-UT Southwestern Colonoscopy Pathology Reporting System (CoPRS),* an electronic medical record-based pathology reporting system with tailored recommendations for patients and providers, to increase guideline-consistent surveillance recommendations and improve communication of recommendations to providers and patients. The system will also allow for tracking of under- and over-screening. *CoPRS* was implemented in December 2013 and used in all colonoscopies that included a biopsy or polyp removal (673 of 1,775). In June 2014, we surveyed the 18 colonoscopists (100% response) who had used *CoPRS*, assessing perceived acceptability, improvement in guideline-consistency of recommendations, and improvement in quality of results communication. Results: More than three quarters agreed or strongly agreed that *CoPRS* is easy to use (83%), provides guideline-based follow-up recommendations (89%), improves quality of Spanish-language letters (94%), and is something they would recommend for adoption at other institutions (78%). More than half agreed that the system led to improvement in the colorectal cancer screening practice (56%) and made their work easier (61%), with most of those who did not agree being neutral. Conclusions: *Parkland-UT Southwestern CoPRS* provides a novel EMR-based tool that promotes guideline-based recommendations and improves communication to patients and providers.

CORRESPONDING AUTHOR: Celette Sugg Skinner, PhD, Department of Clinical Sciences and Harold C. Simmons Cancer Center, UT Southwestern Medical Center, Dallas, TX, Dallas, TX, 75390-9066; celette.skinner@utsouthwestern.edu

6:00 PM-7:00 PM B012

DEVELOPMENT OF THE SCREENING ATTITUDES SCALE

Jessica T. DeFrank, PhD[1], Noel Brewer, PhD[2], Anne Sutkowi-Hemstreet, MPH[3], Robert F. Devellis, PhD[2], Ziya Gizlice, PhD[4], Stacey Sheridan, MD/MPH[5]

[1]Research Triangle Institute, Raleigh, NC; [2]University of North Carolina at Chapel Hill, Chapel Hill, NC; [3]UNC Sheps Center for Health Services Research, Chapel Hill, NC; [4]UNC Center for Health Promotion and Disease Prevention, Chapel Hill, NC; [5]UNC School of Medicine, Chapel Hill, NC

BACKGROUND. The public's high enthusiasm for potentially harmful screening tests makes it important to have a systematic way to assess attitudes that may prompt screening overuse. We sought to develop and evaluate the psychometric properties of a scale that assesses patients' attitudes towards medical screening. METHODS. Data come from a cross-sectional survey in the baseline assessment of an RCT administered from 2012-2014. Patients (n=500) were eligible for one of 3 overused screening services: prostate cancer screening, colonoscopy in adults ages 75-84, and osteoporosis screening in women age 50-65. We developed 57 survey-items with consultation from content experts. Items covered general attitudinal domains thought to contribute to overuse and were not test-specific. We used principal factors factor analysis to identify latent constructs and items to trim. We explored scale validity by testing associations of scale factors with behavioral and personality constructs. RESULTS. Analyses yielded an 11-item screening attitudes scale with 2 reliable factors: perceived benefits of screening (6 items, α=0.82) and personal and moral obligation for screening (5 items, α=0.84). The screening benefits factor correlated more strongly with education, numeracy, and need for cognition (r= -0.31, -0.28 and -0.21) than did the screening obligation factor (all p for differences < .001). The screening obligation factor correlated more strongly with anticipated regret for not screening, worry about illness and perceived susceptibility to prostate cancer (r= 0.55, 0.12 and 0.15) than did the screening benefits factor (p for all differences < .05). CONCLUSIONS. The Screening Attitude Scale is brief and reliable scale assessing attitudes about screening. The scale may be useful in research on the underpinnings of overuse of medical screening.

CORRESPONDING AUTHOR: Jessica T. DeFrank, PhD, Research Triangle Institute, Raleigh, NC, 27613; jessica.defrank@gmail.com

6:00 PM-7:00 PM B013

DISPOSITIONAL EXPRESSIVITY, CANCER-SPECIFIC COPING, AND DISTRESS IN LATINA BREAST CANCER PATIENTS

Patricia I. Moreno, M.A.[1], Margaret R. Bauer, M.A.[1], Betina Yanez, PhD[2], Alexandra Jorge, M.A.[1], Annette L. Stanton, PhD[1]

[1]University of California, Los Angeles, CA; [2]Northwestern University Feinberg School of Medicine, Chicago, IL

Coping processes directed toward the management of emotions predict psychological and physical health-related adjustment in individuals with cancer. However, few studies have examined how the relationship between dispositional emotional tendencies and stressor-specific coping affects outcomes. The aim of the current study was to examine the associations of dispositional emotional expressivity (i.e., propensity to experience and express emotions strongly) with both cancer-specific coping through avoidance and emotional approach in order to predict intrusive thoughts in patients with breast cancer. Recently diagnosed Latina breast cancer patients receiving treatment at a public hospital completed standardized assessments via interview format at two time points: within 18 months of diagnosis (Time 1; N = 95) and three months after the initial assessment (Time 2; N = 79). Most women were immigrants (93%) and reported a combined household income of $20,000 or less (75%), did not graduate from high school (59%), and primarily spoke Spanish (88%). In path modeling analyses, more recent immigration was associated with greater dispositional expressivity, which in turn was associated with coping with the cancer experience using both greater avoidance and emotional approach strategies. However, only avoidance-oriented coping predicted increases in intrusive thoughts at three months. Results suggest that Latina breast cancer patients who have a propensity to experience and express emotions strongly may be initially overwhelmed by their cancer-related emotions and consequently use more avoidance-oriented *and* emotional approach strategies to cope with their diagnosis. However, their greater use of avoidance-oriented coping strategies uniquely predicts compromised subsequent cancer-related distress. Future research is needed to understand how dispositional and stressor-specific emotion regulation and coping processes unfold in highly understudied samples, such as socioeconomically-disadvantaged Latina breast cancer patients.

CORRESPONDING AUTHOR: Patricia I. Moreno, M.A., University of California, Los Angeles, CA, 90095-1563; patriciamoreno@ucla.edu

6:00 PM-7:00 PM B014

DISTRESS, DELAY OF GRATIFICATION AND PREFERENCE FOR PALLIATIVE CARE IN PROSTATE CANCER PATIENTS

James Gerhart, PhD[1], Yasmin Asvat, PhD[1], Emily G. Lattie, M.S.[1], Sean O'Mahony, MB, BCH, BAO[1], Michael Hoerger, PhD[2]

[1]Rush University Medical Center, Chicago, IL; [2]Tulane University, New Orleans, LA

Psychosocial distress screening and referral to supportive care services are part of the standard of care in oncology. However, many cancer patients decline supportive care for reasons that are not well understood. Psychosocial distress may limit patients' receptiveness to supportive care, including palliative care. We examined the associations between psychosocial distress (depression and anxiety symptoms) and preference for palliative care in a sample of 212 men with a history of prostate cancer (94% White, 27% advanced stage, age M = 62, SD = 8). Additionally, we evaluated delay of gratification as a potential mechanism of this association, as distressed patients may have low tolerance for negative emotions and difficulty delaying immediate gratification (e.g., avoidance of difficult discussions on goals of care and mortality) in service of longer-term goals (e.g., improved quality of life). We hypothesized that psychosocial distress would be associated with lower delay of gratification and lower preference for palliative care. Participants completed the Depression Anxiety Stress Scales, the Delay of Gratification Inventory, and rated on a 1-5 scale (1 = "Definitely No"; 5 = "Definitely Yes") their preference for palliative care if a doctor advises that further cancer treatment was unlikely to be helpful. Mild depression or anxiety symptoms were reported by 38% and 21% of the sample, respectively. Most participants were amenable to palliative care (M = 4.29, SD = 0.91), with 83.5% endorsing preference for care. As hypothesized, depression and anxiety symptoms were associated with lower preference for palliative care (p = .03, and p = .02, respectively) and with lower delay of gratification (ps < .001). Results of bias-corrected bootstrapped mediation models indicate that delay of gratification mediates the relationship of depressive (B = -.04, SE = .02, 95 CI %: -.08 to -.01) and anxiety symptoms (B = -.04, SE = .02, 95 CI %: -.09 to -.01) with preference for palliative care. Findings suggest that patients who stand to benefit the most are less receptive to palliative care due to low tolerance for delaying gratification. Future research is needed to identify communication and intervention strategies that address psychosocial distress and delay of gratification in relation to medical decision-making.

CORRESPONDING AUTHOR: James Gerhart, PhD, Rush University Medical Center, Chicago, IL, 60612; james_gerhart@rush.edu

6:00 PM-7:00 PM B015

DOES MARITAL STATUS INFLUENCE THE IMPACT OF SELF-EFFICACY AMONG PATIENTS WITH HEAD AND NECK CANCER?

Sarah Thilges, PhD[1], Elliott Hicks, MS[2], Patricia Mumby, PhD[2]

[1]Rush University Medical Center, Chicago, IL; [2]Loyola University Medical Center, Maywood, IL

BACKGROUND: Cancer coping efficacy (CCE) and social support have been shown to influence quality of life (QOL) and distress among patients diagnosed with cancer. However, social support has a complex relationship with outcomes and has also been shown to interact with CCE to predict well-being through its influence on burden sharing and emotional support. This study seeks to understand the relationship between partner status, QOL, distress and CCE among a sample of patients diagnosed with head and neck cancer (HNC). METHODS: The data utilized in this analysis is part of a large scale longitudinal randomized clinical trial examining QOL, depressive symptoms, medical and demographic variables among 88 newly diagnosed HNC patients through 1 year post-diagnosis. Patients completed demographics including martial status, the Beck Depression Inventory (BDI) and the Brief Symptoms Inventory (BSI) to assess distress, the Functional Assessment of Cancer Therapy-Head and Neck Cancer (FACT-HNC) to assess QOL and the Cancer Behavior inventory to assess CCE.RESULTS: There were no demographic differences between marital status, which was dichotomized as married/partnered (N = 19) or single (N=68) and did not have a significant interaction with self-efficacy in predicting QOL or distress. However, baseline levels of self-efficacy emerged as a significant predictor of distress and QOL at several time points including BDI scores at month 6: F(3,38)=7.34, $p < .01$and month 12: F (3,45)=7.86, $p < .01$as well as FACT total scores at month 6: F(3,38)=6.04, $p < .01$ and BSI scores at month 6, F(3,35)=6.74, $p< .01$. CONCLUSION: The results of this study offer insights both into the importance of exploring social support networks, both for quality and quantity, beyond obvious relationships such as marital partners. It also elucidates the need to assess and utilize interventions to increase self-efficacy. By addressing a patient's confidence in their ability to meet their cancer related needs and working with their support networks, clinicians might be able to directly and indirectly influence patient's distress and QOL.

CORRESPONDING AUTHOR: Sarah Thilges, PhD, Rush University Medical Center, Chicago, IL, 60614; sarahthilges@gmail.com

6:00 PM-7:00 PM B016

DOES THE DOCTOR-PATIENT RELATIONSHIP CONTRIBUTE TO POSTTRAUMATIC GROWTH IN MEN WITH PROSTATE CANCER?

Elizabeth L. Addington, BA[1], Lawrence G. Calhoun, PhD[1], Arnie Cann, PhD[1], Richard G. Tedeschi, PhD[1], Susan Furr, PhD[1], Merle Mishel, PhD[2], James L. Mohler, MD[3], Jeannette T. Bensen, MS, PhD[2]

[1]UNC Charlotte, Charlotte, NC; [2]UNC Chapel Hill, Chapel Hill, NC; [3]Roswell Park Cancer Institute, Buffalo, NY

Background: Survivors of challenging life events such as cancer may experience positive changes known as posttraumatic growth (PTG – e.g., improved relationships, greater appreciation for life). PTG appears most likely under a combination of impact (e.g., distress, disrupted core beliefs) and engagement (e.g., social support), but investigations of cancer-specific processes of PTG are needed. While the doctor-patient relationship clearly influences other outcomes, consideration of its role in PTG is scant. Moreover, men with prostate cancer have been under-studied, and racial and socioeconomic diversity of previous samples have been limited. *Method*:This study applied the PTG model to a diverse sample of prostate cancer patients, using a cancer-specific measure of distress, and examined whether the patient-provider relationship in this context functions similarly to social support in more general settings. Men with newly diagnosed prostate cancer (n=167) completed measures of cancer worry and their relationship with their diagnosing/treating physician. They completed the Core Beliefs Inventory and the PTG Inventory – Short Form approximately five years later. Conditional process analysis tested the hypothesis that men with more worry about their prostate cancer would report more examination of core beliefs and more PTG, particularly among those who had better relationships with their doctors. *Results*: PTG was significantly related to race and socioeconomic status, but only in bivariate analyses. Examining core beliefs most strongly predicted PTG. In addition, contextual knowledge (the patient's view of how well the doctor knows him beyond prostate cancer) positively predicted PTG and moderated its association with cancer worry. *Conclusions*: PTG is more likely when an event promotes examination of core beliefs and when people have psychosocial resources to manage associated distress. Particularly for men who worry about a new diagnosis of prostate cancer, an oncologist who seems to understand him not just as a cancer patient, but as a whole person, predicts positive psychological outcomes five years later. Future research should determine how physicians can promote this type of patient-provider relationship and examine health outcomes associated with PTG.

CORRESPONDING AUTHOR: Elizabeth L. Addington, BA, UNC Charlotte, Charlotte, NC, 28205; elaney4@uncc.edu

6:00 PM-7:00 PM B017

EFFECTS OF LANGUAGE BARRIERS TO TREATMENT AMONG UNDERSERVED LATINAS DIAGNOSED WITH BREAST CANCER

Amelie G. Ramirez, DRPH[1], Eliseo J. Pérez-Stable, MD[2], Frank J. Penedo, PhD[3], Gregory A. Talavera, PhD[4], J. Emilio Carrillo, MD[5], Alan E. C. Holden, PhD[1], Edgar Munoz, M.S.[1], Sandra San Miguel de Mejors, MPH[1], Kipling Gallion, M.A.[1]

[1]University of Texas Health Science Center at San Antonio, San Antonio, TX; [2]University of California, San Francisco, San Francisco, CA; [3]Northwestern University, Chicago, IL; [4]San Diego State University, San Diego, CA; [5]Weill Cornell Medical College, Cornell University, New York, NY

Background: Language barriers inhibiting the health care provider-patient relationship undermine the essential foundation of primary care. These can attenuate the effects of interventions involving cancer care. The extent to which language barriers are present in a given population speak to the potential for delays in cancer care. Here we describe barriers to care reported by Latina breast cancer survivors with a focus on language and the effect of those barriers on time-to-treatment of a breast cancer diagnosis.Methods: *We evaluated 399 barriers to care reported by Latinas diagnosed with cancer as part of Redes En Acción: The National Latino Cancer Research Network* from July 2008-January 2011. *Navigators* maintained monthly logs of encounters with patients and recorded reported barriers to care and actions taken to overcome each barrier. Spearman Correlation, Chi-squared analysis and Cox proportional hazards models were used to assess the barriers.Results: The most commonly-reported barrier was Language (55.6%). Other barriers included Fear (17.5%) and Insurance (9.0%). 48% of women reported one barrier, 37% reported more than one and only 15% reported none. Multiple (2+) barriers resulted in slightly longer time to treatment (aHR [adjusted Hazard Ratio]= 0.871; $p < .05$). This effect disappeared when the Language barrier was removed from the total count (aHR=0.964; p=.982, p=ns). Cluster analysis revealed that barriers fell into one of three groups which we refer to as Cultural (including Language), Personal (including Fear), and System/Socioeconomic (including Insurance) barrier clusters. The importance of a Language barrier was reflected in significant correlation ($p < .05$) between Language and other patient-reported (e.g. Fear, Insurance, Health Education and Beliefs).Conclusions: Barriers to breast cancer treatment reported by Latinas are predominantly linguistic in nature. Multiple barriers appear to result in a delay between diagnosis and treatment initiation; however this effect disappears when accounting for the effects of a Language barrier. Language barriers appear to hold a central place among all barriers to care among Latina breast cancer survivors. Health care systems must attend to the special needs of underserved minorities when planning and improving programs.

CORRESPONDING AUTHOR: Amelie G. Ramirez, DRPH, University of Texas Health Science Center at San Antonio, San Antonio, TX, 78229; ramirezag@uthscsa.edu

6:00 PM-7:00 PM B018

EMOTIONAL DISTRESS, QUALITY OF LIFE, AND SYMPTOM BURDEN IN LONG TERM LUNG CANCER SURVIVORS

Eleshia Morrison, PhD[1], Paul J. Novotny, MS[1], Jeff A. Sloan, PhD[1], Ping Yang, MD, PhD[1], Christi A. Patten, PhD[1], Kathryn J. Ruddy, MD[2], Matthew M. Clark, PhD[1]

[1]Mayo Clinic, Rochester, MN; [2]Mayo Clinic, Rochester, MN, Canada

Purpose: Lung cancer survivors experience substantial long-term physical side effects of their treatments, yet little is known about their emotional distress. This longitudinal study aimed to identify which patient/disease characteristics were associated with emotional distress; examine how distress related to quality of life and symptom burden; and determine which survivors report changes in distress over time. Methods: Participants (N=2205) were long-term lung cancer survivors (LTLCS) who completed self-report information on emotional distress (SF-8), and validated single item measures for quality of life (QOL; mental, physical, emotional, social, spiritual) and symptom burden (pain, cough, shortness of breath, fatigue). Assessment occurred at diagnosis and annually for 6 years thereafter. Relationships between distress, QOL, symptom burden, and sociodemographic variables were analyzed using Wilcoxon tests for continuous variables and chi-square tests for categorical variables. Results: Distress at diagnosis was associated with female gender, former smoking, advanced disease, unemployment, low performance score, and comorbid disease (ps < .01). Statistically significant and clinically meaningful associations were found between greater emotional distress, lower quality of life, and greater symptom burden (ps < .0001). One in ten (9.9%) LTLCS reported distress at diagnosis. The overall rate of distress remained stable over time; however, which survivors who had distress changed over time. For example, of those who did not report distress at baseline, 5% reported the emergence of distress at 1 year. Conclusion: Certain characteristics are related to emotional distress in LTLCS, which is associated with worse quality of life and greater symptom burden. The change in who reports distress over time emphasizes the need for on-going assessment throughout survivorship, so as to not miss opportunities for intervention.

CORRESPONDING AUTHOR: Eleshia Morrison, PhD, Mayo Clinic, Rochester, MN, 55905; morrison.eleshia@mayo.edu

6:00 PM-7:00 PM B019

ETHNIC DIFFERENCES IN DEPRESSION RATES AND SYMPTOMS AMONG OLDER BLACK AND LATINO CANCER PATIENTS

Rosario Costas-Muñiz, PhD[1], Migda Hunter-Hernandez, BA[1], Cynthia Gonzalez, BA[1], Julia Ramirez, MA[1], Nicole Roberts, MPH[1], Jennifer Leng, MD, MPH[1], Francesca Gany, MD, M.S.[2]

[1]Memorial Sloan-Kettering Cancer Center, New York, NY; [2]Memorial Sloan Kettering Cancer Center, New York, NY

10-20% of older adults in primary care settings experience significant levels of depression. Rates are as high as 25% among those with chronic illness. However, elderly patients are far less likely to be diagnosed with major depression or dysthymia than any other age group. Further, the prevalence of psychiatry disorders amongst elderly in the U.S. varies significantly by race and ethnicity. The purpose of this study is to examine the rates of a positive screen for depression in an older sample of Latino and Black cancer patients, and to examine the prevalence of depression symptoms in these groups.Methods: This study examines a cohort of older cancer patients (N=258) recruited thorough the Cancer Portal Project (CPP). Older age was defined as age 65 or older. Latinos (n=135) and Black (n=123) completed a demographic questionnaire and a depression scale (PHQ-9).Results: The rate of a positive depression screen was 16%, 19% for Latinos and 12% for Blacks. Immigrants with more years of residence in the US were more likely to have a positive depression screen and to report feelings of anhedonia. The most commonly endorsed depressive symptoms were low energy (69%) and feelings of depression or hopelessness (40%). Latinos were more likely to endorse the items feelings of depression (47%), and suicidal ideation (5%) than Black patients (32%, 1%, respectively). Amongst the Latinos, Puerto Ricans (57%) more frequently reported feelings of depression, and among the Blacks, Jamaicans more frequently endorsed depressive feelings (46%). Patients with a positive depression screen were twice as likely to report a need for supportive services. Blacks and recent immigrants were more likely to report needing supportive services.Conclusions: Our findings provide insight into ethnic subgroup variability within a sample of older ethnic minority cancer patients. In this sample of ethnic minority patients, older Latino and Black patients have similar rates of positive depression screen as those published in the cancer literature. The results show that although some sub-groups are at increased risk for depression (Latinos and immigrants with a longer stay in the US), other sub-groups (Black and more recent immigrants patients) are at increased risk for unmet supportive needs.

CORRESPONDING AUTHOR: Rosario Costas-Muñiz, PhD, Memorial Sloan-Kettering Cancer Center, New York, NY, 10065; costasmr@mskcc.org

6:00 PM-7:00 PM B020

EXAMINING COGNITIVE REACTIONS TO COLON CANCER SCREENING MATERIALS THAT ADDRESS DEFENSIVE PROCESSING

Amy McQueen, PhD[1], Sally W. Vernon, PhD[2], Paul R. Swank, PhD[2]

[1]Washington University, School of Medicine, St. Louis, MO; [2]University of Texas - Houston, School of Public Health, Houston, TX

Background: Individuals not-adherent to colon cancer screening (CRCS) guidelines may benefit from educational materials that address defensive processes or rationalizations for not being screened. Methods: Eligible participants were average-risk adults recruited by advertisements who were age 50-75 years, non-adherent, no plans for CRCS in the next 3 months, and had insurance or access to healthcare. Participants were randomized to one of 5 conditions. The control group got general CRCS information. The 2x2 intervention crossed information order (risk followed by efficacy messages vs. efficacy then risk) with message format (two-sided vs. narrative). Surveys were done at baseline, post-exposure, and 3 month follow up. Measures included a sum of 9 true/false knowledge items; generic measures of message derogation (5 items) and acceptance/persuasion (4 items), 7 scales of CRCS defenses; and attitudes (5 items), self-efficacy (8 items), and readiness to get CRCS. Results: The sample (N=311) was 73% female, 71% White, 41% college educated, 63% employed, mean age of 56 (SD=5.7), and 24% ever had CRCS. Few differences between intervention groups were identified, so they were collapsed for analyses. The direct effects of study group were not significant. However, intervention participants had greater knowledge, which was related to greater message acceptance, positive evaluations of the brochure, and less defensive information processing. Message acceptance and defenses were significantly associated with attitudes, self-efficacy, and intentions toward CRCS. A structural model controlling for covariates gender and race and the inter-correlations between model variables fit the data well ($\chi^2(60)=57.72$, p=.56; CFI=1.00; RMSEA < .001 (90%CI: < .001-.032). Knowledge was a significant mediator of the effect of study group on message acceptance and defenses. Conclusions: Compared with controls, intervention participants knew more about CRC deaths, racial disparities, and CRCS test options, which increase message acceptance and reduced defenses that impact CRCS determinants. More research is needed to test strategies for reducing defensive reactions to health risk messages.

CORRESPONDING AUTHOR: Amy McQueen, PhD, Washington University, School of Medicine, St. Louis, MO, 63110; amcqueen@dom.wustl.edu

6:00 PM-7:00 PM B021

EXAMINING THE CYTOKINE-IMMUNOLOGICAL THEORY OF CANCER

Jennnifer L. Steel, PhD[1], David A. Geller, MD[1], Kim H. Kevin, PhD[2], Mary Amanda Dew, PhD[2], Lauren Terhorst, PhD[2], Michael H. Antoni, PhD[3], Deborah Brower, MPH, MIS[2], Greene Anna[2], Rachel Kosciusko[2], Philip Bugbee, PhD[2], Butterfield Lisa, PhD[2], Allan Tsung, MD[1]

[1]University of Pittsburgh School of Medicine, Pittsburgh, PA; [2]University of Pittsburgh, Pittsburgh, PA; [3]University of Miami, Miami, FL

Background: The cytokine-immunological model of cancer suggests that symptoms that are reflective of sickness behavior have common underlying biological mechanisms. The aims of the study were to examine the (1) prevalence of cancer-related symptoms and symptoms clusters, and (2) link between the symptom clusters and biomarkers of inflammation and survival.
Methods: A total of 261 advanced cancer patients were administered a battery of questionnaires that included the Center for Epidemiological Studies-Depression scale, Functional Assessment of Cancer Therapy-Fatigue, and the Brief Pain Inventory. Interleukin (IL)-1a, Granulocyte Colony Stimulating Factor (GCSF), IL-10, and IL-4 serum levels were measured. Data were analyzed using descriptive statistics, cluster analyses, and t-tests.
Results: A total of 50% of patients (n=132) reported one or more cancer-related symptoms (depression, pain, fatigue) at diagnosis. Thirteen percent of patients reported all three symptoms, 16% reported two symptoms, and 21% reported only one symptom. Using cluster analyses, four groups emerged (1) high levels of all three symptoms; (2) high prevalence of pain only, (3) high prevalence of depression and fatigue, and (4) asymptomatic. We found that younger age and female gender was associated with high levels of all three symptoms (p=0.02). Younger age was also associated with greater levels of pain (p=0.008). No other demographic or disease specific factors including ethnicity, cirrhosis, vascular invasion, tumor size, lesion number, diagnosis, or etiology of disease was associated with the symptoms or symptom clusters. We found that abnormal levels of Granuolyte Colony Stimulating Factor (GCSF) was associated with high levels of depression and fatigue (p=0.07) and abnormal levels of IL10 with pain (p=0.04) and depression and fatigue (p=0.08). Interleukin-4 was associated with the pain (p=0.04).
Conclusions: A high prevalence of symptoms was observed at diagnosis. The symptoms clusters were found to be linked to specific pro-inflammatory cytokines but the symptoms did not seem to have the same underlying biological mechanisms.

CORRESPONDING AUTHOR: Jennnifer L. Steel, PhD, University of Pittsburgh School of Medicine, Pittsburgh, PA, 15213; steeljl@upmc.edu

6:00 PM-7:00 PM B022

EXPERIENCES OF LESBIAN, GAY, BISEXUAL, AND TRANSGENDER (LGBT) PATIENTS IN THE CONTEXT OF CANCER CARE

Charles Kamen, PhD, MPH[1], Liz Margolies, LCSW[2], Nfn Scout, PhD[3], Marilyn Smith-Stoner, PhD, RN[4], Anita R. Peoples, PhD[5], Mohamedtaki A. Tejani, MD[5], Marie Flannery, PhD, RN, AOCN[6], Gary Morrow, PhD, MS[5], Karen Mustian, PhD, MPH[5]

[1]University of Rochester, Rochester, NY; [2]National LGBT Cancer Network, New York, NY; [3]LGBT HealthLink, Rochester, NY; [4]California State University San Bernardino, Rochester, NY; [5]University of Rochester Medical Center, Rochester, NY; [6]University of Rochester, Fairport, NY

Background: LGBT cancer patients are often invisible in United States cancer care settings. The experiences of LGBT patients during diagnosis with and treatment for cancer have similarly not been explored in research studies. The current study represents an initial, qualitative attempt to understand these experiences. Methods: 307 LGBT cancer patients (mixed cancers; 88.5% Caucasian; 50.1% gay male, 36.3% lesbian, 7% bisexual, 3% transgender; across the United States) completed an online survey that included an open-ended prompt: *"If you were to give a class to healthcare workers, focused on cancer care, what would you tell them about being LGBT and being diagnosed with cancer?"* Open coding was conducted by two parallel teams using a line-by-line approach. Themes were extracted from participant responses and coded using conventional content analysis. Codes were reviewed and refined by an experienced qualitative working group to derive patterns within and across participants and establish saturation. Results: Six themes were identified from participant responses. (1) Stigma increases stress and anxiety in LGBT healthcare. (2) Disclosure of LGBT identity is important and is made more difficult by perceived stigma. (3) Inclusive policies in a cancer care institution can reduce feelings of stigma. (4) LGBT patients feel most respected when their support teams (care partners, etc.) are respected. (5) The pervasive expectation of gender conformity in cancer care can be alienating. (6) More culturally appropriate support and information tailored to the LGBT community are needed. Conclusions: LGBT cancer patients described experiences of stigmatization, disclosure, support, and cultural competence. Participants directly requested that care providers ask about sexual orientation, include diverse care partners in treatment decisions, and temper gendered and heteronormative expectations as ways of delivering high-quality and socioculturally tailored cancer care. These emergent themes indicate a need for additional cultural competency training for cancer care providers focused on the needs of LGBT patients.

CORRESPONDING AUTHOR: Charles Kamen, PhD, MPH, University of Rochester, Rochester, NY, 14642; charles_kamen@urmc.rochester.edu

6:00 PM-7:00 PM B023

FACTORS ASSOCIATED WITH ADHERENCE TO PROGRAMS ENHANCING SEXUAL FUNCTIONING AFTER PRCA SURGERY

Phapichaya Chaoprang Herrera, MA, Vinay Patel, BS, Lourdes Campos-Grudvig, RN, MS, Natan Bar-Chama, MD, Michael A. Diefenbach, PhD

Icahn School of Medicine at Mount Sinai, New York, NY

Introduction: Erectile dysfunction (ED) affects approximately 30 million men in the US and is a detrimental side effect of prostate cancer (PC) treatment. Penile Rehabilitation (PR) is an effective strategy to address ED and encompasses a variety of approaches ranging from counseling, oral regimens, vacuum devices and penile injections. Adherence to PR may take up to 18 months and is critical for optimal outcome, yet a significant number of patients still fail to initiate or withdraw shortly after initiating PR. Objectives: To explore the demographic and clinical characteristics of those who do and do not adhere to recommended PR protocols. Methods and Materials: A retrospective chart review was performed among all patients (n=113) who were referred to an urologist specializing in ED (timeframe: 01/2014 and 08/2014). Data extracted included demographic, pre-operative ED status, International Index Erectile Function (IIEF) scores at the time of their seeking treatment for ED, and attendance of scheduled appointments. Descriptive statistics and multivariate analysis were performed. Results: 93 patients met the eligibility criteria (mean age 60.8; SD =8.0). Patients received a variety of medical treatments at the initial visit. 3-month later, only 23 (24.73%) patients arrived to their first subsequent follow up visit, while 12 patients (12.9%) cancelled, and 11 (11.83%) patients were no-shows. 50.54% of all referred patients (n = 47) failed to return at 3 months. Logistic regressions demonstrated that low scores on the IIEF (i.e., erectile functioning, intercourse satisfaction) were significantly associated with adherence to the follow up visit (all ps < 0.04). Age, orgasmic function and sexual desire were not statistically related to adherence to a follow up appointment.Conclusion: Lack of functioning and decreased intercourse satisfaction was predictive of continued adherence to PR. More information is needed to establish reasons for non-adherence among those patients who discontinue PR after their initial consultation.

CORRESPONDING AUTHOR: Phapichaya Chaoprang Herrera, MA, Icahn School of Medicine at Mount Sinai, New York, NY, 10029; pang.herrera@mountsinai.org

6:00 PM-7:00 PM B024

FEAR OF RECURRENCE PREDICTS FUTURE PHYSICAL SYMPTOM SEVERITY AND DISTRESS IN BREAST CANCER

Vivian Yeh, PhD, Julie Schnur, PhD, Matt Dillon, BS, Sheryl Green, MBBCH, Guy Montgomery, PhD

Icahn School of Medicine at Mount Sinai, New York, NY

Background: Fear of cancer recurrence (FCR), fear that cancer may progress or return, is prevalent in breast cancer patients. FCR is a cancer-specific form of anxiety which may have distinct effects on patient outcomes like physical symptoms above and beyond non-specific anxiety. Elevated FCR may increase patient focus on physical symptoms, consistent with the larger health anxiety literature. Methods: This is a secondary data analysis of 62 female breast cancer radiotherapy patients from the control group of a larger behavioral medicine intervention trial. FCR was assessed at the beginning of radiotherapy with a three item scale (alpha= .82). Chemotherapy history and baseline functional status (Karnofsky Performance Status, KPS) at the beginning of radiotherapy were both abstracted from the EMR. At the end of radiotherapy, physical symptoms (MSAS physical subscale) and general anxiety (SV-POMS-anx) were assessed. Results: Hierarchal multiple regression revealed that FCR at the beginning of radiotherapy predicted physical symptoms at the end of radiotherapy above and beyond an individual's baseline functional status (KPS), chemotherapy history, or current general anxiety levels. The first model step included KPS, chemotherapy history, and general anxiety, all of which independently predicted physical symptoms. Adding FCR in the second step significantly increased overall model fit by 6.2% ($p <$ .05). After including FCR, KPS, chemotherapy history, and general anxiety were no longer significant predictors of physical symptoms. The final model accounted for 40% of the variance in physical symptoms (adjusted R^2=.40, $F(4, 61)$= 11.03, $p < .001$). Two additional models examining symptom distress and severity separately showed the same pattern of results. Conclusion: FCR in breast cancer patients is distinct from general anxiety and has unique consequences on subsequent symptom experience. This effect is above and beyond their baseline physical functioning and chemotherapy history. Although not explored here, FCR could influence patients' symptom experience through increasing symptom monitoring, rumination or catastrophizing. Further research is necessary to clarify the mechanisms through which FRC influences physical symptoms and identify appropriate clinical management.

CORRESPONDING AUTHOR: Vivian Yeh, PhD, Icahn School of Medicine at Mount Sinai, New York, NY, 10029; vivian.yeh@mssm.edu

6:00 PM-7:00 PM B025

FERTILITY ISSUES IN ADOLESCENT AND YOUNG ADULT CANCER SURVIVORS

Catherine Benedict, PhD, Jennifer Ford, PhD

Memorial Sloan Kettering Cancer Center, New York, NY

Background: Many adolescent and young adult (AYA) survivors want to have children in the future and place great importance on their fertility. This study explored AYA survivors' fertility-related thoughts and feelings and the psychosocial impact of fertility-related concerns.Methods: Secondary analyses of a larger qualitative study of AYA survivors using semi-structured interviews and focus groups were conducted. Analyses were guided by grounded theory and thematic content analysis with an inductive data-driven approach was conducted.

Results: Participants (N=26) were 16-24 years old (M=19.6 years, SD=), diagnosed between 14-18 years of age (M=15.6 years) and ≥6 months post-treatment (M=3.2 years). Prior to treatment, 5 males banked their sperm; no females preserved their fertility. The majority were uncertain if treatment affected their fertility. Three major categories emerged: fertility concerns, emotions raised when discussing fertility, and coping strategies. Fertility concerns were related to dating and partner reactions, health risks (self and future child), and adjusting life narratives to include potential infertility. Several participants reported fertility concerns despite receiving information from doctors that treatment likely did not affect their fertility. More females reported concerns related to dating/partner reactions than males. A range of Emotions included increased distress, feeling overwhelmed and hopeful or wishful thinking. A small subgroup (n=7) of AYAs reported no concerns related to their fertility. Banking sperm appeared to alleviate fertility concerns. Coping strategies included acceptance, "making do," postponing fertility concerns until the future/avoidance, and maintaining faith.

Conclusions: AYA survivors are concerned about their future fertility, but have limited knowledge of their fertility status. For some, fertility concerns can be quite distressing and may affect other areas of psychosocial functioning. Females who postpone or avoid addressing fertility concerns may limit their reproductive options due to the risk of premature ovarian failure. Future work should evaluate the ways in which information and support around fertility issues may be more fully incorporated into survivorship care.

CORRESPONDING AUTHOR: Catherine Benedict, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, 10022; benedicc@mskcc.org

6:00 PM-7:00 PM B026

HEALTH BEHAVIORS OF SPOUSAL CAREGIVERS OF BREAST CANCER SURVIVORS: THE ROLE OF STRESS AND DEPRESSION

Caroline S. Dorfman, MA, Barbara L. Andersen, PhD

The Ohio State University, Columbus, OH

Spousal caregivers of cancer survivors are at elevated risk for poor health outcomes including cardiovascular conditions, impaired immunity, and mortality. While much is known about the relationship between health behaviors and health outcomes in the general population, little is known about factors contributing to health behaviors among cancer caregivers. In fact, research has called for an investigation of health behaviors in cancer caregivers (Kim & Given, 2008). The present analyses examine the relative contribution of patient and caregiver subjective reports of emotional distress (perceived stress and depressive symptoms) and objective stress (survivor disease burden) to caregivers' health behaviors. Cross-sectional data were obtained from 32 survivor/spousal caregiver dyads. Linear or ordinal regression, as appropriate, examined the relationship between caregiver health behaviors (fruit/vegetable intake, self-care behaviors, and physical activity) and depressive symptoms (caregiver and survivor), perceived stress (caregiver and survivor), and survivor disease burden (functional performance status and recurrence status). When examining sociodemographic variables, caregivers with more years of education consistently reported engaging in more self-care behaviors (*ps* < .01). Survivor disease burden was not significantly associated with caregiver health behaviors. Caregivers for a survivor reporting more depressive symptoms (β=-.68, p < .001) or higher levels of perceived stress (β=-.40, p=.02) ate fewer fruits and vegetables. While survivor symptoms were not significantly related to caregiver physical activity, caregivers reporting higher levels of perceived stress were more physically active (O*R*=1.18, *p*=.01). This effect appears to be related to a positive association of caregiver stress and mild (β=.16, p=.01) rather than moderate or strenuous physical activity (*ps*>.05).The results suggest that both caregivers' *and* survivors' experiences of emotional distress are related to caregiver health behaviors. Additional studies are necessary to understand the effect of survivor and caregiver emotional distress on caregiver health behaviors and subsequent effects on caregiver health.

CORRESPONDING AUTHOR: Caroline S. Dorfman, MA, The Ohio State University, Columbus, OH, 43210; dorfman.12@osu.edu

6:00 PM-7:00 PM B027

HELICOBACTER PYLORI DIAGNOSES AMONG UTMED CLINIC PATIENTS IN SAN ANTONIO, TEXAS: A HEALTH DISPARITY CHECK

Dorothy Long Parma, MD, MPH, Alex F. Bokov, PhD, Edgar Munoz, M.S., Alfredo Tirado-Ramos, PhD, Amelie G. Ramirez, DRPH

University of Texas Health Science Center at San Antonio, San Antonio, TX

Helicobacter pylori (H. pylori) infection is a common risk factor (RF) for gastric adenocarcinoma. Although the infection is highly prevalent worldwide, US rates vary. Recent analysis of 286 Hispanic and non-Hispanic white men in a prospective cohort found significant associations between *H. pylori*-positive (+) serology and Hispanic ethnicity. This pilot study aimed to examine *H. pylori* diagnosis correlates in patients attending UTMed clinics as a first step toward identifying disparities and developing patient-oriented interventions. De-identified EPIC data (2013-present) from UTMed clinics stored in the CIRD data warehouse (the UTHSCSA site within the Greater Plains Collaborative, a PCORNet Clinical Data Research Network) were extracted using the *i2b2* interface; stripped of patient/encounter IDs; and exported into Excel and STATA for preliminary analyses via descriptive statistics and correlation. The earliest visit with an order for *H. pylori* diagnostic test (DxTest) was designated as baseline. Over 1280 patients (0.1% of 1.7 million) had *H. pylori* testing at baseline. Of these, 73 (6%; 95% CI 4.5, 7.1) tested (+). The sample was mainly white (60.3%) and female (68.5%); mean age at diagnosis (DxAge) was 48.3 (SD=15.1). Serology was the most common DxTest (61.6%). Diagnoses included *H. pylori* infection/gastritis (34.2% each; ICD9 041.86) and *H. pylori* antibody/serology-(+) (26%; 795.79). Chi-square (χ^2) analysis revealed a strong relationship between older DxAge and *H. pylori*-(+) diagnosis ($\chi^2(5)$=12.38, p=0.03; $\chi^2_{\text{trend}}(1)$=8.08, p=0.005); and weak associations between female gender and DxTest ($\chi^2(2)$=3.79, p=0.15), and race and DxAge ($\chi^2(25)$=34.98, p=0.09). Older DxAge in this sample is consistent with other *H. pylori* epidemiological studies. Women may be more likely to accept testing, and minorities to present with symptoms at younger ages. Ongoing analyses include ethnicity, comorbidities and socioeconomic status variables; and comparisons of treatment, test-of-cure, and specialty referrals/procedures. Further results refinement is expected, from which stronger, clinically relevant conclusions may be drawn. Challenges of working with large electronic health record datasets, as well as tactics found effective for meeting these challenges are discussed.

CORRESPONDING AUTHOR: Dorothy Long Parma, MD, MPH, University of Texas Health Science Center at San Antonio, San Antonio, TX, 78229; longparma@uthscsa.edu

6:00 PM-7:00 PM B028

LONG-TERM PSYCHOLOGICAL BENEFITS OF A PSYCHOSOCIAL INTERVENTION DURING BREAST CANCER TREATMENT

Jamie Stagl, MA[1], Laura C. Bouchard, M.S.[2], Suzanne C. Lechner, PhD[3], Bonnie Blomberg, PhD[3], Lisa Gudenkauf, M.S.[2], Devika R. Jutagir, M.S.[2], Stefan Glück, MD[4], Charles Carver, PhD[2], Michael H. Antoni, PhD[5]

[1]Massachusetts General Hospital / Harvard Medical School, Boston, MA; [2]University of Miami, Coral Gables, FL; [3]University of Miami Miller School of Medicine, Miami, FL; [4]University of Miami Miller School of Medicine, Sylvester Cancer Center, Miami, FL; [5]University of Miami, Miami, FL

Background: Survivors of breast cancer experience long-term side effects in the years following primary treatment that result in increased depressive symptoms and a reduced quality of life (QOL). Previous work showed that women post-surgery for early stage breast cancer who were randomly assigned to a 10-week, group-based cognitive-behavioral stress management (CBSM) intervention reported better QOL over a 12-month follow-up and fewer depressive symptoms up to five years post-enrollment compared to the control group. The current study examines whether women who received CBSM would report fewer depressive symptoms and better QOL than those in the control group at a long-term, 8-15 year (11-year median) follow-up.Methods: Women (N=240) who were 2-10 weeks post-surgery for stage 0-IIIb breast cancer were initially recruited and randomized to a 10-week CBSM intervention or a 1-day psychoeducational control group. Women were re-contacted 8-15 years post-enrollment to participate in a follow-up study. Self-report measures included the Center for Epidemiologic Studies- Depression scale (CES-D) and the Functional Assessment of Cancer Therapy-Breast (FACT-B). Multiple regression was conducted to assess for study group differences at 8-15 year follow-up on the CES-D and FACT-B, over and above the effects of confounding variables. Differences on specific FACT-B subscales of physical well-being and emotional well-being were also assessed.Results: One hundred women from the initial study (CBSM = 51; Control = 49) participated in the follow-up study. Women who had been assigned to CBSM reported significantly less depressive symptoms (*d*=0.63, 95% CI [0.56,0.70]), and significantly better QOL (*d*=0.58, 95% CI [0.52,0.65]) than those in the control group, above the effects of covariates. With regard to QOL specifically, women in the CBSM group reported significantly better physical well-being (*d*=0.77, 95% CI [0.70,0.84]) and emotional well-being (*d*=0.63, 95% CI [0.56,0.70]) than those in the control group.Conculsions: Women who received CBSM post-surgery for early stage breast cancer reported less depressive symptoms and better QOL than the control group up to 15 years later. Early delivery of cognitive-behavioral interventions may influence long-term psychosocial functioning in breast cancer survivors.

CORRESPONDING AUTHOR: Jamie Stagl, MA, Massachusetts General Hospital / Harvard Medical School, Boston, MA, 02114; jstagl@mgh.harvard.edu

6:00 PM-7:00 PM B029

DEPRESSION IS ASSOCIATED WITH HEART RATE VARIABILITY INDEPENDENTLY OF FITNESS IN HEART FAILURE

Fawn A. Walter[1], Emily C. Gathright, M.A.[2], Joseph Redle, MD[3], John Gunstad, PhD[1], Joel W. Hughes, PhD, FAACVPR[1]

[1]Kent State University, Kent, OH; [2]Kent State University, Stow, OH; [3]Summa Health System, Akron, OH

IntroductionDepression has been associated with reduced heart rate variability (HRV) in healthy and cardiac samples, which physical fitness may partly account for. Hughes and colleagues (2010) previously reported that activity and fitness levels attenuated the relationship between HRV and depression in a small sample of cardiac patients, though this pattern has not been examined in persons with heart failure (HF). PurposeTo determine whether depression is associated with HRV in HF, and whether this is accounted for by fitness. MethodsThe sample consisted of adults with HF (N = 123), aged 68.57 ± 8.95 years, 68.3% male, and 82.9% Caucasian. Depression was evaluated using the Beck Depression Inventory (BDI) and fitness was assessed using the two-minute step test (2MS). HRV was assessed during a 10-minute resting laboratory psychophysiology protocol and analyzed with Kubios software. The square root of the mean squared differences of successive NN intervals (RMSSD) was used as the dependent variable, as it is the most commonly used time-domain HRV measure. Hierarchical linear regressions were used to determine if fitness (2MS) and depression (BDI) explained variability in HRV (RMSSD). ResultsControlling for sex, age, and presence of high blood pressure and diabetes, BDI significantly predicted HRV, $\beta = -.18$, $t(117) = -2.00$, $p < .05$. Adding 2MS did not attenuate the relationship. DiscussionDepression was associated with lower HRV in patients with HF independent of physical fitness. Given the high prevalence of depression, suppressed HRV, and poor fitness typical of HF, interventions addressing these predictors of poor outcomes may be warranted.

CORRESPONDING AUTHOR: Fawn A. Walter, Kent State University, Kent, OH, 44240; fwalter@kent.edu

6:00 PM-7:00 PM B030

EFFECT OF CARDIAC REHABILITATION IN COLOMBIAN CORONARY HEART DISEASE PATIENTS

Andrea Mojica, B.A.[1], Mariantonia Lemos, M.A.[2], Diana María Agudelo, PhD[2], Julia Blackburn[2], Maria Clara Acevedo, B.A.[1], Daniela Bermejo, B.A.[1], Angela Giovanna Patarroyo, B.A.[1], Melissa Mendivil, M.A.[1], Lucía Delgado, M.A.[1]

[1]Universidad de los Andes, Bogota, Colombia; [2]Universidad de los Andes, Bogotá, Colombia

Cardiac Rehabilitation programs seek to improve the Quality of life (Qol) in Colombian patients with Coronary Heart Disease (CHD). Depression is a risk factor for cardiac mortality and it causes significant psychological and social morbidity associated with a low perception on QoL. The purpose of this research was to study whether the presence depressive symptoms after cardiac event were associated with the QoL perception in patients that attend to a Cardiac Rehabilitation program. A total of 46 patients (34 men) were assessed up for a period of six months from the moment they began in the Program, and follow-up measures of QoL and depression in the middle (3 months) and the end of the treatment phase (6 months) were done. The QoL was assessed by the SF-36 questionnaire and depression was assessed by a state-trait depression inventory. Non-parametric results showed that physical functioning and role physical improved in the treatment phase ($p < 0.01$). Opposite to our hypothesis, women showed higher scores in social functioning, emotional role and physical role than men at the end of treatment ($p < 0.05$). Finally, men showed higher state depression measures during the follow-ups, while women remain stable scores. Cardiac rehabilitation program showed efficacy improving results in the physical components of the QoL. However, a new component of the cardiac rehabilitation focused in depression is warranted.

CORRESPONDING AUTHOR: Andrea Mojica, B.A., Universidad de los Andes, Bogota, 00000; amojica@fundacionjeymar.org

6:00 PM-7:00 PM B031

ETHNIC DIFFERENCES IN KNOWLEDGE OF CARDIOVASCULAR AND DIABETES RISK FACTORS AND HEALTH BEHAVIORS

Mindy Ma, PhD, Jeffrey L. Kibler, PhD

Nova Southeastern University, Ft. Lauderdale, FL

Objective: African-Americans evidence disproportionately higher incidence of cardiovascular disease and diabetes relative to Caucasians. Cardiovascular and diabetes risk factors include elevated blood pressure (BP), cholesterol, glucose, and body mass index (BMI). Ethnic disparities in risk factors have been well documented in the literature, while personal knowledge of the risk factors remains under-investigated. Knowledge of one's own risk factors and their healthy ranges is critical to maintaining cardiovascular and diabetes health. To date, little is known about personal risk factor knowledge of Caucasian- and African-Americans. The objective of the current study was to examine ethnic differences in knowledge of personal cardiovascular and diabetes risk factors and health behaviors.Method: Participants (65.2% female) consisted of 470 African-Americans (53%) and Caucasians (47%), ages 18 and older recruited from primary care clinics and churches. Participants completed a brief questionnaire on BP, cholesterol, glucose, BMI, physical activity, and diet.Results: Significantly more Caucasians than African-Americans reported knowing their own BP (76.5% vs 57.0%; $p < .001$) and cholesterol (65.7% vs 16.5%; $p < .001$). Additionally, more Caucasians compared to African Americans had knowledge of the healthy range for BP (81.8% vs 67.1%; $p < .001$), cholesterol (71.9% vs 33.2%; $p < .001$), and BMI (26.5% vs 11.4%; $p < .001$), and reported maintaining a healthy diet (54.3% vs 41.0%; $p < .001$). Caucasians also reported engaging in more physical activity per week relative to African Americans (3.0 vs 2.3 days of at least 30 minutes; $p = .001$). Conclusions: Results suggest there is a racial disparity in knowledge of personal cardiovascular and diabetes risk factors and health behaviors. The literature indicates cardiovascular disease and diabetes fatalities can be prevented through the reduction of risk factors. Additional research is needed to examine the mediating effect of the observed ethnic disparity in knowledge/behaviors on cardiovascular and diabetes health, as well as interventions to increase awareness of risk factors among African Americans.

CORRESPONDING AUTHOR: Jeffrey L. Kibler, PhD, Nova Southeastern University, Ft. Lauderdale, FL, 33314; kibler@nova.edu

6:00 PM-7:00 PM B032

EXPLORING PARTICIPANTS' RESPONSES TO THE RISK REDUCTION PROGRAM: A QUALITATIVE STUDY

Elizabeth A. Beverly, PhD[1], Josh Christen, MS[2], Jay Shubrook, DO[1], Daryn Straley, DO[1], Kimberly Valentour, MS[2]

[1]Ohio University Heritage College of Osteopathic Medicine, Athens, OH; [2]Ohio University, Athens, OH

The Risk Reduction Program is a structured, supervised program designed to support individuals with lifestyle diseases (e.g. coronary artery disease, diabetes, hypertension, obesity) to improve health outcomes and quality of life. This year-long program includes a personal trainer, individual nutrition counseling, stress management through yoga and relaxation techniques, group support meetings, and individual goal-setting from a case manager. The study explored factors associated with improvement and maintenance of behavioral change after completion of the program. Risk Reduction participants were invited to take part in focus groups and/or an anonymous online survey; the same questions were asked in both formats. A total of 18 adults participated in 5 focus groups (83% White, 83% female, aged 58±8, 19±3 years of education, 56% married, 17% retired) and 59 adults (100% White, 76% female, aged 55±9, 17±3 years of education, 76% married, 19% retired) completed the online survey. Focus group discussions and survey responses were coded and analyzed via content analysis using NVivo 10 software. Participants reported that the personal training sessions and the group support meetings were the two most important factors contributing to health improvements and maintenance (e.g., weight loss, lowered lipid panels, reductions in blood pressure, improved glycemia). Participants stated that the personal training sessions challenged them to perform new exercises they otherwise would not have tried. Further, the personal training sessions provided a consistent exercise schedule and a team member to hold them accountable. The personal training was so well received that numerous participants continued with the sessions after the program concluded. The group support meetings offered ongoing feedback and reinforcement from other program participants and the case manager. Participants felt a strong sense of comradery with the group members, which provided encouragement and motivation to actively engage in the program. Identifying factors that support behavioral change and maintenance from the participant perspective can help develop programs to achieve and maintain lifestyle behaviors over the longer term.

CORRESPONDING AUTHOR: Elizabeth A. Beverly, PhD, Ohio University Heritage College of Osteopathic Medicine, Athens, OH, 45701; beverle1@ohio.edu

MERITORIOUS POSTER

6:00 PM-7:00 PM B033

HIGH BASELINE PREVALENCE OF DEPRESSION & HBA1C $\geq$ 6.5% IN ACUTE CORONARY SYNDROME: THE ADVENT STUDY

John Oldroyd, PhD[1], Dominique Bird, MD[2], Verity Chadwick, BSc(Hons)[3], Brian Oldenburg, PhD[1], Fiona Cocker, PhD[1], Aaron Fisher, PhD[4], Craig Barr Taylor, MD[5], Adrienne O'Neil, PhD[6]

[1]The University of Melbourne, Melbourne, Australia; [2]The University of Queensland, Brisbane, Australia; [3]Monash University, Australia, Melbourne, Australia; [4]University of California, Berkeley, CA, USA, Berkeley, CA; [5]Stanford University School of Medicine, Stanford, CA; [6]Deakin University, Geelong, VIC, Australia

Having diabetes more than doubles the odds of developing depression which increases the risk of diabetes complications. However, there is uncertainty about this association when diabetes is diagnosed by glycosylated haemoglobin (HbA1c) using WHO criteria (HbA1c $\geq$ 6.5%). Some studies show no association, others an age dependent association and others display a positive association that plateaus at an HbA1c 8.0%. Also, little is known about the association of depressive symptoms and less severe metabolic dysfunction such as impaired fasting glucose (IFG). We prospectively monitored depression in patients admitted to hospital for acute coronary syndrome (ACS) over 12 month's follow-up for whom we measured fasting plasma glucose (FPG) and HbA1c at baseline. We hypothesised that the baseline prevalence and severity of depression will be higher in those with HbA1c $\geq$ 6.5% compared with those with IFG. Of 373 participants, 102 (27.4%) had HbA1c $\geq$ 6.5% (diabetes diagnosis), 29 (10.4%) had IFG (FPG 6.1-6.9mmol/l). 89/373 (23.9%) met the criteria for elevated depression symptoms (Beck Depression Inventory (BDI) >= 14). Of those with HbA1c $\geq$ 6.5%, 21 (24.1%) met criteria for elevated depression symptoms. Of participants with IFG, 3 (14.3 %) met criteria for elevated depression symptoms. In univariate analysis HbA1c and FPG were not associated with BDI scores. A greater proportion of participants with elevated HbA1c (24.1%) than IFG (14.3%) had elevated depression symptoms. This suggests depression symptoms are more common in ACS patients with greater metabolic dysfunction. High levels of comorbid depressive symptoms and elevated HbA1c in those with ACS have implications for management of ACS, as both depression and diabetes are associated with adverse medical outcomes in ACS populations.

CORRESPONDING AUTHOR: John Oldroyd, PhD, The University of Melbourne, Melbourne, 3168; john.oldroyd@monash.edu

6:00 PM-7:00 PM B034

EXAMINING KNOWLEDGE, ATTITUDES, AND BELIEFS ABOUT TYPE 2 DIABETES AMONG COLLEGE STUDENTS

Bonita Sur, B.A.[1], Elizabeth A. Beverly, PhD[2]

[1]Ohio University, Athens, OH; [2]Ohio University Heritage College of Osteopathic Medicine, Athens, OH

Type 2 Diabetes Mellitus (T2DM) is a lifelong chronic illness influenced by both genetic and behavioral risk factors. As this disease has been increasing in prevalence, researchers have focused on examining factors to prevent diabetes in those individuals at greatest risk. Although children of parents with T2DM are at significantly greater risk for developing the disease than age-matched controls (Valdez, Yoon, Liu, & Khoury, 2007), there is a paucity of research examining the unique experience of this illness in the family. In this descriptive cross-sectional survey study, we recruited university students (N = 454, 88% Caucasian, 63% female, 20±3 years old) with or without a parent diagnosed with Type 2 Diabetes Mellitus (T2DM) in order to assess differences in perceived threat of illness, health locus of control, psychosocial factors, body mass index, as well as knowledge, attitudes and beliefs of diabetes. A Mann-Whitney *U* test was conducted, revealing individuals with a parent with T2DM (N = 48) reported significantly higher body mass index (p = .015), greater overall perceived risk of illness (p = .02), greater personal diabetes risk (p = .004), and were less likely to believe that degree of health or illness is determined by important figures such as physicians or parents (p = .01) than individuals without a family history of T2DM (N = 397). Reports of the individuals with a parent with T2DM concerning depression, anxiety, personal control over developing diabetes, worry over developing diabetes, optimistic bias over developing diabetes, and knowledge of diabetes risk factors did not differ from reports of individuals without a family history of T2DM (all p's >.05). The findings suggest children of individuals with T2DM perceive unique risks of developing diabetes and provide valuable information for developing better strategies for diabetes prevention in at risk families.

CORRESPONDING AUTHOR: Bonita Sur, B.A., Ohio University, Athens, OH, 45701; bs035212@ohio.edu

6:00 PM-7:00 PM B035

ILLNESS COHERENCE SUPPORTS DECISION-MAKING USE AND BETTER COPING IN INSULIN TREATED TYPE 2 DIABETES

Jennifer Ward, PhD[1], Stephanie R. McDonough, B.S.[2], Barbara Stetson, PhD[2], Christen McKiel[3], Rebekah DeVore[2], Cassandra Gonzalez[4], Sri Prakash Mokshagundam, MD[2]

[1]University of Louisville, Prospect, KY; [2]University of Louisville, Louisville, KY; [3]University of Louisville, Department of Psychological and Brain Sciences, Jeffersonville, IN; [4]University of Louisville, Ashland, KY

Diabetes (DM) self-care is critical for prevention of complications. Self-monitoring of blood glucose (SMBG) is recommended to aid in understanding health behavior impact on glucose levels and inform decisions. Self-regulation theory suggests that perceived diabetes coherence, or the degree to which diabetes is understood, could have implications for treatment adherence. If one perceives diabetes to be easily understood, they may be more likely to adapt behaviors based on their own knowledge of the illness.Aim: To examine the role of illness coherence in SMBG decision-making and coping in adults with type 2 DM Rx insulin.Methods: 117 Ss with T2DM Rx insulin were recruited from a DM specialty clinic. Self-report (IPQ, SDSCA, PAID) and medical chart data were collected. Regression and other parametric and nonparametric statistics were used.Results: SMBG testing frequency was generally high (modal response 7 days/week). Reported coherence beliefs had a wide range from very little to very high perceived coherence. Ss reporting higher coherence tended to have higher education and higher SES. Coherence was not associated with time since DM Dx. Those reporting greater use of SMBG for decision-making tended to have less overall difficulty with diabetes-specific coping (PAID); H(4)=16.226, p=.003). Ss with very poor glucose control (HbA1c > 9%) were less likely to use SMBG for decision-making than well controlled (A1c < 7%; p=.007) or moderately controlled Ss (7% < A1c < 9%); H(2)=9.796, p=.007. Coherence statistically mediated the relationship between SMBG decision-making and diabetes coping (p range < .001 to .044). Frequency of adherence to SMBG recommendations was not related to glucose control or coping.Discussion: Illness coherence may support the use of SMBG for decision-making in T2DM self-care. For those with low coherence, apprehension in instances requiring decision-making could result in less use of SMBG, increased affective distress, or difficulty coping. Coherence beliefs greatly varied between Ss in this generally treatment compliant, experienced T2DM population, suggesting many might benefit from psychosocial intervention for coherence. As coherence was associated with education level, providing materials to increase or aid coherence needs, such as tables and decision-trees or increased access to educational support, may facilitate more effective use of SMBG for decision-making.

CORRESPONDING AUTHOR: Jennifer Ward, PhD, University of Louisville, Prospect, KY, 40059; jefloy01@louisville.edu

6:00 PM-7:00 PM B036

IMPACT OF HEALTH LITERACY ON EFFECTIVENESS OF AN INTERVENTION WITH KOREAN IMMIGRANTS WITH TYPE 2 DM.

Juyoung Lee, Doctoralstudent[1], Miyong Kim, Professor[2], Jisook Ko, Doctoralstudent[1], Nicole Murry, Doctoralstudent[1], Kim B. Kim, PhD[3]

[1]University of Texas at Austin, Austin, TX; [2]University of Texas, Austin, TX; [3]Korean Resource Center, Ellicott City, MD

Background: While an increasing number of scientific reports document the negative impact of inadequate health literacy (HL) on various health seeking behaviors, the impact of HL on health outcomes in patients with chronic diseases are not entirely clear due to insufficient empirical studies in mixed findings, including longitudinal research that explicating the impact of HL on health outcomes.Objective: The purpose of this paper is to report the findings obtained from a series of analysis to illustrate the process of HL influencing both proximal and distal health outcomes in a group of Korean Americans (KAs) with type 2 DM.Research Design /Methods: A randomized controlled trial with two parallel arms (intervention vs. control) was conducted. A total of 250 KAs (intervention n = 120 control n = 130) with uncontrolled type 2 DM (hemoglobin A1C $\geq$ 7.0%) participated in a 6-week psycho-behavioral, educational intervention followed by motivational telephone counseling once a month for 12 months. DM-related health literacy education was a major component of the program and designed to address both print and functional health literacy domains. The education efficacy was examined through DM related health literacy, diabetic knowledge, self-efficacy, and self-care behaviors. Data were collected at baseline, 3, 6 and 12 months for proximal and distal outcomes. Additionally, the distal outcomes were collected at 9 months.Results: A series of path analysis using the data set identified several significant path coefficients between HL and self-efficacy (p < 0.001), DM related knowledge (p < 0.001) and adherence to self-care recommendation of diet (p < 0.001). Analysis further identified significant indirect effects of HL onto the primary distal outcome, glucose control (A1c) through the above proximal outcomes.Conclusions: The findings suggested that the level of HL is indirectly influencing distal outcomes (diabetes control) through selected proximal outcomes such as diabetic knowledge, self-efficacy, and selected critical self-care behaviors. The data used in this study was rare as this is the first intervention study that designed to specifically change health literacy levels for a group of immigrants with type 2 DM. The finding of this study highlight the importance of HL in chronic disease management as it serves as a missing link between individual characteristics, mediating factors and distal health outcomes.

CORRESPONDING AUTHOR: Miyong Kim, Professor, University of Texas, Austin, TX, 78701; mkim@nursing.utexas.edu

6:00 PM-7:00 PM B037

IMPACT OF MOBILE PHONE-BASED TAILORED MESSAGES ON HEALTH BELIEFS AND MEDICATION ADHERENCE

Justin Gatwood, PhD, MPH[1], Rajesh Balkrishnan, PhD[2], Steve Erickson, PharmD[2], Larry An, MD[3], John Piette, PhD[4], Karen Farris, PhD[2]

[1]University of Tennessee College of Pharmacy, Memphis, TN; [2]University of Michigan College of Pharmacy, Ann Arbor, MI; [3]University of Michigan, Ann Arbor, MI; [4]University of Michigan Medical School, Ann Arbor, MI

Background: Suboptimal medication use plagues health outcomes and contributes to increased costs, particularly in patients with diabetes. Efforts to date have had limited impact; approaches leveraging mobile technology have emerged but their focus has mainly been limited to reminder text messages. Methods: Adults 21-64 years of age, with uncontrolled diabetes, and taking at least one antidiabetic medication were recruited from a western Michigan health system and randomized into two study arms. Using baseline survey responses, intervention arm subjects received a tailored text message once daily for 90 days; control subjects received standard care only. Messages were tailored on subject characteristics, diabetes treatment, and categorized levels of health beliefs and attitudes. Changes in theory-driven health beliefs and attitudes were assessed by comparing baseline and endpoint survey responses, and the impact on medication adherence was evaluated using pharmacy claims by calculating the percent of days covered (PDC) prior to, during, and following the study period.Results: A total of 75 subjects were consented and 48 were ultimately and equally randomized into the study arms. Mean PDCs at baseline were comparable between active and control subjects (84.4% and 87.1%, respectively). Declines in adherence were observed in both groups (-5.7% and -12.4% for active and control subjects, respectively) over time (p=0.012 for change from baseline) but no significant differences were observed between groups from baseline to the end of the study period (adjusted difference = 5.5%; p>0.05). A trend toward significant improvement (p=0.0598) in adjusted mean values for perceived competence was observed in the intervention cohort, and unadjusted tests suggested that perceived benefits (p=0.03) and competence (p=0.033) might have improved over the course of the intervention. Participants indicated that a once-daily message was appropriate and voiced interest in continuing in a similar messaging service, if one were available.Conclusions: The tailoring of mobile phone text messages is a novel way to address medication nonadherence and health beliefs but further investigation to this technique is needed to better understand the impact tailored texting may have on behavior change in adults with diabetes.

CORRESPONDING AUTHOR: Justin Gatwood, PhD, MPH, University of Tennessee College of Pharmacy, Memphis, TN, 38163; jgatwood@uthsc.edu

6:00 PM-7:00 PM B038

INVISIBLE VERSUS VISIBLE SOCIAL CONTROL AND SUPPORT IN THE CONTEXT OF CHRONIC ILLNESS

Raquel Borges-Garcia, M.S.P.H.[1], Karen S. Rook, PhD[2], Melissa Franks, PhD[3], Mary Ann Stephens, PhD[4]

[1]University of California, Irvine, Lake Forest, CA; [2]University of California, Irvine, Irvine, CA; [3]Purdue University, West Lafayette, IN; [4]Kent State University, Kent, OH

Receiving social support has the potential to be helpful during periods of stress, but it can also connote need or limited coping ability, thereby contributing to distress and lower self-efficacy among recipients. Empirical evidence of null or negative effects of received social support has prompted researchers to posit that invisible support (support that is not noticed by the recipient) may be more beneficial than visible support (support that is noticed by the recipient). Researchers have recently extended this idea to social control, or efforts by others to prompt change in a person's unsound health behavior. Invisible social control (control not noticed by the recipient) may have fewer psychological costs than visible social control, which has been found to arouse negative affect and reduce self-efficacy in recipients. Effects of invisible social support and control have not yet been examined in the context of chronic illness, however, and the current study sought to address that gap in knowledge. We expected invisible support and control, compared to visible support and control, to be associated with lower negative affect and greater self-efficacy among older adults ($N = 129$) with type 2 diabetes. Daily diary data collected for 24 days assessed participants' negative affect and self-efficacy for dietary adherence, as well as their own and their spouses' reports of spousal support and control directed toward dietary adherence. The dyad members' reports were compared to operationalize support and control visibility. Multilevel analyses revealed, contrary to expectation, that invisible support and control were not related to negative affect, and invisible control was related to lower (rather than greater) self-efficacy. The results suggest that invisible social support and control may not have psychological benefits in the context of chronic illness. Implications for studying invisible social support and social control will be discussed.

CORRESPONDING AUTHOR: Raquel Borges-Garcia, M.S.P.H., University of California, Irvine, Lake Forest, CA, 92630; rborgesg@uci.edu

6:00 PM-7:00 PM B039

KINDNESS MATTERS: SELF-COMPASSION BUFFERS THE NEGATIVE EFFECT OF DIABETES DISTRESS ON HBA1C

Nathan S. Consedine, PhD[1], Anna M. Friis, PGD[2], Richard G. Cutfield, MbChB[3], Malcolm H. Johnson, PGD[2]

[1]The University of Auckland, Auckland, New Zealand; [2]University of Auckland, Auckland, New Zealand; [3]Waitemata District Health Board, Auckland, New Zealand

Background: Managing the multiple medical and lifestyle demands of diabetes is a continuous and demanding challenge for patients. Depression and distress are common and appear to compound the difficulty patients have in maintaining HbA_{1c} at appropriate levels; current treatments have only mixed success. The current study evaluated whether dispositional self-compassion might have a protective role for diabetes patients, testing whether self-compassion would buffer diabetes patient's HbA_{1c} against the negative effects of distress.Methods: Diabetes patients ($n = 110$) completed self-report measures assessing trait self-compassion, depression, diabetes-distress and diabetes self-efficacy. HbA_{1c} results were obtained through medical records. Results: Consistent with prior work, regressions using forward entry showed that diabetes specific distress was a better predictor of elevated HbA_{1c} than depression, even when controlling for gender, age, and self-efficacy ($\beta = .25$, $p < .05$). Additional regression modelling using interactions showed that self-compassion moderated the link between distress and HbA_{1c} such that while higher distress predicted higher HbA_{1c} at lower levels of self-compassion, it was unrelated at higher levels of self-compassion ($\beta = -.21$, $p < .05$).Conclusions: In addition to further indicating that diabetes specific distress may be a better predictor of metabolic outcomes than depression, these findings suggest self-compassion might buffer patients from the negative metabolic consequences of diabetes distress. Given the ongoing development of self-compassion based interventions, self-compassion may thus represent a viable supplement to traditional clinical care in at risk diabetes patients

CORRESPONDING AUTHOR: Nathan S. Consedine, PhD, The University of Auckland, Auckland, 1142; n.consedine@auckland.ac.nz

6:00 PM-7:00 PM B040

LATINOS' DIABETES KNOWLEDGE AND NUMERACY

Alexandra Garcia, PhD, RN, FAAN

The University of Texas at Austin, Austin, TX

People with diabetes need numeracy skills and knowledge to interpret blood glucose levels, nutritional content, and medication schedules. This study examined Latino patients' diabetes knowledge and numeracy. A cross-sectional design was used to evaluate Latino patients at three safety-net clinics. Researchers read questionnaires to participants and recorded results from a patient information form; a 4-item language-based acculturation scale; Spoken Knowledge in Low Literacy for Diabetes (SKILLD, 11 open-ended questions about diabetes self-care); Diabetes Knowledge Questionnaire (DKQ, 24 true/false statements about symptoms, causes, and treatment); and the Diabetes Numeracy Test (DNT, 5 diabetes math problems). Descriptive statistics summarized participant characteristics, item tallies, and total scores; Pearson correlations between education, acculturation, and scale scores were calculated. Participants (n=119) were predominantly Spanish-speaking (67%), with 9 years school, diagnosed with diabetes for 5 years, and 73% taking oral hypoglycemics. Mean SKILLD score was 57%, DKQ score 69%. The majority were correct about treating low blood glucose, checking feet, eye exams, and complications of diabetes were but 70% scored incorrectly on items about symptoms of high and low glucose, and normal blood glucose and A1C values. Mean DNT score was 48% only 12% could calculate carbohydrate grams from information on a food label. Small correlations (.27-.34) found between education, acculturation, SKILLD, DKQ, and DNT. Knowledge and numeracy levels are low among Latino patients at these safety-net clinics although those with more English usage and education had more knowledge and numeracy. Surveys used confusing wording (e.g., double negatives), outdated concepts (e.g., testing urine versus blood), and authoritative phrasing. Mathematical operations were challenging for most. Education on food labels is greatest need. Literacy is an important component of patient-centeredness and quality and an important precursor to knowledge. Programs aimed at organizations (e.g., supportive culture, training opportunities), providers (e.g., clear communication), and patients (e.g., educational materials, interactive methods) are needed to improve numeracy and diabetes knowledge.

CORRESPONDING AUTHOR: Alexandra Garcia, PhD, RN, FAAN, The University of Texas at Austin, Austin, TX, 78701; agarcia@mail.nur.utexas.edu

6:00 PM-7:00 PM B041

MAINTAINING RESISTANCE TRAINING IN PREDIABETIC, OLDER ADULTS: RESULTS OF THE RESIST-DIABETES TRIAL

Richard Winett, PhD[1], Brenda M. Davy, PhD, RD[1], Jyoti Savla, PhD[1], Elaina Marinik, PhD[1], Sarah A. Kelleher, PhD[2], Sheila Winett, M.S.[3], David M. Williams, PhD[4]

[1]Virginia Tech, Blacksburg, VA; [2]Duke University Medical Center, Durham, NC; [3]PC Resources Inc, Blacksburg, VA; [4]Brown University School of Public Health, Providence, RI

The Resist-Diabetes (R-D) project's AIM was to assess the efficacy of a social cognitive theory (SCT)-based intervention focused on resistance training (RT) with adults, 50-69 yrs, who fit prediabetic criteria, inactive, and overweight/obese (BMI 25-39.9 kg/m^2) to *maintain* RT in community settings after a 3-month initial lab/gym phase. A supervised 3-month RT (2x/wk) phase revolved around mastery experiences with effort-based RT and participants were then randomly assigned (n=159) to one of two 6-month maintenance conditions: SCT or Standard. SCT involved hands-on transition sessions to an approved health club, electronic interactions with the R-D website for scheduling, planning, and recording workouts, tailored feedback, goal setting, and problem solving, and 9 brief personal contacts . Standard involved a brief transition session, more minimal R-D website interactions, SCT didactic content and only 2 personal contacts. Strength (chest and leg press 3-RM), lean body mass (DXA), and glucose tolerance (120-min OGT after a 75g glucose load), were assessed as primary outcome measures at baseline, 3, 9, and 15 months. Both SCT and Standard showed RT adherence rates of ~75%. Preliminary results from growth curve models showed linear changes across the four stages and nonlinear (quadratic) changes, a deceleration of changes, in the primary outcomes over time but with no group differences: 1. a significant linear gain in chest press (31.1%) and leg press (20.6%) (β=22.63, β=65.51), with the quadratic effect also significant (β=-5.33; β=-16.71); 2. a significant linear increase in % lean body mass (~1%) (β=0.68), with the quadratic effect also significant (β=-.16); 3. a significant decrease (11 mg/dl) in OGT, (β=-11.13) with the quadratic effect also significant (β=3.25). At post and follow-up assessments, a mean of 32% of participants were normoglycemic. These data suggest that for prediabetic, older adults, maintenance of RT, once well-established within a SCT context, may require continued but not extensive contacts. Subsequent interventions can use the less expensive ($160 per participant), lower dose Standard intervention. The results are discussed in the context of personalized medicine and adaptive interventions to further improve outcomes.

CORRESPONDING AUTHOR: Richard Winett, PhD, Virginia Tech, Blacksburg, VA, 24061; richardwinett@gmail.com

6:00 PM-7:00 PM B042

INNOVATION IN HIV PREVENTION: IDENTIFYING PSYCHOLOGICAL STRENGTHS IN A HIGH RISK POPULATION

Eva N. Woodward, MA[1], Regina Banks, BS[2], Amy Kerivan. Marks, PhD[3], David W. Pantalone, PhD[4]

[1]The Warren Alpert Medical School of Brown University, Providence, RI; [2]AmeriCorp, Providence, RI; [3]Suffolk University, Boston, MA; [4]University of Massachusetts, Boston, MA

HIV prevention remains a significant public health concern, especially for sexual minority (gay or bisexual) men with a history of psychosocial syndemic conditions (e.g., trauma; CDC, 2013). Currently available HIV prevention interventions help only 27-43% of enrolled participants (Herbst et al., 2007) and syndemics likely serve as a barrier to intervention uptake for many of these men. One innovative paradigm shift in HIV prevention has been the development of strengths-based interventions (e.g., Herrick et al., 2011). To that end, our research aims to identify resilience factors in sexual minority men who are HIV-negative and at high risk of acquiring HIV. We systematically reviewed 904 peer-reviewed articles on HIV-negative sexual minority men who reported 1+ syndemic condition previously found to be associated with a higher likelihood of HIV acquisition (e.g., victimization, polydrug abuse, poor mental health; Stall et al., 2003). Data collection followed PRISMA guidelines (Moher et al., 2009). Our final sample included 22 empirical articles between 1991 and 2013. Coders extracted data on resilience characteristics (strong interrater reliability, k = .90) and categorized them using a content coding strategy with a six-member coding team of HIV researchers.Resilience characteristics included: (1) identity descriptors (i.e., employment), (2) behavioral coping strategies (i.e., engaging in mental health treatment), (3) cognitions and emotions (i.e., acceptance of difficult life situations), and (4) relationships (i.e., social support). In addition, data extraction from our studies revealed 10 resilience characteristics significantly associated with fewer HIV risk behaviors ($p < .05$; e.g., positive peer norms about condoms, gay self-acceptance), and 10 characteristics not associated with HIV risk behaviors ($p > .05$; e.g., positive romantic relationship). Preliminary results suggest that high-risk populations have multiple strengths associated with HIV prevention. Behavioral HIV researchers should study relations between HIV risk and resilience, especially in high-risk populations, to determine how these characteristics can best be utilized to improve existing HIV prevention interventions and expand their effectiveness and reach.

CORRESPONDING AUTHOR: Eva N. Woodward, MA, The Warren Alpert Medical School of Brown University, Providence, RI, 02909; eva_woodward@brown.edu

6:00 PM-7:00 PM B043

INTERSECTIONALITY OF THE EFFECTS OF RACISM AND HOMOPHOBIA WITHIN SEXUAL PARTNERSHIPS AMONG BLACK MSM

Michelle Broaddus, PhD[1], Jill Owczarzak, PhD[2], Julia Dickson-Gomez, PhD[1], Broderick Pearson[1], Prentise Vann-Beets[1], Yuri Amirkhanian, PhD[1], Janet St. Lawrence, PhD[3], Jeffrey Kelly, PhD[1]

[1]Medical College of Wisconsin, Milwaukee, WI; [2]Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; [3]Mississippi State University, Meridian, Portland, OR

Although Black men who have sex with men (BMSM) do not engage in higher levels of sexual risk behavior than White MSM, there is a concerning racial disparity in HIV incidence, with BMSM accounting for over 35% of new infections among MSM in the US. The tendency for individuals to choose sexual partners of their own race ("homophily"), combined with existing higher prevalence among BMSM, has been suggested as a possible reason for this disparity. We conducted in-depth interviews with 100 BMSM and 96 Key Informants in three cities as part of formative work for a social networks intervention, "Connections Creating Change" (C3). We probed for participants' experiences with racism and homophobia, especially in regards to their sexual relationships, and used an intersectionality approach to analyze discussions of racism and homophobia within the contexts of these relationships. Intersectionality posits that sources of oppression have interlocking, interdependent effects that are experienced simultaneously and interpreted within a larger historical and sociocultural context. Participants perceived a high degree of homophobia, and discussed multiple ways that homophobia may manifest differently in Black and White communities. Expected or experienced homophobia created a desire to keep relationships extremely private, often restricting them to a focus on sexual intercourse. The private and primarily sexual nature of many relationships, as well as preferences for racial homophily, occurred within a context of institutional, cultural, and interpersonal racism. BMSM described relationships with White men rooted in power imbalances due to lack of financial or housing security, particularly when BMSM were forced from family homes because of homophobia. In addition, participants described sexual-specific stereotypes that ignore or fetishize BMSM, and for some participants, sexual experiences with White men triggered discomfort stemming from a legacy of slavery. Finally, they indicated a lack of shared experiences with White men due to racial segregation, and expected rejection from White partners' families. Taken together, these results indicate the need for a more complex understanding of the various ways homophobia and racism intersect to shape BMSM's HIV risks.

CORRESPONDING AUTHOR: Michelle Broaddus, PhD, Medical College of Wisconsin, Milwaukee, WI, 53202; mbroaddus@mcw.edu

6:00 PM-7:00 PM B044

PERCEIVED SOCIAL SUPPORT USING A RELIGIOUSLY AND CULTURALLY TAILORED HIV AND STI INTERVENTION

Marcie Berman, MA[1], Jannette Berkley-Patton, PhD[1], Alexandria Booker, BA[1], Carole Bowe Thomspon, BS[2], Asha Clark[2], Tabitha Harris[2], Marvia Jones, MA[1], Jonathan D. Barclay[2]

[1]University of Missouri-Kansas City, Kansas City, MO; [2]University of Missouri-Kansas City, Kansas city, MO

African Americans are disproportionately affected by HIV and STIs. The Black church is a highly influential institution that has the potential to increase the reach of HIV/STI screening services in African American communities through various supportive services (e.g., prayer, sharing of comforting and empowering biblical scriptures) and church supportive services (e.g., food/housing assistance, health advocacy in doctor's appointments). This study examined the effect of an HIV/STI intervention on perceived social support for HIV/STI testing among church and community members affiliated with 4 churches who participated in a culturally tailored HIV/STI education and testing intervention using religiously-tailored Tool Kit materials/activities (e.g., pastoral sermons, printed/video/in-person testimonials on HIV/STIs, HIV/STI education games). Church liaisons delivered one to two tools per month during services and held HIV/STI testing events at 4 months. The most frequently used tools were brochures/church bulletins, poster/bulletin boards, and church health fairs. Survey data were collected from church and community members (N = 120 participants) at baseline and 4 months. Baseline findings indicated most participants were: female (mean age = 42 [SD = 13]), and affiliated with their church > 7 years (mean membership = 15 years [SD = 12]). Four-month findings indicated participants were significantly more likely to feel supported from their partners, $r(87) = .233$, $p = .03$, fellow church members, $r(94) = .274$, $p = .007$, and pastors, $r(94) = .277$, $p = .006$, to receive an HIV/STI test following intervention implementation. Linear regression analysis suggests more exposure to tools significantly positively predicted perceived social support ($b = .232$, $t(75) = 2.762$, $p = .007$). Future expanded studies will assist in understanding feasibility of a scalable, church-based intervention and its impact on HIV/STI testing rates in African American communities.

CORRESPONDING AUTHOR: Marcie Berman, MA, University of Missouri-Kansas City, Kansas City, MO, 64110; mabvz6@mail.umkc.edu

6:00 PM-7:00 PM B045

POSTTRAUMATIC GROWTH AND DEPRESSION IN SOUTH ASIANS WITH HIV/AIDS: IS FORGIVENESS A MEDIATOR?

Zunaira Jilani[1], Edward Chang, PhD[2], Tina Yu[2], Jiachen Lin[2], Erin E. Fowler[2], Shanmukh Vasant. Kamble, PhD[3], Jameson K. Hirsch, PhD[4]

[1]University of Michigan, Ypsilanti, MI; [2]University of Michigan, Ann Arbor, MI; [3]Karnatak University Dharwad. India, Dharwad, India; [4]East Tennessee State University, Johnson City, TN

Posttraumatic growth and depression in South Asians with HIV/AIDS: Is forgiveness a mediator? Approximately 5 million people living today in Asia and the Pacific have been diagnosed with human immunodeficiency virus (HIV). In the past year alone, nearly a quarter million people have died of acquired immune deficiency (AIDS) related causes in this region. Surprisingly, India accounts for over half of all the AIDS-related mortalities in the region. Considering the lack of knowledge regarding health, the high rates of poverty, low accessibility to medical care, and the critical issue of sex trafficking and prostitution, the risks of spreading HIV/AIDS are high. While there have been efforts in instituting reactive medical care with anti-retroviral treatments (ART), there is limited research on psychological adjustment in South Asians diagnosed with HIV/AIDS. More specifically, given the blaring inequality between genders in Indian society, it would be valuable to investigate differences in psychological adjustment (viz., posttraumatic growth, depressive symptoms, & forgiveness) among South Asian males and females. In the present study, we examined forgiveness as a potential mediator of the association between posttraumatic growth and depressive symptoms. The sample consisted of 97 males and 114 females who were diagnosed with HIV/AIDS. The survey, comprised of several health related items (e.g., CD4 count, ART, treatment adherence), the Posttraumatic Growth Inventory, Center for Epidemiological Studies Depression Scale (CES-D), and The Forgiveness Scale, was translated and collected in India, with over a third of the participants being illiterate labor workers. Results from conducting bootstrapped mediation analyses indicated that forgiveness partially mediated the link between posttraumatic growth and depressive symptoms in males, but not in females. This may be due to the strong differences in gender norms in India's male dominated society. Women have arguably less freedom, limited access to resources, and are faced with societal and familial pressures that may influence their psychological health negatively. Furthermore, both mental health and HIV/AIDS both are negatively stigmatized in South Asia. These findings, in particular, are important in modifying interventions to combat depression as males and females with HIV/AIDS may require different psychological treatment in South Asia.

CORRESPONDING AUTHOR: Zunaira Jilani, University of Michigan, Ypsilanti, MI, 48198; jilanzun@umich.edu

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6:00 PM-7:00 PM B046

DIFFERENCES IN ILLNESS SEVERITY AND TREATMENT RESPONSE BY WEIGHT STATUS AMONG BINGE EATING PATIENTS

Leah Schumacher, B.S., Stephanie Manasse, B.A., Adrienne Juarascio, PhD, Hallie Espel, B.I.S., Evan Forman, PhD

Drexel University, Philadelphia, PA

Although most individuals with binge eating disorder (BED) are overweight/obese (OW/O), a percentage is of normal weight (NW). Little is known about BED illness characteristics and treatment response in relation to weight status, despite potential implications for intervention. The present study examined the relationships among body mass index (BMI), several aspects of BED severity, depression, and quality of life among a sample of treatment-seeking women with BED of varying weight status (N=23, M_{age}=37.0, M_{BMI}=34.3 kg/m^2, BMI range: 21.2-50.1). A subset of these women (n=12) completed a 10-week group treatment for BED; exploratory analyses also examined symptom change by weight category (NW vs. OW/O) among these women. Prior to receiving treatment, all participants completed measures of depression (Beck Depression Inventory-II) and quality of life (Quality of Life Inventory). Eating pathology was assessed with the Eating Disorders Examination (EDE). The EDE was re-administered to women receiving treatment at mid- and post-treatment. Results revealed that BMI was moderately associated with age (r=.30, p=.02), illness duration (trend; r=.39, p=.10), depression (trend; r=.40, p=.09), overall level of eating pathology (r=.41, p=.05), eating concern (trend; r=.34, p=.11), and shape concern (r=.50, p=.02). BMI was not strongly related to frequency of binge episodes (r=-.05), quality of life (r=-.08), eating restraint (r=.21), or weight concern (r=.22). With regard to treatment response, a significant weight category by time interaction was observed for overall level of eating pathology (F(2,20)=7.26, $p < .01$, partial η^2=.42), such that OW/O women exhibited greater decreases from pre- to mid-treatment, while NW women exhibited greater decreases from mid- to post-treatment. These results suggest that higher BMI is associated with greater age, duration of illness, and impairment in certain psychological domains but not worse quality of life or more frequent binges. Additionally, NW and OW/O BED patients may show differential patterns of response to treatment, perhaps indicating OW/O patients show greater motivation and adherence early in treatment. With replication, these findings could be used to tailor treatments to the differing concerns and needs of BED patients of different weight status.

CORRESPONDING AUTHOR: Leah Schumacher, B.S., Drexel University, Philadelphia, PA, 19104; leah.schumacher1@gmail.com

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6:00 PM-7:00 PM B047

DOES DISSATISFACTION WITH SPECIFIC BODY PARTS DIFFER BY SEXUAL ORIENTATION IN TAIWANESE MEN?

Jiun-Hau Huang, S.M., Sc.D., Pei-Chun Kuo, M.S.

National Taiwan University College of Public Health, Taipei, Taiwan

Background: Body dissatisfaction has been confirmed to be associated with depression, low self-esteem, muscle dysmorphia, unhealthy weight control behaviors, eating disorder, and other risk behaviors. There has also been empirical evidence suggesting that body dissatisfaction appears to vary by sexual orientation. However, the majority of previous studies have focused on the overall body dissatisfaction among Western women and recently more attention has been paid to men. Still, relatively little is known about dissatisfaction with specific body parts among sexual minority Asian men. Hence, the current study aimed to explore body dissatisfaction with specific body parts among gay, bisexual, and heterosexual men in Taiwan, and to examine potential differences by sexual orientation. Methods: A total of 665 male participants were recruited via a popular electronic bulletin board system frequented by Taiwanese youth. A description of the study, along with a web link to the anonymous online survey, was posted in twenty forums appealing to a broad-based and diverse audience of various interests and sexual orientations across Taiwan. Collected data included sociodemographic information, sexual orientation, body mass index (BMI), level of body satisfaction, and quasi-quantitative data on dissatisfaction with specific body parts. Results: Significant differences were found across the three sexual minority subgroups, with gay and bisexual men reporting lower levels of overall body satisfaction (21.8 and 21.1, respectively) than heterosexual men (22.8). Gay and bisexual men also reported significantly lower levels of satisfaction with their penis (2.60 and 2.62, respectively) than their heterosexual counterparts (2.79). Bisexual men had significantly lower levels of satisfaction with their weight (2.08), compared with gay and heterosexual men (2.32 and 2.31, respectively). Conclusions: This study found that overall body dissatisfaction and dissatisfaction with specific body parts vary across gay, bisexual, and heterosexual men in Taiwan. These findings provide valuable insights into body dissatisfaction in Asian men. Future research may explore the meanings of body dissatisfaction to men and how lower levels of satisfaction with specific body parts could potentially harm men's health.

CORRESPONDING AUTHOR: Jiun-Hau Huang, S.M., Sc.D., National Taiwan University College of Public Health, Taipei, 10055; jhuang@ntu.edu.tw

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6:00 PM-7:00 PM B048

EFFECTIVENESS OF COMMUNITY-BASED PSYCHOSOCIAL PROGRAMS FOR INDIVIDUALS LIVING WITH CHRONIC ILLNESS

Rebecca L. Hunter, MA[1], Jennifer Klemp, MPH, PhD[2], Boda Klenke, MA[3], Moira Mulhern, PhD[3]

[1]VA Palo Alto Health Care System, San Jose, CA; [2]University of Kansas Cancer Center, Westwood, KS; [3]Turning Point: The Center for Hope and Healing, Leawood, KS

As psychosocial screening protocols are implemented in hospitals and outpatient clinics, referral rates have increased to support services including psychology, dietetics, social work, and occupational and physical therapy. Community patient and caregiver support organizations may be able to help meet the immediate referral needs of medical centers and hospitals who may not have the available staff and are not always ideally located. This study was undertaken at a community-based psychosocial clinic of a large Midwestern academic medical center and evaluated programs in emotional and physical support, nutrition, meditation, body movement, practical issues, and creativity for individuals diagnosed with serious physical illness. Participants (n=154, mean age=57.0±11.6 years, 77.4% female) attending multi-session programs completed the PROMIS-Emotional Distress to measure anxiety, depression, and general distress (total score) prior to starting a program and immediately following completion of the program. Items were ranked on a 5-point Likert scale, with higher scores indicating greater levels of distress. Eighteen programs were represented, including those focusing on emotional and physical support (e.g., "Managing the emotions that may accompany illness"), meditation (e.g., "Biofeedback"), and body movement (e.g., "Tai Chi for the heart"). Men and women did not differ on any of the scales, both before and after the program. Anxiety (t=7.90, $p < .001$), depression (t=8.74, $p < .001$), and general distress (t=9.53, $p < .001$) scores all improved upon completion of the programs. Community patient support organizations providing multi-disciplinary programs for individuals with serious physical illness can aid in decreasing emotional distress. As a result, providers can establish and maintain relationships with such organizations for referral purposes to further enhance individualized patient care and to meet national accreditation standards.

CORRESPONDING AUTHOR: Rebecca L. Hunter, MA, VA Palo Alto Health Care System, San Jose, CA, 95128; beckyc@ku.edu

6:00 PM-7:00 PM B049

EFFECTS OF RESILIENCE, HOPEFULNESS, PRIVACY, ON DEPRESSION AND SELF-EFFICACY FOR HEALTHY BEHAVIORS IN WIDOW(ER)S

Carrie West, PhD

Schreiner University, Kerrville, TX

Approximately 1.4 million people are widowed each year (Elliot & Simmons, 2011). Because the death of a spouse is one of the most difficult events an individual may face and bereaved spouses are at increased risk for depression (Zisook, 1993) and report more frequent visits to a physician and taking more prescription medications (Charlton, Sheahan, Smith, & Campbell, 2001). This study uses structural equation modeling to investigate how resilience, management of private thoughts and information, and feelings of hopefulness influence well-being and self-efficacy related to maintaining a healthy weight and engaging in exercise at least times per week, in bereaved spouses. Previous research found that these factors significantly influenced life satisfaction. Privacy management is the notion that an individual owns his or her own private information and can choose whom to share it with and what others should do with that information (Petronio, 2002). This study particularly investigates privacy or boundary turbulence which occurs when there is misuse or misunderstanding relating to managing rules of privacy. The current study evaluates a similar model to the previous study but addresses two limitations of the previous study and extends the research to include self-efficacy for maintaining a healthy weight and exercising at least three times per week as a measure of adaptation and well-being after the death of a spouse. The current study surveyed bereaved spouses (N=877; 94.7% female, *M* age = 51.06±10.62, months since loss = 38.14). Two structural equation models represent the hypothesized relationships and a chi-square difference test was used to compare model fit and Model 2 represents the best fit to the data. The results of the goodness of fit indices yielded acceptably high results to support model fit. Trait resilience is a significant factor in this study but is largely developed through external factors (e.g. parents who suffer from mental illness, childhood experiences) that are difficult for an individual to control. However, these findings indicate the importance of maintaining hope for the future and effectively learning to manage private thoughts and information for physical and mental well-being in bereaved spouses. These two are factors within control of the individual and represent more opportunity for positive impact.

CORRESPONDING AUTHOR: Carrie West, DoctorateinCommunication, Schreiner University, Kerrville, TX, 78028; clwest@schreiner.edu

6:00 PM-7:00 PM B050

ENVIRONMENTAL STRESSORS: ASSOCIATIONS BETWEEN HOME AND VETERANS' PTSD SYMPTOMOLOGY

Colin Lim, MA, MSW[1], Hasti Ashtiani, MA[2], Erika Bocknek, PhD[2], Maria Muzik, MD, MS[3], Katherine Rosenblum, PhD[3]

[1]Fielding Graduate University, San Antonio, TX; [2]Wayne State University, Detroit, MI; [3]University of Michigan, Ann Arb

Background: Research has shown that returning veterans have increased risks of developing posttraumatic stress symptomology edit (Milliken, Auchterlonie, & Hoge, 2007; Vasterling et al., 2010). Literature suggests that secondary traumatization may occur within returning veterans' families, exacerbating the presence of symptoms (Galovski & Lyons, 2004). Unfortunately, research has not examined factors in the home environment that may affect PTSD symptomology. Objective: This study examines the impact of chaos in the family environment on returning veterans' PTSD symptomology.
Methods: Linear regression was conducted on pilot data of a parenting intervention study to examine associations between PTSD symptomology and the home environment, specifically, selfreports of familial chaos. Results: Family environment significantly predicted a significant proportion of variance in scores of PTSD symptomology, controlling for family income levels, $R^2 = .76$, $F(2, 9) = 11.11$, $p < .01$.
Conclusion: These results suggested that problems in the home environment may impact greater psychopathology in the long term for returning veterans. Interventions focusing on strengthening family relationships and parenting skills are strongly indicated to help reduce the severity of traumatic stress and symptoms of psychopathology among returning veterans.

CORRESPONDING AUTHOR: Colin Lim, MA, MSW, Fielding Graduate University, San Antonio, TX, 78209; clim@email.fielding.edu

6:00 PM-7:00 PM B051

EVALUATION OF PSYCHOLOGICAL SERVICES FOR ANXIETY AND DEPRESSION PROVIDED IN A PRIMARY CARE CLINIC

Elizabeth Sadock, M.S.[1], Stephen Auerbach, PhD, LCP[2], Bruce Rybarczyk, PhD, LCP[2]

[1]Virginia Commonwealth University, Redwood City, CA; [2]Virginia Commonwealth University, Richmond, VA

Primary care clinics are increasingly integrating psychological services into their service programs, however few studies have used a comparison group to demonstrate the effectiveness of these services. This study evaluated the psychological services provided at the Ambulatory Care Clinic (ACC) at the Virginia Commonwealth University Health System (VCUHS) by comparing changes in 147 patients' PHQ-9 depression scores and GAD-7 anxiety scores over time to the scores of 139 patients at the Hayes E. Willis Health Center, a comparison clinic with demographically similar patients but no integrated psychological services. Assessment data were collected from participants in the ACC at VCUHS during their first or second primary care psychology appointment and during their 3rd-5th appointment. To maximize similarity in baseline levels, participants in the Hayes clinic were matched to participants from the ACC at VCUHS according to their initial levels of depression and anxiety. Participants from the Hayes clinic were then evaluated with follow-up measures of depression and anxiety at approximately the same time interval as their matched counterparts from the ACC at VCUHS. Results indicated that participants from the ACC at VCUHS experienced significantly greater decreases in their depression and anxiety scores compared to participants in the Hayes Clinic. These results remained significant after accounting for participants' medication for depression and anxiety and participants' medical diagnoses. The influence of additional mental health services, treatment resistance factors, marital status, employment status, and general demographic variables were also evaluated. This study provided modest preliminary evidence that indicate integration of psychological services is effective over and above standard care.

CORRESPONDING AUTHOR: Elizabeth Sadock, M.S., Virginia Commonwealth University, Redwood City, CA, 94061; sadockej@vcu.edu

6:00 PM-7:00 PM B052

EXAMINING THE ANTECEDENTS OF SUBJECTIVE WELL-BEING OF COLLEGE STUDENTS

Jordan Lyerly, MSPH[1], Silvia Bonaccio, PhD[2], Charlie Reeve, PhD[1]

[1]Health Psychology Program, University of North Carolina at Charlotte, Charlotte, NC; [2]Tefler School of Management, University of Ottawa, Ottawa, ON, Canada

Understanding the predictors of subjective well-being (SWB) in college students is important given its relationship with academic and health behavior outcomes (Suldo et al., 2010; Grant et al., 2009). Past research has shown that neuroticism and task value predict lower SWB while self-efficacy predicts higher SWB (Bandura, 1993; Hayes & Joseph, 2003; Pintrich et al., 1993). Despite research on academic emotions (Pekrun et al., 2012) the relationships between academic emotions and SWB among college students is unclear. Indeed, academic emotions could mediate the relationships between neuroticism, task value, and self-efficacy and SWB. Our study sought to clarify these relationships. *Sample.* Participants were 224 undergraduate students. 79% of the sample self-reported as female, white (57.4%), black (25.1%), and other (17.4%).They were on average 23.05 years (*SD* = 5.12). *Measures.* At the beginning of the semester, participants self-reported on their neuroticism (International Personality Item Pool), task value and academic self-efficacy (Motivated Strategies for Learning Questionnaire), positive and negative class emotions (Academic Emotions Questionnaire), and SWB (Behavioral Risk Factor Surveillance System). SWB was also measured at the end of the semester. *Results.* Path analysis with multiple regression was used to examine the direct and indirect effects on SWB.Neuroticism had the largest effect on baseline SWB ($\beta = -.49$). After controlling for SWB at baseline, neuroticism, task value, and self-efficacy had small effects on end of semester SWB ($\beta = -.08, -.12, .09$, respectively), which were partially due to indirect effects via academic emotions. Unexpectedly, positive class emotions predicted a decrease in end of semester SWB ($\beta = -.08$). Using hierarchical multiple regression, only self-efficacy and positive academic emotions had statistically significant effects on end of semester SWB after controlling for demographic factors and baseline SWB. *Discussion.* Individual traits and emotions are associated with SWB in college students. Academic emotions and self-efficacy predicted end-of-semester SWB. Such knowledge is helpful in identifying students who are at risk for lower SWB and establishing interventions to prevent it.

CORRESPONDING AUTHOR: Jordan Lyerly, MSPH, Health Psychology Program, University of North Carolina at Charlotte, Charlotte, NC, 28223; jlyerly3@uncc.edu

6:00 PM-7:00 PM B053

EXAMINING THE MENTAL HEALTH OF PEDIATRIC GROWTH PATIENTS AND PARENTS RELATIVE TO DIABETES

Meera Parbhakar, M.A.[1], Ailie Posillico[1], Christie DiPietrantonio[1], Averi Giudicessi, B.S.[1], Victor Chan, B.S.[1], Molly Regelmann, MD[2], Robert Rapaport, MD[2], Rachel Annunziato, PhD[3]

[1]Fordham University, Bronx, NY; [2]Mount Sinai Hospital, New York, NY; [3]Fordham University, New York, NY

Introduction
Little is known about the mental health of patients with concerns for growth failure, some of whom are treated with human growth hormone (HGH). This study compared internalizing symptoms among growth patients and their parents with experiences of type 1 diabetes mellitus (T1DM) patients, given established associations with depression and anxiety. Methods

Patients ages 8-17 with T1DM (N=34), on HGH treatment (N=43), or with untreated short stature (SS; N=46) were recruited with a parent. Patients were administered the Children's Depression Inventory (CDI) and the Screen for Childhood Anxiety Related Emotional Disorders (SCARED). Parents were administered the Center for Epidemiological Studies Depression Scale (CES-D) and the Impact of Events Scale (IES). Results

CDI scores did not vary significantly between groups [F(2,120)=2.99, $p>0.05$)]; scores among T1DM (M=9.83, SD=0.66), HGH (M=10.09, SD=0.29), and SS patients (M=9.98, SD=0.44) were below the clinical cutoff of 11. SCARED scores did vary significantly [F(2,100)=3.49, $p < 0.05$)] with post-hoc analyses revealing higher scores among T1DM (M=23.03, SD=12.42) than HGH patients (M=15.68, SD=10.49) at $p < 0.05$. SCARED scores did not vary significantly between HGH and SS patients (M=18.11, SD=11.21) and all scores were below the clinical cutoff of 25.

Parent experiences varied significantly between groups on the IES [F(2,119)=22.99, $p < 0.01$)] and CES-D [F(2,116=8.323, $p < 0.01$)]. Post-hoc analyses revealed significantly higher IES scores for T1DM (M=21.75, SD=16.06) than the HGH (M=6.40, SD=9.04) and SS cohorts (M=5.56, SD=9.42) at $p < 0.01$. T1DM parents also reported significantly higher CES-D scores (M=18.88, SD=9.02) than HGH (M=12.79, SD=10.49) and SS parents (M=14.41, SD=9.43) at $p < 0.01$. On average, only T1DM parents scored above the clinical cutoffs of 16 on the CESD and 18 on the IES. Conclusions
This study is the first to assess mental health of growth patients and their parents compared to T1DM. There was no difference in functioning between SS patients on and off treatment. Furthermore, the burden on T1DM patients was more so than HGH patients who have similar treatment requirements in the short-term. Results suggest that mental health concerns are not uniform among pediatric endocrinology patients.

CORRESPONDING AUTHOR: Meera Parbhakar, M.A., Fordham University, Bronx, NY, 10458; mparbhakar@fordham.edu

6:00 PM-7:00 PM B054

EXPLORING THE ROLE OF CULTURE/ETHNICITY IN THE RELATIONSHIP BETWEEN COPING AND POSTTRAUMATIC GROWTH

Nelson Yeung, M.Phil, Qian Lu, MD, PhD

University of Houston, Houston, TX

There are growing interests in understanding people's positive changes after their negative life events. Previous studies have shown that coping resources (e.g., social support, optimism) and coping strategies (e.g., acceptance, religious coping) are associated with higher posttraumatic growth (PTG). However, how these coping resources and strategies affect PTG among people from different ethnic groups has received less empirical attention. This study examined the factors associated with posttraumatic growth (PTG) among an ethnically diverse sample of 457 college students, using a cross-sectional survey. It extended from existing studies by examining the roles of these coping resources and coping strategies in facilitating PTG across four ethnic groups (including Asians, African Americans, Caucasians, and Hispanics). The sample consisted of 22% Asians, 13% African Americans, 28% Caucasians, and 37% Hispanics. After controlling for gender, number of types of traumatic events, and the level of current distress due to the most traumatic event, results from hierarchical regressions showed that optimism ($\beta = .20$, $p < .05$) and acceptance ($\beta = .47$, $p < .001$) were associated with PTG among Asians; optimism ($\beta = .25$, $p < .05$), social support from family ($\beta = .24$, $p < .05$), religious coping ($\beta = .49$, $p < .001$) were associated with PTG among African Americans; social support from family ($\beta = .26$, $p < .01$), religious coping ($\beta = .27$, $p < .01$), and acceptance ($\beta = .28$, $p =.001$) were associated with PTG among Caucasians; social support from family ($\beta = .17$, $p < .05$), religious coping ($\beta = .31$, $p < .001$), and humor ($\beta = .17$, $p < .05$) were associated with PTG among Hispanics. Our findings imply that interventions helping to enhance optimism, facilitate social support from family, improve skills in using appropriate coping strategies may increase people's PTG. We found that the strongest predictors of PTG among ethnic minorities were acceptance for Asians and religious coping for African Americans and Hispanics, which highlights the importance of culture/ethnicity in affecting PTG. Researchers should develop culturally-sensitive interventions tailored for different ethnic groups to maximize people's PTG.

CORRESPONDING AUTHOR: Nelson Yeung, M.Phil, University of Houston, Houston, TX, 77004; nelson.fall2010@gmail.com

6:00 PM-7:00 PM B055

GENETIC SENSITIVITY TO THREAT, RACIAL DISCRIMINATION AND DEPRESSIVE SYMPTOMS AMONG AFRICAN-AMERICAN ADOLESCENT FEMALES

Jessica M. Sales, PhD[1], Jennifer Brown, PhD[2], Erica Smearman, BS[1], Gene Brody, PhD[1], Ralph DiClemente, PhD[1]

[1]Emory University, Rollins School of Public Health, Atlanta, GA; [2]Texas Tech University, Lubbock, TX

Background: African-American adolescent females experience high rates of depression. Psychosocial stress, including stress resulting from perceived racial discrimination (PRD), has been associated with elevated depressive symptoms. Genetic variations within the linked promoter region of the serotonin transporter gene (*5-HTTLPR)* are related to heightened reactivity to threatening environmental cues. Likewise, variations within this region may interact with stressful life events (e.g., abuse) to influence depressive symptoms, but this has not been empirically examined in prior studies. The objective of this study was to examine whether variations in the *5-HTTLPR* gene interact with racial discrimination to predict depressive symptoms. Methods: Participants were 304 African-American adolescent females enrolled in an HIV prevention trial in Georgia. Participants completed a baseline survey (prior to randomization) assessing psychosocial factors including PRD (low vs. high) and depressive symptomatology (low vs. high) and provided a saliva sample for genotyping the risk polymorphism *5-HTTLPR* (risk allele present vs. not present). Results: In a logistic regression model controlling for other stressors, an interaction between PRD and 5-HTTLPR group was significantly associated with depressive symptomatology (AOR = 3.32, 95% CI: 1.08-10.18, p=0.036). Follow-up tests found that high PRD was significantly associated with greater odds of high depressive symptoms only for participants with the riskallele. Discussion: PRD and 5-HTTLPR status interact to differentially impact depressive symptoms among African-American adolescent females. Efforts to decrease depression among minority youth should include interventions which address racial discrimination and strengthen factors (e.g., parenting) which protect youth from the psychological costs of discrimination.

CORRESPONDING AUTHOR: Jessica M. Sales, PhD, Emory University, Rollins School of Public Health, Atlanta, GA, 30322; jmcderm@emory.edu

6:00 PM-7:00 PM B056

IMPLICIT ASSOCIATIONS IN BII PHOBIA: CHANGES AFTER EXPOSURE TO A DISGUST-ELICITING STIMULUS

Lauren Rothstein, MA, Alanna Covington, MA, Michele Carter, PhD

American University, Washington, DC

The current study examined implicit disgust associations between blood-injection-injury (BII) phobic (n = 30) and non-phobic (n = 30) individuals following 30-minute in vivo exposure to a disgust-eliciting stimulus (severed deer leg). Participants engaged in an implicit association test (IAT), prior to and following exposure to determine the strength of implicit associations regarding the concept of disgust. Participants also engaged in a behavior approach/avoidance task (BAT) with a vial of blood at the same time points to determine if disgust elicited by the deer leg was generalizable to a BII-specific disgust-elicitor. IAT and BAT assessments were then repeated one week following exposure. Results indicated a significant change in implicit associations, from pre-exposure to follow-up suggesting that BII phobic individuals underwent a cognitive change of lessening of disgust associations. There was also a significant decrease in avoidance to the BAT from pre-exposure to follow-up.

CORRESPONDING AUTHOR: Lauren Rothstein, MA, American University, Washington, DC, 20016; laurena.rothstein@gmail.com

6:00 PM-7:00 PM B057

INDIVIDUAL AND ENVIRONMENTAL INFLUENCES OF ADOLESCENT DEPRESSIVE FEELINGS

Jessica Wong, BS[1], Enrique Ortega, PhD, MPH[2]

[1]University of Cal State Dominguez Hills, Carson, CA; [2]California State University Dominguez Hills, Carson, CA

Introduction: Students who report depressive feelings are at risk for social withdrawal, poor health and lowered expectations. Investigations are needed which can assist prevention specialists to develop targeted efforts aiming to reduce influencing factors to the development of depressive feelings among adolescents. This study investigated the effects that intrapersonal health indicators and social environmental factors play of indications of adolescent depressive feelings. We investigated these potential associations separately for each gender.Methods: The sample consisted of 452 European high school adolescents (49% female), ages 15-19 years (mean age = 17.1 (S.D. = 1.2)), living in the northwest of Italy and in the northeast of Holland. Multiple linear regressions were used to explore the associations of intrapersonal mental health indicators (self-esteem, stress) and environmental factors (strictness of family rules, parental support, peer pressure and friend support) on adolescent depressive feelings. Age, and country of origin were used as covariates in the analysis. Analyses were separated by gender.Results: Results among males indicated that greater indications of self-esteem ($\beta = -.169$, $p < 0.05$) were associated with lower indications of depressive feelings. Social relationship ($\beta = .401$, $p < 0.001$) family ($\beta = .262$, $p < 0.001$) and academic stress ($\beta = .141$, $p < 0.001$) were all associated with greater indications of depressive feelings. Among females, greater social relationship ($\beta = .239$, $p < 0.001$) family ($\beta = .188$, $p < 0.001$) and academic stress ($\beta = .355$, $p < 0.001$) were all associated with greater indications of depressive feelings. Lower indications of parental support ($\beta = -.127$, $p < 0.05$) were associated with lower indications of depressive feelings.Conclusions: Findings indicated that only intrapersonal problems seemed to associate with depressive feelings among males. For females both intrapersonal and environmental problems were associated to depressive feelings. Results of this study highlight the need to consider diverse interactions between psychosocial determinants between genders when designing adolescent depression prevention programs.

CORRESPONDING AUTHOR: Jessica Wong, BSHealthScience, University of Cal State Dominguez Hills, Carson, CA, 90745; jwong57@toromail.csudh.edu

6:00 PM-7:00 PM B058

IS LOW DISTRESS TOLERANCE LINKED TO ADDICTIVE EATING?

Lauren K. Caravello[1], Andrea T. Kozak, PhD[2], Jessica E. Davis, BA[2], Scott M. Pickett, PhD[2], Michele R. Parkhill, PhD[2]

[1]Oakland University, Macomb, MI; [2]Oakland University, Rochester, MI

Background: Distress tolerance is one's ability to withstand negative emotions. Food addiction may be related to low distress tolerance, given the link between substance use disorders and reduced distress tolerance. The aim of this investigation was to examine whether food addiction was associated with seven factors of low distress tolerance.Methods: A sample of 339 undergraduate students (218 female and 121 male) completed an online survey that included the Yale Food Addiction Scale (YFAS), a Distress Tolerance Scale (DTS-E), which was validated in an eating disordered sample, and another Distress Tolerance Scale, which was validated in individuals with substance-related problems (DTS-S) . The YFAS measures food addiction and is based on the seven substance dependence symptoms from the DSM-IV-TR. Total scores indicate the number of food addiction symptoms endorsed. The DTS-E assesses distress tolerance and has three factors/strategies: anticipate and distract, avoidance of affect, and accepting and managing emotion. Higher scores indicate more frequent use of each strategy. The DTS-S also measures distress tolerance, but has four factors: tolerance, appraisal, absorption, and regulation. Lower scores on each factor indicate low distress tolerance.Results: Multiple regression models were conducted with the YFAS total score and the subscales of each DTS measure. After adjusting for sex and body mass index, there was a significant positive association between YFAS total score and avoidance of affect as measured by the DTS-E (p=0.000). YFAS total score was also inversely related to the absorption subscale as measured by the DTS-S (p=0.02) after adjusting for the same covariates.Conclusion: The results of this study indicate that food addiction is associated with two factors of low distress tolerance, absorption and avoidance of affect. Although this was not an experiment, these results suggest that individuals addicted to food are completely consumed by their emotions, which is linked to impaired functioning, and as a result, these individuals spend a great deal of time avoiding their emotions.

CORRESPONDING AUTHOR: Lauren K. Caravello, Oakland University, Macomb, MI, 48044; lkcarave@oakland.edu

6:00 PM-7:00 PM B059

CORRELATES OF PARENTAL READINESS TO PROVIDE FIVE SERVINGS FRUIT AND VEGETABLES EVERY DAY

Julie A. Wright, PhD[1], Jessica Whiteley, PhD[1], Tanya Nixon-Silberg, BS[1], Robert Laforge, ScD[2]

[1]UMass Boston, Boston, MA; [2]URI, Kingston, RI

According to the most recent statistics from the CDC, U.S. children are not eating enough fruits and vegetables (FV). Parents have been identified as affecting their children's FV intake, which suggests that parents be included in intervention efforts. However, factors that might influence a parent's readiness to provide enough FV, are largely are unknown. Recent studies have found an association between a parent's perception of a child's weight and parent's readiness for helping his or her child lose weight. The purpose of this study was to examine potential correlates of parental readiness to provide adequate amounts of FV. The data used for this study are from a larger survey study that used a convenience sample of parents with at least one child between 4-10 years of age. Parents were recruited to take a survey and have their child's and their own height (ht) and weight (wt) measured in-person. The parent's stage of change for providing their child with 5 servings of FV every day (FV SOC) was assessed. FV SOC was classified into 3 groups: 1) precontemplation and contemplation (PC/C), 2) preparation (PR), and 3) action and maintenance (A/M). Parental perception of child's wt status ("how would you describe your child's weight" on a 5-point scale from very underweight to very overweight) and parental perception of their own wt was assessed. Multinomial logistic regression was used to examine factors associated with the parent's FV SOC. Factors explored were child's age, gender, weight status and parent's income, marital status, race, perception variables and accuracy of weight perception. Parents (N=236) were, 89% female, 50% White, 46% married, 71% overweight, 61% in A/M and mean age of 38.6 (8.2). Children (N=236) were, 50% female, 42% overweight and mean age 7.1 (2.1). None of the factors predicted FV SOC (p >.68). These findings suggest that FV SOC is invariant to the factors explored. While other factors should be explored, it is likely that helping children get adequate amounts of FV is a cross-cutting issue for parents.

CORRESPONDING AUTHOR: Julie A. Wright, PhD, UMass Boston, Boston, MA, 02125; julie.wright@umb.edu

6:00 PM-7:00 PM B060

DEMOGRAPHIC PREDICTORS IN FRUIT AND VEGETABLE CONSUMPTION AND WASTE AMONG MIDDLE SCHOOL STUDENTS

Jane C. Hurley, MS, Meg Bruening, PhD, MPH, RD, Marc A. Adams, PhD, Punam Ohri-Vachaspati, PhD, RD

Arizona State University, Phoenix, AZ

Background: Youth in the US do not come close to meeting the national recommendations for fruit and vegetable (F&V) consumption. Current evidence suggests F&V intake differs across demographic groups, but the typical self-report measures of F&V intake in school lunch environments may introduce bias in the current literature. *Objective:* To explore the relations between demographic factors and objective measures of F&V self-served, consumed and wasted at lunch in middle schools with salad bars. We hypothesized that amounts of self-served and consumed F&V would be less for higher grade levels, boys, non-whites, and those with free/reduced lunch price status. We also explored interactions between demographic factors. *Design:* A secondary analysis of a cross-sectional study that randomly sampled 294 students in three middle schools to assess the effectiveness of salad bars on students' F&V consumption at lunch in schools. *Statistical analysis:* Multivariate linear regression was used to regress the amounts of F&V self-served, consumed, and wasted (independently) on demographic predictor variables, after adjusting for school, gender, age, race/ethnicity, free/reduced priced lunch status. School was included as a fixed factor to account for clustering effects and categorical factors with more than two levels (e.g. grade, race or ethnicity) were dummy coded. Two-way interactions between demographic variables were explored. *Results:* No significant relations were found for any demographic subgroup on amount of F&V self-served, consumed or wasted. Significant interactions were found between free/reduced priced lunch status and gender on F&V consumed (omnibus p-value = .008). Among free/reduced priced lunch students, girls ate less than boys (83.9 g vs. 96.8 g, respectively; p-value = .09) and the opposite effect was observed with students who paid full price for lunch, where boys ate significantly less than girls (73.3 g vs. 109.1 g, respectively; p-value = .03). *Conclusions:* Free/reduced priced lunch status moderates the relation between gender and F&V consumed at salad bars. Results suggest targeted interventions for specific demographic subgroups may be needed to increase F&V consumption at schools.

CORRESPONDING AUTHOR: Jane C. Hurley, MS, Arizona State University, Phoenix, AZ, 85004; jchurley@asu.edu

6:00 PM-7:00 PM B061

DEMOGRAPHIC, PERSONAL AND BEHAVIORAL CORRELATES OF DIETARY PATTERNS IN DIVERSE ADOLESCENTS

Chorong Park, MSN, RN[1], Jane Dixon, PhD[2], Ariana Chao, MSN, RN, FNP-BC[3], Karl E. Minges, MPH[4], Myoungock Jang, MSN[5], Margaret Grey, DrPH, RN, FAAN[3], Robin Whittemore, PhD, APRN, FAAN[3]

[1]Yale University School of Nursing, New Haven, CT; [2]Yale University School of Nursing, West Haven, CT; [3]Yale University School of Nursing, Orange, CT; [4]Yale University, Wallingford, CT; [5]Yale University School of Nursing, Middletown, CT

Introduction: Dietary pattern analysis has recently emerged as an important approach for assessing a complex set of foods, not just a single food. However, little is known about dietary patterns in adolescents and correlates of these patterns. The purpose of this study was to explore dietary patterns and to identify their demographic, personal and behavioral correlates in diverse adolescents. Methods: Baseline data from an Internet obesity prevention program was used for this secondary analysis (n=175; mean age 15.5±.48 years, 48% male, 62% minority race/ethnicity). Principal component analysis with promax rotation identified dietary patterns from 13 food items. Linear regression was used to examine the association of 7 correlates on dietary pattern scores including demographic (gender and race), personal (Diet Self-Efficacy [DSE], and dieting intention) and behavioral characteristics (food label use, eating breakfast, and evening hyperphagia). Lastly, K-means cluster analysis grouped adolescents based on the dietary pattern scores. Results: Four dietary patterns were identified: sweet snacks, fast food, fruits and vegetables, and high-fat milk. Higher intake of sweet snacks was associated with lower DSE ($p < .01$). Higher intake of fast food was associated with lower DSE ($p < .01$), being non-White ($p=.03$), and having evening hyperphagia ($p < .01$). Higher intake of fruits and vegetables was associated with higher DSE ($p=.06$) and eating breakfast ($p=.05$), but these relationships were marginally significant. High-fat milk intake was negatively associated with reading food labels ($p=.02$). K-means cluster analysis produced 4 clusters: 1) low intake of high-fat milk (n=29), 2) high intake of sweets and fast food (n=19), 3) high intake of fruits and vegetables (n=38), and 4) average intake of sweets and fast food, with low intake of fruits and vegetables (n=59). Conclusions: Almost half of adolescents were in the cluster representing higher-than-average intake of sweets and fast food, but lower intake of fruits and vegetables. Many of the correlates of dietary patterns were modifiable factors such as dietary behaviors and dietary self-efficacy. These findings can contribute to our understanding of adolescents' dietary patterns and provide guidance for tailoring dietary interventions.

CORRESPONDING AUTHOR: Chorong Park, MSN, RN, Yale University School of Nursing, New Haven, CT, 06510; chorong.park@yale.edu

6:00 PM-7:00 PM B062

DEVELOPMENT AND EVALUATION OF THE CHILDREN MEDIA LITERACY NUTRITION EDUCATION INTERVENTION

Li-Ling Liao, PhD[1], I-Ju Lai, PhD, RD[2]

[1]Department of Health Management, I-Shou University, Kaohsiung City, Taiwan; [2]I-Shou University, Kaohsiung City, Taiwan

INTRODUCTION. The prevalence of overweight and obesity in Taiwanese children is growing at an alarming rate. Enhance of media literacy in children to enable them to critically evaluate the food advertising is believed to be beneficial in preventing overweight of children. The purpose of this study is to develop and evaluate a set of media literacy nutrition education courses for senior elementary students in their healthy diet. METHODS. The courses were developed based on the integrated health-promoting media literacy model consisting of four components, empowerment, health and media knowledge, habits of inquiry, and critical analysis and expression skills. The developing process experienced formative evaluation, organizing action-research team, courses development, expert review, pretest, and sustained revision. Six units of courses with 40 minutes for each unit were developed and taught in a 6-week period. A nonequivalent experiment control group design was adopted to implement in one selected elementary school. Participants were divided into one experimental group and two control groups with approximate 50 children in each group. The experimental group received the intervention courses, and the control group A received the traditional nutrition education intervention while the control group B didn't receive any nutrition education. RESULTS. This research shows that the experimental courses could significantly increase children's media literacy skills and behavior of healthy diet, and its effect is better than two control groups. DISCUSSION. This set of media literacy nutrition education courses for children could be a valuable reference for health-promoting schools to promote healthy diet behaviors.

CORRESPONDING AUTHOR: Li-Ling Liao, PhD, Department of Health Management, I-Shou University, Kaohsiung City, 82445; hililin@isu.edu.tw

MERITORIOUS POSTER
6:00 PM-7:00 PM B063

DEVELOPMENT AND TESTING OF PSYCHOSOCIAL FACTORS RELATED TO FOOD PREPARATION AMONG HISPANIC PARENTS

Teresa M. Smith, MS[1], Genevieve F. Dunton, PhD, MPH[2], Courtney A. Pinard, PhD[3], Amy Yaroch, PhD[4]

[1]University of Nebraska Medical Center, Omaha, NE; [2]University of Southern California, Los Angeles, CA; [3]Gretchen Swanson Center for Nutrition, Omaha; [4]Gretchen Swanson Center for Nutrition, Omaha, NE

Though preparing food at home has been recognized as an avenue for promoting healthier eating, currently no tool exists to measure psychosocial correlates of food preparation among Hispanic parents. The purpose of this study was to develop and psychometrically test a culturally relevant survey assessing psychosocial factors of food preparation among Hispanic parents. Literature review and focus group findings guided the selection and development of new and existing behavior and psychosocial survey items. The survey was cognitively tested in a sample (n = 25) of Hispanic adults in the Midwest United States and revised for better understanding and readability. The survey was then pilot tested in a convenience sample of Hispanic parents (n=248) in Southern California from July to August 2013. Factor analysis utilizing the Generalized Least Squares extraction and Varimax with Kaiser Normalization rotation methods was used to reduce psychosocial items and identify scales. Four scales related to food preparation had good internal consistency: self-efficacy (4 items; $\alpha = 0.8$), perceived benefits (4 items; $\alpha = 0.8$), perceived barriers (3 items; $\alpha = 0.8$), and resources (3 items; $\alpha = 0.7$). Scales demonstrated convergent validity: resources and perceived benefits($r = 0.6$), resources and self-efficacy ($r = 0.4$), perceived benefits and self-efficacy($r = 0.4$), perceived barriers and self-efficacy($r = -0.3$). Scales also demonstrated concurrent validity with select healthy food preparation behaviors. Self-efficacy correlated with frequency of food preparation ($r = 0.4$), scratch preparation ($r = 0.4$), adjusting meals to be healthier ($r = 0.2$), and planning meals ($r = 0.3$). Perceived benefits correlated with frequency of food preparation ($r = 0.4$), scratch preparation ($r = 0.3$), adjusting meals to be healthier ($r = 0.2$), and planning meals ($r = 0.2$). Perceived barriers correlated with frequency of scratch preparation ($r = -0.2$), adjusting meals to be healthier ($r = -0.2$), and planning meals ($r = -0.2$). Resources correlated with frequency of food preparation ($r = 0.3$), and scratch preparation ($r = 0.3$). Emphasizing how food preparation in the home can support a healthy diet, this tool can enhance utility of dietary information for surveillance and inform intervention and evaluation among Hispanic American families.

CORRESPONDING AUTHOR: Teresa M. Smith, MS, University of Nebraska Medical Center, Omaha, NE, 68114; tsmith@centerfornutrition.org

6:00 PM-7:00 PM B064

DEVELOPMENT AND VALIDATION OF THE BARRIERS TO HYDRATION INDEX (BHI)

Matthew Scanlin, B.S., Stephen Patterson, PhD

Ohio University, Athens, OH

Introduction: Given the importance of proper hydration to health, research is needed to identify factors that hinder adequate hydration. This study is the first to develop a valid and reliable questionnaire of such factors. Methods: 671 young (mean=19.67 years) participants (71.6% female, 88.2% Caucasian) completed an online survey containing 65 items. Factor-analysis was performed to identify subscales. Cronbach's alphas were calculated to determine each subscale's reliability. Factors' items were removed as necessary to improve Cronbach's alphas. Additionally, concurrent validity was calculated via a hierarchical, multiple regression analysis with the identified factors entered as predictors of self-reported daily water consumption. Results: The maximum-likelihood factor analysis with a varimax rotation revealed six factors: tap water's perceived purity; education on dehydration; perceived health risks of water bottles' packaging; cost of bottled water; water's taste and thirst quenching properties; and perceived purity of bottled water. Together these factors explained 54.28% of the variance in barriers to adequate hydration. Each of these factors demonstrated strong reliability (alphas ranged from .761 to .931). In terms of concurrent validity, only one factor was associated with daily water consumption. More specifically, after controlling for age, gender, socioeconomic status, other foods and beverages consumed, and all other hydration barrier factors, the factor comprised of items related to water's taste and thirst quenching properties was negatively associated with self-reported water consumption (Beta = -.226, $t(592) = -5.61$, $p = .000$). Therefore, participants who found water less tasty and less effective at satisfying their thirst also reported consuming less water on a daily basis. Discussion: The BHI is the first reliable index for quantitatively assessing hydration barriers. Further psychometric testing should be conducted to establish its predictive validity with biological measures of hydration status as well as its reliability and validity in other age groups, especially in the elderly as they are at an increased risk for dehydration.

CORRESPONDING AUTHOR: Matthew Scanlin, B.S., Ohio University, Athens, OH, 45701; ms269111@ohio.edu

6:00 PM-7:00 PM B065

DIFFERENCE IN PRICE OF HEALTHY VS UNHEALTHY SNACKS IN CORNER STORES BY NEIGHBORHOOD CHARACTERISTICS

Robin DeWeese, MS[1], Michelle Kennedy, MPH, MCHES[2], Punam Ohri-Vachaspati, PhD, RD[1]

[1]Arizona State University, Phoenix, AZ; [2]Rutgers University-Center for State Health Policy, New Brunswick, NJ

Background: Low-income neighborhoods have more than twice as many small retail food stores as high-income areas have, with higher concentrations near schools. Although a number of interventions have been conducted to increase the availability of healthy foods in these stores, most continue to stock large numbers of energy-dense, nutrient-poor snacks as well. Higher prices for fruits and vegetables has been associated with lower fruit and vegetable consumption among adolescents.

Purpose: To determine whether the prices of healthy versus unhealthy snacks sold in stores in two high-minority, low-income New Jersey communities differ by various characteristics of the neighborhoods in which the stores are located.

Methods: Store audits were conducted in randomly selected corner stores in Camden and Newark, NJ in June, 2014. The audits were derived from the availability portion of the Nutrition Environment Measures Survey for Corner Stores, with additional questions added to assess promotion and availability of healthy snacks. 2010 census block group characteristics were obtained from the American Community Survey for each of the block groups where stores were located. At the end of an audit, a single-serving bag of chips and a healthy snack were purchased. The analyses are limited to 89 stores from which a 1-ounce bag of chips and a piece of fruit or cut-up single-serving fruit were purchased. Frequencies and paired t-tests were conducted to compare prices using SPSS.

Results: In the overall sample, the average price of a one-ounce bag of chips was 47 cents, significantly lower than the average price of fruit at 59 cents ($p < .01$). This price difference held across all neighborhood characteristics, with healthy snacks costing 13-25 cents more, except when comparing neighborhoods by education level. In neighborhoods in which 74% or more of the residents have earned a GED or high school diploma, the mean price of fruit was only 7 cents higher than was the mean price of chips (53¢ vs 46¢).

Conclusion: Unhealthy snacks, such as chips, tend to be cheaper than healthy ones, such as fruit. A child with only a dollar to spend on a snack may be more likely to buy the lower-priced nutrient-poor, energy-dense item, even when stores offer healthier options.

CORRESPONDING AUTHOR: Robin DeWeese, MS, Arizona State University, Phoenix, AZ, 85004; robin.deweese@asu.edu

6:00 PM-7:00 PM B067

CONSTRUCTING AN INSTRUMENT FOR A THEORY-BASED CORRELATES OF PARENTAL MONITORING OF SUGAR-SWEETENED BEVERAGES

Paul Branscum, PhD, RD, Alexandra Housely, MS, CHES

The University of Oklahoma, Norman, OK

Sugar-sweetened beverage (SSB) consumption is an important public health concern, especially for children and adolescents, as up to 88% consume SSB's every day, and 4-5% consume $\geq$500 calories from SSBs daily. Identifying important environmental and psychosocial determinants of how parents monitor their child's SSB consumption could lead to more effective public health programs. Therefore, the purpose of this study was to develop and validate a new theory-based instrument related to this parenting practice. While a number of theoretical models exist in health promotion, the Integrative Model (IM) was recently developed as an attempt to integrate a number of the leading theories and models within the field, therefore underpinnings of this theory were utilized for instrument development. Initially, a 41-item instrument was developed and face and content validity were established using a panel of 6 experts in a 2 round review process. After minor changes suggested by the panel, the survey was administered to 270 parents (29 parents completed the survey twice). Psychometric properties tested of the instrument included construct validity, using the maximum likelihood extraction method of factor analysis, internal consistency reliability, using Cronbach's alpha, and stability (or test-retest reliability) using Pearson-product moment correlations between instrument results taken at two separate occasions. Initial results suggested some of the scales required re-specification, which included removing items that were weakly related with other items on its corresponding scale. The Cronbach's alpha, and stability coefficients for all scales were above 0.70, besides the Skills/Abilities ($\alpha=0.69$; $r=0.67$), and Perceived Behavioral Control scales ($\alpha=0.60$;$r=0.64$). Results from this study can be used to assist future researchers and practitioners for measuring theory-based determinants of parental practices related to monitoring SSB consumption. This process can also be replicated to construct instruments measuring other important obesogenic behaviors, such as monitoring fruit and vegetable consumption, or physical activity.

CORRESPONDING AUTHOR: Paul Branscum, PhD, RD, The University of Oklahoma, Norman, OK, 73019; pbranscum@ou.edu

6:00 PM-7:00 PM B068

CULTURE AND OBESITY-RELATED VARIABLES IN MEXICAN AND PUERTO RICAN MEN

Lisa Sanchez-Johnsen, PhD[1], Liliana Bolanos, B.A.[1], Eduardo Bastian, B.A.[1], Regina Reina, B.S.[1], Jaime Delgado, B.A.[2], Hui Xie, PhD[1], Kelly Ortega, B.S.[3], Fernando Elli, MD[1], Daniel Le Grange, PhD[4], Marian Fitzgibbon, PhD[1]

[1]University of Illinois at Chicago, Chicago, IL; [2]The Greater Humboldt Park Diabetes Empowerment Center, Chicago, IL; [3]Columbia University School of Nursing, New York, NY; [4]The University of Chicago, Chicago, IL

Among Latino men, 42% are overweight and 37% are obese (Daviglus, et al., 2012), making it imperative to examine overweight and obesity in Latino men. This presentation describes the demographic characteristics and initial analyses of the body image, physical activity, and cultural variables assessed in an NIH-funded study addressing culture and several obesity-related variables. Mexican and Puerto Rican male participants completed measures (height, weight, body fat, hip, waist); a health and culture interview (e.g., questions on body image and physical activity); a diet questionnaire; and used an accelerometer. A total of 203 participants completed the measures and the health and culture interview and 193 completed all study components. Puerto Ricans were older than Mexicans ($p < .0001$) and there were significant differences in marital status ($p < .05$), country of birth ($p < .0001$), smoking ($p < .05$) and work status ($p < .001$). There were no significant differences in religion, education, health insurance, BMI, body fat, hip and waist measurements, and the language preference of the interview. Mexicans and Puerto Ricans did not differ in their current and ideal image nor in their body satisfaction or how they described their weight. There were also no significant differences in whether they participated in any regular activity designed to improve or maintain their physical fitness or the number of times or length they engaged this activity, nor in their perceived exertion during this activity. Mexicans and Puerto Ricans did not differ in their acculturation level, ethnic identity, bicultural identity integration, or in their pressure or stress associated with developing competency in the Spanish or English language, or pressures originating from the mainstream American culture or Hispanic/Latino culture to acculturate or not acculturate. Finally, Puerto Ricans reported a higher level of familism ($p < .01$) and a higher level of adherence to traditional gender role behaviors and attitudes ($p < .05$), as assessed by a machismo subscale, than Mexicans. There were no differences in folk illness beliefs, fatalism or personalism. Results have implications for the development of a future intervention that incorporates the role of cultural factors into a community participatory obesity intervention for Latino men.

CORRESPONDING AUTHOR: Lisa Sanchez-Johnsen, PhD, University of Illinois at Chicago, Chicago, IL, 60608; lsanchez@psych.uic.edu

6:00 PM-7:00 PM B069

DEPRESSION, INACTIVITY, & FUNCTIONAL LIMITATIONS CONTRIBUTE TO OBESITY IN ADULTS WITH ARTHRITIS

E. Amy Janke, PhD[1], Christina M. Hopkins, BS[1], Megan M. Fritz, M.S.[2]

[1]University of the Sciences, Philadelphia, PA; [2]University of California, Riverside, Riverside, CA

Background: Arthritis is a risk factor for obesity; yet, environmental and individual factors that may predict arthritis-associated obesity risk are not well understood. Objectives: Using a nationally-representative sample, evaluate arthritis diagnosis as a risk factor for obesity, examine the role of environmental and individual factors in observed obesity rates, and assess whether functional limitations and joint pain contribute to the likelihood for obesity in those with arthritis. Methods: Data from the CDC Behavioral Risk Factor Surveillance System 2011 were used. Binary logistic regression models examined the impact of arthritis diagnosis and associated risk factors on likelihood for obesity in adults (n=474,722). The role of functional limitations and pain in predicting obesity were further examined in those with arthritis (n=160,182). Results: Adults with arthritis were almost twice as likely to be obese than adults without arthritis (Unadjusted OR=1.76; 95% CI=1.73, 1.79) with a prevalence of 35.9% in arthritis compared to 23.7%% in non-arthritic peers ($p < .00$). In addition to arthritis diagnosis, sociodemographic factors such as race/ethnicity and age and individual factors such as depression and physical inactivity were significantly associated with increased rates of obesity. Among adults with arthritis, those who reported limitations due to joint pain were more likely to be obese than those who did not (OR=1.27, 95% CI=1.23,1.30); those who were age 35 or older, Black or who reported depression or physical inactivity were also at increased risk for obesity ($p < .00$). Obesity risk was lower for those with no or mild pain associated with their diagnosis (OR=0.78, 95% CI=0.74, 0.83). Conclusion: Physical inactivity, depression, and functional limitations may enhance the risk of obesity in those with arthritis. Heightened efforts at early identification and intervention are warranted to prevent and treat obesity in this group, particularly in older adults or minority populations.

CORRESPONDING AUTHOR: E. Amy Janke, PhD, University of the Sciences, Philadelphia, PA, 19104; e.janke@usciences.edu

6:00 PM-7:00 PM B070

DEVELOPING AND PILOTING A NUTRITION AND EXERCISE AFTER-SCHOOL PROGRAM THAT INCLUDES FAMILIES

Blakely Brown, PhD[1], Kari Jo Harris, PhD, MPH[1], Daniel Heil, PhD[2], Carly Holman, MS[1], Solomon Harrar, PhD[1]

[1]University of Montana, Missoula, MT; [2]Montana State University, Bozeman, MT

Afterschool programs are a promising setting to improve children's exercise and healthy eating behaviors. Caregivers play an important role in supporting healthy exercise and nutrition, but caregivers have rarely been part of afterschool programs. This study developed and conducted an initial assessment of an afterschool obesity prevention program that had a high level of family involvement. Family members (n=15) took part in a focus group and interviews, which generated 133 relevant statements that were subjected to content analysis. For frequency and duration of activities, most caregivers said they could implement home activities 2 times a week if they were short (3-5 minutes) and a longer (1 hour) weekend activity. Suggestions for engaging caregivers included connecting family activities to what children are doing in the afterschool program and having children teach caregivers at home. Developing ways to incentivize children to do the home activities was critical and sending texts to motivate and remind caregivers was suggested. Most caregivers said they would regularly attend a family night to learn more about the program and participate in fun activities with their child.Next, 20 child/caregiver dyads were screened to identify children with personal or family risk factors for obesity to recruit to the pilot study that implemented a 2-week, 300 minute, 5 day per week, afterschool nutrition and exercise intervention that included family activities. 17 children and 11 caregivers were enrolled in the study. 41% of children enrolled were overweight or obese. Child participation rate was 82%. 8 families participated in family night, 5 families attended a nutrition session, and 18 home activity cards were returned. Caregivers gave high satisfaction ratings for the program.Following the 2-week intervention, significant improvements were observed in child knowledge about fat ($p=0.02$) and food intentions ($p=0.003$), child daily vigorous activity and energy expenditure ($p < 0.05$), and caregiver support of child's exercise and healthy food intake ($p=0.04$). As expected, due to the short duration of the pilot study, no significant changes were detected in BMI.

Findings suggest this intervention that involves families has potential to decrease risk for childhood obesity in an afterschool setting.

CORRESPONDING AUTHOR: Blakely Brown, PhD, University of Montana, Missoula, MT, 59812; blakely.brown@umontana.edu

6:00 PM-7:00 PM B071

DISTRESS TOLERANCE AND BARIATRIC SURGERY OUTCOMES

Afton M. Koall, PhD[1], Karen B. Grothe, PhD[1], Susan M. Himes, PhD[2], Leslie A. Sim, PhD[1], Matthew M. Clark, PhD[1], Karen Graszer, MA[1], Maria Collazzo-Clavell, MD[1]

[1]Mayo Clinic, Rochester, MN; [2]Brown University, Providence, RI

Background: Low distress tolerance, or the inability to handle negative emotional states, may contribute to weight management difficulties. Limited research has documented the impact of an inability to tolerate distress on eating and weight; however, it is unknown how low distress tolerance might influence patient outcomes after undergoing bariatric surgery. One potential correlate that may impact long term outcomes is eating self-efficacy. The present study examined the relationship between distress tolerance, eating self-efficacy, and weight loss outcomes and post-surgical hospitalizations in patients undergoing Roux-en-Y gastric bypass surgery.Methods: Two hundred seventy three obese patients were included (mean BMI = 44.8, mean age = 48.0, 97.4% Caucasian, 78.4% female). Participants' level of distress tolerance and eating self-efficacy was assessed using the Distress Tolerance Scale and the Weight Efficacy Lifestyle Questionnaire at pre-surgical psychological evaluations. Post-surgery weights were collected on date of surgery and at endocrinology follow-up appointments.Results: Eating self-efficacy was significantly related to level of distress tolerance ($p < .001$) pre-bariatric surgery. No significant relationships between the distress tolerance subscales or eating self-efficacy and percent weight loss at 6-moths, 1-year, or 2 years post-surgery emerged. Additionally, no relationships between distress tolerance scores or eating self-efficacy and post-surgery hospital admissions were found.Conclusions: These findings are consistent with the broader bariatric surgery literature which has shown that the biological impact of surgery on weight often overshadows many psychological variables in the early postoperative period. Eating self-efficacy is a predictor of long term behavior change, and its relationship to distress tolerance suggests that more long term follow up of patients is warranted. Results indicate that the ability to tolerate distress does not necessarily hinder patient weight loss or lead to post-surgery complications requiring hospitalizations within the first two years after surgery.

CORRESPONDING AUTHOR: Afton M. Koall, PhD, Mayo Clinic, Rochester, MN, 55904; amkoball@gmail.com

6:00 PM-7:00 PM B072

DOES WEIGHT BIAS EXIST ON TWITTER?

Christine May, MA[1], Jessica Oleski, MA[2], Gin-Fei Olendzki, MS, MBA[3], Martinus M. Evans, MS[4], Jonathan M. Scully, B.A.[5], Sherry L. Pagoto, PhD[2], Stephanie Rodrigues, PhD[6]

[1]Case Western Reserve University, Cleveland Heights, OH; [2]University of Massachusetts Medical School, Worcester, MA; [3]Umass Medical School, Worcester, MA; [4]University of Massachusetts Medical School, Sturbridge, MA; [5]UMass Medical School Division of Preventative and Behavioral Medicine, Worcester, MA; [6]University of Massachusetts Medical School, Bloomington, IL

Research has shown that many healthcare and fitness professionals exhibit weight bias, a decreased respect toward people who are obese. Healthcare professionals and patients are appearing on Twitter which presents new ways for them to communicate as well as new opportunities for weight bias to be expressed. Many individuals who experience weight bias during in-person interactions may seek advice on Twitter to decrease the chances of experiencing weight bias. The present study investigated whether weight bias was conveyed by healthcare and fitness professionals toward individuals who are obese on Twitter. Four Twitter profiles were created and portrayed patients with type 2 diabetes who were interested in losing weight (two were described as obese and two described as lean). Each of the profiles followed 60 nutrition, fitness, and healthcare professionals who noted an interest in obesity in their Twitter profiles. Weight bias was hypothesized to exist if healthcare professionals showed a lesser tendency to follow obese patients back relative to lean patients. The professionals' rate of follow backs and interactions with each of the four profiles over two weeks was evaluated and compared by weight class. Overall, rates of follow backs (9%) and interactions (10%) between professionals and these patient followers were low, with no differences by weight class. Findings suggest that patients joining Twitter to seek help and support managing their weight may not be likely to gain attention from relevant healthcare professionals regardless of their weight.

CORRESPONDING AUTHOR: Christine May, MA, Case Western Reserve University, Cleveland Heights, OH, 44118; christinemay811@gmail.com

6:00 PM-7:00 PM B073

EFFECT OF BMI ON PHYSICAL AND PSYCHOLOGICAL WELLBEING: THE MODERATING ROLE OF RACE

Jessica McCauley, B.S., Nao Hagiwara, PhD

Virginia Commonwealth University, Richmond, VA

Effect of BMI on Physical and Psychological Wellbeing: The Moderating Role of Race

Research has shown that White women tend to suffer from lower body esteem and higher social physique anxiety as compared to Black women, due to distinctive cultural beauty standards. However, few studies have systematically investigated how race and BMI simultaneously influence health outcomes. This study aimed to examine the potential moderating effect of race on the association between BMI and body esteem, social physique anxiety, and physical and mental health outcomes.

Participants were 86 White and 46 Black female college students, who completed an online questionnaire that included measures of body esteem, social physique anxiety, and health-related quality of life (HRQOL). They were also asked to report their height and weight, which was computed into BMI.

Race and BMI were each independently associated with body-esteem and social physique anxiety. Specifically, White women had significantly lower body-esteem and significantly higher social physique anxiety as compared to Black women and individuals with higher BMI had significantly lower body-esteem and significantly higher social physique anxiety as compared to individuals with lower BMI. However, the nature of the association between BMI and these two constructs did not differ between White and Black Women. On the other hand, race moderated the association between BMI and all HRQOL subscales associated with mental health outcomes, such that higher BMI was associated with poorer mental health among Black women but not among White women. This relationship did not hold for subscales associated with physical health, except pain.

These findings suggest that the consequences of BMI may be more relevant to psychological wellbeing than physical wellbeing. Consistent with previous findings, when White and Black women have the same BMI, White women tend to have less positive self-perception than Black women. However, the present study provides new evidence that both White and Black women suffer from negative self-perception as BMI increases. Interestingly, Black women may experience greater negative mental health consequences due to higher BMI as compared to White women. This study highlights the importance of further examining how race and BMI interact to influence health outcomes.

CORRESPONDING AUTHOR: Jessica McCauley, B.S., Virginia Commonwealth University, Richmond, VA, 23284; mccauleyjm@vcu.edu

6:00 PM-7:00 PM B074

EFFECTIVENESS OF A SCHOOL-BASED INTERVENTION ON OBESITY: A NONRANDOMIZED CONTROLLED TRIAL

Xiaohui Li, MD, Jun Ma, PhD, Haijun Wang, PhD

Institute of Child and Adolescent Health, Peking University, Beijing, China, Peoples Rep

Background Childhood obesity has been a serious public health problem. An effective school-based physical activity (PA) intervention is still lacking in China.This study aimed to assess the effectiveness of a school-based physical activity intervention during 3 months on obesity and related health outcomes in school children.
Methods It was a non-randomized controlled trial. Altogether 921 children aged 7 to 15 years were recruited at baseline survey. Children in the intervention group (n=388) participated in a multi-component physical activity intervention during 3 months that included improvement of physical education class, extracurricular physical activities for overweight/obese students, physical activities at home, and health education lectures for students and parents. Children (n=533) in the control group did not receive any intervention.Results Participants had mean age of 10.4 years, mean body mass index (BMI) of 19.59 kg/m^2, and 36.8% of them were overweight or obese at baseline survey. The change in BMI in intervention group (reduction of 0.02±0.06 kg/m^2) was significantly different from that in control group (0.41±0.08 kg/m^2). The adjusted mean difference was -0.43 kg/m^2 (95%CI: -0.63 to -0.23 kg/m^2, $P < 0.001$). The change in overweight/obesity prevalence was also different between two groups (intervention: -2.3%, control: 1.7%; between-group difference, -4.0%). The adjusted OR was 0.83 (95%CI: 0.72 to 0.97, P=0.017). The effects on triceps, subscapular, abdominal skinfold thickness and fasting glucose were also significant in intervention group compared with control group (all $P < 0.05$).Conclusions The school-based, multi-component physical activity intervention significantly decreased overweight/obesity prevalence, levels of BMI, skinfold thickness and fasting glucose.

CORRESPONDING AUTHOR: Haijun Wang, PhD, Institute of Child and Adolescent Health, Peking University, Beijing, 100191; whjun1@bjmu.edu.cn

6:00 PM-7:00 PM B075

EFFECTIVENESS OF HEALTH PROMOTION FOR INDIVIDUALS WITH SEVERE OBESITY AND SERIOUS MENTAL ILLNESS

John A. Naslund, MPH[1], Kelly Aschbrenner, PhD[2], Emily A. Scherer, PhD[3], Rosemarie Wolfe, MS[4], Sarah I. Pratt, PhD[4], Stephen Bartels, MD, MS[3]

[1]Dartmouth College, Lebanon, NH; [2]Geisel School of Medicine at Dartmouth, Nashua, NH; [3]Geisel School of Medicine at Dartmouth, Lebanon, NH; [4]Geisel School of Medicine at Dartmouth, Concord, NH

Background:Persons with serious mental illness (SMI) experience rates of obesity nearly double observed rates within the general population including elevated prevalence of severe obesity (BMI ≥ 40 kg/m^2), contributing to significantly reduced life expectancy. Interventions promoting diet and exercise in people with SMI have demonstrated effectiveness in achieving weight loss, however the effects between BMI groups are not known. We examined the effect of the In SHAPE health promotion intervention on percent weight loss among participants with SMI who were severely obese compared with overweight (BMI 25 to < 30 kg/m^2), class I (BMI 30 to < 35 kg/m^2), and class II (BMI 35 to < 40 kg/m^2) obese participants.
Methods: We combined data from three trials of the 12-month In SHAPE intervention for individuals with SMI. In SHAPE consists of individual weekly meetings with a health coach, a fitness club membership, and nutrition education. The primary outcome was percent weight loss. Secondary outcomes were fitness, mental health, blood pressure and serum lipids, and program adherence.
Results: Participants (N=232) had a mean age of 44.06±11.14 years, were 52% female, mostly white (75%), and diagnosed with schizophrenia spectrum (52%) or mood (48%) disorders. At 12-months, the overall sample showed significant weight loss, but differences between BMI groups were not significant (severely obese, 2.57±7.98%; class II, 2.26±8.69%; class I 1.05±6.86%; overweight, 0.83±7.62%). One third of severely obese participants achieved clinically significant weight loss (≥5%), which was comparable across BMI groups. Fitness, mental health, and blood pressure and lipid outcomes were comparable between BMI groups. Severely obese participants did not differ from overweight or class I obesity participants in terms of program adherence, but showed significantly lower program adherence compared to class II obesity participants.
Conclusions: Severely obese individuals with SMI are as likely to benefit from participation in health promotion programs targeting weight loss when compared to individuals from lower BMI groups. These findings suggest that behavioral weight loss programs for people with SMI should include individuals with severe obesity given the elevated disease burden associated with obesity in this population.

CORRESPONDING AUTHOR: John A. Naslund, MPH, Dartmouth College, Lebanon, NH, 03766; john.a.naslund@dartmouth.edu

6:00 PM-7:00 PM B076

EFFECTS OF PSYCHOLOGICAL STRESS AND MINDFULNESS ON EXECUTIVE FUNCTION AND OBESITY RISK IN EARLY ADOLESCENCE

Hee sung Shin, DoctoralStudent[1], Eleanor Tate, DoctoralStudent[1], David Black, PhD[2], Mary Ann Pentz, PhD[3]

[1]USC, LOS ANGELES, CA; [2]University of Southern California Keck School of Medicine, LOS ANGELES, CA; [3]University of Southern California Keck School of Medicine, Los Angeles, CA

Background: Emerging research suggests that adolescents low on executive function (EF) proficiency may be at higher risk for obesity, perhaps due to greater challenges regulating physical activity or unhealthy food intake. EF skills are a set of psychological processes involved in regulating emotional and cognitive control. Mindfulness as a level of attention stationed on the present moment may be protective against EF difficulties by making children more aware self-regulation. In contrast, increased psychological stress could heighten EF problems by hindering opportunities for behavioral control. While prior research suggests that both low mindfulness and high stress are associated with EF difficulties, little is known about their interactive effects. Method: The sample consisted of 410 7th grade students. This cross-sectional study used self-report measures to assess perceived stress, dispositional mindfulness, obesity risk behaviors (sedentary behavior & high-calorie/low-nutrient (HCLN) food intake), and EF problems. Adjusting for child age and gender, linear regressions were conducted for EF with interaction terms between MAAS and PSS. Moderation was also examined by graphing regression lines for mindfulness and EF for high vs. low stress adolescents. Results: PSS scores were positively associated with EF difficulties (PSS $\beta = 0.19$, p < 0.001) and MAAS scores negatively associated with EF difficulties ($\beta = -0.64$, $p < 0.001$). EF difficulties were explained in part by the interaction between MAAS and PSS ($\beta = -0.07$, $p < .06$) suggesting that, for those low in mindfulness, highly stressed children showed greater EF difficulties than those lower in stress. EF difficulties were correlated with higher consumption of HCLN foods ($r = .19$, $p < 0.001$) and higher sedentary behavior ($r = .26$, $p < 0.001$). MAAS was significantly correlated with less HCLN food intake (r=-0.22, p < 0.001) and less sedentary behavior (r=0.26, p < 0.001), while PSS was significantly correlated with higher HCLN food intake (r=0.12, p < 0.05) and higher sedentary behavior (p=0.19, p=0.001). Conclusion: Mindful attention appears to be protective against EF difficulties when experiencing higher levels of stress in early adolescence. Given the relationship of EF to obesity-related behaviors, future obesity prevention research may consider enhancing mindfulness and reducing stress in adolescents.

CORRESPONDING AUTHOR: Hee sung Shin, DoctoralStudent, USC, LOS ANGELES, CA, 90032; heesungs@usc.edu

6:00 PM-7:00 PM B077

EVALUATING A PARENT WORKBOOK FOR CHILDHOOD OBESITY MANAGEMENT USING CLEAR COMMUNICATION STRATEGIES

Fabiana A. Brito, MPH[1], Jamie Zoellner, PhD, RD[2], Jennie Hill, PhD[2], Ramine Alexander, BS[2], Xiaolu Hou, BA[2], Bryan E. Price[3], Kathryn S. Plumb, R.N..B.S.N., M.Ed[4], Ruby Marshall, BSN[5], Paul Estabrooks, PhD[6]

[1]Virginia Tech, Christiansburg, VA; [2]Virginia Tech, Blacksburg, VA; [3]Virginia tech, Danville, VA; [4]Virginia Department of Health, Danville, VA; [5]Children's Healthcare Center, Danville, VA; [6]Virginia Tech / Carilion Clinic / Virginia Tech Carilion School of Medicine, Blacksburg, VA

When adapting evidence-based childhood obesity interventions for delivery by community personnel in areas that experience health disparities, it is critical to determine the degree to which written materials clearly and effectively communicate information. The purpose of this presentation is to describe the development of written materials for the iChoose program using a community-based participatory research approach. Phase 1 piloted a parent workbook with 26 families that were representative of the population in a health disparate region and 16 families provided feedback via survey and focus groups. Phase 2 included a community advisory board (CAB) evaluation (n=14) of a revised workbook (based on parent feedback) using the CDC clear communication index (CCI), readability tests and exploratory questions from the suitability assessment instrument (SAM). Phase 1 results indicated that parents were satisfied with the workbook (μ=9.6/10, SD=0.9) and found it to be helpful (μ=9.4/10, SD=1.4). Focus groups reinforced the quantitative ratings (i.e., the workbook accomplished objectives and was easy to understand). However, areas that needed improvement in format (e.g., more visual cues and separation of sections) and content (e.g., difficulty in understanding energy balance) were also highlighted. Following revisions based on the parent feedback, the CAB CCI ratings found the workbook had strong behavioral recommendations (94-100% across chapters) and was moderately successful in presenting main messages (59-67%) and reporting numbers (58-75%). The workbooks were rated as superior for layout and cultural appropriateness. Reading level was computed to be at the 5th grade level. Future directions include completing additional revisions based on CCI results and further testing with a second cohort of families.

CORRESPONDING AUTHOR: Fabiana A. Brito, MPH, Virginia Tech, Christiansburg, VA, 24073; fabiana@vt.edu

6:00 PM-7:00 PM B078

FACTOR STRUCTURE OF THE YALE-BROWN OBSESSIVE COMPULSIVE SCALE MODIFIED FOR BINGE EATING

Carolyn Mingione, M.A.[1], Sarah Whitton, PhD[2], Thomas J. Blom, M.S.[3], Susan McElroy, MD[3]

[1]University of Cincinnati, Ann Arbor, MI; [2]University of Cincinnati, Cincinnati, OH; [3]Lindner Center of HOPE, Mason, OH

Background: Binge Eating Disorder (BED) symptoms have many phenomenologically similar features to obsessions and compulsions characteristic of OCD. Despite the theoretical relevance of obsessions and compulsions to binge eating, no scales specifically assess binge eating related obsessions and compulsions (BE-OC). As such, the Yale-Brown Obsessive Compulsive Scale Modified for Binge Eating (YBOCS-BE) was developed by our research group to assess BE-OC. The subscales of the YBOCS-BE are intended to assess the factors of obsessions and compulsions; however, the factor structure of the scale has yet to be empirically explored. Thus, the current study sought to examine the factor structure of the YBOCS-BE. Method: Baseline data were analyzed for 211 treatment-seeking outpatients (89% female) who participated in 1 of 6 investigator initiated pharmacotherapy trials. Participants were diagnosed with current BED using the Structured Clinical Interview for DSM-IV-TR (SCID). Mean baseline BMI was 39 kg/m^2. The YBOCS-BE is a 10-item clinician administered scale used to assess obsessiveness of binge eating thoughts or urges and compulsiveness of binge eating behaviors. A common factor analysis using maximum likelihood extraction with an oblique rotation was performed to determine the factor structure of the Y-BOCS-BE. Cronbach's alpha was calculated to examine internal consistency. Results: Factor analysis revealed three factors: (1) time/distress (2) resistance/control and (3) interference. While factor 2 demonstrated adequate internal consistency ($\alpha = 0.72$), factors 1, 3, and the total score demonstrated only modest internal consistency ($\alpha = 0.54, 0.66$, and 0.62, respectively). Factors had moderate between-factor correlations ($r = 0.24$ to 0.44). Analyses using principal components revealed a similar factor structure, with the 3 factors explaining 56% of total variance. Conclusions: Contrary to expectations, BE-OC appear to cluster around similar behavioral and psychological characteristics rather than obsessions and compulsions. The three factor solution of the YBOCS-BE suggests that the core characteristics of BE-OC closely parallel symptoms of of BED, namely, distress, lack of control, and functional impairment, thus providing theoretical support for this solution. Additional psychometric properties of the scale need to be examined to provide a basis for its empirical and clinical use.

CORRESPONDING AUTHOR: Carolyn Mingione, M.A., University of Cincinnati, Ann Arbor, MI, 48105; mingiocn@mail.uc.edu

6:00 PM-7:00 PM B079

FEASIBILITY OF A THEORY DRIVEN, TAILORED, AND AUTOMATED MESSAGING SYSTEM FOR WEIGHT LOSS

Angela Pfammatter, PhD[1], Sara A. Hoffman, B.A.[2], Christine Pellegrini, PhD[2], Miriam Davidson, MSCS[2], Claire E. Maby, B.A.[1], Elyse R. Daly, B.A.[2], Bonnie Spring, PhD, ABPP[2]

[1]Northwestern University, Chicago, IL; [2]Northwestern University Feinberg School of Medicine, Chicago, IL

An automated and tailored smartphone message system was created for Opt-IN, a multi-component weight loss trial to optimize intervention . The objective was to build text messages targeting supportive accountability and facilitation, two constructs of social cognitive theory, while being effective and engaging. Supportive accountability texts focus on the relationship between participant and coach to increase adherence; facilitation texts address the process of guiding an individual toward strategies and environmental cues to impact behavior change. Our theoretical model posits that these types of messages will synergize to increase self-efficacy, and thereby self-regulation, ultimately leading to weight loss. An 8 week pilot study was conducted to test feasibility, content of messages, and preferences for messaging in a weight loss intervention. Participants (n=8) selected timing and frequency of text messages, up to 3/day, every day. Results indicated preference to be sent an average of 1.8 texts/day on 4.3 days of the week and demonstrated significant decreases in weight from baseline (m=187.7(25.8)) to 8 week follow up (m=182.2(28.9), $p=.025$). However, the range of preferred frequency was vast: between 2-7 texts/ week, and 1-3 texts/day, with 2 participants expressing a desire for 3 texts every day. Based on these findings, the Opt-IN system was constructed to send at least 7 text messages a week to maintain a minimum dose, but allow users to choose timing and option of bonus texts. Messages sent are automated and tailored to individual self-monitoring records, decreasing manual sending burden and uses push notifications, decreasing costs in receiving messages. To date, 6,695 messages have been sent to 46 participants. Of those, 5780 (86%) have been opened. This messaging system has resulted in a tailored and automated intervention that has produced a high rate of engagement and may provide an improved model to deliver weight loss interventions.

CORRESPONDING AUTHOR: Angela Pfammatter, PhD, Northwestern University, Chicago, IL, 60611; angela.pfammatter@northwestern.edu

6:00 PM-7:00 PM B080

IS HISTORY REPEATING?: COMPARISON OF THE FUNCTIONAL LIMITATIONS OF OEF/OIF VETERANS TO GULF WAR VETERANS WITH CHRONIC FATIGUE

Lisa McAndrew, PhD[1], Radhika Pasupuleti, PhD[2], Helena Chandler, PhD[2], Jorge Serrador, PhD[2], Benjamin Natelson, MD[3], Karen Quigley, PhD[4], Gudrun Lange, PhD[2]

[1]Veterans Affairs, East Orange, NJ; [2]WRIISC Veterans Affairs, East Orange, NJ; [3]Beth Israel Medical Center, New York, NY; [4]Department of Veterans Affairs, Bedford Memorial Hospital, Bedford, MA

Background: After the first Gulf War, veterans reported medically unexplained physical symptoms, consistent with Chronic Fatigue Syndrome (CFS), that cause significant functional limitations. It is not known if OEF/OIF (Operation Enduring Freedom/Operation Iraqi Freedom) veterans suffer from similar medically unexplained symptoms or if these symptoms cause significant functional limitations. Methods: We compared OEF/OIF veterans with CFS to Gulf War veterans with CFS seen at a post-deployment VA clinic soon after their respective deployments. We compared self-report measures of functional status and physical symptoms across these two cohorts.Results: In this sample of OEF/OIF veterans seen at a VA specialty clinic, 17.6% meet criteria for CFS. Compared to Gulf War veterans with CFS, the OEF/OIF veterans with CFS in our sample demonstrated worse mental health function and similar physical health function. Conclusions: Our findings suggest that OEF/OIF veterans seeking treatment at a specialty VA clinic are experiencing high rates of CFS with associated reductions in health function. Post-deployment chronic fatigue is not unique to OEF/OIF veterans, yet remains an understudied problem.

CORRESPONDING AUTHOR: Lisa McAndrew, PhD, Veterans Affairs, East Orange, NJ, 08701; Lisa.mcandrew@va.gov

6:00 PM-7:00 PM B081

PREDICTORS OF MIGRAINES FOR PUBLIC SCHOOL TEACHERS

Jaime Chambers, MS[1], Briana Cobos, BA[1], Rachel Price, BA[2], Kelly Haskard Zolnierek, PhD[2], Krista Howard, PhD[2]

[1]Texas State University, Austin, TX; [2]Texas State University, San Marcos, TX

Background: Migraine is a disabling disease that impacts psychosocial and socio-economical aspects. While the causes of migraines are unknown, stress is reported as the most common perceived trigger. However, there is limited research examining migraines within specific vocations.Methods: 2,802 teachers from 46 public school districts in Texas participated in an occupational health survey. Teachers who indicated that they currently suffer from migraines were compared to teachers without migraine on a series of demographic, occupational and health variables.Results: The univariate comparisons indicated presence of migraines is more associated with younger age ($p < .001$) and females ($p < .001$). Controlling for age and gender, common triggers of migraines included higher levels of stress ($p < .001$), poorer quality of eating ($p=.01$), poorer quality of sleep ($p < .001$) and fewer hours slept ($p < .001$). Occupational comparisons showed that those with more years experience ($p=.021$), lower job satisfaction ($p=.001$), poorer workplace climate ($p=.021$) and less control over policies and procedures ($p=.002$) have higher rates of migraines. Both poorer mental ($p < .001$) and physical ($p < .001$) quality of life are related to higher incidence of migraines. The presence of mental disorders, such as somatization ($p < .001$), major depression ($p < .001$), panic ($p=.009$) and anxiety ($p < .001$) are significantly associated with migraine. A multivariate binary logistic regression was used to examine the key factors associated with migraines within the teacher sample. The results of this multivariate analysis identified that female gender ($p < .001$), younger age ($p=.006$), poor physical quality of life ($p < .001$), poor quality of sleep ($p=.002$), poor eating habits ($p=.044$), and the presence of somatization disorder ($p < .001$) or panic disorder ($p=.032$), were significantly related to migraine.Discussion: Migraines are debilitating and can interfere with normal daily functions, including work. The results of this study on public school teachers showed that both occupational and health factors are associated with migraine. By working to improve general health behaviors and overall quality of life, the incidence of migraines may be lowered.

CORRESPONDING AUTHOR: Jaime Chambers, MastersofPsychologicalResearch, Texas State University, Austin, TX, 78704; jc2107@txstate.edu

6:00 PM-7:00 PM B082

SOMATIZATION DISORDER IN PUBLIC SCHOOL TEACHERS: A COMPREHENSIVE OCCUPATIONAL HEALTH STUDY

Rachel Price, BA[1], Briana Cobos, BA[2], Jaime Chambers, MS[2], Kelly Haskard Zolnierek, PhD[1], Krista Howard, PhD[1]

[1]Texas State University, San Marcos, TX; [2]Texas State University, Austin, TX

Background: Somatization Disorder (SD) is a biopsychosocial-based, stress-induced disorder involving multiple physical ailments with no medical explanation. Research has shown that occupational stress can have detrimental effects on the psychological health of employees. The teaching profession is characterized as very stressful, making teachers especially susceptible to developing somatization disorder.Objective: This study examined somatization disorder in a K-12 teacher population. It was hypothesized that teachers with SD would report higher stress, and have a higher likelihood of presenting with physical and psychological health problems.Methods: Teachers from 46 Texas districts responded to a comprehensive online occupational health survey, and 2,988 teachers completed the Patient Health Questionnaire, which assesses for SD. Univariate analyses were conducted between teachers with and without SD to identify specific relationships with demographic variables, occupational variables, perceived stress, Axis I psychopathology, and physical health. A simultaneous binomial logistic regression was developed to identify the variables most strongly associated with the presence of SD in a teacher population.Results: Analyses demonstrated that female teachers are 3.3 times more likely to develop SD. Compared to Caucasians, African American teachers are 3.3 times and Hispanic teachers are 2.1 times more likely to develop SD. Furthermore, higher levels of stress, poorer physical quality of life, major depression, panic disorder and anxiety disorder were significantly associated with SD (all $p < .05$). Teachers with SD were more likely to report gastrointestinal, musculoskeletal and neurological disorders.Conclusion: Higher levels of stress and poorer physical and mental health are among the psychosocial and demographic factors associated with SD in public school teachers. Future research should focus on prevention of somatization disorders and stress management interventions within various occupational settings.

CORRESPONDING AUTHOR: Rachel Price, BachelorofArtsinPsychology, Texas State University, San Marcos, TX, 78666; rp1295@txstate.edu

6:00 PM-7:00 PM B083

THE IMPACT OF WEARING AN ACTIVITY MONITORING DEVICE ON PHYSICAL ACTIVITY AND SLEEP

Olga Crowley, PhD, Stan Kachnowski, MPA, CSEP, Laura Pugliese, MS

HITLAB, New York, NY

Introduction: The present study investigated the impact of wearing an activity monitoring device on physical activity and sleep levels in a sample of 565 full-time employees (235 males and 278 females aged 23-67) of a large pharmaceutical company. Study Design and Procedures: This is a prospective single-cohort study that involves 12 months of data collection (still ongoing; to be completed at the end of September 2014). Activity and sleep data are collected by the UP by Jawbone wristband, an activity measuring device that uses a precision motion sensor (MotionX technology) to passively track and quantify steps, and actigraphy monitoring to track sleep. Data Analysis and Results: We are reporting the data from the first 11 months of this study (excluding September 2013 as there were only 6 days). The data was analyzed using mixed models approach with study month as a predictor of steps and sleep averages (controlling for the number of the diseases, age, BMI, and sex. The program produced significant changes in steps and sleep ($F (9, 3296) = 27.56$, $p < .0001$; $F (9, 3126) = 12.40$, $p < .0001$), respectively). Table 1 describes study retention and the average number of steps and hours of sleep throughout the study period. Discussion: We found that the intervention produced significant increase in both physical activity levels and sleep. While suggestive, our findings are limited by the absence of the control group. In conclusion, our results suggest mobile monitoring applications hold great promise for health promotion and health behavior change.

Table 1. Monthly averages and retention for the steps and sleep data

Study Month	Steps				Sleep			
	Mean	SD	D	N	Mean	SD	D	N
September 2013	7663.10	3390.20		173	7.33	1.30		141
October 2013	7599.92	2881.30	-63.18	510	7.13	0.99	-0.2	510
November 2013	7378.62	2950.13	-221.3*	489	7.18	1.09	0.05*	477
December 2013	7046.36	3033.93	-332.26	446	7.33	1.07	0.15	425
January 2014	6753.12	2931.91	-293.24*	426	7.34	1.10	0.01	407
February 2014	7123.48	2901.88	370.36	397	7.43	1.09	0.09	375
March 2014	7297.27	2966.88	173.79	368	7.53	1.03	0.1	344
April 2014	7703.65	3012.75	406.38*	358	7.54	1.05	0.01	340
May 2014	8121.11	3146.21	417.46*	332	7.61	1.01	0.07	309
June 2014	8205.42	3382.13	84.31	294	7.52	1.02	-0.09*	270
July 2014	7942.82	3118.44	-262.6*	259	7.53	1.11	0.01	244

D for the each study month was computed by subtracting its mean value from the mean value for the previous month * The D between the two consecutive months was significant at the .002 level

CORRESPONDING AUTHOR: Olga Crowley, PhD, HITLAB, New York, NY, 10032; ocrowley@hitlab.org

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DEVELOPMENT OF A PROVIDER-DIRECTED PATIENT-CENTERED ADHERENCE TOOL

Caroline McKay, PhD[1], Heather Black, PhD[2]

[1]Merck & Co., Inc., North Wales, PA; [2]Merck & Co., Inc, North Wales, PA

To date, research has documented heterogeneity in content and quality of patient-provider medication adherence discussions, both within clinicians (between patients) and between clinicians themselves. Though tools have been introduced with the intention of improving conversations, a dearth exists of empirically-based tools formally used in ambulatory practice settings. This work aims to (1) document current state of knowledge regarding tools presently in use via literature review and (2) survey to guide the creation of a patient-centered, provider directed tool for subsequent testing in real world practice settings. Peer reviewed and gray literature published 2008-present were included in the search. Literature review results (n=26) detailed characteristics of tools and informed the 40-question online survey fielded to 1000 practicing physicians. Questions included key dimensions identified in the literature (content, specificity/intent, demonstrated improvement, implementation). Findings revealed a broad conceptualization of a “tool” without details regarding content or implementation. Only 7 studies assessed improvement in adherence or clinical indicators associated with the tool’s use. There was a scarcity of prescriptive, focused resources, with few tied to behavioral or clinical outcomes. Consistent with these findings, preliminary survey results indicated only 21% of respondents reported availability of a formalized guide or protocol, with 75% preferring one customized for medication adherence only, rather than for general adherence to treatment plan. The most commonly endorsed format types for a tool were an open-ended checklist of structured topics and an interactive tool embedded in an EHR. Significant differences between PCPs and specialists were found in time spent with patient discussing a new prescription. Specialists reported more time for the conversation ($p < .05$); however limited – most PCPs reported spending less than 3 minutes per patient on the topic of medication adherence. In conclusion, there is a need for a validated practice tool that accommodates provider needs in patient-centered care and improves the consistency and quality of conversations, decision-making and the provision of quality care related to medication adherence.

CORRESPONDING AUTHOR: Caroline McKay, PhD, Merck & Co., Inc., North Wales, PA, 19454; caroline.mckay@merck.com

6:00 PM-7:00 PM B085

DEVELOPMENT OF A TRAINING PROGRAM FOR PRE-VISIT PLANNING THROUGH VIRTUAL CARE

Diana Hall, MPH[1], Kathryn DeLaughter, MA[1], Mary Rocheleau, MA[1], Julie Volkman, PhD[2], Timothy Hogan, PhD[1], Tana Luger, PhD[1], Bridget Smith, PhD[3], Thomas Houston, MD, MPH[1]

[1]VA CHOIR, Bedford, MA; [2]Bryant University, Smithfield, RI; [3]VA, Hines, IL

Secure Messaging (SM) is a virtual care modality specifically mentioned by the Institute of Medicine as part of patient-centered continuous care. The Veterans Health Administration (VA) is aggressively adopting SM; however, most SM is reactive (clinicians awaiting patient messages), not proactive. Informed by the Promoting Action on Research Implementation in Health Services Framework, the objective of this hybrid type II implementation-effectiveness trial was to facilitate implementation of pre-visit planning using SM.

We developed and tested a training program as part of a larger multi-component implementation strategy to educate teams about proactive SM and pre-visit planning through SM. Needs assessment data collected from teams using a 5-point Likert scale revealed a strong preference for scenarios illustrating the role of pre-visit planning through SM (mean 3.18), SM templates (mean 3.17) to support uptake, as well as training guides and related educational materials about use of proactive SM among different stakeholders (mean 3.1). These resources and accompanying content were disseminated through a series of in-person team training sessions.

During the 11-month implementation period, 7 primary care teams completed the training program (39 total team members) including physicians (16), medical assistants (10), nurses (6), therapists/psychosocial workers (4), and others (3). Evaluation data collected using a 5-point Likert scale at the end of each session showed that participants found the trainings were supported by effective facilitators (mean 4.5) and accompanying resources (mean 4.2), met their expectations (mean 4.0), stimulated their learning (mean 3.9), and were relevant to their work (mean 3.9). Primary care teams are now implementing pre-visit SM. To date, 181 primary care patients have received pre-visit messages, and 40% have read those messages. Plans are underway to refine our training program for wider-spread dissemination across VA primary care settings. This work was funded by VA’s Quality Enhancement Research Initiative Program.

CORRESPONDING AUTHOR: Diana Hall, MPH, VA CHOIR, Bedford, MA, 01730; diana.hall4@va.gov

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DOES WORKING MODERATE THE RELATIONSHIP OF DEPRESSION AND COGNITIVE PERFORMANCE IN THOSE WITH M.S.?

Heather Becker, PhD[1], Alexa Stuifbergen, PhD, R.N.[1], Ashley M. Henneghan, MSN, BSN, RN, CHPN[2]

[1]The University of Texas at Austin, Austin, TX; [2]University of Texas at Austin, Austin, TX

Many individuals with multiple sclerosis (M.S.) report depression and/or cognitive concerns. Both can profoundly impact quality of life. We proposed that employment could buffer the relationship between depression and cognitive performance. Individuals with M.S. living in three Texas cities were recruited through physicians and M.S. societies into a study about cognitive functioning. The first 45 participants (of whom 71% reported relapsing-remitting M.S.) had an average age of 47 years, and 76% were non-Hispanic Whites. They were 91% female, and 54% had at least a Bachelors degree. Fifty-four percent were working full or part-time. The sample completed the Center for Epidemiologic Studies Depression Scale, Every Day Problems Test, California Verbal Learning Test, Brief Visuospatial Memory Test, Paced Auditory Serial Addition Test, Symbol Digit Modalities Test, and Controlled Oral Word Association Test.Working individuals had lower scores on the CESD measure of depressive symptoms than those not working ($p < .07$). Half of those not working scored in the depressed range versus 31% of employed individuals. CESD scores were modestly correlated with cognitive test scores (r values from .08 to .33). While the only statistically significant differences between those who were working and those who were not was on the Symbol Digit Modalities Test ($p < .01$), employment status moderated the relationship between depressive symptoms and scores on the Everyday Performance Test ($p < .06$), the California Verbal Learning Test ($p < .10$), and the 2-second and 3-second PASAT ($p < .08$ and $p < .02$). While there was a positive correlation between depressive symptoms and many cognitive tests for those who were unemployed, depressive symptoms and cognitive performance were generally not related among employed individuals. Employment can contribute to well being and should be considered when examining relationships between depression and cognitive performance among people with M.S.

CORRESPONDING AUTHOR: Heather Becker, PhD, The University of Texas at Austin, Austin, TX, 78701; heatherbecker@mail.utexas.edu

6:00 PM-7:00 PM B087

EFFECT OF MODEL OF CONSENT ON INTENTIONS TO DONATE TO A BIOBANK AMONG A DIVERSE SAMPLE OF WOMEN

Kimberly Kaphingst, ScD[1], Sarah Lyons, MS[2], Katherine Brown, MS[2], Hannah Perkins, MPP[3], Leslie Wolf, JD, MPH[4], Bettina Drake, PhD, MPH[2], Sarah Gehlert, PhD[5], James DuBois, PhD[2], Melody Goodman, PhD[2]

[1]University of Utah, Salt Lake City, UT; [2]Washington University School of Medicine, Saint Louis, MO; [3]Washington University in St Louis School of Medicine, St Louis, MO; [4]Georgia State University College of Law, Atlanta, GA; [5]George Warren Brown School of Social Work, Saint Louis, MO

Introduction: For biobanks to provide broad societal benefits, participation by individuals from diverse groups is needed. Various models of informed consent have been proposed for future research use of biobanked specimens, differing in level of donor control and amount of information received. Data are needed regarding how different models of consent might affect participation in biobanks among diverse populations. Methods: We are conducting a randomized experiment to examine the effect of consent model on intentions to donate a biospecimen for future research use among a diverse sample of women 35 years of age or older. Participants are assigned in a randomly determined order to review an informed consent form and supplemental informational brochures based on three models of consent: notice (participants are notified that their biospecimens may be used in future research); broad (participants give blanket permission for biospecimens to be used in future research); and study-specific (participants give consent for each future research study). After reviewing each brochure, participants are asked to indicate their intention to donate a biospecimen on a four-point Likert scale. We have conducted preliminary analyses on pilot data (N=44), comparing intentions to donate based on different consent models using McNemar's test. Results: Participants' mean age was 52 years; 59% were Black, 50% had a household income of less than $35,000, and 14% had limited health literacy. For the notice consent model, 79% of participants probably or definitely intended to participate, compared with 86% for the broad consent model and 95% for the study-specific consent model. Participants were significantly more likely to intend to donate with the study-specific consent model compared with the notice consent model ($p < 0.01$). After reviewing all materials, 70% of participants preferred the study-specific consent model. Discussion: The majority of participants intended to donate a biospecimen to a biobank for future research use based on all models of consent. However, intentions were stronger for the consent model that gave them the most control over their samples and information about future uses. Future analyses will examine whether race/ethnicity modifies this relationship.

CORRESPONDING AUTHOR: Kimberly Kaphingst, ScD, University of Utah, Salt Lake City, UT, 84112; kakaphingst@gmail.com

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GENDER DIFFERENCES ASSOCIATED WITH HEALTH BEHAVIORS AND RELATED BELIEFS AMONG COLLEGE STUDENTS

Dejan Magoc, PhD[1], Mihailo Miletic, M.A.[2]

[1]Stetson University, Deland, FL; [2]REGIONAL INSTITUTE OF SPORT AND SPORTS MEDICINE, Novi Sad, Serbia and Montenegro

Theoretical Framework: Social Cognitive Theory (SCT) has been one of the most widely used Behavioral Change Theories, and its constructs provide a useful framework for the prediction of healthy behaviors and the design of behavioral interventions. Overall, studies support the use of SCT constructs in predicting PA and healthy eating behaviors.

Objectives: To examine (a) general levels of physical activity (PA) and household food insecurity (HFI) in college students, (b) gender differences in PA and HFI beliefs, using SCT, and (c) relationships between PA and HFI related beliefs and behavior.

Methods: Besides various demographic questions, 323 predominantly white college students completed the International Physical Activity Questionnaire, the Exercise Goal-Setting Scale and the Exercise Planning and Scheduling Scale (Rovniak et al., 2000), the Family and Friend Support for Exercise Habits Scale (Sallis et al., 1987), the Self-Efficacy for Exercise Behavior Scale (Sallis et al., 1988), the Outcome Expectations and Expectancies Scale for PA (Steinhardt & Dishman, 1989), and the U.S. Household Food Security Survey (Blumberg et al., 1999).

Results: The results indicated significant gender differences in levels of PA with men being significantly more physically active than women on two PA variables: Vigorous Days and Vigorous Minutes. Men and women also significantly differed in their PA beliefs on two SCT variables with men having significantly greater Self-Efficacy for PA than women and greater Expectations that PA would enhance their level of accomplishment. Nearly 1/3 of students reported being food insecure with one in eight students reaching the highest level of food insecurity - "with hunger". The social support from family members has remained the strongest predictor of HFI in female students.

Conclusions: Although research has related SCT variables to levels of PA and healthy eating behaviors in several studies, as of our knowledge a limited research has investigated such relationships focusing on gender differences. The results of this study clearly demonstrated the existence of gender differences in levels of PA and HFI as well as related beliefs among college students, suggesting that focusing on gender differences, cognitive changes and behavioral related beliefs can be crucial.

CORRESPONDING AUTHOR: Dejan Magoc, PhD, Stetson University, Deland, FL, 32723; dmagoc@stetson.edu

6:00 PM-7:00 PM B089

HEALTH CONCERNS AND RISK BEHAVIORS OF AFRICAN AMERICAN YOUTH: A COMPARISON OF PARENTAL AND YOUTH PERSPECTIVES

Luke D. Mitzel, B.A., Peter A. Vanable, PhD, Charity A. Ntansah, B.S., Andrea G. Pennington, Marvi Najam

Syracuse University, Syracuse, NY

African American youth experience higher rates of health problems relative to national averages. To inform efforts to reduce health disparities among African American youth, we sought to characterize the perceived health concerns of African American youth based on the perspectives of mothers and their children in the domains of sexual health, mental health, and substance abuse. We also examined the association of youth health behaviors to parental concerns about their child's health and parents' willingness to discuss sexual health with their child. Participants were 298 African American mothers and their sons and daughters (ages 11-17) recruited for participation in a health promotion study. Mothers were more concerned than their children were about sexual ($t = 3.54$, $p < 0.01$) and mental ($t = 4.96$, $p < 0.01$) health. Further, parental concerns were directly associated with child self-reports of health behaviors and mental health. Parental concerns regarding their child's sexual health were significantly associated with recent youth engagement in oral ($t = 4.32$, $p < 0.01$) and vaginal ($t = 5.91$, $p < 0.01$) sex. Additionally, parental concern regarding their child's mental health and substance abuse were associated with their child's depression ($r = 0.17$, $p < 0.01$) and substance abuse risk ($r = 0.19$, $p < 0.01$) scores. Finally, parental concern about sexual health, mental health, and substance use was associated with more frequent conversations about sexual health between mother and child ($r = 0.39$, 0.15, and 0.21, respectively, p's < 0.01). Overall, parents express greater concerns about sexual and mental health than did their children. Fortunately, parents' concerns correspond with youth self-reports of risk behavior and parents' willingness to discuss sexual health with their child. Thus, parents are often aware of youth risk behavior and willing to take steps to address the topic with their child. Parent-based interventions may offer a promising approach to reducing health disparities among African American youth.

CORRESPONDING AUTHOR: Luke D. Mitzel, B.A., Syracuse University, Syracuse, NY, 13244; ldmitzel@syr.edu

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HEALTH LITERACY AND HEALTH INFORMATION SEEKING AMONG HAITIAN IMMIGRANTS SEEN IN PRIMARY CARE

Kathleen Isaac, BA[1], Jennifer Hay, PhD[2], Emily C. Zabor, MS[2], Julie Ruckel Kumar, MPH[2], Margaret m. Kemeny, MD[3], Erica Lubetkin, MD, MPH[4]

[1]City College of New York, New York, NY; [2]Memorial Sloan Kettering Cancer Center, New York, NY; [3]Queens Cancer Center, Queens Hospital Center, Jamaica, NY; [4]Community Health and Social Medicine, New York, NY

Little is known about health literacy (the ability to read and interpret health information) in Haitians, even though Haitian immigrants comprise one of the fastest growing Caribbean subgroups in the U.S. Haitian-Creole is largely a spoken language, so immigrants may be dependent on the oral tradition to obtain health-related information; a potential barrier for this group, as health information tends to be written. We assessed health literacy and health information seeking preferences among Haitian primary care patients in a New York City public hospital setting. We hypothesized that: 1. Haitians who report looking for health and medical topics and cancer information on the Internet would have higher health literacy scores. 2. Health literacy scores for Haitians who report looking for information from oral forms of communication would be lower than those who report looking for written sources of information. Participants (N=85) completed a 20-minute survey in English or Haitian-Creole. Health Literacy was assessed using the 3-item Brief Health Literacy Screener and items about health information seeking were obtained from the 2007 HINTS Survey. Participants who reported ever going online to access the Internet or World Wide Web had higher health literacy than participants who did not (p=0.001). Scores of health literacy tended to be highest for participants reporting first looking for information through the Internet, and lowest for participants reporting going to radio and family, friend/coworker, but these differences were not significant (p=0.111). These findings provide further support for combining verbal and written information in order to improve patients' knowledge and recall of medical facts. Future research should explore the role of acculturation and English language acquisition in the health literacy of Haitian immigrants.

CORRESPONDING AUTHOR: Kathleen Isaac, BA, City College of New York, New York, NY, 10032; kisaac@gc.cuny.edu

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HUMAN SUBJECTS PROTECTION TRAINING WITH FIELD WORKERS IN COMMUNITY-ENGAGED RESEARCH

Jennifer Kue, PhD

The Ohio State University, Columbus, OH

Background: Ensuring that research staff are appropriately trained in the protection of human subjects is imperative in research. However, there is a lack of standardized training guidelines specific to field workers with little or no experience with research, specifically those with limited English proficiency. Traditional programs such as the Collaborative Institutional Training Initiative (CITI) or National Institutes of Health (NIH) online ethics trainings are too difficult and translation of online training programs into non-English languages are limited. Further, trainings are not written at an appropriate educational level for field workers, many of whom may be bilingual and bicultural but have limited formal education.Methods: Content from CITI training and other human subjects protection trainings were adapted to develop educational modules for field workers with limited English proficiency on this study. Seven modules were created, including a basic introduction to research, research ethics, protection of human subjects, informed consent, protecting privacy and confidentiality, solving unanticipated problems and reporting requirements in social and behavioral research, and study protocols and procedures. The training was approved by the university's Institutional Review Board.Results: Field workers went through a rigorous, day-long training where the educational modules were presented. The written materials were accompanied by a Power Point presentation, culturally relevant case-based scenarios, role-playing, and discussions. Field workers were given a written quiz at the end each module to evaluate knowledge of the content presented. The test was administered and graded by the Principal Investigator. All field workers have passed the written test.Conclusion: The educational modules provide an alternative to the protection of human subjects training mandated by universities and federal funders, especially for field workers with limited English proficiency and research experience. This human subjects protection training could be easily adapted for use in a wide variety of settings and with field workers from different cultural backgrounds.

CORRESPONDING AUTHOR: Jennifer Kue, PhD, The Ohio State University, Columbus, OH, 43210; kue.2@osu.edu

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INFLUENCE OF INTERNAL AND EXTERNAL MENTAL AND SOCIAL HEALTH INDICATORS ON ADOLESCENT'S EATING HABITS

Janette Wong, B.S, Enrique Ortega, PhD, MPH

California State University Dominguez Hills, Carson, CA

Introduction: The factors influencing adolescent eating behaviors need to be better understood in the face of eating behaviors which many times are not in line with current dietary guidelines. Interventionists need to study ever evolving and interacting influencing factors which can uncover more effective ways to change eating behaviors. This study investigated the additive effects of a number of internal and external mental and social health indicators on adolescent eating habits. We investigated gender differences among these associations. Methods: The sample consisted of 452 European high school adolescents (49% female), ages 15-19 years (mean age = 17.1 (S.D. = 1.2)), living in the northwest of Italy and in the northeast of Holland. Multiple linear regressions were used to explore the associations of among internalized problems (stress, depressive feelings, self-esteem, alienation), externalized problems (lying and disobedience, theft and vandalism, aggression) on poor eating habits. Age, and country of origin were used as covariates in the analysis. Analyses were separated by gender.Results: Results among males indicated that greater indications of internalized problems such as stress ($\beta = .302$, $p < 0.001$), self-esteem ($\beta = .307$, $p < 0.05$) and alienation ($\beta = .330$, $p < 0.05$) were associated to poor eating habits. Among females, results showed that the internalized problems of depressive feelings ($\beta = .384$, $p < 0.001$) alienation ($\beta = .250$, $p < 0.05$) and the externalized problem of lying and disobedience ($\beta = .321$, $p < 0.01$) were associated to poor eating habits.Conclusions: Findings indicated that only internalized problems seemed to associate with poor eating practices among males. For females both internalized and externalized problems were associated to poor eating practices. The results point out that internalized health problems and external behavioral problems influence adolescent's eating habits differently according to gender. Further investigations are needed to determine the actual need for gender specific tailored nutrition interventions, nonetheless this study has presented evidence for a distinct set of gender specific eating behavior factors.

CORRESPONDING AUTHOR: Janette Wong, B.S.inHealthScience, California State University Dominguez Hills, Carson, CA, 90745; janette_wong1990@yahoo.com

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ACUTE EFFECTS OF CONTEXT SAFETY IN EMOTIONAL DISCLOSURE TASK ON NEUROGENIC INFLAMMATION AND PAIN

Hans Linsenbardt, M.A., Mary Meagher, PhD

Texas A&M University, College Station, TX

How safe one feels in their environment can affect how engaged they are in a task. In the written emotional disclosure (WED) task, individuals write about either their most traumatic experience or a neutral experience for three 20 minute sessions. These negative writing sessions have been shown to decrease indices of nociceptive and chronic pain. Theories underlying the efficacy of WED include being able to safely confront one's traumatic experience and engage in appropriate cognitive and emotional strategies. The level of safety individuals feel in their environment could therefore affect how engaged they can become in the mechanisms and therefore how their affect and stress levels can affect measures of inflammation and pain sensitivity.

The present study examined whether safety alters the effect of WED on pain perception by varying the warmth of the experimenter and assurances of confidentiality. Women writing about traumatic events in a "safe" environment (safe trauma group with warm experimenter who assured participants of confidentiality) showed reduced neurogenic inflammation compared to women writing in a neutral environment (neutral experimenter without assurance), and compared to women writing about positive life and neutral life events, $F(3, 43) = 4.024$, $p < .005$. The second part of the study included healthy undergraduate women randomly assigned to the safe trauma, neutral trauma, and neutral groups with a gender-matched experimenter. Data will be presented on the effect of safety on neurogenic inflammation and central and peripheral sensitization.

CORRESPONDING AUTHOR: Hans Linsenbardt, M.A., Texas A&M University, College Station, TX, 77843; hans.linsenbardt@tamu.edu

MERITORIOUS POSTER
6:00 PM-7:00 PM B094

AN INVESTIGATION OF COMMITTED ACTION IN CHRONIC PAIN AND ITS RELATION TO PATIENT FUNCTIONING

Robert Bailey, M.A.[1], Kevin E. Vowles, PhD[1], Gail Sowden, MA[2], Julie Ashworth, MD[2]

[1]University of New Mexico, Albuquerque, NM; [2]IMPACT Pain Service, Haywood Hospital, Burslem, Stoke-on-Trent, United Kingdom

Decades of research indicates that pain avoidance strategies are problematic because they narrow response options and isolate individuals from meaningful activities. Psychosocial interventions have therefore historically emphasized minimizing pain avoidance, and more recent approaches, such as Acceptance and Commitment Therapy (ACT), have highlighted increasing engagement in activities consistent with valued living as a key treatment target. In terms of salient processes in ACT, committed action is considered essential to the pursuit of a meaningful life and is assumed to enhance flexible responding. To date, however, only one study has examined the specific contribution of committed action to flexibility and other measures of functioning. The purpose of the present study was to replicate the initial findings and explore the degree to which the results would translate from tertiary to primary care. Data were examined from 149 chronic pain patients in the U.K. who completed the Committed Action Questionnaire (CAQ) and other measures of functioning. Almost all participants were White European (99%) and the majority were female (63%), had a high school education or less (86%), and were married or cohabitating with a partner (67%). The most common primary diagnoses were arthritis (27%) and fibromyalgia (24%). The suitability of the CAQ was explored through several steps. The results of item analyses indicated a normal distribution of responses with acceptable item-total correlations. Using all 24 items, the scale demonstrated good internal consistency (Cronbach’s α = .89). Correlation and regression analyses indicated that CAQ scores have significant relations with multiple facets of patient functioning, such as distress and disability. Our findings appear relevant to chronic pain treatment settings in several ways. For example, the CAQ appears to consistently capture committed action in multiple treatment settings. Furthermore, this study offers additional evidence indicating the importance of committed action in treating pain, particularly in the context of patient functioning. This final point is especially significant given the empirical support for ACT, where committed action is purported to be one of the central processes that contribute positive health outcomes.

CORRESPONDING AUTHOR: Robert Bailey, M.A., University of New Mexico, Albuquerque, NM, 87131; rwbailey4@unm.edu

6:00 PM-7:00 PM B095

BASELINE AND DEXAMETHASONE-SUPPRESSED CORTISOL AND CONDITIONED PAIN MODULATION IN FEMALE TWINS

Kathryn M. Godfrey, M.S.[1], Eric Strachan, PhD[2], Leslie J. Crofford, MD[3], Dedra Buchwald, MD[2], Brian Poeschla, MD[2], Annemarie Succop, B.A.[2], Niloofar Afari, PhD[4]

[1]San Diego State University/University of California, San Diego Joint Doctoral Program in Clinical Psychology, La Jolla, CA; [2]University of Washington, Seattle, WA; [3]Vanderbilt University, Nashville, TN; [4]VA Center of Excellence for Stress and Mental Health and Department of Psychiatry, University of California, San Diego, La Jolla, CA

Hypothalamic-pituitary-adrenal axis dysregulation has been associated with chronic pain. Conditioned pain modulation paradigms such as diffuse noxious inhibitory control (DNIC) may inform mechanisms involved in stress, pain perception, and chronic pain risk. The aims of this study were to: a) examine the DNIC and cortisol relationship and b) explore genetic confounding in those associations. The 99 community-based female twin pairs had a mean age of 29 years; 75% were monozygotic (MZ). Salivary cortisol was measured across 7 days including baseline and dexamethasone (dex) suppressed periods. Temperature at a rating of 6 on a 0 to 10 pain scale (VAS6 temp) and DNIC response (and were assessed. Generalized estimating equations models adjusted for age found that higher morning cortisol levels during baseline and after .25 mg dex were associated with higher VAS6 temp (B’s = 0.64-0.72, p’s = 0.010-0.002). Lower diurnal variation in cortisol during baseline and lower cortisol levels after suppression were linked to higher DNIC response scores or less endogenous analgesia (B’s = -0.43 - -0.94, p’s = 0.046-0.001). All but one within-pair association were diminished, suggesting genetic confounding. Cortisol dysregulation at baseline and after suppression was associated with lower pain modulation and chronic pain risk. Elucidating the cortisol and pain modulation relationship could contribute to understanding, treating, and preventing the development of chronic pain conditions.

CORRESPONDING AUTHOR: Kathryn M. Godfrey, M.S., San Diego State University/University of California, San Diego Joint Doctoral Program in Clinical Psychology, La Jolla, CA, 92093; kmgodfrey@ucsd.edu

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CHRONIC DISEASE SELF-EFFICACY, PAIN, AND QUALITY OF LIFE IN STEM CELL TRANSPLANT PATIENTS

Madeline O'Sullivan, Tamara Somers, PhD, Francis Keefe, PhD, Hannah Fisher, B.S., Sara Edmond, Sarah Kelleher, PhD, Rebecca Shelby, PhD

Duke University Medical Center, Durham, NC

Hematopoietic stem cell transplantation (HSCT) is an increasingly common treatment for many cancers. HSCT outcomes have improved over time, however HSCT patients still experience difficult physical and psychological problems. While several studies have examined acute challenges following HSCT, there is limited information on how pain changes over time in HSCT patients and its relation to long-term well-being. Self-efficacy, or the belief in one’s self to achieve a goal, has been shown to be an important factor in determining quality of life in cancer patients. The current study examines relationships between self-efficacy for chronic disease management, pain over time, and quality of life. The study sample included 118 patients who had undergone HCST for various diseases (mean age 57; 75% autologous; 34% on disability). Patients completed self-report questionnaires prior to transplant, at discharge to home, and at 3 and 6 months post-transplant. Linear mixed modeling was used to examine the relationships between pain, self-efficacy, and quality of life. Overall levels of pain significantly declined over time (B= -0.08, SE=0.03, p=0.005), but patients who had clinically significant pain pre-transplant (≥3/10) continued to have elevated levels of pain post-transplant. Higher pre-transplant pain was significantly related to lower post-transplant self-efficacy (B=-0.46, SE=0.10, p < 0.001). Both pain and self-efficacy for chronic disease management were related to physical, emotional, and functional well-being such that higher levels of pain (B=-0.61 to -0.50, p < 0.05) and lower levels of self-efficacy (B=0.46 to 1.13, p < 0.001) were related to lower levels of well-being. These results suggest that patients’ self-efficacy for chronic disease management throughout treatment may be an important factor in understanding how pain affects physical, emotional, and functional well-being in the months following transplant. These findings emphasize the importance of addressing patients’ beliefs about their treatment and abilities to manage their disease, as this may be related to their overall quality of life.

CORRESPONDING AUTHOR: Madeline O'Sullivan, Duke University Medical Center, Durham, NC, 27705; maddieosul@gmail.com

MERITORIOUS POSTER
6:00 PM-7:00 PM B097

EFFECT OF PERCEIVED STRESS LEVELS ON TEMPORAL SUMMATION OF SECOND PAIN

Dokyoung You, MS, Hans Linsenbardt, MA, Rachel Haney, BA, Mary Meagher, PhD

Texas A&M University, College Station, TX

Prior studies suggest that chronic stress sensitizes nociceptive afferents. Yet, the effect of chronic stress on central pain processing remains to be elucidated. Exposure to chronic stress can contribute to the onset or exacerbation of chronic pain disorders such as fibromyalgia and rheumatoid arthritis. Temporal summation of second pain (TSSP) due to repeated stimulation results in increased pain perceptions. This homosynaptic facilitation occurs at spinal and supra-spinal levels. The current study examined whether higher perceived stress levels would predict enhanced TSSP and persistent pain after TSSP in healthy young adults. Before pain testing, the Perceived Stress Scale was administered to assess perceived stress levels during the past month. Seventy-nine young adults (54% female) underwent three TSSP tests. Sensitivity tests with four pulses identified the peak temperatures to individually induce moderate pain (defined by a rating of 45±10 in a 0-100 visual analogue scale) before TSSP testing with ten pulses (0.3 Hz). We also assessed aftersensation (pain intensity at 30s after the last pulse) to evaluate decay of TSSP. To calculate summed TSSP pain intensity, area under the curve (AUC) was computed with average pain intensity at each pulse. Multiple regression analyses were conducted to predict absolute windup (AUC - 10 x the first response) as well as aftersensation while controlling for individual differences in peak temperature and number of sensitivity tests. Results indicated perceived stress levels were not associated with peak temperature, but did predict greater absolute windup (B=0.9, R^2=.16, p=.001) and higher aftersensation (B=0.4, R^2=.14, p=.036). Consequently, perceived stress levels were associated with enhanced TSSP (absolute windup) and persistent pain after TSSP (higher aftersensation) without altered nociceptive responses to suprathreshold pain. These results suggest that higher perceived stress levels may enhance central pain processing and therefore may be a risk factor for chronic pain disorders.

CORRESPONDING AUTHOR: Hans Linsenbardt, MA, Texas A&M University, College Station, TX, 77843; hans.linsenbardt@email.tamu.edu

6:00 PM-7:00 PM B098

EXAMINING VIRTUAL REALITY GAMING FOR PAIN-RELATED FEAR AND DISABILITY IN CHRONIC LOW BACK PAIN

Liza Nowlin, B.S., Dina Madi, Adam Guck, M.A., Madison Davis, Zina Trost, PhD

University of North Texas, Denton, TX

Although strong evidence exists for the application of virtual reality gaming (VRG) systems for acute pain relief, few studies have examined VRG as a modality to restore function or address maladaptive pain beliefs among individuals with chronic pain conditions. The current study examined the feasibility of a VRG platform to facilitate graded exposure to avoided physical activity among 30 individuals with chronic low back pain (CLBP; 15 male, 15 female; mean age = 43.3 yrs.) characterized by high disability and pain-related fear (assessed by the Tampa Scale of Kinesiophobia). Participants completed a progressively more difficult reaching task by means of either a standard exposure protocol or VRG platform and digital avatar customized through Microsoft Kinect. Participants provided ratings of expected pain, difficulty, and concern about injury prior to each movement comprising the exposure protocol. Pain (MPQ-SF) and mood (PANAS) were assessed prior to and following protocol completion. Following protocol completion, participants also completed a measure of treatment acceptability (Treatment Evaluation Inventory) and semi-structured interviews regarding the perceived utility of VRG exposure-based treatment. Repeated-measures analyses indicated a significant decrease in pain, harm, and activity appraisals across task performance in both standard and VRG exposure conditions. Further, while participants in both conditions reported an elevation in mood and pain; VRG participants reported significantly higher mood following protocol completion. Participants in both conditions reported high treatment acceptability (M = 36.66) and qualitative interviews reflected an interest in the development of a home or clinic-based VRG intervention for CLBP. Findings suggest that VRG exposure is effective in reducing pain-related movement appraisals among individuals with CLBP and elevated pain-related fear. Further, high fear CLBP participants express strong interest in access to such treatment. Specific participant feedback as well as potential applications of VRG exposure platforms for low back pain – related disability are discussed.

CORRESPONDING AUTHOR: Dina Madi, University of North Texas, Denton, TX, 76203; dinamadi@my.unt.edu

6:00 PM-7:00 PM B099

LONGITUDINAL PATTERNS OF PAIN IN PATIENTS WITH SYSTEMIC SCLEROSIS: BIOPSYCHOSOCIAL CONTRIBUTIONS

Erin L. Merz, PhD, MPH[1], Vanessa L. Malcarne, PhD[2], Scott C. Roesch, PhD[3], Deepthi K. Nair, M.S.[4], Gloria Salazar, MD[4], Shervin Assassi, MD[4], Maureen Mayes, MD, MPH[4]

[1]California State University, Dominguez Hills, Carson, CA; [2]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center; San Diego State University, San Diego, CA; [3]San Diego State University, San Diego, CA; [4]University of Texas Health Science Center at Houston, Houston, TX

Systemic Sclerosis (SSc) is a chronic autoimmune disease characterized by fibrosis of the skin and internal organs. Pain is a virtually ubiquitous problem for patients with SSc, but it has been understudied. The extant literature of cross-sectional samples has suggested that pain severity is not always relative to clinical variables and tissue damage, and few studies have evaluated SSc pain from a biopsychosocial framework. Because so little is known about the progression and concomitants of SSc pain, the current study sought to describe its course and biopsychosocial correlates during the early phase of the disease. A prospective cohort of patients with early disease SSc ($N = 316$) from the *G*enetics versus *EN*vironment *I*n Scleroderma *O*utcome *S*tudy (GENISOS) were followed for three years. Multilevel modeling was used to describe longitudinal changes in pain and the extent to which pain variance was explained by disease severity, mental health, perceived physical health, health worry, and social support. An iterative model building process was employed to test the study hypotheses. Overall, pain levels remained relatively stable, although small improvements were noted. When disease severity (represented as the more severe diffuse cutaneous disease type vs. the less severe limited cutaneous disease type) was added to the model, the more severe diffuse cutaneous classification was associated with worse pain. However, this relationship was reduced to nonsignificance after accounting for the psychosocial variables. Clinically relevant effects for mental health and social support emerged. Better emotional health was associated with lower levels of initial pain, although the trajectories of change in pain were similar, irrespective of mental health status. However, the level of social support impacted the extent of pain recovery, with the highest level of social support predicting the greatest improvements in pain. These data provide evidence that mental health and social support may be more important than disease severity in understanding SSc pain. Given that these risk factors are potentially modifiable, researchers and rheumatology health professionals may want to consider these factors in comprehensive pain models and pain management protocols in this population.

CORRESPONDING AUTHOR: Erin L. Merz, PhD, MPH, California State University, Dominguez Hills, Carson, CA, 90747; emerz@csudh.edu

6:00 PM-7:00 PM B100

MATERNAL CATASTROPHIZING AND RESPONSE TO CHILD PAIN BEHAVIOR: A LABORATORY-BASED OBSERVATIONAL STUDY

Shelby Langer, PhD[1], Joan Romano, PhD[1], Rona Levy, MSW, PhD, MPH[1], Heather Nielson, BS[2], Bobby Ou, BS[1], Christina Rauch[1], Lirra Zullo, BS[3], Jonathon Brown, PhD[1]

[1]University of Washington, Seattle, WA; [2]Seattle Children's Hospital, Seattle, WA; [3]University of Washington, Lakewood, WA

This study examined the relationship of maternal catastrophizing (CAT) to child pain behavior in a sample of 80 children with functional abdominal pain and their mothers. Mothers completed the parent version of the Pain Catastrophizing Scale and children participated in a safe and validated water ingestion procedure designed to induce acute abdominal discomfort, rating their pain before and after. Mothers were present for the task and parent-child interactions were videotaped. Recordings were edited into 30-sec segments and independently coded by two raters for presence of child pain behavior, maternal encouragement, maternal solicitousness and non-task conversation. Kappa reliabilities ranged from 0.80-0.95. Demographic characteristics were: M (SD) age = 9.6 (1.6), 66% female, 13% Hispanic and 70% Caucasian [children]; M (SD) age = 40.9 (8.1), 10% Hispanic and 81% Caucasian [mothers]. Child pain increased from pre-to-post water ingestion, $p < .001$. Factor analysis of coded maternal behaviors yielded two factors (eigenvalues > 1): attention and distraction. Maternal encouragement and solicitousness loaded onto the former and non-task conversation loaded onto the latter. Regression analysis was then used to predict child pain behavior from maternal CAT about child pain, and maternal attention and distraction (the rotated factor scores). CAT and distraction did not predict child pain behavior, but attention did (b = 2.02, $p < .001$); the more mothers directed their comments toward the drinking task, the more pain the child displayed. Moderated analyses yielded a CAT X distraction interaction, $p < .01$. Although distraction was unassociated with child pain behavior when CAT was high (b = .37, ns), it was inversely associated with child pain behavior when CAT was low (b = -1.97, $p < .01$). In short, attention was uniformly negative, but distraction was adaptive for mothers low in CAT, offering implications for the design of targeted cognitive-behavioral interventions.

CORRESPONDING AUTHOR: Shelby Langer, PhD, University of Washington, Seattle, WA, 98195; shelby11@uw.edu

6:00 PM-7:00 PM B101

MIGRAINE IN AMERICA 2012

Christopher Malone, BA[1], Amy Wachholtz, PhD, MDiv, MS[2], Amrita Bhowmick, MPH, MBA[3]

[1]Univ of Mass Medical School/Mass School of Prof Psych, Worcester, MA; [2]University of Massachusetts Medical School, Worcester, MA; [3]Health Union LLC, Philadelphia, PA

Objective: Migraine headaches are a prevalent and costly condition to both individuals and society resulting in lost productivity and impaired social relationships in addition to debilitating symptoms such as head pain and sensory sensitivity. The present study sought to further characterize the treatment patterns, disorder characteristics, and medical and disability profile of the migraine suffering population.Methods: An online survey was presented by a migraine specific community website between May 15th and June 15th 2012. The survey was advertised on Migraine.com, social networks, and search engines.Results: The survey was started by 2,907 individuals and of those 2,735 met the inclusion criteria of the study. The sample was 92.8% female and 75.9% had experienced their migraine symptoms for longer than 10 years. Participants who reported a higher frequency of migraine symptoms were found to have tended to report more negative personal impacts due to migraines and were also found to tend to report a greater number of comorbid physical and mental health disorders. The most commonly reported comorbid conditions were depression (63.8%), anxiety (60.4%), and chronic pain (39.5%). The majority of participants rated their migraine treatment satisfaction as 'neutral' or lower (65.9%).Conclusion: The results of this study imply that migraineurs who suffer more frequent migraine symptoms may suffer more from both the biological impact of migraines as well as the negative social impact of migraines. Further, the participants who reported more frequent migraine symptoms were also found to have reported a greater number of comorbid medical conditions. The findings of this study suggest that there may be a relationship between high levels of stress correlated with migraine headaches and the development of additional medical comorbidities. When viewed in light of the migraineurs' low treatment satisfaction it is clear that migraine treatment providers need to address the entire spectrum of bio-psycho-social issues related to migraine headaches.

CORRESPONDING AUTHOR: Christopher Malone, BA, Univ of Mass Medical School/Mass School of Prof Psych, Worcester, MA, 01655; christopher.malone@umassmed.edu

6:00 PM-7:00 PM B102

PAIN MANAGEMENT VALUES IN CAREGIVERS OF PATIENTS WITH HEMATOLOGY/ONCOLOGY CONDITIONS

Sara N. Edmond, M.A.[1], Cynthia Karlson, PhD[2], Danielle Buckingham[2], Andrea M. Laikin, B.A, B.S[3], Jennifer V. Schurman, PhD, ABPP[4]

[1]University of Mississippi Medical Center / G.V. (Sonny) Montgomery VAMC, Jackson, MS; [2]University of Mississippi Medical Center, Jackson, MS; [3]Jackson State University, Jackson, MS; [4]Children's Mercy Kansas City, Kansas City, MO

Children with hematology/oncology conditions often endure pain during blood draws and IV needle procedures. Aversive experiences with medical procedures can generalize to other medical procedures and may lead to anxious, avoidant, and aggressive behaviors, as well as poorer adherence to medical regimens. Understanding caregiver knowledge regarding pain management and their beliefs about the utility of pain prevention may be important in efforts to implement evidence-based techniques for pain management within this population. To this end, caregivers of children who had experienced a needle procedure during the past year were recruited from an outpatient pediatric hematology/oncology clinic. Caregivers completed a survey regarding knowledge, beliefs, perceived barriers and value of pain management strategies. Survey respondents (N=200) were predominantly female (85%), black (64%), and had a spouse/partner (60%); 36% had a bachelor's degree or higher. Patients were predominantly male (68%) and, on average, 8.3 years old (SD=5.5). Patient diagnoses included sickle cell disease (32%), cancer (45%), or another hematological condition (23%). Commonly used pain management strategies included holding the child (53%), distraction (50%) and numbing topical cream (45%). Most caregivers (89%) agreed it was better to get blood draws and needle procedures over with quickly, but 91% agreed that it was important to lessen pain during these procedures. Over half (58%) believed there is no lasting negative effects from needle procedures and 22% reported the only effective pain management strategy was medication. Women were more willing to use pain prevention strategies (X^2=4.83, p=0.03). Non-white caregivers were more likely to say they did not have time to use pain management strategies (X^2=5.91, p=0.02). Results suggest that while most caregivers value pain management, only about half utilize effective strategies during needle procedures. Demographic differences in pain management beliefs and values may exist, emphasizing the importance of considering social and cultural factors when working with individual families regarding pain management or implementing more effective and culturally-competent pain management interventions at the system level.

CORRESPONDING AUTHOR: Sara N. Edmond, M.A., University of Mississippi Medical Center / G.V. (Sonny) Montgomery VAMC, Jackson, MS, 39206; sara.edmond@duke.edu

6:00 PM-7:00 PM B103

DEVELOPMENT OF A SMARTPHONE APP TO PROMOTE ACTIVE TRAVEL TO A LARGE UNIVERSITY CAMPUS

Bopp Melissa, PhD[1], Dangaia Sims, M.A.[2], Joanna Colgan, BA[3], Stephen A. Matthews, PhD[4], Liza Rovniak, PhD, MPH[5], Erika Poole, PhD[6]

[1]Pennsylvania State University, University Park, PA; [2]Penn State University, State College, PA; [3]Pennsylvania State University, West Chester, PA; [4]Penn State University, University Park, PA; [5]Penn State College of Medicine, Hershey, PA; [6]The Pennsylvania State University, University Park, PA

Active travel (AT) has been associated with a number of health benefits however rates of AT remain low in the USA. Using technology to targeting AT behavior at a population level allows for the widespread dissemination of behavior change messages. Limited evidence exists on an effective process for developing and tailoring apps for a specific population. Purpose: To describe the process of developing a smartphone app to promote AT among university students and employees. Methods: Formative research was conducted with students and employees using an online survey and focus groups. Focus groups (n=8 groups) were conducted to examine influences on AT and preferences for app features. Focus groups were recorded, coded and analyzed for themes. An online survey (n=1048) was conducted to examine current travel patterns and gain feedback on the possible app features. Descriptive statistics described the sample and trends. The app was developed through a collaborative process with the research team and a software development company with weekly design meetings and frequent beta testing. Results: The focus groups and surveys revealed that students' AT was influenced by time and costs. Employees indicated that time, distance from campus, and health concerns influenced AT. Among both employees and students the most frequently requested app features were: route planning (requested by 76.8% employees, 78.7% students), projected time for commute (74.9%, 71.8%), weather for commute time (72.3%, 61.1%), information on campus bike parking (51.8%, 57.1%) and motivational messages for AT (49.3%, 63.6%). The app was developed to include these features. App users can plan routes and are prompted with relevant information (estimated travel time, forecasted weather) for each trip. Trips are logged and individuals are encouraged with messages about their accomplishments (e.g., number of miles logged, money saved, pounds of carbon saved). An interactive bike parking map was developed showing bike racks on campus. Conclusion: The formative research process allowed for a better understanding of the AT behavior for campus members. Feedback from the formative research allowed for the developers and research team to build an app that addresses community preferences.

CORRESPONDING AUTHOR: Bopp Melissa, PhD, Pennsylvania State University, University Park, PA, 16802; mjb73@psu.edu

6:00 PM-7:00 PM B104

DISTINGUISHING EARLY TERMINATORS FROM MAINTAINERS AT A HEALTH AND WELLNESS FITNESS CENTER

Jennalee Wooldridge, MA[1], Stephanie A. Hooker, M.S.[1], Kaile Ross[1], Kevin Masters, PhD[1], Krista W. Ranby, PhD[2], James Hill, PhD[3]

[1]University of Colorado Denver, Denver, CO; [2]University of Colorado Denver, Denver, Colorado 80214, CO; [3]University of Colorado Denver, Aurora, CO

There is a lack of research examining predictors of fitness center membership retention, suggesting potential missed opportunities to improve physical activity participation rates. Identifying individuals at risk for early termination may be helpful in defining a target group in need of early intervention. We examined differences in attendance patterns and characteristics of members of a health and wellness fitness center (HWC) who terminated membership early (3 months or less) or later (between 4 and 12 months) and maintainers (did not terminate in the first 12 months). Members (*N* = 441; 74% female; *M* age = 42 years) completed surveys assessing life satisfaction, sleep, stress, and diet, and were evaluated for physical fitness and metabolic health by personal trainers at initiation of HWC membership. Participants also rated the importance of fitness related goals. Members' attendance patterns (number of visits) were tracked. Members who terminated early visited the HWC significantly more times in the first month (*M* = 18.89, SD = 13.05) than either later terminators (*M* = 7.85, *SD* = 4.73) or maintainers [*M* = 9.06, *SD* = 5.27; *F* (2, 520) = 16.94 *p* < .001]. Similarly, early terminators had a significantly higher average of monthly visits over the course of their membership (*M* = 16.48, *SD* = 13.05), than either later (*M* = 7.85, SD = 4.73) or maintainers [*M* = 9.06, SD = 5.27; *F* (2, 4360 = 33.43, *p* < .001]. Early terminators also reported significantly lower levels of life satisfaction (*M* = 53.11, *SD* = 16.72) than either later terminators (*M* = 67.43, *SD* = 15.27), or maintainers [*M* = 69.72, *SD* = 15.24; *F* (2, 436) = 5.73, *p* < .01]. All three member groups were similar in terms of sleep, stress, diet, physical fitness, metabolic health, and fitness goals. These results suggest that early terminators may have greater initial motivation to exercise but have difficulty maintaining a demanding exercise routine. Additionally, early terminators may have lower life satisfaction. Helping members to set realistic goals for frequency of HWC attendance as well as finding ways to improve their quality of life may improve membership retention rates and maintenance of physical activity by extension.

CORRESPONDING AUTHOR: Jennalee Wooldridge, MA, University of Colorado Denver, Denver, CO, 80203; jennalee.wooldridge@ucdenver.edu

6:00 PM-7:00 PM B105

DOES ENCOURAGING EXERCISE IMPROVE EXERCISE RATES DURING A QUIT ATTEMPT: A BAYESIAN ANALYSIS

Aaron K. Haslam, M.A.[1], Joshua C. Gottlieb, M.A.[1], Michael A. Sustaíta, B.A[1], Noreen Watson, M.A.[2], Gabriella Grimaldo, B.S.[1], Muqaddas Sarwar, B.A[1], Hunter King[1], Charlene Key, PhD[2], Lee M. Cohen, PhD[1]

[1]Texas Tech University, Lubbock, TX; [2]Texas Tech University,, Lubbock, TX

Some smoking cessation programs have attempted to implement physical activity (PA) as an adjunct to traditional smoking cessation interventions, but have failed to show reliable improvements in cessation rates when compared to traditional groups (Ussher, et al. 2012). One possible explanation for this is that PA adherence does not increase as a result of the intervention. The purpose of the current study was to assess changes in PA levels across three groups in a smoking cessation trial: CBT, CBT + PA, CBT + confectionary chewing gum. It was hypothesized that the CBT + PA group would have higher rates of exercise when compared to the other groups. To assess this hypothesis, a Bayesian split plot ANOVA with uninformed priors was employed. Bayesian analyses provide the estimated probabilities of hypothesis being tested given the data. Session IPAQ MET scores were nested within the participants, who were then nested within treatment arm. PA was measured using the International Physical Activity Questionnaire using the recommended MET calculation guidelines (IPAQ; Booth, 2000). Data were log transformed to account for non-normality and missing data were multiply imputed. Participants completed the IPAQ on all sessions they attended (minimum of 4 session and up to 10). The analyses/analysis indicated that there was a 29.8% and 51.6% chance that the CBT + PA was better than the CBT only and CBT + gum groups, respectively, at increasing levels of PA. Thus, the CBT + PA protocol was likely not effective at increasing PA in this trial. The analyses suggest that there is a 70.6% and a 64.9% chance that the participants exercised more during the week prior to the intervention than they did during the 10th and 5th weeks respectively in the exercise group, indicating that exercise decreased over time. Future interventions need to incorporate more effective behavioral strategies to increase and maintain PA.

CORRESPONDING AUTHOR: Aaron K. Haslam, M.A., Texas Tech University, Lubbock, TX, 79409; aaron.haslam@ttu.edu

6:00 PM-7:00 PM B106

DOSE-RESPONSE ASSOCIATION BETWEEN PHYSICAL ACTIVITY AND A1C: EXAMINING INTENSITY AND BOUT LENGTH

Jennifer L. Gay, PhD[1], David M. Buchner, MD, MPH[2]

[1]University of Georgia, Athens, GA; [2]University of Illinois at Urbana Champaign, Urbana, IL

Background: Higher amounts of moderate-to-vigorous intensity physical activity (MVPA) are associated with lower levels of insulin and glucose, particularly for bouts of MVPA of 10 or more minutes. Glycated hemoglobin (A1C) is now recommended for diagnosing type 2 diabetes mellitus risk (T2DM). However, the relationship between total physical activity or MVPA with A1C has not been well studied, particularly among adults at risk for T2DM.

Purpose: (1) to characterize the dose-response relationship between MVPA and total PA (light, moderate, and vigorous) with A1C in adults at low, moderate, and high risk of T2DM; (2) to compare the effects of short (1 to 9 minutes) versus long (10+ minutes) of MVPA on levels of A1C, and (3) to determine if the association between physical activity level and A1C is influenced by how physical activity is spread throughout the day. Methods: Participants aged 18 years and older in NHANES 2003-2004 and 2005-2006 waves (N=5,302) were included in the study. T2DM risk was classified according to age (<40 years; ≥40 years) and BMI (<30; ≥30). Physical activity was measured using an accelerometer worn for one week. The relationship between A1C levels and physical activity indicators (total PA, total MPVA, long bouts of MVPA, short bouts of MVPA) was assessed using OLS regression models accounting for the complex sampling framework of NHANES.Results: There was a dose-response relationship between A1C with total PA and MVPA such that there was a greater impact on A1C at lower doses of total PA or MVPA in the Moderate and High Risk groups. There were no significant associations for the Low Risk group. A1C was also reduced by having a greater proportion of PA as moderate-to-vigorous intensity. The association between MVPA and A1C was stronger when activity is in short bouts (<10 minutes) and when spread throughout the day.Conclusion: In adults at increased risk of T2DM, both long and short bouts of MVPA are associated with lower levels of A1C. MVPA may not need to be in bouts of 10 minutes or more for there to be an impact on A1C. Adults may be able to reduce risk of T2DM by engaging in shorter bouts of MVPA spread throughout the day. These findings may reframe how we promote activity in worksites, for leisure or transportation.

CORRESPONDING AUTHOR: Jennifer L. Gay, PhD, University of Georgia, Athens, GA, 30602; jlgay@uga.edu

6:00 PM-7:00 PM B107

EFFECTS OF TWO THEORY-BASED INTERVENTIONS ON PHYSICAL ACTIVITY AND FATIGUE AMONG POSTPARTUM MOTHERS

Emily L. Mailey, PhD

Kansas State University, Manhattan, KS

The transition to parenthood is associated with steep declines in physical activity (PA) and excessive fatigue. During the first year postpartum, mothers face numerous physical, emotional, and structural barriers to engaging in PA. Thus, effective theory-based PA interventions targeting women during the postpartum period are needed. The purpose of this study was to evaluate the effects of two intervention approaches on PA and fatigue among postpartum mothers. Participants (N=49) were women who had had a baby in the past year and were not currently active. They were randomly assigned to an efficacy-building intervention (EBI) or an autonomy-supportive intervention (ASI) condition. All participants attended three small group workshop sessions designed to promote PA by facilitating mastery experiences (EBI) or emphasizing choice and intrinsic motives (ASI). Both interventions aimed to help mothers alleviate key barriers and prioritize PA. All participants completed measures of PA (Actigraph accelerometer, Godin Leisure-Time Exercise Questionnaire) and fatigue (Fatigue Symptom Inventory) at baseline and immediately following the 2-month intervention. Results of a 2 (group) X 2 (time) repeated measured ANOVA indicated both self-reported PA [*F* (1,42) = 29.67, *p* < .001, η^2 = 0.41] and accelerometer-measured moderate/vigorous PA [*F* (1,40) = 7.01, *p*=.01, η^2 = 0.15] increased from pre- to post-intervention; effects did not differ between groups. Participants reported significant declines in general fatigue [*F* (1,42) = 19.21, *p* < .001, η^2 = 0.31] which were significantly associated with self-reported PA (r=-.40, p=.007). The results of this study suggest interventions based on social cognitive theory (EBI) and self-determination theory (ASI) may be effective for increasing PA among postpartum mothers. Furthermore, increases in PA were associated with reductions in fatigue in this population, which may have significant implications for new mothers' quality of life. Future research should explore these intervention approaches in larger, more diverse samples and assess key mediators of intervention effects on PA.

CORRESPONDING AUTHOR: Emily L. Mailey, PhD, Kansas State University, Manhattan, KS, 66506; emailey@ksu.edu

MERITORIOUS POSTER
6:00 PM-7:00 PM B108

EXERCISE AND DEPRESSION IN ADULTS WITH NEUROLOGICAL DISORDERS: SYSTEMATIC REVIEW AND META-ANALYSIS

Brynn Adamson, MS[1], Ipek Ensari, EdM[1], Robert Motl, PhD[2]

[1]University of Illinois Urbana-Champaign, Urbana, IL; [2]University of Illinois at Urbana-Champaign, Urbana, IL

Introduction: Depression and depressive symptoms are particularly common in adults with neurological disorders. Exercise has been an effective method of reducing depression and depressive symptoms in the general population. We undertook a meta-analysis to evaluate the overall effect of exercise interventions on depressive symptoms in adults with neurological disorders. Methods: We searched CINAHL, the Cochrane Register of Controlled Clinical Trials, EMBASE, ERIC, MEDLINE, PsycINFO, PubMed, and SPORTDiscus for randomized controlled trials conducted in adults diagnosed with a neurological disorder. We included studies which compared an exercise intervention group to a control group and used depression as an outcome measure. Twenty-six trials met our inclusion criteria. These trials represented 1,324 participants with 7 different neurological disorders. Depression measure data were extracted and effect sizes were computed for 23 trials. We estimated an overall effect size and conducted moderator analyses using Comprehensive Meta-Analysis, version 2.0. Results: The overall effect size was 0.28 (SE=0.07, CI=0.15-0.41, p=0.00) favoring a reduction in depression outcomes following an exercise intervention compared with control. We performed moderator analyses based on neurological disorder and meeting physical activity guidelines (PAGs). Studies completed with spinal cord injured participants had the greatest effect (ES=0.43) and those completed in participants suffering from traumatic brain injury had the smallest effect (ES=0.16). Of note, interventions that met PAGs yielded an overall effect of 0.38 compared with 0.19 for studies whose interventions did not meet PAGs. When relaxation control groups were excluded, the overall effect of exercise interventions that met PAGs increased to 0.49 compared with the interventions that did not meet PAGs (ES=0.20). Conclusions: This review provides evidence that exercise, particularly when meeting published PAGs, can improve depressive symptoms in adults with neurological disorders.

CORRESPONDING AUTHOR: Brynn Adamson, MS, University of Illinois Urbana-Champaign, Urbana, IL, 61810; bcadams2@illinois.edu

6:00 PM-7:00 PM B109

EXPLORING POTENTIAL RELATIONSHIPS BETWEEN CANNABIS USE AND EXERCISE BEHAVIOR

Arielle Gillman, BA, Kismet Cordova, BA, David Allen, PhD, Angela Bryan, PhD, Kent Hutchison, PhD, Tiffany Ito, PhD

University of Colorado Boulder, Boulder, CO

Policies regarding cannabis use are rapidly changing, yet public officials have limited access to scientific information that might inform the creation of these policies. Likewise, the public has almost no information that might inform personal decisions about whether or not to use cannabis and how to reduce the risks associated with use, particularly in terms of its impact on health, including exercise behavior. There are common anecdotal reports that cannabis decreases motivation, including motivation to exercise. On the other hand, there are also anecdotal reports that cannabis is used prior to athletic activity, potentially to enhance performance. While these conflicting perspectives exist, at this point the specific relationship between cannabis use and exercise behavior is unclear. In order to investigate this relationship, we examined associations between cannabis use and exercise self-reports in two separate samples of college students in Boulder, Colorado. Our first sample was from an online survey of 238 students (M age=19.51, SD 1.67, 50.8% female). In this sample, we found no significant associations between several self-reported cannabis use and exercise behavior measures, including the Godin Leisure-Time Exercise Questionnaire and other measures of aerobic exercise frequency (all p's>.59, controlling for alcohol use). Our second sample was from a longitudinal study of 95 students selected on the basis of their cannabis use (students began the study as frequent users, infrequent users, and nonusers; M age=20.31, SD .46, 46.8% female). In this sample, we found trends for negative associations between measures of exercise behavior and days of cannabis use at Year 3 of the study, controlling for baseline cannabis use and number of drinking days. For example, self-reported frequency of moderate exercise was negatively associated with number of days of cannabis use (b=-.6, t=-1.79, p=.075). Based on our results, the relationship between cannabis use and exercise behavior remains unclear, and future studies should examine these relationships using objective measures of exercise behavior. Given recent political, cultural, and legal trends and the growing acceptance of recreational cannabis use, it is important to develop a more nuanced understanding of the relationship between cannabis and exercise.

CORRESPONDING AUTHOR: Arielle Gillman, BA, University of Colorado Boulder, Boulder, CO, 80303; arielle.gillman@colorado.edu

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EXPLORING STAFF MOTIVATION FOR PROMOTING GIRLS PHYSICAL ACTIVITY IN AFTERSCHOOL PROGRAMS

Danae Dinkel, PhD[1], Jennifer Huberty, PhD[2]

[1]University of Nebraska at Omaha, Omaha, NE; [2]Arizona State University, Phoenix, AZ

Background: Afterschool program (ASP) staff are a key component to increasing PA in girls. However, staff are often not motivated to promote PA and little is known about staff's perception of girls' motivation for PA which may impact their belief in the need to promote PA to girls. Therefore, the purpose of this study was to: (1) explore staff's motivation for promoting PA and (2) explore staff's perceptions about girls' motivation for PA. Methods: Semi-structured interviews were conducted with staff from 7 community-based ASPs (n=43). Interview questions were guided by the Self-Determination Theory. Data were analyzed by trained coders using immersion/crystallization. Results: Less than half of staff reported they had the autonomy to decide the types of PA provided. However, most staff thought they could have input if they so desired. A majority of staff felt they could competently participate in at least one PA with girls and learned these activities from a variety of sources (e.g., childhood experiences, Internet). All staff stated they had a positive relationship with girls at the ASP ranging from "getting along" to a "strong" relationship. Staff's motivation for their personal PA participation was most often for extrinsic reasons (e.g., maintain weight).Less than half of staff thought girls were motivated to participate in PA for intrinsic reasons (e.g., enjoyment). Half of staff also reported they believed they had a positive impact on girls PA but only a third reported they participated in PA with girls. To motivate girls', staff reported using verbal persuasion or playing with them. Conclusion: About half of the staff appeared to have the autonomy, competence, and relatedness necessary to be intrinsically motivated to promote PA yet few reported consistently participating in PA. Information about girls PA motivation was inconclusive. More research is needed on how staff's perception of girls' and their own PA motivation, either intrinsic or extrinsic, impacts their efforts to promote PA to girls.

CORRESPONDING AUTHOR: Danae Dinkel, PhD, University of Nebraska at Omaha, Omaha, NE, 68182; dmdinkel@unomaha.edu

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FACTORS INFLUENCING PHYSICAL ACTIVITY PARTICIPATION IN TRAN STIBIAL AMPUTEES

Derek Crawford, M.S., M.Ed., Toby Hamilton, PhD, MPH, OTR/L, FAOTA, Carol Dionne, PT, DPT, PhD, OCS, CertMDT

University of Oklahoma Health Sciences Center, Oklahoma CIty, OK

Background: Lower limb amputation (LLA) results in significant participation restrictions in major life activities, including physical activity and leisure. Participating in significantly less physical activity/exercise (PA/Ex) than the healthy population, people with LLA are at a high risk for development of chronic health conditions. Physical therapists have the potential to facilitate the adoption of a healthy lifestyle in this population. However, the barriers and facilitators affecting PA/Ex participation need to be fully understood before interventions can be developed. Objectives: To qualitatively investigate the barriers and facilitators to PA/Ex participation in the LLA population and present theory for development of interventions aimed to increase participation. Design: Observational, qualitative research design following the Grounded Theory tradition. Methods: Semi-structured interviews were utilized to collect information rich data from nine men with trans-tibial lower limb amputations. Results: The participants report minimal body structure impairments, but still experience impairments in body functions. Activity limitations during both running and resistance exercises along with differences in pre-amputation and post-amputation PA/Ex participation were reported. The majority of participants report valuing PA/Ex benefits as they relate to prevention of chronic disease, but fail to recognize the potential benefits on function. An individual's motivation to participate can serve as both a facilitator and barrier to PA/Ex and having the opportunity to socialize during PA/Ex is important to these participants. The quality of the rehabilitation program has a direct influence on the long-term PA/Ex participation for these participants. Conclusions: People with LLA continue to experience body function impairments, activity limitations, and participation restrictions. Physical therapists can play a significant role in the adoption of a physically active lifestyle for people with LLA through both effective patient education and the implementation of comprehensive, patient-centered rehabilitation programs.

CORRESPONDING AUTHOR: Derek Crawford, M.S., M.Ed., University of Oklahoma Health Sciences Center, Oklahoma CIty, OK, 73170; derek-crawford@ouhsc.edu

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FATIGUE AND PHYSICAL ACTIVITY: POTENTIAL MODIFIABLE CONTRIBUTORS TO PARENTING SENSE OF COMPETENCE

Christina R. Studts, PhD, LCSW, Nathalie C. Astudillo, MPH, Brigid K. Cecil, MPH, Robin A. Thompson, MPH

Univeristy of Kentucky College of Public Health, Lexington, KY

BACKGROUND: Parenting sense of competence (PSC) is associated with positive parent-child interactions, high levels of parental warmth and responsiveness, and parental involvement with and monitoring of adolescents. These protective factors reduce the likelihood of child disruptive behavior problems and their known negative outcomes, including adolescent drug use, school failure, and poor quality of life. Evidence-based behavioral parent training interventions improve PSC and prevent long-term negative consequences by training parents to use effective positive parenting strategies. PSC is often a targeted outcome in studies testing the efficacy and effectiveness of these interventions. However, while inadequate knowledge and negative parenting behaviors are associated with low PSC, other modifiable contributing factors may exist. We hypothesized that fatigue and physical activity are significantly associated with PSC among parents of young children. METHOD: Parents (N=131) of preschool-aged children attending a diverse university-based pediatric primary care clinic participated in a screening study of disruptive behavior disorders. Participants completed a sociodemographic questionnaire and a battery of reliable and valid instruments, including measures of child disruptive behavior disorders, parent fatigue, and parent physical activity level. PSC was measured with the 16-item Parenting Sense of Competence Scale. RESULTS: Bivariate analyses demonstrated significant associations between PSC and a positive child screen for a disruptive behavior disorder ($p < .01$), PSC and fatigue (r=–0.30, $p < .01$), and PSC and physical activity category ($p < .001$). Separate multiple linear regression analyses revealed significant independent effects of fatigue (β=–0.25, $p < .01$) and physical activity category (βs=0.32 and 0.44, $p<.01$) on PSC, controlling for the effects of disruptive behavior disorders (β=–0.23, $p < .01$ in both models). CONCLUSIONS: The negative effect of fatigue and positive effect of physical activity on PSC suggest potential complementary targets for intervention within the scope of behavioral parent training interventions. Decreasing parent fatigue and increasing parent physical activity levels may contribute to improved parenting and associated outcomes.

CORRESPONDING AUTHOR: Christina R. Studts, PhD, LCSW, Univeristy of Kentucky College of Public Health, Lexington, KY, 40506-0059; tina.studts@uky.edu

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FEASIBILITY AND ACCEPTABILITY OF LEVERAGING ONLINE FANTASY SPORTS TO PROMOTE PHYSICAL ACTIVITY

Arlen C. Moller, PhD[1], Pooja Agarwal, BS[1], Melanie P. Standish[1], Kristin L. Schneider, PhD[2]

[1]Illinois Institute of Technology, Chicago, IL; [2]Rosalind Franklin University of Medicine & Science, North Chicago, IL

Over the last decade, video games designed to promote physical activity (i.e., active video games; AVGs) have rapidly grown in popularity. We conducted a series of studies (2 field studies, and 1 web survey) exploring the feasibility and acceptability of a new AVG that involves integrating physical activity goals into a previously sedentary but very popular online game platform (i.e., online fantasy sports). In three field studies, participants wore a low cost triaxial accelerometer while participating in an online fantasy baseball (Study 1; n=9; 13-weeks) or fantasy basketball league (Study 2; n=10; 17-weeks). Privileges within the game were made contingent on meeting weekly physical activity goals (e.g., averaging 10,000 steps/day). A web survey (Study 3; n=85) was conducted to assess generalizability of anticipated acceptability and interest. The feasibility and acceptability of the active fantasy sports intervention were well supported. Participants found the active fantasy sports game enjoyable, as or more enjoyable than traditional (sedentary) online fantasy sports [Study 1: $t(8) = 4.43$, $p < .01$;Study 2: $t(9) = 2.09$, $p = .07$]. Participants in Study 1 increased their average steps/week, $t(8) = 2.63$, $p < .05$, while participants in Study 2 maintained (i.e., did not change) their activity, $t(9) = 1.57$, $p = 0.15$. Participants expressed willingness to participate with others who differed in baseline fitness, and social features within the game was consistently cited as a key motivating factor for increasing physical activity. Limitations, future directions, and public health implications will be discussed.

CORRESPONDING AUTHOR: Arlen C. Moller, PhD, Illinois Institute of Technology, Chicago, IL, 60616; amoller@iit.edu

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POSITIVE BODY IMAGE PREDICTS MORE EXERCISE LONGITUDINALLY FOR EXERCISE MAINTAINERS

Miriam H. Eisenberg, PhD[1], Katherine Thompson, B.A.[2], Margot C. Quinn[3], Jessica Abrams, B.A.[4], Steffi Renninger, BA[5], Philip Moore, PhD[5], Leigh Alison Phillips, PhD[6]

[1]National Institutes of Health, NICHD, Washington, DC; [2]George Washington University, Bethesda, MD; [3]The George Washington University, Washington, DC; [4]George Washington University, Somerville, MA; [5]George Washington University, Washington, DC; [6]Iowa State University, Ames, IA

Background: Exercise is crucial for maintaining health and preventing diseases such as diabetes, heart disease, and many forms of cancer. Previous research has shown that positive body image is associated with more exercise, but few studies have tested this relationship longitudinally, which limits researcher's ability to determine temporal directionality. The current study explored the influence of body image (BI) on two aspects of exercise: frequency (EF) and habit strength (HS). Participants were identified as either exercise *initiators* (those just beginning to exercise or who exercise irregularly) or *maintainers* (those who have exercised regularly for at least 6 months). Positing that exercise levels in general are more likely to change for initiators than maintainers, we hypothesized that body image would predict a positive change in exercise over the month for initiators but not maintainers. Method: Participants (n = 112) completed measures of BI, EF, and HS at baseline and one month later (one week after the Thanksgiving holiday). Categorization as either initiators or maintainers was based off responses to an Exercise Stages of Change (SOC) item. All analyses controlled for baseline exercise.Results: There was a significant BI x SOC interaction for exercise frequency (EF) and habit strength (HS). Simple slopes analysis revealed that *maintainers* with high body image, not initiators, were the ones with the highest EF and HS scores after controlling for baseline exercise. Specifically, BI and EF were significantly related among maintainers ($\beta = .35$, $p < .001$), but not initiators ($\beta = -.11$, $p>.33$); and BI was positively associated with HS for maintainers ($\beta = .19$, $p = .02$) but negatively for initiators ($\beta = -.13$, $p=.002$). Discussion: Results showed that positive body image was predictive of more EF and HS longitudinally for maintainers but not necessarily initiators, which did not support our initial hypothesis but does suggest that positive body image may be particularly important for exercise maintenance. We will discuss potential implications for initiators and address the inconsistent finding that initiators with lower body image exercised the most longitudinally.

CORRESPONDING AUTHOR: Miriam H. Eisenberg, PhD, National Institutes of Health, NICHD, Washington, DC, 20009; miriam.h.eisenb@gmail.com

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DISCLOSING HEALTHCARE SYSTEM ADVERSE EVENTS: PATIENTS' PERCEPTIONS OF RISK, TRUST AND FOLLOW-UP BEHAVIOR

A. Rani Elwy, PhD[1], Thom Taylor, PhD[2], Elizabeth Maguire, MSW[1], Barbara Bokhour, PhD[1], Allen L. Gifford, MD[1], Richard A. Martinello, MD[3], Todd H. Wagner, PhD[2], Steven M. Asch, MD, MPH[2], Thomas H. Gallagher, MD[4]

[1]Department of Veterans Affairs, Bedford, MA; [2]Department of Veterans Affairs, Menlo Park, CA; [3]Department of Veterans Affairs, Washington, DC; [4]University of Washington, Seattle, WA

Background: Healthcare systems' disclosures of large scale adverse events are unique in that many patients are potentially exposed but few are truly at risk of injury or illness. Large scale events are often infection control breaches, which present challenges for healthcare leaders and public health officials alike because of the absence of known disease transmission. This study sought to determine the factors that impact patients' decision-making following such an event. Methods: Using a weighted Internet survey panel, 1,013 participants received one of six vignettes describing a colonoscopy and disclosure processes following identification of improper equipment sterilization. Three vignettes portrayed a high risk (HR) and three portrayed a low risk (LR) of contracting HIV/ hepatitis. Additionally, participants randomly received one of three disclosure methods: social media notification, then a provider's phone call, and then a letter from the hospital (SCL); a provider's phone call, and then a letter from the hospital (CL; considered status quo); or a letter from the hospital, and then a provider's phone call (LC). Before and after the vignette, participants reported their perceived risk of HIV/hepatitis infection, their willingness to undergo HIV/hepatitis testing, and trust in their provider and healthcare system. Results: Participants perceived significantly less risk of HIV in the low risk conditions of SCL (B=-.55, p < .05) and CL (B=-1.01, p < .01) and hepatitis in the SCL (B=-.56, p < .05) and CL conditions (B=-1.04, p < .01), relative to participants who received the healthcare systems' status quo condition of high risk CL. Participants who received the low risk LC (OR=2.35, p< .05) and low risk CL (OR=5.01, p < .001) reported that they would be less likely to seek follow-up testing for HIV/hepatitis. Trust in providers and the healthcare system did not vary by vignette. Conclusions: The way healthcare system adverse events are communicated has important implications for patients' risk perceptions and their willingness to seek follow-up bloodborne pathogen testing. Healthcare leaders are often reluctant to disclose these uncertain events, fearing patients' negative perceptions of trust. This study found no evidence that disclosure impacted patients' trust in providers or the healthcare system.

CORRESPONDING AUTHORs: A. Rani Elwy, PhD, Department of Veterans Affairs, Bedford, MA, 01730; rani.elwy@va.gov; Thom Taylor, PhD, Department of Veterans Affairs, Menlo Park, CA, 94025; thomas.taylor4@va.gov

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DISGUST AND DEFENSIVE RESPONDING IN HEALTH CONTEXTS

Steve Newell, M.S.[1], James Shepperd, PhD[2]

[1]University of Florida, Gainesville, FL; [2]Univ of Florida, Gainesville, FL

When confronted with health information, people sometimes respond defensively, derogating or avoiding the information, potentially leading to suboptimal decision-making or unhealthy behaviors. According to the Extended Parallel Processing Model (EPPM), threat and efficacy influence whether people respond defensively or not. Specifically, when people experience a sufficient level of threat, they process information in one of two ways depending on their level of efficacy. When people feel efficacious, they engage in danger control responses aimed at addressing the threat. When they do not feel efficacious, they engage in fear control responses aimed at reducing the experience of negative emotions. Prior research on the EPPM operationalizes threat in terms of perceived severity and susceptibility, focusing specifically on the effects of fear. We examined the effects of threat related to disgust, an emotion that frequently co-occurs with fear but one that produces distinct physiological, cognitive, and behavioral responses. Participants viewed an informational video about a fictitious health condition then responded to the Risk Behavior Diagnosis Scale (Witte, Cameron, McKeon, & Berkowitz, 1996), a measure of defensiveness. We randomly assigned participants to learn about a controllable or uncontrollable serious health condition (efficacy manipulation) with disgusting or non-disgusting symptoms (threat manipulation). Results revealed main effects of efficacy and threat qualified by an efficacy by threat interaction. Consistent with other research, participants responded more defensively when efficacy was low compared to when efficacy was high. When efficacy was high, participants displayed more defensive responding when the health condition had disgusting symptoms than when it did not. These results held even after controlling for fear. Thus, disgust elicited defensive responding in contexts where people normally respond with little defensiveness.

CORRESPONDING AUTHOR: Steve Newell, M.S., University of Florida, Gainesville, FL, 32601; smnewell@ufl.edu

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EMOTIONS, ATTITUDES, AND DECISIONS REGARDING THE GENETIC TESTS FOR AUTISM SPECTRUM DISORDERS: A SYSTEMATIC REVIEW

Lei Xu, PhD, MA[1], Patricia Goodson, PhD, MA[2], Divya Talwar, MPH, BDS[2], Margaret Foster, MPH, MS[2]

[1]East Carolina University, Greenville, NC; [2]Texas A&M, College Station, TX

Background: Autism Spectrum Disorders are a group of highly inheritable disorders. Genetic testing associated with ASD is a routine clinical genetic service and an integral diagnostic process for the evaluating ASD in the U.S. In many instances, decision to undergo genetic tests requires elaborate psychological and behavioral adjustments. However, to date, no systematic literature reviews have been conducted on this topic. This study summarized the literature that reported the emotions, attitudes, and intention with regard to ASD genetic testing (including the three first-tier tests recommended for patients or families with ASD, i.e. fragile X, G-banded Karyotype and Chromosomal Micro Array). Methods: A methodological assessment to evaluate the quality of the reviewed articles by employing a 7-point (quantitative study) and a 6-point (qualitative study) criteria respectively. Four electronic databases were searched testing methods, attitudes or perceptions, and intention. Results: After applying the inclusion/exclusion criteria, 17 articles remained. Most studies (88.2%) examined their participants' perspectives related to genetic testing for fragile X (FX) syndrome. Among 15 studies on FX screening, 60% (*n*=9) examined participants' attitudes or test intention regarding carrier testing (58.8%, *n*=7) or prenatal screening (11.8%, *n*=2). The majority of the studies (72.8%) were conducted prospectively, (e.g. asking the participants how they might feel when they take the test), but three (27.2%) were retrospective studies that collected participants' emotional responses after having taken the test. The most frequently reported emotions were anxiety, uncertainty, worry, parent-child bonding and fear. Conclusion: This review indicated lack of sufficient evidence on the associations between emotional factors and decisions of undergoing autism genetic testing. Also theoretical framework is largely missing in most of the included studies in this review, which makes it difficult to interpret the relationship of the psychological variables and other correlated variables. Future studies need consideration of using validated or self-synthesized theories to explore how emotional factors, attitudes and decisions interact with each other among at-risk populations with ASD.

CORRESPONDING AUTHOR: Lei Xu, PhD, MA, East Carolina University, Greenville, NC, 27858-4353; xul14@ecu.edu

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EXPECTATIONS FOR DIAGNOSTIC GENOMIC SEQUENCING AND POST-RETURN OF RESULT INFORMATION-SEEKING

Cynthia M. Khan, PhD, Christine M. Rini, PhD, Jonathan S. Berg, MD, PhD, James P. Evans, MD, PhD, Gail E. Henderson, PhD

University of North Carolina, Chapel Hill, Chapel Hill, NC

Next-generation genomic sequencing technologies vastly expand the potential to uncover genetic causes of disease. Yet, the clinical benefits of genomic sequencing will depend, in part, on how patients respond to their sequencing results. Psychological research suggests that patients' expectations for a sequencing result (i.e., their perception of the likelihood of receiving a given result) may shape responses to their actual result—such as seeking information to facilitate understanding and decision making. For example, patients may expect a sequencing result that explains their condition ("positive"); a result that provides an uncertain but possible explanation ("uncertain"); or a result where sequencing did not uncover any potentially explanatory gene variants ("uninformative" or "negative"). Relative to uncertain or negative results, expectations for a positive result will often not be met due to current limitations in genomic science. We investigated the effects of met and unmet expectations—through statistical interactions between expected and actual diagnostic sequencing results—on post-result information-seeking and sharing in hierarchical linear regression analyses. Participants were adult patients (N = 88) and parents of pediatric patients (N = 45) participating in an ongoing longitudinal study of diagnostic whole exome sequencing. Results indicated that participants who expected *and* received a positive result sought information from fewer sources (e.g., health care providers, family members; $\beta = -.36$, $p = .027$) than those who expected and received any other combination of results. When sharing results with others, participants who *expected* a negative result but instead *received* a positive result placed a marginally greater importance on getting advice about a decision related to the result ($\beta = .28$, $p = .068$) than those who expected and received any other combination of results. No significant effects of expected and received results were found for the importance of receiving comfort and reassurance. While preliminary, findings suggest that certain combinations of expected and actual sequencing results (instead of whether expectations were met) could shape patients' informational needs and inform provider efforts to help patients understand and apply sequencing results.

CORRESPONDING AUTHOR: Cynthia M. Khan, PhD, University of North Carolina, Chapel Hill, Chapel Hill, NC, 27599; ckhan@med.unc.edu

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FAMILY CAREGIVERS' LIKELIHOOD OF USE AND WILLINGNESS TO PAY FOR MOBILE TECHNOLOGIES TO MANAGE THEIR OWN HEALTH

Yun Jiang, PhD(c), MS, RN[1], Marci L. Nilsen, PhD, RN[2], Annette DeVito Dabbs, PhD, RN, FAAN[1], Judith T. Matthews, PhD, MPH, RN[1], Scott Beach, PhD[1], Laurel Person Mecca, MA[1], Karen L. Courtney, PhD, RN[3], Richard Schulz, PhD[4]

[1]University of Pittsburgh, Pittsburgh, PA; [2]University of Pittsburgh, School of Nursing, Pittsburgh, PA; [3]University of Victoria, Victoria, BC, Canada; [4]University of Pittsburgh, Pittsburgh, PA

Caregiving poses health risks to family members who assume the role. Although previous studies have reported family caregivers' acceptance of mobile technologies to manage their loved ones' health, the likelihood of using and willingness to pay for such technologies for themselves is unknown. Data from a national web-based survey of 512 family caregivers were analyzed to explore predictors of caregivers' likelihood of use and willingness to pay for mobile technologies to manage their own health. Caregivers were adults (18-64 years) caring for parents (79%), spouses (10%), or other relatives (11%) with a variety of health conditions. The majority of caregivers provided care ≥ 20 hours per week (52%), lived with the care recipient (52%), reported good to excellent health (81%), and had no problems with self-care (92%). Approximately half of caregivers (51%) reported being somewhat or very likely to use mobile technologies for their own health. Thirty-nine percent were unwilling to pay anything out of pocket, whereas 61% were willing to pay a median of $20 per month. Ordinal logistic regression showed that the following caregiver characteristics indicated a greater likelihood of use: female (p=.046), African American (p<.001), Hispanic (p=.005), Asian (p=.03), > 44 years of age (p=.04), < graduate education (p=.04), self-reported good to excellent health (p=.03), lived with the care recipient (p=.001), positive technology attitudes (p=.008), internet searching for caregiving information ("sometimes" $p=.006$ and "often" $p=.001$), and use of commercially available caregiving technologies (p<.001). Linear regression showed that caregivers were willing to pay higher amounts out-of-pocket if they were having problems with self-care (p=.001), caregiving ≥ 20 hours per week (p=.04), and used commercially available caregiving technologies ($p < .001$). At least half of our growing population of family caregivers may be likely to use and willing to pay a moderate amount for mobile technologies to enhance management of their own health. Selected sociodemographic factors, health and functional status, and technology use and attitudes should inform design decisions and cost considerations by developers and marketers as well as clinicians who recommend these technologies to patients who are family caregivers.

CORRESPONDING AUTHOR: Yun Jiang, PhD(c), MS, RN, University of Pittsburgh, Pittsburgh, PA, 15261; yuj10@pitt.edu

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GENETIC TESTING FOR OBESITY: IMPACT OF PERSONALIZED RISK ON THOSE WHO ARE OVERWEIGHT OR OBESE

Catharine Wang, PhD, MSc[1], Erynn S. Gordon, MS, CGC[2], Tricia Norkunas, MPH, MA[1], Lisa Wawak, BA[3], Ching-Ti Liu, PhD[4], Michael Winter, MPH[1], Rachel S. Kasper, MPH[5], Michael F. Christman, PhD[3], Robert C. Green, MD, MPH[6], Deborah Bowen, PhD[7]

[1]Boston University School of Public Health, Boston, MA; [2]Invitae, Mount Laurel, NJ; [3]Coriell Institute for Medical Research, Camden, NJ; [4]Boston University, Boston, MA; [5]Coriell Institute, Camden, NJ; [6]Brigham and Women's Hospital/Harvard Medical School, Boston, MA; [7]University of Washington, Seattle, WA

Genetic testing is currently available for obesity. This study examines how information about genetic predisposition to obesity affects perceptions of body image, risk, worry, self-efficacy, control, and intentions to lose weight among those who are overweight or obese (BMI>25). We conducted a trial examining the impact of communicating obesity risk based on either genetic (G) and/or lifestyle (L) factors (2x2 factorial design). Participants randomized to the genetic only or G+L arms were informed about their genetic risk, based on number of FTO risk variants (zero, RR=1.0; one, RR=1.1; two, RR=1.3). Linear regression models adjusted for age, gender, baseline measure, and lifestyle arm. Level of genetic risk was significantly associated with follow-up worry about gaining weight (p=.03). Specifically, those who had 0 copies of the risk variant worried more about gaining weight (M_{adj}=3.80) than those who had 1 copy of the risk variant (M_{adj}=3.51, p=.03), but did not differ from those with 2 copies (M_{adj}=3.74) or who did not get genetic feedback (M_{adj}=3.72). Analyses for body image dissatisfaction (BID) showed a similar pattern, with greater BID among those with 0 copies (M_{adj}=2.14) versus 1 copy (M_{adj}=1.82), but results did not achieve statistical significance (p=.08). Perceptions of risk, self-efficacy, and control did not differ by genetic risk. Genetic feedback did not affect follow-up intentions to lose weight. In sum, the impact of genetic risk information is minimal among those who are overweight or obese. Notably, receiving "low" genetic risk feedback may have unintended effects, the implications of which will be discussed.

CORRESPONDING AUTHOR: Catharine Wang, PhD, MSc, Boston University School of Public Health, Boston, MA, 02118; clwang@bu.edu

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HOW DO PATIENT DECISION AIDS FOR PROSTATE CANCER TREATMENT PRESENT INFORMATION?

Prajakta Adsul, MBBS, MPH, PhD(abd)[1], Ricardo Wray, PhD[2], Oussama Darwish, MD[3], Sameer Siddiqui, MD[3]

[1]Saint Louis University - College for Public Health and Social Justice, St. Louis, MO; [2]Saint Louis University, St. Louis, MO; [3]Saint Louis University - School of Medicine, St. Louis, MO

Despite established evidence for using patient decision aids (DA) for newly diagnosed prostate cancer (PCa) patients, implementation of these tools remains limited, partly due to variability in the characteristics of DAs. The aim of this study was to review characteristics of DAs designed for newly diagnosed PCa patients.MEDLINE, Web of Science, and PsychInfo databases were searched for articles in peer reviewed journals from inception to October 2013, in addition to the Google search engine. Decision aids that were freely available on the internet with or without published studies, related to treatment of prostate cancer, for patients, and written in the English language only were included in the study. The search strategy retrieved a total of 15 patient DAs specific to PCa treatment. DAs were assessed based on the previously validated International Patient Decision Aid Standards (IPDAS) and implementation criteria.Of the 14 DAs, 8 were developed in US. They were either digital or print based (7); only web based programs (5), computer-based programs (2). Ten tools were geared towards a specific stage of prostate cancer and 5 were produced by individual researchers. Treatment options discussed included surgery (12), radiation (12), active surveillance (9), and hormonal therapy (7). Four tools used alternate formats (graphics, audio, and videos). The average readability score was at grade 10th level (range 6-16th grade) with 7 DAs written at grade 8 or lower readability level. Only 4 DAs had published effectiveness studies. No DAs provided information on their implementation process.None of the Das included in this review met all the IPDAS. Content, format and presentation of PCa information within DAs varied significantly. Critical issues such as overtreatment and watchful waiting were not covered in all DAs. The tools were not always written using plain language and very limited information was available regarding the effectiveness and implementation of these tools. Considerable variability exists among decision aids for patients making prostate cancer related decisions. As physicians look to adopt decision aids for their practice, they may base the choice of decision aids on the characteristics of the decision aid depending upon their patient populations and practice settings.

CORRESPONDING AUTHOR: Prajakta Adsul, MBBS, MPH, PhD(abd), Saint Louis University - College for Public Health and Social Justice, St. Louis, MO, 63104; padsul@slu.edu

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ASSOCIATIONS BETWEEN SLEEP TIMING AND DURATION WITH BODY FAT, MEAL TIMING AND CALORIC INTAKE

Kelly Baron, PhD, MPH, CBSM[1], Kathryn Reid, PhD[2], Tiffany Kim, B.A.[3], Lisa Wolfe, MD[1], Hrayr Attarian, MD[1], Phyllis Zee, MD, PhD[2]

[1]Feinberg School of Medicine, Northwestern University, Chicago, IL; [2]Feinberg School of Medicine, Northwestern University, Chicago, IL, Canada; [3]Northwestern University, Flushing, NY

Short sleep duration and later sleep timing have been associated with poorer dietary behaviors and greater risk for obesity. However, few studies have evaluated the different associations between weekday/weekend sleep with obesity and dietary patterns. Methods: Participants included 174 healthy adults (104 F/66 M, age M (SD)=27(+8) years) who completed questionnaires and 7 nights of wrist actigraphy. BMI and body fat percentage were measured using the Tanita Scale. Dietary pattern was measured using the Lifestyle Patterns Questionnaire, a 24-item questionnaire that assesses 6 factors of unhealthful eating behaviors including: "accidental diner" i.e., lack of planning and consumption of convenience foods, and "exercise novice", i.e., someone who does not have time or interest in exercise. Diet logs for 7 days were available for 40 participants and included caloric intake, as well as grams of protein, carbohydrate and fat. Results: Average sleep onset time was 01:16, average sleep offset time was 07:54 and average sleep duration was 422 minutes. Average BMI was 24 kg/m2 and average body fat was 27.6%. Later sleep onset time was associated with lower % body fat ($r= -0.29$, $p < .01$). Among diet patterns, later wake time overall, bedtimes and wake times on weekdays and weekends were associated with higher scores on "accidental diner" ($p < .01$) and wake times were associated with higher "exercise novice" scores ($p < .05$). Sleep timing was not associated with calories or macronutrient intake in the subsample with dietary food diaries. Correlations among only overweight and obese participants ($n=100$) demonstrated a similar pattern to the entire sample. Sleep duration overall and on weekdays was associated with greater carbohydrate intake ($p < .05$). Conclusion: Results demonstrate that later sleep onset and offset times are associated with less a less organized eating pattern, while wake times were more strongly associated with poor motivation to exercise. However, later sleep timing was associated with lower body fat in this sample of young, healthy participants.

CORRESPONDING AUTHOR: Kelly Baron, PhD, MPH, CBSM, Feinberg School of Medicine, Northwestern University, Chicago, IL, 60611; k-baron@northwestern.edu

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CHANGE IN DIMENSIONS OF SLEEP AS A RESULT OF PARTICIPATION IN OUT-PATIENT CARDIAC REHABILITATION: EXAMINING THE ROLE OF ADHERENCE

Kristie Harris, M.S., Derek Anderson, M.A., Jacob Landers, B.A., Charles Emery, PhD

The Ohio State University, Columbus, OH

Background: Exercise training (ET) has been found to improve sleep quality among healthy older adults and patients with cardiovascular disease. However, ET effects on sleep quality among patients in cardiac rehabilitation (CR) have not been studied. The purpose of the study was to evaluate changes in sleep during and following CR, and the degree to which adherence is associated with sleep changes.

Methods: 60 patients (38 males; mean age=56.9±10.8 years) enrolled in an outpatient CR program completed the Pittsburgh Sleep Quality Index (PSQI) and demographic questionnaires as part of a larger study of psychological predictors of CR outcomes. The PSQI measures sleep quality, duration, latency, efficiency, disturbance, daytime dysfunction, and sleep medication use, and provides a global score of overall sleep functioning. PSQI was measured at baseline (pre-CR), following CR (post-CR), and 3 months post-CR (3-month follow-up). CR adherence was calculated as a proportion of the number of sessions attended divided by the number prescribed. Data were analyzed with hierarchical multiple regression, predicting post-CR and 3-month follow-up sleep variables from adherence during CR. Baseline corresponding sleep variables were entered in the first step and adherence was entered in the second step of each regression. The relation of demographic variables to sleep variables included on the PSQI was assessed via correlational analyses and analysis of variance.

Results: Women entered CR with poorer global sleep functioning, as well as greater latency, disturbance, and daytime dysfunction, compared to men (all $p < .05$). Hierarchical regression analysis indicated that adherence to CR predicted change in daytime dysfunction ($\beta=-0.04$, $p < .001$) and frequency of sleep medication usage ($\beta=-0.01$, $p < .05$) from post-CR to 3-month follow-up.

Conclusions: Results indicate that adherence to CR was associated with improvements in dimensions of sleep during the three months following CR. Enhancements included decreased daily dysfunction due to disrupted sleep and decreased use of sleep medication. These data suggest that CR may lead to improvements in aspects of patient quality of life and that adherence during CR may be associated with longer term improvements in functioning.

CORRESPONDING AUTHOR: Kristie Harris, M.S., The Ohio State University, Columbus, OH, 43210; harris.1815@osu.edu

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DEPRESSION MODERATES THE RELATIONSHIP BETWEEN SLEEP QUALITY AND SELF-RATED HEALTH

Christine Smith, M.A., Virginia Gil-Rivas, PhD

The University of North Carolina at Charlotte, Charlotte, NC

Statement of Problem: College students frequently report poor sleep quality and increased stress, and these symptoms are likely to be associated with lower self-rated health. Depression and anxiety are comorbid with poor sleep and increased stress and may alter the nature of these relationships. This study examined whether ever being diagnosed with depression and anxiety moderated the effects of sleep quality and perceived stress on self-rated health. Participants: Undergraduate students ($N = 455$) from diverse backgrounds (67.4% White); 74.4% female; age range 17-51 years (M=20.1, SD=4.10). Procedure: Self-administered electronic survey. Demographics, perceived stress (PSS- Cohen & Williamson, 1988; $\alpha = .86$), sleep quality (PSQI- Buysee et al., 1989), medical history, and self-rated health (Miilunpalo et al., 1997) were obtained. Results: Poor sleep quality was reported by 21.1% of the sample; participants reported moderate levels of perceived stress ($M = 18.18$, $SD = 7.17$); 23.2% reported ever having a diagnosis of depression; 24.6% reported a diagnosis of anxiety; and 9.6% reported being in fair or poor health ($M = 2.38$, $SD = .88$). Females were significantly more likely to report poorer self-rated health than were males (t [453] = -2.09, $p < .05$). Poorer sleep quality was associated with increased perceived stress, depression and anxiety, and poorer self-rated health. Controlling for sex, regression analyses indicated that poor sleep quality had a positive direct effect on poor self-rated health ($b =.33$, $p < .01$; $R^2_{adj.} = 0.09$). A significant interaction effect was found between sleep quality and depression on poor self-rated health ($b =.42$, $p < .05$), such that the effects of poor sleep quality on poor self-rated health were significantly greater for individuals who reported ever having a diagnosis of depression. This relationship was not found between stress and self-rated health. Furthermore, anxiety did not moderate the relationship between sleep quality or stress with self-rated health.

Conclusions: Our findings add to what is known about the relationship between sleep, depression, and self-rated health (Geiger et al., 2012). These results suggest that efforts to promote well-being among college students should address the combined effects of poor sleep quality and depression on perceived health.

CORRESPONDING AUTHOR: Christine Smith, M.A., The University of North Carolina at Charlotte, Charlotte, NC, 28277; csmit474@uncc.edu

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EXECUTIVE COGNITIVE FUNCTION MEDIATES RELATIONSHIPS BETWEEN SLEEP AND SEDENTARY BEHAVIOR IN CHILDREN

Christopher M. Warren, BA[1], Nathaniel Riggs, PhD[2], Mary Ann Pentz, PhD[3]

[1]University of Southern California Keck School of Medicine, Alhambra, CA; [2]Colorado State University College of Health and Human Sciences, Fort Collins, CO; [3]University of Southern California Keck School of Medicine, Los Angeles, CA

Background: Today's youth spend an average of 7.5 hours/day engaged in sedentary activities, which in turn have been linked to increased risk of childhood obesity, metabolic syndrome, and adverse psychosocial outcomes. Past research has found negative associations between participation in sedentary behaviors and sleep in children, though this work failed to account for differences in key covariates such as physical activity. Furthermore, recent studies have identified associations between executive cognitive function (ECF), sedentary behavior, and sleep, suggesting that perhaps chronic sleep deprivation may adversely impact ECF and lead to increased sedentary behavior in children.

Methods: The present study used data from 709 participants over three annual waves of assessment in a school-based RCT for childhood obesity and substance use prevention. Average nightly sleep duration was treated as the primary predictor of sedentary behavior and ECF was examined for its direct and mediational relationship to sedentary behavior using multiple linear regression techniques.

Results: Associations at baseline between sleep duration and sedentary behavior were highly significant ($\beta= -.202$; $p < .0001$) adjusting for participant gender, physical activity, socioeconomic status (SES), ethnicity, group assignment and executive cognitive function. These associations remained highly significant at two annual waves of follow-up ($p < .01$). Though physical activity did not predict sedentary behavior at baseline, it became a significant independent predictor at year one ($p < .05$) and year two ($p < .01$) follow-up. When ECF was entered as a mediator of the relationship between sleep duration and sedentary behavior adjusting for gender, physical activity, SES, ethnicity, and group assignment, it significantly mediated the relationship at fourth ($\beta=-.033$; $p < .01$), fifth ($\beta=-.026$; $p < .05$) and sixth grades ($\beta= -.035$; $p < .01$).

Conclusions: This study found that average nightly sleep duration is significantly associated with sedentary behavior, and that this association is significantly mediated by ECF, suggesting that efforts to maximize nightly sleep duration and ECF in late-elementary schoolchildren may reduce sedentary behavior in this population.

CORRESPONDING AUTHOR: Christopher M. Warren, BA, University of Southern California Keck School of Medicine, Alhambra, CA, 91801; cmwarren@usc.edu

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SLEEP HYGIENE PRESENTATION IMPROVES SLEEP FOR NEW COLLEGE STUDENTS

Tracy Trevorrow, PhD[1], Yuka Hosomi[1], Monique Tsang[1], Jordyn Yahata[2]

[1]Chaminade University, Honolulu, HI; [2]Washington State University, Honolulu, HI

It is well documented that college students often have poor sleep, which can lead to negative outcomes regarding health, adjustment, and learning (e.g., Buboltz et al., 2001). Challenges to sleep are likely to present during the first year of university given students' new academic and social demands (Ari & Shulman, 2012). Knowlden (2012) suggests that interventions to improve college students' sleep should focus on teaching sleep hygiene. However, few studies on the efficacy of such interventions have been published. The current study investigated whether a single presentation on sleep hygiene could result in improvement in reported sleep quality and quantity for undergraduate students newly entering university. Participants were students from a liberal arts university in Honolulu enrolled in a fall semester course entitled "Introduction to College Life." They were quasi-randomly divided into two groups based on their assigned section of the course. Approximately half of the 214 students (70% female) attended a presentation on sleep hygiene, while the remainder heard a talk on the hazards of cigarette smoking. Both presentations were given by the senior author and lasted for approximately 45 minutes. The Pittsburg Sleep Quality Index (PSQI) was administered five months later at the beginning of the spring semester. Students who attended the talk on sleep hygiene reported greater Total Sleep Time (M = 6.56 hours, SD = 1.24) than those who attended the lecture on smoking (M = 6.02 hours, SD = 1.32), t(92) =50.64, p < .001. Sleep Onset was quicker for those in the sleep hygiene group (M = 20.63 minutes, SD = 14.54) than for those in the smoking presentation group (M = 25.85 minutes, SD = 24.82), t(95) = 13.89, p < .001. The PSQI index (higher score representing worse sleep) also reflected significantly better sleep for the sleep hygiene group (M = 6.09, SD = 2.45) than those in the smoking presentation group (M = 7.00, SD = 2.48), t(97)=24.61, p < .001. Significant sleep differences were not observed based on demographic variables. While the current study has the inherent limitations of a single assessment and relies on self-report data, the consistency of findings support that a brief informational presentation on sleep hygiene can result in improved sleep experience of new university students.

CORRESPONDING AUTHOR: Tracy Trevorrow, PhD, Chaminade University, Honolulu, HI, 96822; ttrevorr@chaminade.edu

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VALIDATION OF A BRIEF MEASURE OF SELF-REPORTED INSOMNIA, SLEEP APNEA, AND SLEEP DURATION: THE BRIEF SLEEP QUESTIONNAIRE (BSQ)

Jessica R. Dietch, B.A., B.F.A.[1], Daniel J. Taylor, PhD, CBSM[1], Chul Ahn, PhD[2], Matthew Allison, MD, MPH, FAHA[3], Timothy W. Smith, PhD[4], Joshua M. Smyth, PhD[5], Bert N. Uchino, PhD[4], John Ruiz, PhD[1]

[1]University of North Texas, Denton, TX; [2]University of Texas Southwestern Medical Center, Dallas, TX; [3]University of California, San Diego, La Jolla, CA; [4]University of Utah, Salt Lake City, UT; [5]Pennsylvania State University, University Park, PA

Although measures exist to assess sleep complaints across several domains, few if any of these measures are brief, comprehensive and easy to score. The current study examines validity of a new measure, the Brief Sleep Questionnaire (BSQ), which has three subscales assessing insomnia, sleep apnea, and sleep duration. The 16-item BSQ was administered to two study samples. In study 1, participants were 391 undergraduate students from a large public university (72.5% female; M age = 20.8[SD = 3.4]). Participants completed an online questionnaire battery (including the BSQ and other measures such as the Pittsburgh Sleep Quality Index [PSQI], STOP Questionnaire, and Insomnia Severity Index [ISI]) using REDCap electronic data capture tools and then completed the same battery 30-35 days later. In study 2, participants were 300 community adults (50% female; M age = 42.4[SD = 12.8]). Here we report data regarding the measure's internal consistency, test re-test reliability, and convergent validity. Study 1: The internal consistency of the measure was high and consistent in the first and second administrations for the total score (Cronbach's $\alpha = .84$ and $\alpha = .85$), and test-retest reliability was also good ($r = .76$, $p < .001$). Internal consistency was high for the insomnia subscale (Cronbach's $\alpha = .79$), but lower for the apnea subscale (Cronbach's $\alpha = .30$) and the sleep duration subscale (Cronbach's $\alpha = .59$). The insomnia subscale of the BSQ correlated highly with the ISI ($r = .89$; $p < .001$), demonstrating good convergent validity. The apnea subscale of the BSQ correlated moderately with the STOP ($r = .57$; $p < .001$). Study 2: The internal consistency of the measure was similar to study 1 (Cronbach's $\alpha = .84$). The sleep duration subscale demonstrated low correlations with actigraphy ($r = .32$; $p < .001$) and sleep diaries ($r = .24$; $p < .001$). The BSQ appears to be a valid and reliable measure in a sample of undergraduates and community adults. The BSQ demonstrates good convergent validity with longer, previously validated questionnaires. Similar to other self-report questionnaires, the BSQ does not correlate highly with an objective measure of sleep (i.e., actigraphy). This measure should be used by researchers with a need to assess sleep complaints thoroughly yet briefly.

CORRESPONDING AUTHOR: Jessica R. Dietch, B.A., B.F.A., University of North Texas, Denton, TX, 76201; j.dietch@gmail.com

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GENERALIZABILITY OF PARTICIPANTS RANDOMIZED TO AN INTERNET SMOKING CESSATION TRIAL

Sarah Cha, MSPH, Jennifer Leone, MPH, Amanda L. Graham, PhD

American Legacy Foundation, Washington, DC

Introduction: Internet use continues to rise through all segments of the US population, now at 87% of all adults. However, concerns about generalizability plague Internet trials. Smokers in cessation trials are often assumed to not be representative of groups at disproportionate risk for smoking (e.g., racial minorities) and to be lighter, less addicted smokers. To address these assumptions, we compared characteristics of smokers randomized to an ongoing Internet cessation trial to a nationally representative sample of current smokers.*Method*: Participants were adult current smokers recruited between Mar 2012-Aug 2014 to an Internet cessation trial following registration on BecomeAnEX, a free smoking cessation website. Smoking rate (cigs/day), age, gender, race, ethnicity, education, and employment assessed during enrollment of randomized participants (N=4,362) were compared to weighted 2013 National Health Interview Survey data using Chi Square and t-tests.*Results*: Internet trial participants smoked at a higher rate (16.7±8.4 vs 14.2±11.0, p < .001) and had a higher proportion of heavy smokers (30+ cigs/day: 11.3% vs 7.1%, p < .001) compared to the national sample. The proportion of racial minorities was equivalent (20.2% vs 19.0%, p>.05). Trial participants were less likely to be employed for wages (56.9% vs 58.5%, p=.02) and were slightly younger (42.0±13.1 vs 43.4 ±21.3, p < .001), though the magnitude of these differences was small. Major differences were the overrepresentation of women (59.0% vs 44.6%, p < .001) and those with some college education or higher (72.4% vs 51.0%, p < .001) among trial participants. *Conclusions*: Study results counter assumptions of Internet trial participants as lighter smokers and less racially diverse. Gender and education differences mirror online health seeking and Internet use trends. Special recruitment efforts are needed to ensure adequate representation of men and those with lower levels of education in Internet cessation trials.

CORRESPONDING AUTHOR: Sarah Cha, MSPH, American Legacy Foundation, Washington, DC, 20002; scha@legacyforhealth.org

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INCREASING COMPLEXITY OF THINKING IN SMOKERS UNMOTIVATED TO QUIT: PROOF OF CONCEPT STUDY

Kari Jo Harris, PhD, MPH[1], Lucian Gideon. Conway, III., PhD[2], Meredith Repke, MA[2], Shannon Houck, MA[2]

[1]University of Montana, Missoula, MT; [2]The University of Montana, Missoula, MT

Although most smokers want to quit at some time in their lives, only 20% report that they are motivated to quit immediately. Cognitive complexity is the degree that people see an issue as containing more than one facet. The present study is built on a model of the cognitive complexity-healthy behavior relationship which suggests that for tobacco cessation interventions to be effective for unmotivated smokers, the smokers must first experience an increase in complexity of thinking about smoking. A necessary test for understanding the usefulness of this model is to explore whether it is possible to increase the complexity of smokers' thinking. Thus, the present study used a qualitative analysis to design a brief intervention aimed at increasing the complexity of smokers' thinking and subsequently tested this intervention in a brief pilot. Smokers for the pilot were randomly assigned to either a Treatment (n = 13) condition containing the newly-designed complexity-enhancing module or a Control Condition (n = 12) matched for length and topic. Intervention sessions were recorded, transcribed, and coded for cognitive complexity as the primary variable of interest. Participants also completed assessments measuring written complexity and smoking before the intervention session (baseline), directly after the session (post intervention) and 2-3 weeks after the session (follow up).Overall, within session scores of the transcribed sessions indicated that Treatment participants were significantly higher, with small to medium effect sizes, in most measures of complexity than Control participants, even when controlling for word count. Significant differences were observed for measures of Integrative Complexity (r=.15, p=.046), Dialectical Complexity (r=.34, p < .001), and Openness Posture (r=.26, p.002), but not for Elaborative Complexity. There were no significant differences between Treatment and Control on follow up measures of smoking (quit attempts and motivation to quit) or on the written complexity assessment.The present study provides evidence that it is possible to design an intervention that increases the complexity of smokers' thinking, at least in the context of the session itself. We discuss limitations of this finding, as well as implications for smoking researchers and practitioners.

CORRESPONDING AUTHOR: Kari Jo Harris, PhD, MPH, University of Montana, Missoula, MT, 59812; kari.harris@umontana.edu

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INFANTS AT RISK: MOTIVATION TO IMPLEMENT HOME AND CAR SMOKING BANS FOLLOWING NICU DISCHARGE

Angela L. Stotts, PhD[1], Thomas F. Northrup, PhD[1], Michelle R. Klawans, MPH[1], Yue Xu, BA[2]

[1]University of Texas Health Science Center at Houston Medical School, Houston, TX; [2]University of Texas Health Science Center at Houston School of Public Health, Houston, TX

Chronic secondhand smoke exposure (SHSe) poses many risks to children, and low birth weight infants in the neonatal intensive care unit (NICU) are especially vulnerable. Identifying the stages and processes of change reflecting parental motivation and activity toward implementing home and car smoking bans may offer insight into how best to reduce or prevent infant SHSe in this group. As part of an ongoing study aimed at reducing SHSe, mothers of NICU infants who reported smoking or living with a smoker (n=133) were categorized to a stage of change (pre-contemplation, contemplation, preparation, or action) based on current self-reported behaviors and intentions for establishing smoking bans in their home and car. The Processes of Change (POC) scale was adapted for SHSe reduction practices, with both cognitive/experiential and behavioral processes. The majority of participants reported having a home smoking ban in place (action stage, 56.4%) and relatively few reported neither having nor wanting a home smoking ban (pre-contemplation stage, 8.3%). However, only 31.3% of participants reported a car smoking ban (action), while 26.9% reported neither having nor wanting a car smoking ban (pre-contemplation). This finding indicates that while the majority of mothers of NICU infants understand the importance of protecting their child from SHSe in the home, they do not take the same precautions in the car. An ANOVA revealed a statistically significant difference in mean POC scores between the 4 stages of change for the home ban (p=0.03) and car ban (p=0.003). Tukey post-hoc tests showed between-stage differences for both experiential and behavioral POC scores. Overall, higher POC scores were associated with a more advanced stage of change and thus an increased likelihood of implementing a total smoking ban in both the home and car. Reinforcing POC may increase motivation for mothers to implement a total home and car smoking ban to protect their high-risk infants from SHSe.

CORRESPONDING AUTHOR: Angela L. Stotts, PhD, University of Texas Health Science Center at Houston Medical School, Houston, TX, 77030; angela.l.stotts@uth.tmc.edu

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INFLUENCE OF FAMILY COMMUNICATION, PERCEIVED NORMS AND CANCER WORRY ON SECONDHAND SMOKE AVOIDANCE

Mark Manning, PhD[1], Mark Wojda[2], Lauren M. Hamel, PhD[3], Alicia Salkowski[2], Ann G. Schwartz, PhD[2], Felicity Harper, PhD[2]

[1]Wayne State University, Detroit, MI; [2]Karmanos Cancer Institute, Detroit, MI; [3]Wayne State University/Karmanos Cancer Institute, Detroit, MI

Reducing exposure to environmental tobacco smoke (ETS) among families of individuals with LC can significantly reduce their LC risk as well as morbidity and mortality from other smoking-related diseases. This study examined the extent to which communication patterns among these high risk LC families influence intentions to avoid ETS. Using family communication patterns theory and the theory of planned behavior, we hypothesized that perceived norms and LC worry would more strongly influence behavioral intentions in families with higher conformity and higher conversation. Multilevel regression models were used to test hypotheses among 52 individuals nested within 17 high-risk families. Results showed injunctive norms were positively related to intentions to avoid ETS when families conformed and conversed more. Individuals from high conformity families who worried more about LC also had stronger intentions to avoid ETS. In contrast, those from low conformity families that worried more about LC had weaker intentions to avoid ETS. Findings further our understanding about predictors of intentions to avoid ETS, and specifically, about the role of family worry, family communication, and the unique contributions of descriptive and injunctive norms on these intentions. This knowledge can benefit smoking cessation interventions that feature reduction of ETS as a target behavior.

CORRESPONDING AUTHOR: Lauren M. Hamel, PhD, Wayne State University/ Karmanos Cancer Institute, Detroit, MI, 48201; hamell@karmanos.org

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PROVIDERS ADVICE CONCERNING SMOKING CESSATION: EVIDENCE FROM THE MEDICAL EXPENDITURES PANEL SURVEY

Robert Kaplan, PhD[1], Glen Morgan, PhD[2]

[1]AHRQ, Rockville, MD; [2]National Cancer Institute, Rockville, MD

Background: Despite systematic declines in smoking behavior over the last 45 years, an estimated 42.1 million Americans still smoke cigarettes. Meta analyses suggest that advice from a primary care providers can boost quite attempts by 24 to 60%. We use the most recent data to estimate the prevalence of primary care based advice to quit smoking in a nationally representative sample of adults.

Method: Data for this investigation came from the household component of the Medical Expenditure Panel Survey (MEPS). The survey collects data from a representative sample of families and individuals living in randomly selected communities across the United States. The sample frame comes from the prior year's National Health Interview Survey (NHIS), conducted by the National Center For Health Statistics. MEPS allows linkage to the NHIS, and also connects to a separate survey that obtains cost data information on insurance status.

Results: Among adult smokers who had seen a physician within the last 12 months, the proportion advised to quit smoking remained relatively unchanged between 2002 and 2010. In the most vulnerable group aged 18 – 44 years, only about 6 in 10 smokers were advised to stop. This proportion has been relatively constant over the last decade. High-income patients were more likely to be told to quit (74%) in comparison to poor or near poor patients (63%). Patients in the Northeast (75%) were significantly more likely to be told to quit than those living in the Midwest or South (64%). White non-Hispanic patients were more likely to be advised to quit (70%) in comparison to Hispanic (61%) and black (59%) patients.

Discussion: Meta analyses suggests that advice from healthcare providers to stop smoking can increase quit attempts by between 24 and 60% . However, this advice is only given in about 60% of encounters between healthcare providers and cigarette smokers, and it is least likely to be given to the most vulnerable populaitons. The rate has not changed over the last decade. Healthcare providers are missing a significant opportunity to enhance health outcomes by counceling their patients or referring them to smoking cessation programs. Using modeling methods, we estimate the impact of small and modest increases in physician advice to stop smoking on sucessful quits , lives saved, and healthcare costs.

CORRESPONDING AUTHOR: Robert Kaplan, PhD, AHRQ, Rockville, MD, 20850; rmkaplan@ucla.edu

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PUBLIC PERSPECTIVES ON CANCER PATIENTS WHO SMOKE: A QUALITATIVE ANALYSIS OF THE INFLUENCE OF STIGMA

Kelly A. Hyland, B.A.[1], Joanna Streck, B.A.[2], Brandon Temel[1], Elyse R. Park, PhD, MPH[1], Christina Luberto

[1]Massachusetts General Hospital, Boston, MA; [2]University of Vermont, Burlington, VT

Background. Smoking is a leading cause of cancer, but many patients, despite stigma concerns, continue to smoke after a cancer diagnosis. Among a multiregional cohort of patients diagnosed with colorectal (CRC) and lung cancer (LC), a significant minority of patients were smoking at 5 months post diagnosis. We sought to assess public perspectives on cancer patients who smoke. Methods. An online news article, published in January 2012, summarized findings of smoking prevalence among 2,456 LC patients and 3,063 CRC patients enrolled in the CanCORS trial. In response, 432 written comments were posted by 244 people on the articles' public discussion board. Applying principles of grounded theory, two coders conducted thematic analyses and established a theoretical framework to explain attitudes about cancer patients' ability to quit and cancer patients' responsibility for their smoking.Results. A framework emerged in which individuals' Personal Experiences (e.g., smoking status, experiences with cancer) and Health Literacy (e.g., comprehension of study statistics), informed their beliefs about Cancer Causes and Outcomes. Personal Experiences also directly influenced Attitudes about Cancer Patients' Quitting and Responsibility for Cancer Patients' Smoking. Personal Experiences, which influenced attitudes about the importance of quitting and cancer patients' ability to quit, included 1) the benefit of quitting following diagnosis, 2) the role of motivation, and 3) the influence of addiction. Attitudes about cancer patients' responsibility for their smoking were divided into Intrinsic (e.g., patient is responsible) and Extrinsic (e.g., government and big tobacco) themes. Intrinsic beliefs were further split into empathic tones versus expressions of stigma and blame.Conclusions. Utilizing written comments posted in response to the prevalence of smoking among cancer patients, we developed a model to explain individuals' reactions to cancer patients who smoke. Findings can inform development of communication strategies and help raise awareness of stigma toward cancer patients who smoke.

CORRESPONDING AUTHOR: Kelly A. Hyland, B.A., Massachusetts General Hospital, Boston, MA, 02114; khyland@mgh.harvard.edu

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MULTI-GROUP CONFIRMATORY FACTOR ANALYSIS OF THE PERCEIVED STRESS SCALE-10 IN HISPANIC AMERICANS

Sharon H. Baik, B.A.[1], Rina S. Fox, M.S., MPH[2], Sarah D. Mills, M.S.[2], Scott C. Roesch, PhD[3], Georgia Robins Sadler, PhD, M.B.A., B.S.N.[4], Elizabeth A. Klonoff, PhD[3], Vanessa L. Malcarne, PhD[5]

[1]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology, San Diego, CA; [2]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center, San Diego, CA; [3]San Diego State University, San Diego, CA; [4]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center, La Jolla, CA; [5]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center; San Diego State University, San Diego, CA

Research has consistently supported the role of stress in health and illness. Stress has been linked to a myriad of physical health conditions (e.g., immune functioning, obesity, cardiovascular disease, cancer) and psychological symptoms (e.g., anxiety, depression). The Perceived Stress Scale-10 (PSS-10) is a self-report measure of global appraisal of stress that has been widely used in health outcome studies and with diverse samples. However, the psychometric properties of the PSS-10 have not been evaluated for English- and Spanish-speaking Hispanic Americans (HAs). The present study examined the structural invariance, reliability, and convergent validity of the PSS-10 in a community sample of HAs with an English- ($n = 210$) or a Spanish- ($n = 226$) language preference. One-factor, two-factor, and bifactor models of the PSS-10 were estimated via confirmatory factor analyses (CFA). Multi-group CFA was used to examine the goodness-of-fit of the factor structure across language-preference groups. Satorra-Bentler Chi-squared (SB-χ^2), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) were used when assessing model fit. Internal consistency reliability was evaluated by Cronbach's alpha. Convergent validity was examined via bivariate correlations with the Generalized Anxiety Disorder-7 (GAD-7) and Patient Health Questionnaire-9 (PHQ-9) scales, measures of anxiety and depression. Results confirmed the two-factor structure, and the scalar invariance model was the superior fit (SB-$\chi^2(84) = 153.40$, $p < .01$; CFI = .95; RMSEA = .06; SRMR = .06), indicating measurement invariance across language-preference groups. Internal consistency was good for both English ($\alpha = .87$) and Spanish ($\alpha = .78$) groups. Convergent validity was supported by significant and expected relationships with the GAD-7 (English: $r = .71$; Spanish: $r = .67$, $p < .01$) and PHQ-9 (English: $r = .64$; Spanish: $r = .60$; $p < .01$). These results support the use of the PSS-10 among HAs with an English or Spanish language preference.

CORRESPONDING AUTHOR: Sharon H. Baik, B.A., SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology, San Diego, CA, 92120; sharon.h.baik@gmail.com

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NOT CREATED EQUAL: SEX DIFFERENCES IN STRESS APPRAISAL AND TYPE OF SELF-SELECTED COPING ACTIVITY

Michelle Di Paolo, M.S.[1], Marcellus Merritt, PhD[2]

[1]Experimental Health Psychology, Shorewood, WI; [2]Experimental Health Psychology, Milwaukee, WI

Emerging research suggests the disparity between men and women's psychosocial profile related to stress and coping (e.g., worry, rumination) are so great that a tailored approach to treatment is crucial to its success. However, there is less evidence about how sex moderates this relationship, and exactly how men and women differ in self-selected coping activities (SSAs) for example, physically active (PAC) versus physically passive (PPC) coping.139 male and 458 female college students, mean age 21.1 ± 3.19 years from a Midwestern University completed a number of psychosocial surveys. Those with extremely high or low perseverative cognition (PC), a composite index of worry and rumination often used as an indicator of stress appraisal, and those who self-selected PAC (e.g., walking, going to gym) were recruited for a lab visit; PPCs data were used for stress profile comparison purposes. PACs were assigned to one of two experimental conditions, a control (sitting quietly in a chair) or PAC (treadmill walking) task for 10 minutes after an anger-recall stressor task. Measures of positive and negative mood were assessed at 4 time periods (baseline, after anger recall, at 5 and 10 minutes of assigned condition) and it was expected that High PC/PAC women would show more positive mood recovery in the treadmill but not the control condition. It was also expected that the psychosocial profiles of PACs related to stress appraisal and coping: PC, depression, desire for control (DFC), self-efficacy (SE), and striving would be moderated by sex.Men utilize PAC much more than women, $c^2(1, 596) = 18.50$, $p = .0001$. Women have significantly greater levels of PC than men, $t(595) = 5.08$, $p = .0001$. Supporting hypothesis 2, women who are PACs (vs. PPCs) exhibit lower PC, depression, and higher DFC, SE, and striving, $p(t) < .01$. Results indicate the same effect for PAC men being different from PPC men in PC levels, $p(t) = .02$, but the groups *do not* differ in depression, DFC, SE, or striving $p(t) < .519$, like women. For hypothesis 1, high PC women in the treadmill group had significantly more positive mood than the control group at both 5, $t(9) = 2.818$, $p = .02$, and 10 minutes, $t(9) = 3.09$, $p = .01$.Both men and women use PAC, but vary greatly in their psychosocial profiles, especially PC, which affects women's mood when recovering from an acute stressor.

CORRESPONDING AUTHOR: Michelle Di Paolo, M.S., Experimental Health Psychology, Shorewood, WI, 53211; mdipaolo@uwm.edu

6:00 PM-7:00 PM B137

PATIENT AGE AND PATIENT ACTIVATION IN A RURAL COMMUNITY – PHYSICIAN COMMUNICATION AS A MODERATOR

Jorie M. Butler, PhD[1], Marjorie Carter, MSPH[2], Man Hung, PhD[2], Bryan Gibson, PhD[2], Candace Haroldsen, MPH[2], Matthew H. Samore, MD[2]

[1]Divisio of Geriatrics, University of Utah, Salt Lake City, UT; [2]University of Utah School of Medicine, Salt Lake City, UT

Activated patients have skills, knowledge, confidence, and motivation to manage their own health. Little is known about how patient activation varies by age but some research has shown older patients may be less active in health management and physician engagement. It is important to understand how communication with providers about sensitive issues may relate to patient activation to better target patients for interventions designed to increase patient activation. A survey of 811 patient participants receiving care in primary care clinics in rural communities was conducted to understand patient experience. Patients with at least one chronic illness were more heavily recruited for the questionnaire to ensure that the participants had a need for regular follow-up care and interaction with their provider. The participants were likely to report a chronic illness (75%) and were largely female (62%, 38% male) with 42% over age 65. Participants completed a telephone interview relating their experiences with their physician over the preceding twelve months including reporting whether they talked with their physician about life stress. Age was associated with less patient activation ($r = -.22$, $p < .01$) whereas female gender ($r = .09$, $p < .05$) and education ($r = .14$, $p < .01$) were associated with more patient activation. We wanted to understand whether communication with physicians might moderate the relationship between age and less patient activation. Regression analysis controlling for patient gender and education demonstrated that patient age interacted with reports of conversations about life stress ($b = 04$; $p < .05$) such that rates of patient activation did not appreciably differ between older and younger patients who reported discussing life stress with their doctors. However, among patients who did not discuss life stress with their physician older patients were significantly less activated. Results suggest that intervening in physician communication and drawing out older patients conversationally could potentially positively impact patient activation.

CORRESPONDING AUTHOR: Jorie M. Butler, PhD, Divisio of Geriatrics, University of Utah, Salt Lake City, UT, 84132-0001; jorie.butler@hsc.utah.edu

6:00 PM-7:00 PM B138

THE DAILY LIVED EXPERIENCES ASSOCIATED WITH WORK STRESS

Catherine Dalpé[1], Bianca D'Antono, PhD[2]

[1]Montreal Heart Institute, Repentigny, PQ, Canada; [2]Montreal Heart Institute, Montréal, PQ, Canada

Introduction: Chronic work stress involving high psychological demands and/or low decision latitude has been shown to have harmful consequences for one's health. However, how it influences the daily lived experiences of individuals, at work and elsewhere, has been the focus of relatively little research.

Objective: To examine the associations of work stress with daily interpersonal behaviors, mood, and physical symptoms among healthy men and women.

Methods: 192 healthy male and female workers (Mean = 41± 11 yrs) completed the short-version of the Job Content Questionnaire. For 21 days, they recorded their interpersonal behaviour (relating to dominance, submissiveness, agreeableness, and quarrelsomeness), mood (valence, arousal), and symptoms, after each interpersonal interaction (maximum 10/day). Preliminary correlational analyses are presented below. Regression analyses examining whether sex, age or support obtained at work moderate these relations will follow.

Results: High psychological demands were correlated with significantly more negative affect (r = .18), as well as with more frequent reports of gastrointestinal difficulties (r=.18), fatigue (r = .16), and chest pain (r = .15) while at work (all p < .05). High decision latitude, on the other hand, was associated with significantly more assertive/dominant behaviours (r's > .24), more agreeable behaviours (r's > .17), but with less submissive (r's > -0.22) and quarrelsome behaviours (r's > -0.21) both generally, and more specifically in their interactions at work (all p's < .05). Greater decision latitude was also correlated with more positive affect (r = .20, p < .01) and with less negative affect (r = -0.22, p < .01) at work.

Conclusion: Work stress and daily lived experiences are intimately linked. Greater decision latitude at work was specifically associated with more constructive interpersonal styles at work and elsewhere, as well as with more positive affect at work. It is perhaps through these impacts that greater control at work may contribute to better health.

Key words: Work stress, decision latitude, demands, interpersonal behaviours, mood, symptoms

CORRESPONDING AUTHOR: Catherine Dalpé, Montreal Heart Institute, Repentigny, PQ, J5Z 4L8; catherine.dalpe@umontreal.ca

CITATION AND MERITORIOUS POSTER
6:00 PM-7:00 PM B139

THE INTERACTION OF NEIGHBORHOOD AND GENETIC RISK IN PREDICTING BLOOD PRESSURE AND STRESS-RELATED OUTCOMES IN THE PATH TRIAL

Sandra Coulon, PhD, Dawn K. Wilson, PhD

University of South Carolina, Columbia, SC

African Americans are disproportionately affected by high blood pressure (BP), and both environmental stress and genetic risk may play a role in its development. The aim of this study was to test the impact of neighborhood socioeconomic status (SES) and genetic risk (glucocorticoid receptor sensitivity) on stress-related outcomes (BP, cortisol, perceived stress) in African-American adults. The study hypothesized a stress-diathesis/dual-risk interaction such that genetic risk would have a greater adverse impact on individuals with lower neighborhood SES. Cross-sectional data were collected from 245 African-American adults who participated in the PATH trial, a community-based program to increase walking. Waking saliva cortisol, BP, and perceived stress surveys were collected as markers of physiologic and mental stress. Polymorphisms (*Bcl1*, rs41423247; *FKBP5,* rs1360780) were genotyped from buccal swab samples and indexed to obtain genetic risk. Neighborhood SES was calculated from an established index using block-group data from the 2010 U.S. Census. The sample was predominantly female (65%) and overweight (M_{BMI}=32.44, SD=8.63), with an average age of 55.78 (SD=15.51). Lower neighborhood SES was related to higher waking cortisol (β=-.046, $p < .01$). The gene-by-neighborhood SES interaction was significant for both diastolic BP (β=-.538, $p < .05$) and perceived stress (β=-.041, $p < .01$). Simple slopes indicated significant relations of neighborhood SES with respective perceived stress and diastolic BP outcomes for those with high (β=-0.348; β=-6.566) but not low (β=-0.184; β=-4.434) risk. The patterns were consistent with a differential susceptibility model rather than the hypothesized dual-risk model, and indicated that those with high genetic sensitivity not only had poorer outcomes with lower SES but also had better outcomes with higher SES. This study is the first to assess the impact of neighborhood SES and genetic sensitivity on stress-related outcomes in African-American adults, and to show a differential susceptibility pattern in a physical outcome such as blood pressure. Findings may inform public policy efforts to decrease BP health disparity through greater attention to neighborhood factors, and they support a more malleable model of genetic "susceptibility" rather than "risk."

CORRESPONDING AUTHOR: Sandra Coulon, PhD, University of South Carolina, Columbia, SC, 29201; sandrausc@gmail.com

6:00 PM-7:00 PM B140

THE RELATIONS OF THE GENDER-RELATED PERSONALITY TRAITS AND STRESS TO HEALTH BEHAVIORS AMONG COLLEGE STUDENTS

Alexander J. Nagurney, III., PhD, Cheryl M. Ramos, PhD

University of Hawaii, Hilo, HI

Over the last several decades, there has been a major shift in the trends involving mortality and morbidity. In particular, the illnesses that are making people sick and subsequently killing them are no longer infectious diseases, but are now primarily diseases involving lifestyle choices and health behaviors. Such behaviors involve making healthy food choices, maintaining an active lifestyle, and practicing safe sex habits. With this in mind, an important issue to address is whether or not factors can be identified that make individuals more or less prone to choosing healthy lifestyles. The existing research literature surrounding the gender-related traits of agency and communion, as well as their unmitigated counterparts, provides one starting point for elucidating possible factors that predispose people to make these poor lifestyle choices. The current study asked college student participants to rate themselves on their stress levels, the gender-related traits, and measures of how often they brush and floss their teeth, exercise, and eat a healthy diet. It was found that when the participants rated their stress levels as relatively low, those who rated themselves as high on agency reported brushing their teeth and exercising more regularly whereas those high in unmitigated agency reported the opposite patterns. Under conditions of relatively higher stress, those who were high on agency reported eating a healthier diet and exercising more regularly. Communion and unmitigated communion were largely unrelated to these health behaviors. These results suggest that agency not only predisposes people to taking part in healthier lifestyle habits, but it also serves as a protective factor when stress levels rise. Implications of this pattern of results will be presented.

CORRESPONDING AUTHOR: Alexander J. Nagurney, III., PhD, University of Hawaii, Hilo, HI, 96720; nagurney@hawaii.edu

6:00 PM-7:00 PM B141

THE ROLE OF CULTURAL FACTORS AND PROBLEM ALCOHOL USE IN PREDICTING RESILIENCE FOR HISPANIC EMERGING ADULTS

Timothy Grigsby, BA[1], Myriam Forster, PhD(c)[2], Daniel Soto, MPH[1], Jennifer B. Unger, PhD[1]

[1]University of Southern California, Los Angeles, CA; [2]University of Southern California, Santa Monica, CA

Background: Improving resilience, the ability to thrive in lieu of stress or adversity, has been shown to be a compensatory and protective factor for a number of negative internalizing and externalizing outcomes (e.g., depression, homelessness, etc.). However, empirical studies of resilience in emerging adult populations tend to emphasize childhood maltreatment and investigate current substance use as an outcome rather than a mediator or moderator. The present study investigates (a) the contribution of relevant cultural factors in addition to childhood maltreatment and (b) how risk and protective factors interact with alcohol problem use.Methods: A sample of Hispanic emerging adults participating in Project RED (n = 1,002) completed a battery of self-report survey items at two waves on alcohol use, alcohol use consequences, childhood maltreatment, parent alcohol problems, perceived discrimination, and familism (wave 5) and resilience (wave 6). A hierarchical linear regression model was used to examine risk-protective models of resilience and examine how predictors of resilience varied by alcohol problem use category (non-drinker, drinker, problem drinker).Results: When the direct effects of perceived discrimination (p< 0.05) and familism (p< 0.001) were added to the model, we observed a significant contribution to resilience scores above and beyond childhood maltreatment (verbal and physical abuse) controlling for gender and parent alcohol problems. Additionally, there was a marginally significant problem use x gender interaction (p=0.056) where males have significantly higher resilience scores in the non-drinking group, but no noticeable difference in the drinking and problem drinking groups.Conclusions: These findings provide preliminary evidence that cultural variables—particularly strengthening family bonds—should be considered and incorporated into prevention programs that aim to promote resilience in Hispanic emerging adults. There may also be important gender differences in resilience when working with populations that use alcohol or other substances, although these associations need to be explored further. Future work should attempt to identify cultural and universal predictors of resilience that can be utilized with problem alcohol users.

CORRESPONDING AUTHOR: Timothy Grigsby, BA, University of Southern California, Los Angeles, CA, 90032; tjgrigsb@usc.edu

Friday
April 24, 2015
8:30 AM-9:45 AM

Symposium 26 8:30 AM-9:45 AM

MULTI-LEVEL BEHAVIORAL CHANGE APPROACHES TO FALL PREVENTION: INDIVIDUAL, COMMUNITY AND POLICY

Thelma Mielenz, PhD[1], Sandra J. Winter, PhD, MHA[2], Marcia G. Ory, PhD, MPH[3], Ellen Schneider, MBA[4], Matthew Lee. Smith, PhD, MPH, CHES[5], Mary Altpeter, PhD[6], Stephanie Bomberger, MA[4], Tiffany Shubert, PhD[7], Rebekah J. Kharrazi, MPH, CPH[8], Mark A. Fauci[9], Cynthia Marie. Castro, PhD[10], Abby King, PhD[11], Judy A. Stevens, PhD[12], Anna I. Caffarelli[13]

[1]Columbia University Mailman School of Public Health, New York, NY; [2]Stanford University School of Medicine, Palo Alto, CA; [3]Texas A&M, College Station, TX; [4]University of North Carolina at Chapel Hill, Chapel Hill, NC; [5]The University of Georgia, Athens, GA; [6]UNC At Chapel HIll, Center for Health Promotion and Disease Prevention, Chapel Hill, NC; [7]UNC Chapel Hill, Chapel Hill, NC; [8]Columbia University Mailman School of Public Health, Alameda, CA; [9]94040-2586, San Jose, CA; [10]Stanford University, Palo Alto, CA; [11]Stanford University School of Medicine, Stanford, CA; [12]Centers for Disease Control & Prevention, Atlanta, GA; [13]NYC Department of Health and Mental Hygiene, New York, NY

As the leading cause of injury mortality in older adults and the cause of approximately 60% of all nonfatal injuries, falls are a tremendous burden to society, with projected injury costs of $43.8 billion by 2020. At the individual level, falls can result in serious physiological, psychological, social and financial consequences and contribute to increased mortality, morbidity and institutionalization. With one in three older adults experiencing at least one fall each year, the number of fall events are increasingly rapidly, along with the growing older adult population.Individual and combined risk factors contribute to the risk of falls. Predisposing factors, such as health status, play an important role, as do environmental factors. Other factors that are independently associated with increased risk include: previous history of falls, strength, gait and balance impairment, and certain specific medications. Though falls among constitute a major public health problem, many falls are preventable by addressing the major modifiable risk factors.This symposium highlights three initiatives, currently underway, that tackle fall prevention at individual, community, and policy levels. Using the latest in machine-learning technology, researchers are employing wearable movement and activity monitoring to provide instant feedback on exercises performed in the home and to test remote monitoring capabilities. Seeking broader application of the Center for Disease Control and Prevention's STEADI (Stopping Elderly Accidents, Deaths & Injuries) toolkit for health care providers, public health practitioners are adapting STEADI for application in community-based settings. Finally, state-based fall prevention coalitions are actively gathering representatives from diverse sectors to develop novel policy approaches to falls prevention. Results of a survey of coalition characteristics, goals being pursued and perceived barriers and facilitators of these goals will be presented.

Symposium 26A

COMMUNITY STEADI: EXPANDING OLDER ADULT FALL PREVENTION AT THE COMMUNITY LEVEL

Thelma J Mielenz, PhD, Rebekah J Kharrazi, MPH, CPH, Anna I Caffarelli and Judy A Stevens, PhD

Background: The Centers for Disease Control and Prevention (CDC) created the STEADI (Stopping Elderly Accidents, Deaths & Injuries) tool kit to help health care providers incorporate older adult fall prevention into their practices. The purpose of this project is to develop "Community STEADI", a modified version of the STEADI tool kit, for use in community settings. Methods: Developed through a partnership between Columbia University Mailman School of Public Health, the New York City (NYC) Department of Health and Mental Hygiene (who co-leads the NYC Falls Prevention Coaltion), and the CDC. Community STEADI uses materials from the original STEADI tool kit to create a simple guide for training program implementation staff at senior centers and similar community organizations. The guide will enable them to conduct falls risk assessments, provide appropriate referals to community-based programs, and promote communication with the older adults' health care providers. Results: Community STEADI will summarize a participant's fall risk using either the Stay Independent brochure self-risk assessment scores or three key screening questions, and an objective assessment of gait, strength and balance (the Timed Up and Go test). A risk assessment summary form will be provided to the older adults to share with their healthcare providers. Based on their fall risk level, older adults will be referred to either evidence-based community exercise, balance, and fitness programs or to fall prevention programs. Selected programs were identified from the CDC Compendium of Effective Fall Interventions and the Administration on Aging's Title III-D Highest Tier of Evidence-Based Health Promotion/Disease Prevention programs and compiled into program-level and state-level inventories. Local directories will eventually be available to participating organizations. Conclusions: Community STEADI is a potentially valuable tool for conducting fall risk screening in community settings. The next step in this project will be to develop a proposal for implementing and evaluating Community STEADI.

Symposium 26B

A TECHNOLOGY-BASED INTEGRATED APPROACH TO INDIVIDUAL-LEVEL FALL PREVENTION IN OLDER ADULTS

Sandra J. Winter, PhD, MHA

Background: Each year 1/3 of adults aged 65+ experience a fall, and 1/3 of these falls result in injuries. This presentation will describe the development and pilot testing of two technology-driven falls prevention solutions that remotely monitor older adults' movement and physical activity in the home.Methods: *Movement monitoring*–our wearable solution combines innovative machine-learning algorithms and a compact hardware device to accurately monitor the movement of older adults within their homes without the use of external references, such as GPS. User testing is underway. *Activity monitoring*–our system uses emerging infrared sensor technology, smart mobile technology, and network software architecture to remotely monitor and give feedback on exercise performed in the home. User testing was conducted on 10 men and women (mean age=79.2 years). Participants were at increased risk of physical disability (Short Physical Performance Battery mean score=6.1±2.3).Results: *Movement monitoring*–User testing is underway to determine accuracy of the techonology in detecting a variety of movements. *Activity monitoring*--On a scale of 1(disagree)–7(agree), usertesters reported that seeing their body mechanic feedback on a screen made them think about and do exercises differently (think: mean=5.4±2.2, do: mean=5.6±1.8); they trusted the information was accurate (mean=6.9 ±0.3); and would use such a system in their homes (mean=6.2±1.4). On a scale of 1(disagree)–10(agree), test-users gave high ratings on receiving remote help from an exercise expert (mean=9.0±1.8); having virtual exercise sessions with friends/family (mean=7.6±2.6); tracking improvements in activity over time (mean=9.75±0.5); and comparing results with others (mean=7.0±2.6). Receiving bonuses for accurate performance was rated lower (mean=5.75±3.6). Conclusions: Properly designed and implemented technology has the potential to improve home-based monitoring of elders' movement and motivation for activity in the home.

Symposium 26C

STATE COALITIONS: A CRITICAL POLICY-LEVEL BEHAVIOR CHANGE INTERVENTION FOR FALL PREVENTION

Marcia G. Ory, PhD, MPH

Background: With the recognition that falls are a major public health problem, there is a growing body of literature calling for comprehensive intervention strategies that involve evidence-based multi-level interventions. In 2012, the National Council on Aging's Falls Free® initiative disseminated a State Policy Toolkit for advancing fall prevention. However, little is known about what states are doing to address policy goals outlined in this Toolkit. The purposes of this presentation are to: 1) set state fall prevention coalitions within the greater array of fall prevention strategies; 2) delineate eight coalition goals that have been generally seen as beneficial for falls prevention; and 3) document changes in state fall coalition composition and activities from 2012-2014. Methods: To learn more about state fall prevention coalitions, an online questionnaire was distributed to state leads identified by the Falls Free® Initiative in November 2012, and again in January 2014. The questionnaire had 63 items soliciting information about coalition characteristics and activities. Descriptive statistics will be presented to document state coalition characteristics; coalition sectors represented; goals being pursued, and changes over time. Results: In 2012, of the 42 state coalitions that were identified with state-level fall prevention activities, 34 had active coalitions and completed the questionnaire. In 2014, of the 42 states identified, 37 had active coalitions and completed the questionnaire. Nationally, some states established new coalitions, while others became inactive. There is a trend for coalitions to be embedded in larger networks versus serving as standalone coalitions (57% in 2012 versus 44% in 2014). Departments of public health departments were the most highly represented coalition sector at both time points, and coalition membership represented greater sector diversity in 2014. In both time periods, a major emphasis has been on increasing the availability of evidence-based programs.Discussion: Findings reveal that over time more states have active fall prevention coalitions, coalition partnerships are becoming more diverse, and more coalition partners providing in-kind or other support. Obtaining funding for coalition efforts remains a challenge.

Symposium 26D

A TECHNOLOGY-BASED INTEGRATED APPROACH TO INDIVIDUAL-LEVEL FALL PREVENTION IN OLDER ADULTS

Mark A. Fauci

Background: Each year 1/3 of adults aged 65+ experience a fall, and 1/3 of these falls result in injuries. This presentation will describe the development and pilot testing of two technology-driven falls prevention solutions that remotely monitor older adults' movement and physical activity in the home.Methods: *Movement monitoring*–our wearable solution combines innovative machine-learning algorithms and a compact hardware device to accurately monitor the movement of older adults within their homes without the use of external references, such as GPS. User testing is underway. *Activity monitoring*–our system uses emerging infrared sensor technology, smart mobile technology, and network software architecture to remotely monitor and give feedback on exercise performed in the home. User testing was conducted on 10 men and women (mean age=79.2 years). Participants were at increased risk of physical disability (Short Physical Performance Battery mean score=6.1±2.3).Results: *Movement monitoring*–User testing is underway to determine accuracy of the techonology in detecting a variety of movements. *Activity monitoring*--On a scale of 1(disagree)–7(agree), usertesters reported that seeing their body mechanic feedback on a screen made them think about and do exercises differently (think: mean=5.4±2.2, do: mean=5.6±1.8); they trusted the information was accurate (mean=6.9 ±0.3); and would use such a system in their homes (mean=6.2±1.4). On a scale of 1(disagree)–10(agree), test-users gave high ratings on receiving remote help from an exercise expert (mean=9.0±1.8); having virtual exercise sessions with friends/family (mean=7.6±2.6); tracking improvements in activity over time (mean=9.75±0.5); and comparing results with others (mean=7.0±2.6). Receiving bonuses for accurate performance was rated lower (mean=5.75 ±3.6).Conclusions: Properly designed and implemented technology has the potential to improve home-based monitoring of elders' movement and motivation for activity in the home.

CORRESPONDING AUTHORS: Thelma Mielenz, PhD, Columbia University Mailman School of Public Health, New York, NY, 10032; tjm2141@columbia.edu; Sandra J. Winter, PhD, MHA, Stanford University School of Medicine, Palo Alto, CA, 94304; sjwinter@stanford.edu; Marcia G. Ory, PhD, MPH, Texas A&M, College Station, TX, 77845; mory@sph.tamhsc.edu; Mark A. Fauci, 94040-2586, San Jose, CA, 95113; mfauci@gen9.com

Symposium 27 8:30 AM-9:45 AM

USING EVIDENCE-BASED MEASURES IN INTEGRATED PRIMARY CARE TO IMPROVE QUALITY OF SERVICE

Jennifer Funderburk, PhD[1], Gregory Beehler, PhD, MA[2], Paul King, PhD[2], Robyn Shepardson, PhD[1], Jeff Goodie, PhD[3]

[1]VA Center for Integrated Healthcare, Syracuse, NY; [2]VA Center for Integrated Healthcare, Buffalo, NY; [3]Uniformed Services University for Health Services, Bethesda, MD

Behavioral health services are a crucial element of the medical home. In the Veterans Health Administration (VHA), Primary Care-Mental Health Integration (PC-MHI) offers a platform for the delivery of evidence-based prevention and treatment services. Empirically-validated measures can be used to help implement evidence-based clinical care, including rapid identification of at-risk patients, monitoring symptom changes, and improving behavioral health provider adherence to protocol. However, the use of validated measures outside of the research arena is often met with resistance. Using data captured by several research and quality improvement initiatives within the VHA, this symposium will discuss various perspectives of how empirically-validated measures can be used to help promote evidence-based practices within integrated primary care clinics. The first presentation will summarize the development and piloting of the Primary Care Behavioral Health Provider Adherence Questionnaire toolkit, which uses a validated questionnaire designed to assess behavioral health providers' fidelity to the PC-MHI model of integration. The toolkit was developed as a diagnostic self-assessment regarding how closely behavioral health providers adhere to essential components of PC-MHI. The second presentation will report on the results of a retrospective chart review study of 8400 Veterans seen in 34 VA integrated primary care clinics. This study examined behavioral health providers' use of both ultra-brief (2-4 item) mental health screenings as well as well-validated patient self-report measures available within the electronic medical record to identify distress and monitor symptom changes. The third presentation will present national data from VHA primary care staff summarizing how each primary care clinic implemented regular screening for at-risk alcohol use and depression using psychometrically validated questionnaires. Discussion will focus on best practices when incorporating empirically-validated measures and potential solutions to address barriers to wider implementation.

Symposium 27A

IMPLEMENTING BEHAVIORAL HEALTH SCREENING IN PRIMARY CARE

Jennifer Funderburk, PhD

Regular behavioral health screening for alcohol use and depression is recommended within primary care clinics, but little is known regarding best practices for implementing those screens. There are several self-report screening measures (e.g., the 3-item Alcohol Use Disorders Identification Test-Consumption [AUDIT-C] and 2-item Patient Health Questionnaire [PHQ-2]) that are validated for this purpose and can be administered verbally, on paper, or online. The Veterans Health Administration (VHA) has mandated annual screening using the AUDIT-C and PHQ-2 in primary care, with high rates of screening achieved (e.g., 90% of AUDIT-C; Bradley et al., 2006). However, research has shown that proper administration methods must be used to achieve accurate results. Yet there is no specific training or implementation protocol required, therefore it is possible that clinics may train providers and implement screening procures in a nonstandard fashion. This presentation will summarize the results of a national web-based survey of 1120 primary care staff from all 21 VHA primary care networks across the United States. Respondents indicated that the AUDIT-C and PHQ-2 were primarily administered verbally by nurses in the exam rooms. Fewer than half of the respondents who regularly administer screens endorsed prior training in the AUDIT-C and PHQ-2. Among those who were trained, fewer than half reported that training included discussions of best practices in administration procedures. These findings highlight important preferences for implementing screening within primary care clinics and potential areas of concern regarding reliable administration. In addition, these findings provide guidance for quality monitoring plans among other integrated primary care clinics considering implementation of behavioral health screening.

Symposium 27B

SUPPORTING HI-FI PRACTICE WITH THE PRIMARY CARE BEHAVIORAL HEALTH PROVIDER ADHERENCE QUESTIONNAIRE

Gregory Beehler, PhD, MA

The roles of behavioral health providers working in integrated primary care are diverse and complex. Formal training programs in integrated care settings remain scarce, making the transition to the multifaceted primary care environment challenging for traditionally-trained providers. The Primary Care Behavioral Health Provider Adherence Questionnaire (PPAQ) was developed through a rigorous expert consensus process and subsequently validated with a large sample of behavioral health providers resulting in the first psychometrically sound measure of integrated primary care provider fidelity. This measure provides a new approach to assessing provider behavior that may improve the translation of integrated care conceptual models into everyday practice. This presentation will report on the next steps in PPAQ research and quality improvement efforts. First, a latent class analysis was conducted as a secondary analysis of PPAQ validation study data to determine if the PPAQ could identify provider practice patterns. This analysis revealed five distinct clusters of integrated care providers that varied by self-reported theoretical orientation, educational background and professional training, and level of clinic integration. Provider clusters demonstrated varying levels of adherence to integrated care model elements, with the lowest levels of adherence related to collaboration with other primary care staff. Second, to assist frontline providers with identifying areas of low-fidelity practice, the PPAQ was expanded into a toolkit by adding a scoring template and interpretation guide that was embedded with links to educational resources and clinical tools. Piloting the toolkit with a sample of providers garnered high levels of acceptability and perceived utility as well as suggestions for future modification. Based on the results of this pilot, the PPAQ toolkit is being transformed into a web-based resource to promote ongoing quality improvement initiatives among providers in VHA. Results of the PPAQ projects described above will be discussed in terms of their relevance for conducting future research regarding the clinical effectiveness of integrated care models, as well as for supporting high-fidelity practice among frontline integrated care providers.

Symposium 27C

IDENTIFYING MEASUREMENT-BASED CARE PRACTICES OF VA INTEGRATED PRIMARY CARE PROVIDERS

Paul King, PhD

Measurement-based care (MBC) refers to the use of baseline screening and ongoing symptom monitoring to guide treatment selection and modification to improve outcomes for chronic health conditions. In the primary care setting, MBC for depression and other common mental health diagnoses lags behind that of medical conditions, such as hypertension and diabetes. Yet several empirically-validated screening and brief assessment measures are available for depression, anxiety, and posttraumatic stress disorder (PTSD). Within VHA, each measure is available for administration via the electronic medical record system. Despite easy access to these measures, there is little direct guidance for behavioral health providers working in integrated primary care settings regarding how to routinely implement MBC principles. This presentation will summarize the results of a large retrospective chart review study of veterans seen by integrated primary care providers over a two year period. The goal of this study was to examine the extent to which integrated care providers employ MBC. Among 8,403 patients, only 23% had at least one screening or brief assessment conducted in association with their integrated care encounters. These patients were were more likely to be younger, male, have a documented service-connected disability, and have served during the Persian Gulf service era. After controlling for patient-level factors in multivariate logistic regression models, greater likelihood of being screened/assessed was associated with having more frequent encounters (versus a single encounter), having a primary diagnosis of PTSD or anxiety (versus depression), receiving care at a VA medical center (versus a VA Community Based Outpatient Clinic), and receiving care from non-physician behavioral health providers. These findings suggest a clear practice gap related to MBC in VA integrated care settings. Discussion will focus on potential barriers to MBC encountered by integrated care providers, as well as possible strategies for assisting providers in making measurement-based treatment decisions.

CORRESPONDING AUTHORS: Jennifer Funderburk, PhD, VA Center for Integrated Healthcare, Syracuse, NY, 13210; Jennifer.Funderburk@va.gov; Gregory Beehler, PhD, MA, VA Center for Integrated Healthcare, Buffalo, NY, 14215; gregory.beehler@va.gov; Paul King, PhD, VA Center for Integrated Healthcare, Buffalo, NY, 14215; paulking@buffalo.edu

Symposium 28 8:30 AM-9:45 AM

ADOLESCENTS AND YOUNG ADULTS WITH CANCER: AN UNDER-RECOGNIZED CANCER DISPARITIES POPULATION

Suzanne C. Lechner, PhD[1], Crystal Park, PhD[2], Elizabeth Siembida, M.A.[2], Lena Wettergren, PhD[3], Ashley W. Smith, PhD, MPH[3]

[1]University of Miami Miller School of Medicine, Miami, FL; [2]University of Connecticut, Storrs, CT; [3]National Cancer Institute, Bethesda, MD

Teens and young adults often report feeling as though they do not “fit in” with peers, and surprisingly, this experience is replicated within oncology care settings. Too old for pediatric cancer settings and too young to feel comfortable in most adult cancer clinics, the needs of adolescents and young adults with cancer (AYA) have been under-recognized. Reports indicate that AYA oncology patients constitute a health disparities population with regard to mortality and quality of life indices. In this symposium, we highlight quality of life issues in AYA cancer patient-survivors from three relevant vantage points. First, Dr. Crystal Park will describe the development of an AYA-specific quality of life instrument that was designed to capture the multiple aspects of QOL specific to AYAs, and examine how QOL relates to aspects of spirituality. Next, Lena Wettergren will discuss an important aspect of AYA QOL that is seldom addressed in clinical settings: sexual functioning, reproductive concerns, and intimacy needs. Using data from a large epidemiological study, Wettergren and colleagues found that there were differences in sexual functioning and intimacy needs among AYAs. To shed further light on a possible mechanism that may be driving the disparity in outcomes among members of this population, Ashley Simbida will discuss the findings of a large systematic review that suggested that failure to recognize the developmental stage of patients in doctor-patient interactions may hamper quality care. Adolescents with cancer require a developmentally-appropriate approach to a) their involvement in treatment-related decisions, b) the content of the information they wish to receive, and c) their information delivery preferences, which is different from young adults. Finally, Dr. Ashley Wilder-Smith from the NCI will review the ways that Behavioral Medicine researchers can work toward reducing HRQOL disparities among this disadvantaged population of individuals with cancer.

Symposium 28A

SPIRITUAL COMFORT AND STRUGGLE AND WELL-BEING IN LATE ADOLESCENT AND YOUNG ADULT CANCER SURVIVORS

Crystal Park, PhD

Introduction: Spirituality has been shown to play complex roles in cancer survivors’ physical and psychological adjustment: Spirituality is typically more strongly related to mental than to physical quality of life (QOL) and well-being, and few aspects of spirituality are related to adherence or health behaviors. While less often examined, spiritual struggle appears to be more strongly related to survivors’ well-being, but inversely. However, most of this research has been conducted with middle-aged and older adults; little is known about spirituality-well-being links in younger cancer survivors. We examined two dimensions of spirituality (spiritual struggle and spiritual comfort) as correlates of mental and physical QOL, health behaviors, and well-being (perceived impact of cancer, fear of recurrence) in late adolescent and young adult survivors. Methods: An Internet survey was advertised across the US, containing multiple measures of spirituality and well-being. Results: In 120 respondents (ages 16-47, Mean =32.6, 88% female, 86% white), spiritual comfort was marginally positively correlated with mental QOL and health behaviors (diet, sleep, adherence) while spiritual struggle was more strongly inversely to mental (and marginally, physical) QOL and health behaviors (most rs >.3, ps < .01). Similarly, comfort was marginally related to greater well-being, but struggle was strongly related to greater fear of recurrence and negative impacts of cancer (most rs> .24, ps < .05). When considered together, effects of spiritual struggle were much more strongly and consistently (inversely) related to well-being than was spiritual comfort. Results held and were in some cases stronger when controlling for depression. Conclusions: As is true with older cancer survivors, spirituality is related to many aspects of well-being, but relations are stronger and more consistent for spiritual struggle than for spiritual comfort. Findings suggest directions for future interventions, particularly finding ways to help survivors potentiate their sense of connectedness and reduce spiritual struggle in the service of greater well-being and improved health behaviors.

Symposium 28B

THE DOCTOR-PATIENT RELATIONSHIP IN ADOLESCENT CANCER: A DEVELOPMENTALLY-FOCUSED LITERATURE REVIEW

Elizabeth Siembida, M.A.

Several national reports as well as the clinical oncology community have defined the adolescent and young adult (AYA) cancer population as individuals diagnosed with cancer between the ages of 15 and 39. However, neuroscience and developmental research have identified important decision-making skills (e.g., information processing, reasoning, emotion regulation) that are not fully developed during adolescence, making general, AYA-focused doctor-patient interaction guidelines potentially inappropriate for the adolescent cancer population. Most studies include adolescents in samples of pediatric cancer patients or include adolescents in samples of young adult cancer patients, but studies rarely consider adolescent cancer patients as a distinct, developmentally unique group. A systematic literature review was undertaken in February 2014 to begin to understand what is known about the doctor-patient relationship and communication preferences among adolescent cancer patients, their parents, and providers. Among the 23 studies that met inclusion criteria, three important themes emerged: 1) discrepancies among adolescent patients, parents and providers about the desired extent of involvement in treatment related decisions, 2) desire for developmentally and culturally appropriate information provision (e.g., treatment options, side effects, survivorship care) from providers directed specifically to the patient as opposed to the parent, and 3) the desire and preference for how information is delivered with recognition that these preferences may change with age. There was some variation in themes by study design with studies directly observing medical consultations reporting less adolescent involvement in discussions than studies that surveyed doctors. The results of this review support the need for developmentally-focused research and clinical guidelines that emphasize the experience of adolescent cancer patients separate from their older and younger counterparts. The results also highlight the importance of understanding concordance and dis-concordance of preferences and roles among the adolescent patient, their parent(s), and the doctor within the medical consultation.

Symposium 28C

SEXUAL FUNCTION AND REPRODUCTIVE CONCERNS AMONG ADOLESCENTS AND YOUNG ADULTS TREATED FOR CANCER

Lena Wettergren, PhD

In adolescents and young adults (AYA) ages 15-39 at diagnosis, cancer treatment is associated with negative effects on health-related quality of life. However, the impact on sexual functioning is poorly documented. The aim of this study was to describe the sexual function, body image and reproductive concerns of a population-based cohort of AYAs following diagnosis, and to explore factors associated with these concerns. Participants in the US Adolescent and Young Adult Health Outcomes and Patient Experience (AYA HOPE) study who completed two surveys approximately 1 and 2 years after their cancer diagnosis, were included in the analysis (n=465). Distributions of demographic and clinical characteristics by sexual functioning, body image and reproductive concerns were explored. Predictors of concerns about sexual functioning and reproduction were identified using multivariable logistic regression. At the baseline one year after diagnosis: 49% of the respondents were concerned about sexual function and intimacy, and 59% held negative feelings about their appearance. At two years, the proportion reporting concerns in these domains declined significantly (Sexual functioning X^2=123.56, $p < .001$; Physical appearance X^2=126.51, $p < .001$), however concerns about sexual function (43%) and body image (50%) remained prevalent. Additionally, reproductive concerns were endorsed by 63% of the sample. While concerns about reproduction were equally endorsed based on gender, AYA survivors ages 15-29 years at diagnosis, compared to those who were older, were significantly more likely to report concerns about reproduction (77% vs. 49%, X^2= 38.95), $p < .001$).

AYAs in the US report substantial concerns regarding sexual function, body image and reproduction one and two years following cancer treatment. These data suggest a need for further research to develop targeted and tailored interventions for vulnerable subgroups of AYAs whose sexual health needs have received only limited attention from the Behavioral Medicine research community.

CORRESPONDING AUTHORS: Crystal Park, PhD, University of Connecticut, Storrs, CT, 06355; crysdara@aol.com; Elizabeth Siembida, M.A., University of Connecticut, Storrs, CT, 06269; elizabeth.siembida@uconn.edu; Lena Wettergren, PhD, National Cancer Institute, Bethesda, MD, 20850; lena.wettergren@nih.gov

Symposium 29 8:30 AM-9:45 AM

AGING AND CANCER: IMPLICATIONS FOR COGNITIVE OUTCOMES AND CLINICAL ENCOUNTERS

Kristi D. Graves, PhD[1], Reginald Tucker-Seeley, ScD[2], Brian D. Gonzalez, PhD[3], Anjali Deshpande, PhD, MPH[4], Lisa M. Lowenstein, PhD, MPH[5], Julia H. Rowland, PhD[6]

[1]Georgetown University, Washington, DC; [2]Dana-Farber Cancer Institute (DFCI)/ Harvard School of Public Health (HSPH), Boston, MA; [3]Moffitt Cancer Center, Tampa, FL; [4]Washington University in St. Louis, St. Louis, MO; [5]University of Rochester, Rochester, NY; [6]National Cancer Institute, Bethesda, MD

The majority of cancer survivors in the United States are over age 65, yet research focused on disentangling the effects of aging from those of cancer treatment in older cancer survivors is scant. Identification of trajectories and predictors of health and cognitive functioning in older cancer survivors can distinguish factors related to aging, cancer, and their intersection. Such efforts are of interest to older cancer survivors, their families and members of their medical team, as certain cancer treatments may exacerbate declines in functioning or increase risk of poorer health outcomes. Understanding factors that increase risk of poorer outcomes could ultimately improve older cancer survivors' quality of life.

The Aging and Cancer Special Interest Groups collaborated to identify research relevant to the treatment, assessment and clinical care of older cancer patients and survivors. Presentation 1 highlights longitudinal patient-reported outcomes within a large cohort of older men and women with and without cancer. Older cancer survivors, particularly non-whites, had significantly lower cognitive and self-reported health compared to their non-cancer peers. Presentation 2 examines cognitive functioning among older men diagnosed with prostate cancer. Compared to prostate cancer patients treated with only surgery as well as cancer-free controls, men treated with androgen deprivation therapy had impaired cognitive functioning. These deficits were exacerbated among men with a specific genetic mutation. Presentation 3 illustrates how older patients' concerns about cognitive functioning and other symptoms are often overlooked during medical oncology encounters. Data from audiotaped clinical visits demonstrated missed opportunities and the lack of validated assessment approaches for identifying functional and symptom concerns. Together the presented research suggests targets for improving patient and provider education about risk factors for and assessment of cognitive and health outcomes in older cancer survivors. The discussant will note opportunities for interdisciplinary research relevant to both aging and cancer and highlight the need for future efforts to promote integrated clinical care to improve quality of life in vulnerable communities of older cancer survivors.

Symposium 29A

COURSE AND PREDICTORS OF COGNITIVE FUNCTION IN PROSTATE CANCER SURVIVORS: A CONTROLLED COMPARISON

Brian D. Gonzalez, Ph.D., Heather S.L. Jim, PhD, Margaret Booth-Jones, PhD, Morgan Lee, MA, Brent J. Small, PhD, Steve K. Sutton, PhD, Hui-Yi Lin, PhD, Jong Y. Park, PhD, Philippe E. Spiess, MD, MS, Mayer N. Fishman, MD, PhD, & Paul B. Jacobsen, PhD

Background: Men receiving androgen deprivation therapy (ADT) for prostate cancer may be at risk for cognitive impairment. Age-related changes may render older men particularly vulnerable to this risk. This study examined the impact of ADT on cognitive performance and explored potential demographic and genetic predictors of impaired performance. Methods: Prostate cancer patients were assessed before or within 21 days of starting ADT (ADT+ group; n=58; age M = 67 years, age range: 49 – 90) and 6 and 12 months later. Age- and education-matched prostate cancer patients treated with prostatectomy only (ADT- group; n=84; age M = 68 years, age range: 50 - 92) and men without cancer (CA- group; n=88; age M = 69 years, age range: 47 – 87) were assessed at similar intervals. Assessments included neuropsychological tests of verbal memory, visual memory, attention, and executive function. Performance was classified as impaired if the participant scored ≥ 2 standard deviations below published norms on one or more tests. Results: A group by time interaction for impaired cognitive performance was evident when comparing the ADT+ group to all controls (p=.01). Groups did not differ at baseline (p=.99); however, the ADT+ group was more likely to demonstrate impaired performance at 6 and 12 months (ps≤.04). Age and cognitive reserve did not moderate the impact of ADT on impaired cognitive performance (ps≥.11). Genetic analyses indicated that the *GNB3* SNP rs1047776 was associated with increased impairment over time in the ADT+ group (p < .001). Conclusion: Men treated with ADT, particularly those with a genetic variant in *GNB3,*were more likely to demonstrate impaired performance on cognitive tests six months after initiation of treatment relative to matched controls. These findings have implications for patient education regarding the risks and benefits of ADT.

Symposium 29B

TRAJECTORIES OF HEALTH STATUS AND COGNITIVE FUNCTION OF OLDER CANCER SURVIVORS VS NON-CANCER ADULTS

Anjali Deshpande, PhD, MPH

OBJECTIVE: Despite prior research that describes patient-reported outcomes (PROs) among cancer survivors, there is a lack of information on the short- and long-term impact of a cancer diagnosis on cognitive functioning and self-rated health (SRH) separate from the effects of aging. An understanding of how cancer affects the normal aging trajectory of older adults is needed to target clinical and rehabilitative care so cancer survivors can optimize function and participate in valued activities as they age. METHODS: Data from 9 waves of the Health and Retirement Study longitudinal cohort (1992-2008) were used to examine trajectories of cognitive functioning and SRH in cohort members with incident cancer compared to those without cancer. Separate mixed models, controlling for demographic factors, comorbidity, and depression, were used to describe the trajectory of each of the two outcomes, with age as the time variable and a random intercept for each study subject. Mean cognitive function scores and the probability of reporting fair/poor health were determined for cancer survivors and non-cancer cohort members by age. Results were stratified by race/ethnicity and gender to evaluate group differences.RESULTS: At each year from age 60-80, cancer patients had lower mean cognitive function and higher probability of reporting fair/poor health compared to non-cancer adults. The effect of cancer on cognitive function was greater in non-Whites; and non-Whites were also more likely to report fair/poor health. Differences between men and women were limited and were mainly observed for SRH among non-cancer adults.CONCLUSION: Cognitive function and SRH are significantly affected by both cancer and age, however the impact of cancer on PROs were far above normal aging patterns in this cohort.

Symposium 29C

MISSED OPPORTUNITIES TO DISCUSS PATIENT AND CAREGIVER AGING CONCERNS IN ONCOLOGY CLINICAL ENCOUNTERS

Lisa M. Lowenstein, PhD, MPH

Background: Older patients often have concerns regarding age-related health conditions that can affect their cancer treatment and quality of life. Addressing these concerns with geriatric assessment (GA) is imperative because GA-driven interventions may help improve outcomes in older patients with cancer.Methods: This study is a secondary analysis using observational data (surveys and clinic encounter audiotapes). Thirty-seven patients aged >60 from 20 oncologists were included. Two trained coders used a structured coding scheme to examine transcribed audiotapes for the number of concerns related to geriatric domains and the number of "missed opportunities" (i.e., concerns that were not addressed or were acknowledged without implementation of GA-driven interventions). Atlas.ti was used for all analyses.

Methods: This study is a secondary analysis using observational data (surveys and clinic encounter audiotapes). Thirty-seven patients aged >60 from 20 oncologists were included. Two trained coders used a structured coding scheme to examine transcribed audiotapes for the number of concerns related to geriatric domains and the number of "missed opportunities" (i.e., concerns that were not addressed or were acknowledged without implementation of GA-driven interventions). Atlas.ti was used for all analyses.<

Results: Patients were 69±7.5 years old, and were mostly female (70%), married (59%), and White (97%). Out of 37 audiotaped visits, 31 visits had a total of 71 age-related discussions, and 52% of them were "missed opportunities": comorbidity=3/18, physical performance=10/16, polypharmacy=6/10, psych=5/9, functional status=5/9, cognitive=5/5, social support=3/4, and nutrition=0/2. Themes within geriatric domains that emerged such as "missed opportunities" included confusion (cognitive), depression (psych), weakness (physical performance), and functional impairment. Rarely did oncologists or their teams implement validated tools for assessment of age-related concerns. The example illustrates how the oncologist (O), in one visit, does not evaluate (with cognitive screening tools) or intervene upon reported confusion.

O: And your hallucinations and dreams? […]

C: He's more confused. The confusion hasn't gone away too much but the hallucinations stopped.

P: Well, that's different.

O: The hallucinations are better.

C: Better.

0: You seem pretty with-it today.

Conclusion: "Missed opportunities" to intervene on age-related concerns are common during oncology clinic visits, which could lead to adverse outcomes. Currently, a PCORI funded study is exploring whether implementing a standardized GA in oncology practices would minimize the number of "missed opportunities," by providing a framework for appropriate communication and intervention.

CORRESPONDING AUTHORS: Brian D. Gonzalez, PhD, Moffitt Cancer Center, Tampa, FL, 33612; brian.gonzalez@moffitt.org; Anjali Deshpande, PhD, MPH, Washington University in St. Louis, St. Louis, MO, 63110; adeshpan@dom.wustl.edu; Lisa M. Lowenstein, PhD, MPH, University of Rochester, Rochester, NY, 14642; lisa_lowenstein@urmc.rochester.edu

Symposium 30 8:30 AM-9:45 AM

IMPLEMENTING DIABETES PREVENTION IN THE VA - RESULTS FROM A CLINICAL DEMONSTRATION PROJECT

Caroline R. Richardson, MD[1], Laura Damschroder, MS, MPH[2], Tannaz Moin, MD, MBA, MSHS[3], Paul Estabrooks, PhD[4]

[1]University of Michigan / Ann Arbor VA Medical Center, Ann Arbor, MI; [2]VA Ann Arbor Center for Clinical Management Research, Ann Arbor, MI; [3]VA Greater Los Angeles, Los Angeles, CA; [4]Virginia Tech / Carilion Clinic / Virginia Tech Carilion School of Medicine, Blacksburg, VA

Results of the Diabetes Prevention Program (DPP) study as well as a number of other large randomized controlled trials demonstrate that type 2 diabetes is a preventable disease. Despite these promising results, most American adults who are at high risk for developing diabetes are not aware of their risk status and do not have access to effective diabetes prevention programs. Veterans are at even higher risk for diabetes than the general population. While the VA has been a leader in developing diet and exercise programs for veterans including national implementation of VA MOVE! program, veterans are not routinely screened for pre-diabetes and lifestyle interventions that meet CDC criteria for Diabetes Prevention Program registration are rare in the VA. In partnership with the VA's National Center for Health Promotion and Disease Prevention, the VA Diabetes Quality Enhancement Research Initiative (Diabetes QUERI) conducted a pragmatic implementation evaluation of the VA DPP clinical demonstration project. This symposium will include three presentations: 1) A comparison of weight loss for veterans with pre-diabetes enrolled in MOVE! vs VA DPP, 2) Implementation lessons learned from the VA DPP clinical demonstration project, and 3) Weight loss and participation results from a parallel arm of veteran with pre-diabetes who enrolled in an internet-mediated DPP.

Symposium 30A

EFFECTIVENESS OF AN ONLINE DIABETES PREVENTION PROGRAM FOR VETERANS WITH PRE-DIABETES

Caroline R. Richardson, MD

Background: The prevalence of diabetes amongst Veterans is estimated at nearly 25%,[15] but numerous studies have shown that diabetes can be prevented with Diabetes Prevention Program (DPP) lifestyle interventions. However, translation of DPP-based lifestyle interventions has presented several challenges in real world settings. The most notable of these is the substantial investment required to deliver 16 one-on-one lifestyle coaching sessions resulting in significant barriers to reach and uptake among both patients and healthcare systems.Objective: To examine preliminary weight loss outcomes, participation and engagement in an online DPP intervention for obese/overweight Veterans with pre-diabetes. Methods: Veterans were recruited from four VA Medical Centers with geographically and racially diverse populations. Veterans with pre-diabetes (defined by HbA1c 5.7-6.4% or FPG 100-125 mg/dL) were eligible to receive free access to *Prevent* (Omada Health, San Francisco, California, USA)*,* a fully internet mediated commercially available group DPP Program. Data on weight change, participation, and engagement were collected using wireless scales, module completion rates and frequency of interactions with the online health coach.

Results: A total of 1163 Veterans were screened between July 2013 and June 2014. Of these 272 met eligibility criteria. 113 participants enrolled prior May 11, 2014 and have completed 16 weeks of the program. Ninety three of these uploaded 16 week weights. Mean percent weight loss for all participants at 16 weeks, using last value carried forward for missing data was 12 lb (9.9,14.1) or 5.4% (4.5%, 6.3%). 86% (n=97) of participants completed at least 9 of the 16 weekly core educational modules. Participants initiated an average of 31 messages to the health coach (range 4-71).Conclusions: An online DPP intervention resulted in significant mean weight loss among participants at 16 weeks and high levels of participation and engagement. Online DPP interventions have the potential to increase uptake and reach of evidence-based DPP interventions and decrease the risk of diabetes among patients with pre-diabetes.

Symposium 30B

TRANSLATING THE DIABETES PREVENTION PROGRAM: CHALLENGES AND ADAPTATIONS

Laura Damschroder, MS, MPH

Background: The Diabetes Prevention Program (DPP) significantly reduced the incidence of diabetes in patients with pre-diabetes. Despite a strong evidence-base for DPP, it is not in widespread use and little is understood about contextual factors that influence successful implementation. The Veterans Affairs (VA) National Centers for Health Promotion and Disease Prevention (NCP) and the Diabetes Quality Enhancement Research Initiative (QUERI) partnered to conduct a pragmatic study of the VA DPP, which included an in-depth implementation evaluation at three geographically diverse VA medical centers (VAMCs). Objective: To understand how DPP program and screening processes were adapted to local settings and implementation challenges to help inform future dissemination.Methods: Qualitative data were collected through 38 semi-structured pre- and post-implementation interviews with local staff from 3 study sites, field notes, and meeting notes. Data collection, coding, and analysis were guided by The Consolidated Framework for Implementation Research (CFIR) using published methods.Results: Each study site adapted pre-diabetes screening processes to their context. It is important to consider who (e.g., patients referred to a weight management program versus all patients) and when (e.g., at an orientation class versus primary care visit) to screen, what metric (point of care testing versus lab requisition; HbA1c versus fasting glucose) to use for screening, and how to engage patients and providers. Challenges across all three sites included a smaller than expected pool of eligible patients, getting screening processes in place, and space and scheduling constraints. All 3 sites had strong, capable implementation and coaching teams, a high awareness of the strong evidence-base for DPP, and support from a coordinating center. Furthermore, strong working relationships with primary care providers, involved clinical leaders, and visible promotion of prevention facilitated higher rates of screening and higher rates of enrollments into DPP.

Conclusions: Consideration of context is necessary to guide adaptation of key processes and strategies for implementing DPP. Recommendations based on these results are offered for other entities that are planning to implement DPP within a healthcare system.

Symposium 30C

TRANSLATING THE DIABETES PREVENTION PROGRAM (DPP) FOR OBESE/OVERWEIGHT VETERANS WITH PRE-DIABETES

Tannaz Moin, MD, MBA, MSHS

Background: Diabetes prevention is particularly important in the Veteran Health Administration (VHA) where 1 in 4 Veterans have diabetes. In an effort to decrease incident diabetes amongst Veterans, the VA National Centers for Health Promotion and Disease Prevention (VA NCP) and the Diabetes Quality Enhancement Research Initiative (QUERI) partnered to conduct a pragmatic evaluation of the VA Diabetes Prevention Clinical Demonstration Project (VA DPP), to test implementation of a DPP intervention for Veterans with pre-diabetes.Objective: To compare weight loss among the first 252 participants systematically assigned to either VA DPP or an established VHA weight loss program known as MOVE! .Methods: Obese and overweight Veterans were recruited from three VHA Medical Centers (VAMCs) with geographically and racially diverse populations using an established referral system for MOVE!. Veterans with pre-diabetes (defined by HbA1c 5.7-6.4% or FPG 100-125 mg/dL who attended a MOVE! orientation and lived within one hour driving distance to the VAMC were eligible. VA DPP classes were filled first and eligible veterans not accommodated were assigned to MOVE!. Weight loss data was collected from the VA Corporate Data Warehouse (CDW), a national data repository comprising data from several VHA clinical and administrative systems.Results: Among the 1345 Veterans screened for pre-diabetes between August 2012 and January 2014, 252had pre-diabetes and met all eligibility criteria. These veterans were systematically assigned to VA DPP (n=211) or MOVE! (n=41). VA DPP participants were more likely to attend at least 9 sessions (39% vs. 29%, p=0.055). At 6 months, VA DPP participants lost significantly more weight than MOVE! participants (VA DPP lost 9.6 lbs and MOVE! lost 3.1lbs, p = .03) By 12 months, VA DPP group had lost twice as much weight as MOVE! group participants, however the difference was not statistically significant (VA DPP lost 8.0 lbs and MOVE! lost 4.1 lbs, p = .44)Conclusions: Compared to usual care, an evidence based DPP intervention was associated with higher mean percent weight loss and uptake among obese/overweight Veterans with pre-diabetes. Aligning MOVE! more closely to DPP or alternatively providing diabetes prevention specific interventions may help reduce incident diabetes amongst Veterans.

CORRESPONDING AUTHORS: Caroline R. Richardson, MD, University of Michigan / Ann Arbor VA Medical Center, Ann Arbor, MI, 48104; caroli@umich.edu; Laura Damschroder, MS, MPH, VA Ann Arbor Center for Clinical Management Research, Ann Arbor, MI, 48109-2800; laura.damschroder@va.gov; Tannaz Moin, MD, MBA, MSHS, VA Greater Los Angeles, Los Angeles, CA, 90073; tmoin@mednet.ucla.edu

Symposium 31 8:30 AM-9:45 AM

IMPROVING PRIMARY CARE THROUGH CULTURALLY RESPONSIVE INITIATIVES

James E. Aikens, PhD[1], Mark Vogel, PhD[2], Rose Ann Illes, Ph.D.[3], Monika M. Safford, MD[4], Susan J. Andreae, MPH[4], Christopher J. Koenig, PhD[5], Shira Maguen, Ph.D.[6], Karen Seal, MD, MPH[7], Lindsay K. Mayott, MA[8]

[1]University of Michigan, Ann Arbor, MI; [2]Genesys Regional Medical Center, Burton, MI; [3]Florida State University, Fort Myers, FL; [4]University of Alabama at Birmingham, Birmingham, AL; [5]San Francisco Veterans Affairs Medical Center/UCSF, San Francisco, CA; [6]San Francisic VA Medical Center and University of California, San Francisco, San Francisco, CA; [7]San Francisco VA Medical Center/UCSF, San Francisco, CA; [8]Teachers College Columbia University, New York, NY

Primary care settings are the major point-of-entry into the health care system for members of most cultural minority populations. Yet, the Institute of Medicine and other groups have concluded that numerous systemic issues contribute to the persistence of health disparities. Integrated primary care (IPC) – a collaboration between behavioral health and primary care providers – is an ideal model for treating comorbid physical and mental health conditions. However, in order to reduce disparities, IPC must accommodate the sociocultural preferences and needs of its entire clinical population. While empirical evidence of IPC effectiveness in reducing disparities is limited, promising approaches are being tested and successfully implemented. This symposium, which is jointly sponsored by the Integrated Primary Care SIG and the Military and Veterans' Health SIG, features a general overview of the major models and clinical outcomes of culturally responsive IPC treatments for common physical and mental health concerns. Researches will also present new findings on a culture-adapted community health worker model designed to improve medication adherence among African Americans living in the "Black Belt," and qualitative data on how to address "reverse culture shock" among veterans returning from Iraq and Afghanistan. It will conclude with a moderated panel discussion that will synthesize across these findings to describe how IPC can adapt conventional interventions to improve health outcomes and reduce health and mental health disparities among challenging underserved groups.

Symposium 31A

INTEGRATED PRIMARY CARE AND CULTURE: ADDRESSING DIVERSITY IN HEALTH AND MENTAL HEALTH CARE

Rose Ann Illes, Ph.D.

Studies have demonstrated that integrated services can improve access to mental health care, enhance quality of care, decrease health care costs, improve overall health, and improve PCPs' ability to address patients' mental health needs (World Health Organization & World Organization of Family Doctors, 2008). Racial and ethnic minorities and people of low socioeconomic status (SES) are disproportionately represented among those with access problems and are considered "priority populations" (NHDR, 2011). Differences have been demonstrated in health disparities between genders, racial/ethnic minorities, disability status, geographic location, and sexual orientation (NHDR, 2011). Integrating behavioral health into primary care environments is a method to address disparity of access of care, increase adherence to care management, and improve on treatment outcomes. Many mental health professionals and physicians are new to this area and are not trained, nor even aware of what this type of integrated model can offer in general, as well as with underserved communities. This presentation will provide: 1) a summarization regarding the relevance of integrated primary care (IPC) services for addressing physical and mental health disparities in underserved communities, 2) presentation of clinical outcome data from the literature of underserved communities who were treated in traditional models vs. IPC, 3) provide examples of culturally tailored interventions for common concerns seen in primary care and how they can be applied in IPC, and 4) describe the benefits and challenges of the systemic and application perspective from a psychologist currently working within this model.

Symposium 31B

CULTURAL ADAPTATION OF A COMMUNITY HEALTH WORKER INTERVENTION

Monika M. Safford, MD

BACKGROUND: As many as 75% of black Americans with diabetes also report moderate to severe chronic pain, creating challenges for self-care. Pharmacologic agents for management of chronic pain have relative contraindications in diabetes, thus other options are needed. Cognitive behavioral therapy (CBT) improves functional status in individuals with chronic pain, but many underserved communities lack trained psychologists to deliver such programs. Community health workers (CHWs) have successfully delivered a CBT-based program for a different disease state (post-partum depression) in a different culture (Pakistan). METHODS: We adapted the Pakistani program for diabetes and chronic pain for delivery in a community composed predominately of rural black Americans. Our approach was highly community-engaged and combined intervention refinement, training, certification, and pilot testing into one process. CHWs requested a highly structured format with well developed scripts for each session, and provided feedback on drafts of each of the 8 sessions in the program. A single half-day training meeting refreshed motivational interviewing skills, using the first intervention session as a framework. Subsequent training focused on one session at a time, first going over the draft of the session on the phone as a group, then pairing CHWs with one another for practice over the following week. A follow-up teleconference elicited CHWs' recommendations for refinements based on their experience during paired practice. Their suggestions shortened the program and enhanced cultural relevance. CHWs were allowed to practice each session until they felt confident, and then each CHW was certified over the telephone one-on-one by a research assistant playing the role of a participant. We trained 10 CHWs, all of whom became certified for each of the 8 sessions of the program over a total of 3 months.RESULTS AND CONCLUSIONS: The 111 individuals who received the intervention expressed high satisfaction and 80% completed the program; this completion rate is higher than for many professionally delivered, clinic-based CBT programs and suggests successful cultural adaptation. This method may have wide application for adapting CHW-delivered programs for delivery in culturally distinct communities.

Symposium 31C

CULTURE-CENTERED COMMUNICATION FOR VETERANS TRANSITIONING FROM MILITARY DEPLOYMENT TO CIVILIAN LIFE

Christopher J. Koenig, PhD

OBJECTIVE: To describe returning veterans' transition experience from military to civilian life and to educate health care providers about culture-centered communication that promotes readjustment to civilian life.METHODS: Qualitative, in-depth, semi-structured interviews with 17 male and 14 female Iraq and Afghanistan veterans were audio recorded, transcribed verbatim, and analyzed using Grounded Practical Theory, a metatheoretical framework to help generate theories that are both practical and useful.RESULTS: Veterans described disorientation when returning to civilian life after deployment. Veterans' experiences resulted from an underlying tension between military and civilian identities consistent with the notion of reverse culture shock. Participants described challenges and strategies for proactively managing readjustment stress across three domains: intrapersonal, professional/educational, and interpersonal. While not all veterans described experience in all domains, all veterans indicated experiences in at least one domain.CONCLUSIONS: To provide patient-centered care to returning Iraq and Afghanistan veterans, health care providers must be attuned to medical, psychological, and social challenges of the readjustment experience, including reverse culture shock. Provider-patient communication that focuses on the cultural domains identified in our analysis may help veterans integrate positive aspects of military and civilian identities, which may promote full reintegration into civilian life.PRACTICE IMPLICATIONS: Health care providers may promote culture-centered interactions by asking veterans to reflect about their readjustment experiences. By actively eliciting challenges and helping veterans' to identify possible solutions, health care providers may help veterans integrate military and civilian identities through an increased therapeutic alliance and social support throughout the readjustment process.

CORRESPONDING AUTHORS: Rose Ann Illes, Ph.D., Florida State University, Fort Myers, FL, 33901; roseanne.illes@leememorial.org; Monika M. Safford, MD, University of Alabama at Birmingham, Birmingham, AL, 35205-4410; msafford@uab.edu; Christopher J. Koenig, PhD, San Francisco Veterans Affairs Medical Center/UCSF, San Francisco, CA, 94122; christopher.koenig@ucsf.edu

Symposium 32 8:30 AM-9:45 AM

BUILDING AND EVALUATING PERSONAL TECHNOLOGY PHYSICAL ACTIVITY INTERVENTIONS IN DIVERSE POPULATIONS

Matthew Buman, PhD[1], Jen Huberty, PhD[2], Bridget F. Melton, EdD[3], AbbyKing, PhD[4], Eric Hekler, PhD, Dana Epstein, PhD, Christine Herb, MD, Kevin Hollingshead, Andrea Hekler, PhD, Carol Baldwin, PhD, RN AHN-BC, FAAN, Punam Ohri-Vachaspati, PhD, RD[1], Sonia Vega-Lopez, PhD, FAHA, Judith Babcock-Parziale, PhD, Monica Gutierrez, Helen Bland, PhD, Brandon Harris, PhD, Lauren Bigham, MS, Marc A. Adams, PhD[1], Lacey Rowedder

[1]Arizona State University, Phoenix, AZ; [2]Arizona State University; [3]Georgia Southern University, Statesboro, GA; [4]Stanford University School of Medicine, Stanford, CA

Regular physical activity is critical to promote and maintain health and longevity; yet, most individuals remain insufficiently active. Personal health technologies (i.e, smartphones, wearable technologies) are promising channels to promote physical activity given their ability to capture and deliver real-time digital health information and potentially lower cost and increase reach of more intensive evidence-based interventions. These technologies are also ubiquitous across population subgroups: smartphone use has grown 62% since 2011 and African Americans (64%) and Hispanics (60%) have the highest rates of smartphone use. Individuals with low income and education are adopting smartphones at rates faster than other groups. Wearable technologies have also experienced incredible growth with more recent attention within public health and medical sectors. The purpose of this symposium is to explore innovative methods for the development and design of emerging technologies and the efficacy of existing consumer-based personal health technologies to increase physical activity. This work will be highlighted in diverse and at-risk populations that may uniquely benefit from the use of personal health technologies. Jennifer Huberty will present on the development, feasibility, and dosing of physical activity targeted text messages delivered through Text 4 Baby, a non-profit mobile information service for pregnant women. Matthew Buman will present on the research design and development of BeWell24, a multi-component, smartphone-based intervention. The goal of the project was to harness technology to identify the optimal combination of changes in sleep, sedentary behavior, and physical activity to improve cardiometabolic risk biomarkers in US Veterans with metabolic syndrome. Bridget Melton will present results from a recent randomized controlled trial testing the efficacy of the Jawbone UP smartphone platform for increasing and maintaining physical activity and sleep quality in African-American college-aged women. Abby King, discussant, will contextualize the development and evaluation of technology-supported interventions and highlight future directions for harnessing these technologies for physical activity promotion at the population scale.

Symposium 32A

BEWELL24: DEVELOPMENT AND EVALUATION DESIGN OF A SMARTPHONE APPLICATION FOR US VETERANS WITH METABOLIC SYNDROME

Matthew Buman, PhD

Sleep, sedentary behavior (i.e., sitting), and physical activity are distinct health behaviors each contributing to cardiometabolic disease risk - yet are linked by the 24h day – thus increasing time in one inevitably requires decreasing time in another. Personal technologies such as the smartphone may be an ideal channel to deliver health interventions to Veterans given their existing mHealth portal which provides access to over 5.5 million Veterans. The purpose of this study was to develop and test *BeWell24*, a multi-component smartphone "app" targeting sleep, sedentary behavior, and physical activity for use with Veterans with metabolic syndrome.

A user-centered iterative design process was used for app development. Content was developed from evidence-based behavioral strategies for sleep (stimulus control therapy), sedentary behavior (self-regulatory strategies), and physical activity (goal setting). Paper and functional prototypes were shared with 5 interdisciplinary VHA clinical teams (n=22) and target Veterans (n=7). Veterans were re-engaged up to 3 additional times throughout app development for additional beta testing. This work informed the completion of BeWell24, an interactive android-based smartphone application with individually-targeted components for sleep, sedentary behavior, and physical activity.

Veterans (n=50; 35-64 years of age) are currently being recruited into a trial to test BeWell24 and its components using a multiphase optimization strategy (MOST) design. This design will test whether BeWell24 components (sleep, sedentary behavior, and physical activity), and combination of components, will optimally improve cardiometabolic risk biomarkers. Behaviors will be measured throughout the 8-week intervention using continuous, blinded, 24h objective monitoring via wrist-worn accelerometry. Preliminary process-level results from the trial indicate Veterans regularly engaged in the self-monitoring and informational components of the app (85% completion). Interviews with study completers (n=6) suggested users felt the app was satisfactory and useful for behavior change. The long-term goal of this project is to disseminate an evidence-based app that optimally targets the full 24h spectrum of behaviors to improve cardiometabolic health.

Symposium 32B

INFORMING DESIGN FOR A TEXT-MESSAGING EXPERIMENT TO IMPROVE PHYSICAL ACTIVITY IN PREGNANT WOMEN

Jennifer Huberty, PhD

Text 4 Baby (T4B) is a non-profit mobile information service that delivers health text messages (SMS) (no physical activity (PA) messages) to pregnant women. The purpose of this study is to develop and test PA SMS to determine the feasibility of using SMS with referral to evidence-based websites and the appropriate dose of SMS to increase PA in pregnant women using T4B. A literature review and interviews of active pregnant women were used to develop text message content (i.e., categories). Prototype SMS were then developed for each category and tested in inactive pregnant women (N=5), physicians (N=7), and nurses/midwives (N=7), informing content for 168 PA SMS. Following, we conducted a national survey (N=294) about dose (i.e., preferred times per week, preferred time of day) to limit burden and improve response. The aforementioned formative work guided hypothesis for our experiment, such as: Are daily PA SMS sufficient to improve PA participation? Does a choice about the time a SMS is received improve PA participation? Is SMS satisfaction related to PA participation?Pregnant women are currently being recruited nationally and randomized to one of four groups: T4B standard (control)–3 T4B SMS per week at noon M, W, F (2) T4B plus PA–1 T4B and 2 PA SMS per week at noon M, W, F, (3) T4B plus high dose PA, random time–1 T4B and 6 PA SMS per week, and (4) T4B plus high dose PA, chosen time PA–1 T4B and 6 PA SMS per week at a participant chosen time. Participants complete baseline demographics and self-reported PA and wear a FitBit Flex for the entire length of the study (i.e., 8-16 to 36 weeks pregnant). Participants are not able to access their FitBit data during the study. SMS satisfaction is measured by asking women to reply "like" or "don't like" to SMS.To date, 88 women (Age M= 31.20; 88% Caucasian, 86.4% married, and 62.5% college educated) are participating. Baseline average daily step counts are 4,728 and active minutes (fairly active & very active) are M=56.06 and M=5.21, respectively. Baseline self-reported minutes of daily PA are M= 14.63 and 21% meet PA recommendations.The experimental design presented here is innovative and valuable. Findings will inform evidence-based recommendations for modifications to T4B to promote clinically meaningful PA among pregnant women.

Symposium 32C

EFFICACY OF JAWBONE UP FOR IMPROVING PHYSICAL ACTIVITY AND SLEEP IN YOUNG AFRICAN AMERICAN WOMEN

Bridget F. Melton, EdD

Young African American women have the highest reported obesity rates compared to other racial/ethnic groups. Technology-based interventions may be effective at enhancing the adoption and maintenance of physical activity behaviors within this population. The Jawbone UP is a consumer-based wearable sensor that passively tracks physical activity and sleep behaviors. The sensor is accompanied with a smartphone-based platform (or "app") aimed at promoting physical activity and healthy sleep behaviors. The efficacy of the Jawbone UP app at improving physical activity or healthy sleep behaviors is currently not well-known. The present randomized controlled trial examined the 6-week efficacy and 12-week follow-up of the Jawbone UP app for increasing physical activity and improving sleep quality among young African American college women. Participants (N= 47, age = 19.9 ± 1.68 years) were randomized to receive the Jawbone UP app + sensor (n=19) or a comparison app focusing primarily on dietary monitoring (MyFitnessPal, n=28). Each group received similar brief training to use the app and weekly emails encouraging regular use of the app. Physical activity and sleep were objectively measured at baseline, 6 weeks, and 12 weeks via 7 consecutive days of 24-hour accelerometry at the wrist (Actigraph GT3x+). For physical activity, neither group showed improvements in physical activity at 6 weeks, as measured by steps counts and total activity (mean counts/minute). For sleep, neither group showed any changes in sleep duration, sleep onset latency, wakefulness after sleep onset, or sleep efficiency. There was a significant difference at the 12-week follow-up, such that the intervention group decreased step counts relative to the comparison app (9,378 vs. 11,287 steps; p=.022). No differences in sleep were observed at 12 weeks. Despite the consumer excitement of wearable sensors for changing health behaviors, this study found little evidence for their initial efficacy at changing behaviors. The present study identified some potential drawbacks of using specific technology to promote healthy behaviors.

CORRESPONDING AUTHORS: Matthew Buman, PhD, Arizona State University, Phoenix, AZ, 85004; matthew.buman@asu.edu; Jen Huberty, PhD, Arizona State University; jhuberty@asu.edu; Bridget F. Melton, EdD, Georgia Southern University, Statesboro, GA, 30460; bmelton@georgiasouthern.edu

Symposium 33 8:30 AM-9:45 AM

SUSTAINABILITY VIA ACTIVE GARDEN EDUCATION: A CBPR PROJECT TO INCREASE PA AND F&VS IN PRESCHOOLERS

Rebecca E. Lee, PhD[1], Scherezade K. Mama, DrPH[2], Erica G. Soltero, BA[3], Nathan Parker, MPH[4], Tracey Ledoux, PhD, RD[4], Lorna H. McNeill, PhD, MPH[5], Lucie Levesque, PhD[6], Rebecca E. Lee, PhD[1]

[1]Arizona State University, Phoenix, AZ; [2]The University of Texas MD Anderson Cancer Center, Houston, TX; [3]University of Houston, Phoenix, AZ; [4]University of Houston, Houston, TX; [5]University of Texas MD Anderson Cancer Center, Houston, TX; [6]Queen's University, Kingston, ON, Canada

Community based participatory research (CBPR) builds on community strengths to overcome scientific limitations by including community members and scientists as equal partners in the research. CBPR approaches promote relevant intervention strategies, with messages that are more easily integrated into existing social norms and community structures, enhancing the probability of adoption and sustainability. Gardening is a physical activity (PA) that can improve liking and interest in fruit and vegetables (F&Vs). Garden interventions have been tested in grade school children, focusing primarily on F&V consumption, but there has been little focus on early childhood or PA effects. This symposium presents the development and testing of Sustainability via Active Garden Education (SAGE), a garden-based, PA and F&V curriculum for preschoolers. SAGE was developed, tested and refined over a period of five years by a joint team of scientists and community members to meet IOM guidelines and early childcare and education accreditation standards. SAGE uses the plant lifecycle as a metaphor for human development, experiential outdoor activities for children that can increase PA (e.g. working in the garden, playing active games) and indoor multi-sensory activities that foster interest in F&Vs (e.g. singing songs about F&V, taste testing). In this symposium, we will describe the background, development and results from pilot tests conducted in Houston and Phoenix. Speakers will describe (1) the partnership development process that provided the foundation for the project; (2) the collaborative development of the curriculum, from theory to practice; (3) the development and results from adapting the “eating in the absence of hunger” protocol for a classroom setting; (4) PA results based on pre, during and post intervention accelerometry; and (5) F&V consumption and home availability. The discussant will highlight the strengths of the approach and results and comment on future directions.

Symposium 33A

DEVELOPING A CBPR PARTNERSHIP TO INFORM CHILDHOOD OBESITY PREVENTION RESEARCH

Scherezade K. Mama, DrPH

The *Science & Community: Ending Obesity Improving Health* (S&C) project aimed to prevent obesity in Houston by developing a community partnership to develop a sustainable obesity reduction program. Attendees at Opportunity Receptions (N=62) and Open Forum Symposia (N=103) were representative of the community and were invited to join the partnership, yielding a sizable academic-community partnership (N=203) of community organizations and a committed Community Advisory Board (CAB). In an effort to learn about the challenges of obesity in partners’ communities and potential solutions, 22 partnership members completed an in-depth interview. Interviewees (n=12 women and 10 men) were mostly Hispanic/Latino (n=9) and African American (n=7). Common problems identified were childhood obesity, balancing a healthy diet, and physical inactivity. Concern for child health, fighting the fast food “eating-out” culture, and balancing healthy dietary habits, rather than eliminating foods altogether, also emerged as themes. Many discussed school programs, mind-body strategies, and the importance of community gardens for reconnecting youth to food origins. Interview themes were adapted into Likert-type scale questions for presentation at an S&C Symposium and Health Fair. Attendees (N=56) agreed/strongly agreed that obesity prevention and treatment programs should focus on children (78%), consider the whole person (100%), take place in schools (97%), include PA (100%) and that community gardens are a good way to promote PA and healthy diets (91%). Findings were presented to the CAB, who then suggested possible venues for intervention and additional strategies for reaching Houstonians. The CAB expressed enthusiasm for gardening and believed children were most vulnerable to obesity. The result of this 3-year dialog was the development of the Sustainability via Active Garden Education (SAGE) project, which captured the vision of the community while maintaining scientific rigor.

Symposium 33B

ADAPTING THE EATING IN THE ABSENSE OF HUNGER ASSESSMENT FOR PRESCHOOLERS IN THE CLASSROOM SETTING

Erica G. Soltero, BA

Eating in the absence of hunger (EAH) represents a failure to self-regulate intake, leading to overconsumption and weight gain in preschoolers. Existing EAH research has come from the clinical setting, limiting our understanding of this behavior in natural settings. In the clinical test, children are individually tested, consume a meal, take a preference test using 10 snacks, and are then observed for 10 minutes to see if they continue to snack or play with toys. This study aimed to adapt and evaluate the EAH test to the classroom setting. The adapted protocol was implemented in childcare centers in Houston, TX (N=4) and Phoenix, AZ (N=2). Children were seated in groups and given two snacks to taste before being given the option to continue to snack or play with classroom toys for 10 minutes. Research assistants (RAs) recorded the children’s pre-test level of hunger, preference for the snacks, and the amount eaten during the 10 minutes. The average kcals eaten in the absence of hunger was 66.37 (SD=63.8). Fourteen RAs were able to assess 60 children, whereas clinical tests require 1 RA/child, limiting sample size. Centers provided toys and meals, and only two snacks were used compared to the clinical test which requires a meal, 10 snacks, and an observation room for each child. The adapted protocol took 30-45 minutes per center, compared to the individual test, which takes 1+ hour/child. All snacks were approved by centers, and 96% of children rated at least one snack as ‘yummy.’ The adapted protocol was feasible, economical, and time-efficient, eliminating barriers to administering the clinical test such as limited resources and meal costs. Challenges included choosing palatable snacks in compliance with each center’s food regulations and limited control over the meal served prior to the test. This protocol allows for broader use of the EAH test in interventions and longitudinal studies which can further understanding of the causes, emergence and prevention of EAH.

Symposium 33C

MEETING PHYSICAL ACTIVITY GUIDELINES THROUGH A PRESCHOOL GARDEN EDUCATION PROGRAM: SAGE

Nathan Parker, MPH

Early childhood is critical for the formation of healthy habits that track through adulthood, including physical activity (PA). Sustainability via Active Garden Education (SAGE) aimed at determining whether participation in a preschool gardening intervention would increase PA sufficiently to meet Institute of Medicine (IOM) PA guidelines of 15 minutes/hour and reduce sedentary time. This presentation describes results from two pilot studies, Houston SAGE Pilot 1 and Phoenix SAGE Pilot 2. The curriculum included physically active songs and games, such as pantomiming the plant lifecycle, acting out farmers’ and gardeners’ tasks, and playing “fruit and vegetable tag,” along with garden-based activities such as watering, weeding and harvesting. Children (SAGE Pilot 1 N=71, SAGE Pilot 2 N=43) wore accelerometers to measure the duration and intensity of PA and sedentary time before, during and after SAGE lessons. In SAGE Pilot 1, total PA increased from 9 minutes/hour pre-intervention to 14 minutes/hour during lessons and 15 minutes/hour post-intervention, based on subsample with complete data (N=30, Cohen’s d=0.89, p=.016). Following SAGE Pilot 1, we carefully reviewed research assistants’ (RAs) Strengths Weaknesses Opportunities and Threats (SWOT) analyses for each lesson and sought feedback from the Community Advisory Board in order to fully reach IOM guidelines. We subsequently increased outdoor time for lessons and added more gardening and active learning games to the curriculum for SAGE Pilot 2. Total PA increased from 19 minutes/hour pre-intervention to 29 minutes/hour during lessons and 31 minutes/hour post-intervention with decreases in sedentary time in SAGE Pilot 2 (Complete data subsample N=30, Cohen’s ds=7.62–8.08, $ps < .05$). Findings suggest that SAGE can help preschoolers achieve hourly PA guidelines and underscore the importance of feedback from RAs and the Community Advisory Board, which led to subsequent improvements in PA.

Symposium 33D

FRUIT AND VEGETABLE CONSUMPTION AND HOME AVAILABILITY IN A GARDEN-BASED CURRICULUM FOR PRESCHOOLERS

Tracey Ledoux, PhD, RD

Diets of preschool-aged children typically lack fruit and vegetables (F&Vs), with over 25% of 2-3 year olds consuming less than one portion of vegetables daily. F&V home availability and preference are related to F&V consumption among children. Repeated exposure increases preference, and child asking behaviors predict F&V home availability. The Sustainability via Active Garden Education (SAGE) intervention was designed to improve F&V consumption and home availability with a garden-based curriculum delivered in preschools. This abstract describes preliminary effects of two SAGE pilot studies (Houston SAGE Pilot 1 and Phoenix SAGE Pilot 2) on F&V intake and home availability among preschoolers. Following Institute of Medicine guidelines, the SAGE curriculum consisted of 12 sessions and included developmentally appropriate activities to increase multi-sensory exposure to F&Vs. A subsample (SAGE Pilot 1 *N*=9; SAGE Pilot 2 *N*=11) of parents of participating preschoolers completed 3-day food diaries for their children and a F&V home availability questionnaire pre- and post-intervention. T-tests detected no change in F&V intake in the Houston SAGE Pilot 1. Based on Community Advisory Board feedback, SAGE parent newsletters with home activities and community resources were developed in English and Spanish to help increase parent engagement for SAGE Pilot 2. Results were more promising with this modification, with increases in F&V consumption from 0.6 to 1.8 servings of vegetables and 1.2 to 1.7 servings of fruit. In addition, there were modest but consistent increases in F&V home availability. Despite low power, results provide insight into potential intervention effects in a properly powered investigation. Findings suggest that community feedback can enhance intervention content to increase parent engagement and improve intervention reach and effects.

Symposium 33E

DEVELOPMENT OF SUSTAINABILITY VIA ACTIVE GARDEN EDUCATION (SAGE)

Rebecca Lee, PhD

The creation of Sustainability via Active Garden Education (SAGE) was the result of a 3-year CBPR project. The curriculum was developed to meet Institute of Medicine (IOM) guidelines to increase PA to at least 15 minutes/hour, expose children to an environment that helps promote eating a variety of foods and understanding hunger and fullness cues, and train caregivers how to support these behaviors. The scientific team and Community Advisory Board (CAB) reviewed existing national recommendations and garden-based curricula and protocols for adaptation and integration in a feasibility trial. We developed an outline of learning objectives, topics and activities that was reviewed by two early childcare teachers, two parents and the local chapter president of the National Association for the Education of Young Children to ensure that it was developmentally appropriate and met accreditation standards. The resulting curriculum has twelve, 1-hour lessons that use an installed garden as a metaphor for human development and promoting PA and healthful dietary habits while engaging children in developmentally appropriate cognitive and social activities. Children learn that plants begin as seeds, and with proper care, feeding, watering and environments, they grow into mature plants that bear fruit. Interactive games and songs reinforce these themes while increasing PA. Houston SAGE Pilot 1 was delivered in four centers to preschoolers (*N*=60). After each lesson, implementation team members completed a Strengths Weaknesses Opportunities and Threats (SWOT) analysis to evaluate each lesson, which was reviewed by the scientific team and CAB to solve weaknesses and threats and capitalize on strengths and opportunities. Lessons were modified based on SWOT feedback for a second pilot in two centers in the Phoenix SAGE Pilot 2 (*N*=30). CAB partnership and feedback was invaluable, promoting a successful curriculum with increasingly improved outcomes and smoother implementation.

CORRESPONDING AUTHORS: Scherezade K. Mama, DrPH, The University of Texas MD Anderson Cancer Center, Houston, TX, 77030; skmama@mdanderson.org; Erica G. Soltero, BA, University of Houston, Phoenix, AZ, 85004; erigabsol@gmail.com; Nathan Parker, MPH, University of Houston, Houston, TX, 77071; nate.parker8@gmail.com; Tracey Ledoux, PhD, RD, University of Houston, Houston, TX, 77204-6015; taledoux@uh.edu; Rebecca E. Lee, PhD, Arizona State University, Phoenix, AZ, 85004; releephd@yahoo.com

Symposium 34 8:30 AM-9:45 AM

NEW WORLD, NEW RISKS: DIVERSE APPROACHES TO ENHANCING COMPREHENSION OF NEW RISKS AND HAZARDS

Jennifer Hay, PhD[1], Geoffrey S. Gold, BA[2], Philip Huang, MD, MPH[3], Paul Han, MD, MA,MPH[4], Noel Brewer, PhD[5]

[1]Memorial Sloan Kettering Cancer Center, New York, NY; [2]Memorial Sloan Kettering Cancer Center, Merrick, NY; [3]AustinTexas.Gov, Austin, TX; [4]Center for Outcomes Research and Evaluation Maine Medical Center, Portland, ME; [5]University of North Carolina at Chapel Hill, Chapel Hill, NC

Much risk perception and communication research focuses on efforts to increase public awareness, knowledge, and accurate personal risk perceptions for well-established illnesses such as cancer, diabetes, or heart disease, or specific health hazards that lead to common illnesses such as tobacco use or physical inactivity. Media attention, public health messaging, physician counseling, and health interventions generally start from the premise that these health risks are established and knowable, and that making the public aware of them will motivate the adoption of protective action. However, the public is continually confronted with novel risks, where professional knowledge of the risks may be unknown or evolving rapidly, and where lack of public knowledge, or high public concern, may be unavoidable. This symposium, which is sponsored by the Health Decision Making SIG, will address these challenges and opportunities. First, Geoffrey Gold will discuss public perspectives on risk and benefits of medical imaging radiation, including computed tomography (CT) scans, which have become heavily used in the US in recent decades. Philip Huang, Medical Director and Health Authority for Austin TX, will discuss public communication regarding novel infectious diseases, such as Chikungunya, in local community settings. Paul Han will discuss theories of ambiguity and uncertainty as they relate to novel risks. Noel Brewer (Discussant) will summarize and present unifying concepts related to a paradigm of ongoing novel risk identification as they relate to theory-based clinical and communiity interventions. The symposium brings together researchers and health practitioners from a range of perspectives to address the challenges applicable to many behavioral medicine and public health contexts.

Symposium 34A

PREVALENCE AND CORRELATES OF WORRY ABOUT MEDICAL IMAGING RADIATION IN THE GENERAL US POPULATION

Geoffrey S. Gold, BA

Awareness and concern regarding medical imaging radiation may be on the increase in the general public, given the dramatic increases in medical imaging use, and subsequent media coverage. Using data from the nationally representative 2012-2013 Health Information National Trends Survey (HINTS 4, cycle 2, N=3532) conducted by the National Cancer Institute, we examined current prevalence of worry about medical imaging radiation (MIR), as well as potential covariates of MIR worry, including demographic, medical and psychological factors, health information-seeking, physician trust in providing cancer information, and cancer fatalism. Descriptive analyses of MIR worry prevalence, compared to worry about other environmental hazards, as well as logistic regression analysis (univariable and multivariable, controlling for all covariates) with 95% confidence intervals were conducted. Results show that about 65% of the population-based sample reported at least some MIR worry, which is comparable to worry for other environmental exposures, such as chemicals in food and water, and air pollution. Multivariable regressions show that MIR worry is significantly associated with gender (MIR worry is higher among women), racial/ethnic minorities, those with lower educational attainment, foreign-born Americans, those with health challenges (poorer self-report poorer health, and those with a personal history of cancer) and those with greater information-seeking behaviors and lower physician trust (all ORs, *p*s < .05). These results suggest a possible link between socioeconomic factors, poorer health, information seeking and higher MIR worry. An accurate assessment of public concerns about medical imaging radiation will aid efforts to anticipate and understand patient responses to medical imaging, as well as to improve risk communication regarding medical imaging among referring physicians, radiologists, patients as well as policy makers.

Symposium 34B

THE FRONT LINES OF RISK COMMUNICATION: PERSPECTIVES FROM A LOCAL PUBLIC HEALTH DEPARTMENT

Philip Huang, MD, MPH

The Austin and Travis County Health and Human Services Department takes action to 1) protect the community from infectious diseases, epidemics, and environmental hazards; 2) prevent illness, injury and disease; and 3) promote community-wide wellness, self-sufficiency, and preparedness. However, the emergence of new illnesses and the re-emergence of illnesses long-considered eradicated in Texas can complicate the implementation of activities and allocation of resources, intended to achieve these goals. This presentation will illustrate three challenges that the Austin and Travis County Health and Human Services Department has encountered when communicating about the risk of novel infectious diseases such as Typhus, West Nile Virus, Chikungunya, H1N1 influenza, and Ebola. The first challenge is to ensure that local healthcare providers have adequate knowledge to be able to identify, treat, and if necessary isolate infected patients from non-infected patients. The second challenge is to craft messages that provide accurate information about the new risk and create an appropriate sense of urgency in the public; that is, one that encourages preventive action but does not diminish the importance of health hazards with a higher burden of disease, but seemingly less urgent (e.g., tobacco use). The third challenge is managing the media response by engaging in proactive outreach activities and responding to unexpected and/or misleading media portrayals of the new illness. These challenges combine to form a particularly high hurdle for health departments to overcome when responding to the emergence or reemergence of infectious disease. However, as travel across countries for people and goods becomes easier, and changes in climate make regions newly hospitable to novel infectious diseases, understanding these challenges and developing strategies to overcome them becomes more important.

Symposium 34C

KNOWN AND UNKNOWN HEALTH RISKS

Paul Han, MD,MA,MPH

Individuals confront a broad range of health risks that vary in the extent to which they are known. At one end of the spectrum are risks that are familiar to the public and well-characterized epidemiologically and clinically—e.g, the risks of developing breast cancer or cardiovascular disease. At the other end of the spectrum are numerous risks for which available risk evidence is sparse—e.g., the risks of contracting emergent infectious illnesses such as Chikagunya, or the health hazards of medical imaging radiation and environmental toxins. The extent to which health risks are known *vs.* unknown is an important matter because it influences people's responses to these risks. A large body of behavioral decision-making research since Ellsberg (1961) has demonstrated that people are more averse to unknown (i.e., "ambiguous") than to known risks; they appraise unknown risks more pessimistically, and will pay more to avoid them. This response, known as "ambiguity aversion," may lead people to become overly fearful and predisposed towards precautionary action—even when such action is not efficacious or even counterproductive—when confronted by ambiguous health risk information.

Effectively communicating and managing unknown health risks requires mitigating ambiguity aversion and enabling more reflective, reasoned responses to these risks. Exactly how to accomplish these tasks remains to be determined, although past theoretical and empirical work on the mechanisms of ambiguity aversion suggests promising directions for further research.

CORRESPONDING AUTHORS: Geoffrey S. Gold, BA, Memorial Sloan Kettering Cancer Center, Merrick, NY, 11566; geoffgold25@gmail.com; Philip Huang, MD, MPH, AustinTexas.Gov, Austin, TX, 78702; philip.huang@austintexas.gov; Paul Han, MD,MA,MPH, Center for Outcomes Research and Evaluation Maine Medical Center, Portland, ME, 04101; hanp@mmc.org

Symposium 35 8:30 AM-9:45 AM

TOBACCO CENTERS FOR REGULATORY SCIENCE: A SEISMIC SHIFT IN TOBACCO PREVENTION AND CONTROL

Elizabeth Ginexi, PhD[1], Robert Hornik, PhD[2], Pamela Ling, MD, MPH[3], Seth M. Noar, PhD[4]

[1]NCI, Bethesda, MD; [2]University of Pennsylvania, Philadelphia, PA; [3]University of California, San Francisco, San Francisco, CA; [4]UNC Chapel Hill, Chapel Hill, NC

Tobacco use continues to be the number one preventable cause of death and disease in the US, and the National Prevention Strategy lists "tobacco free living" as a key priority area. In 2009, the US Congress passed the Family Smoking Prevention and Tobacco Control Act, which gave the Food and Drug Administration (FDA) unprecedented power to regulate the tobacco industry for the first time in US history. In order to have a science base to inform effective regulations, the National Institutes of Health (NIH) and the FDA have committed more than $250 million over 5 years to 14 Tobacco Centers for Regulatory Science (TCORS). Three of those newly funded Centers – at the University of Pennsylvania (UPenn), the University of California San Francisco (UCSF), and the University of North Carolina at Chapel Hill (UNC) – focus on prevention and health communication. The purpose of this panel is to 1) introduce and discuss tobacco regulatory science, 2) provide an overview of these 3 communication Centers – what questions they are answering and how they are doing so, and 3) share pilot findings and information on funding opportunities in tobacco prevention and health communication.The first presentation, by Dr. Elizabeth Ginexi, will focus on the partnership between FDA and NIH, discuss the 14 funded centers, and offer detailed information about additional funding opportunities in this area.The second presentation, by Dr. Robert Hornik, will describe the UPenn TCORS Center, a collaboration between the Annenberg School for Communication and Perelman School of Medicine, and which will focus on tobacco misinformation and its effects.The third presentation, by Dr. Pamela Ling, will focus on the UCSF Center, which includes three projects assessing the effects of tobacco marketing and anti-tobacco messages on perceptions of risk and patterns of tobacco use among youth, young adults, and older adults. The fourth presentation, by Dr. Seth Noar, will focus on the UNC Center. This Center will undertake 3 integrated projects to understand effective messages about the harms of cigarettes and other tobacco products across the lifespan and among diverse populations.

Symposium 35A

TOBACCO REGULATORY SCIENCE PROGRAM

Elizabeth Ginexi, PhD

With the passage of the Family Smoking Prevention and Tobacco Control Act (FSPTCA) in June 2009, the Food and Drug Administration (FDA) acquired the authority to regulate the manufacture, marketing, and distribution of tobacco products in order to protect public health. In response the FDA formed an interagency partnership with the National Institutes of Health (NIH) to foster research relevant to tobacco regulations. In September 2013 the FDA and the NIH awarded 14 new centers to conduct research on tobacco products as part of the Tobacco Centers of Regulatory Science (TCORS) (P50) program. These Centers will include programs of multidisciplinary research that will inform tobacco product regulation and address research priorities. In this presentation, Dr. Ginexi will describe the partnership between FDA and NIH, discuss the 14 funded centers, and offer detailed information about funding opportunities for tobacco health communication research.

Symposium 35B

TOBACCO PRODUCT MESSAGING IN A COMPLEX COMMUNICATION ENVIRONMENT

Robert Hornik, PhD

Public communication about tobacco products has been transformed by the digital marketing revolution and diffusion of social media. Tobacco product information *and misinformation* are readily accessible. Such misinformation, whether explicit (e.g., "low nicotine cigarettes are healthier"), or implicit ("colors of cigarette packaging implying that cigarettes are "light"") can mislead the public to underestimate the dangers or overestimate the benefits of various tobacco products, undermining FDA's regulatory efforts. Major studies examine (1) effects of package colors (Andrew Strasser), (2) residual effects (belief echoes) from prior false claims (Joseph Cappella), and (3) over-time effects of tobacco-relevant content in the public communication environment on youth (Robert Hornik). Two cores (Tobacco FactCheck (Kathleen Hall Jamieson) and Media Data Acquisition and Content Analyis (Sherry Emery from University of Illinois-Chicago)) complement the major projects, and the Center will also provide major programs for doctoral and post-doctoral training. Caryn Lerman and Robert Hornik are the Center PIs.

Symposium 35C

IMPROVED MODELS TO INFORM TOBACCO PRODUCT REGULATION

Pamela Ling, MD, MPH

The UCSF Center is broadly focused on integrated transdisciplinary regulatory science, including 5 major projects and 2 developmental projects. Three projects aim to develop empirically-based models of tobacco use behavior that integrate the effects of pro-tobacco marketing and anti-tobacco messaging on perceptions of the risks and benefits of tobacco use, and how these perceptions affect decisions to start, continue, stop, relapse, and/or switch tobacco products. Dr. Bonnie Halpern-Felsher is leading a longitudinal study of youth and young adults, Dr. Peggy Walsh is leading a longitudinal study of rural high school athletes, and Dr. Janine Cataldo is leading a study of older adults. All projects assess exposure to tobacco marketing, risk and benefit perceptions, use of different tobacco products, and responses to anti-tobacco messages. The Center also offers a post-doctoral fellowship dedicated to regulatory science fully integrated with our highly competitive tobacco fellowship training program, and funding for pilot projects.

Symposium 35D

EVIDENCE-BASED HEALTH COMMUNICATION FOR TOBACCO PREVENTION AND CONTROL

Seth M. Noar, PhD

UNC Chapel Hill's Center for Regulatory Research on Tobacco Communication will undertake 3 major, integrated projects over five years. All projects involve how we can most effectively communicate regarding the harms of cigarette and other tobacco use across the lifespan (adolescent, young adult, adult) and among diverse populations (e.g., African Americans, LGBT Americans). Dr. Noel Brewer will lead a study on the use of warning messages to communicate about harmful cigarette constituents (i.e., ingredients) 2) Dr. Erin Sutfin (of Wake Forest University) will lead a study on the use of warning messages to communicate about other tobacco products (e.g., e-cigarettes, hookah); and 3) Dr. Adam Goldstein will lead a study on how to maximize source credibility effects in anti-tobacco messaging (Project 3). The Center has several cores, including a communication core, and it also provides major programs for doctoral and post-doctoral training. Dr. Kurt Ribisl is the Center PI.

CORRESPONDING AUTHORS: Elizabeth Ginexi, PhD, NCI, Bethesda, MD, 20892; lginexi@mail.nih.gov; Robert Hornik, PhD, University of Pennsylvania, Philadelphia, PA, 19104; rhornik@asc.upenn.edu; Pamela Ling, MD, MPH, University of California, San Francisco, San Francisco, CA, 94143-0320; pling@medicine.ucsf.edu; Seth M. Noar, PhD, UNC Chapel Hill, Chapel Hill, NC, 27599; noar@email.unc.edu

Symposium 36 8:30 AM-9:45 AM

USING TECHNOLOGY TO IMPROVE CHILDREN'S HEALTH: A TALE OF THREE EHEALTH RESEARCH PROGRAMS

Kathy Goggin, PhD[1], Robert M. Jacobson, MD[2], Sarah Finocchario-Kessler, PhD, MPH[3], Mark Connelly, PhD[4], Dawn Tucker, MSN, CPNP[5], David K. Ahern, PhD[6]

[1]Children's Mercy Hospitals and Clinics, University of Missouri - Kansas City Schools of Medicine and Pharmacy, Kansas City, MO; [2]Mayo Clinic, Rochester, MN; [3]University of Kansas Medical Center, Kansas City, KS; [4]Children's Mercy Hospitals and Clinics, University of Missouri - Kansas City, Kansas City, MO; [5]Children's Mercy Hospitals and Clinics, Kansas City, MO; [6]Behavioral Research Program (BRP), Boston, MA

eHealth interventions hold promise for improving health outcomes by enhancing patient-provider communication, dissemination of evidence based interventions and the quality of care. Their advantages include being dynamic and scalable while facilitating customization and cost containment. This symposium will present three research programs that are using eHealth in novel ways to address infant through adolescent health in sub-Saharan Africa and the US. Sarah Finocchario-Kessler will describe an interactive internet-based system (the HIV Infant Tracking System) that cues timely completion of guidelines-based interventions for HIV exposed infants and improves retention in care. Mark Connelly will present eHealth approaches for identifying and intervening on behavioral variables that influence pain and functional limitations in Juvenile Idiopathic Arthritis. Dawn Tucker will describe a novel device to facilitate improved home monitoring and timely care team notification for infants with single ventricle heart disease. Presenters will highlight successes and strategies for addressing challenges faced in developing and implementing these eHealth interventions. Co-chairs Kathy Goggin and Robert Jacobson will facilitate the active engagement of attendees who will be asked to provide questions and reflections through a live Twitter stream. Discussant David Ahern will characterize presenters' contributions in the context of attendees input, current literature and state of the art eHealth initiatives. Overall, this symposium seeks to provide a dynamic, interactive discussion of novel interventions that extend care beyond traditional encounter-based models.

Symposium 36A

HIV INFANT TRACKING SYSTEM (HITSYSTEM): A SYSTEM-LEVEL INNOVATION TO IMPROVE EARLIY INFANT DIAGNOSIS

Sarah Finocchario-Kessler, PhD, MPH

Early Infant Diagnosis (EID) among HIV-exposed infants in resource-limited settings is severely compromised by delays in processing and communicating test results, poor linkages to treatment, and inadequate systems for follow-up care. As a result, retention is poor and many HIV-infected infants never initiate antiretroviral therapy (ART). We designed an interactive internet-based system, the HIV Infant Tracking System (HITSystem), that sends electronic alerts to providers/laboratory technicians and SMS text messages to mothers to cue timely intervention and increase retention. A 2012 pilot of the HITSystem at two government hospitals (n=523 mother-infant pairs) compared to historical controls (n=320) demonstrated increased retention (45.1% to 93.0% urban; 43.2% to 94.1% peri-urban) and ART initiation (14% to 100% urban; 64% to 100% peri-urban). Turn-around time for PCR test results significantly improved, and the time for ART initiation was reduced from 38 to 7 median days. Further examination among n=2229 infants enrolled in the HITSystem between 2011- 2013 across 10 Kenyan facilities indicate 95.3% at 9 months and 79.5% at 18 postnatal months. Based on these promising findings, we are currently conducting a NIH funded randomized cluster controlled trial at 6 hospitals in Kenya to fully evaluate the HITSystem and its cost-effectiveness. Programmatic scale-up of the HITSystem is ongoing at a total of 18 health facilities in Kenya, 15 in Tanzania, and 7 in Malawi. Ongoing review of the implementation strategy, effectiveness, program adoption, and time to system ownership continues at all program sites. Findings reveal that the implementation process must be dynamic to adapt to changing treatment guidelines, user-recommended interface modifications, varied workflows in different settings, and evolving technology. Findings from this innovative intervention have significant implications for EID and HIV services globally. This research is partially supported by Global Health Innovations and the National Institute of Child Health & Development (R01HD076673).

Symposium 36B

PAIN-LESS TECHNOLOGY: LEVERAGING EHEALTH TO UNDERSTAND AND MANAGE CHRONIC PAIN IN JUVENILE ARTHRITIS

Mark Connelly, PhD

Childhood arthritis is one of the most common chronic diseases of childhood and is a leading cause of persistent musculoskeletal pain despite recent innovations in medical treatment. Most children with arthritis, however, are never exposed to evidence-based self-management strategies that could help optimize their pain and quality of life. In a series of studies, we have used novel computer-based and mobile platforms to identify and intervene upon behavioral variables that influence pain and functional limitations in this population of youth. In a pilot attention-controlled randomized trial of a primarily self-guided internet-based cognitive-behavioral coping skills intervention, pain was found to be significantly reduced for adolescents in the treatment condition (n = 46, Cohen's d = .78); outcomes from an ongoing larger education-controlled RCT of over 250 adolescents with chronic arthritis are pending. In other work, a custom mobile pain monitoring application was developed and used over the course of one-month in 65 dyads of youth with arthritis and their primary caregiver. Multilevel modeling results indicated that a child's adaptive regulation of emotions from daily stressors and a parent's avoidance of protective responses to the child's pain significantly predicted reduced subsequent pain levels and functional limitations. With these studies as a foundation, we now have developed and currently are testing a mobile pain management intervention for youth with JIA that capitalizes on "just in time learning;" tailored pain management recommendations are provided via the child's mobile device at the moment they are likely to help improve pain and coping according to the child's previous inputs on the device. Such strategies involving leveraging information technology to improve pain and associated functional disability in youth with persistent pain conditions have the potential to significantly improve disease burden, quality of life, and healthcare utilization while remaining cost-effective.

Symposium 36C

EHEALTH TO IMPROVE OUTCOMES AND REDUVE CAREGIVER BURDEN IN INFANTS WITH SINGLE VENTRICLE HEART DISEASE

Dawn Tucker, MSN, CPNP

Home monitoring of infants with single ventricle heart disease in the interstage period between surgeries improves growth and survival. Home monitoring requires caregivers to record nutritional intake, wet/soiled diapers, weight, pulse and oxygen saturation levels twice per day in a paper notebook, e-mail data weekly, notify the care team when specific "red flag" events occur, and bring the notebook to provider visits. Despite their value, current home monitoring methods increase the possibility of delays in care team notification, do not collect all relevant data, and are burdensome. We developed a platform that uses a tablet PC, a Bluetooth pulse oximeter and custom software that provides reminders for manual entry of weight, intake and output data as well as high-definition recording of video and audio. Data is time-stamped and encrypted within the tablet, transmitted to an enterprise database using a secure wireless connection and entered in the electronic medical record. Algorithms within the database send caregivers daily summary emails or instant alerts to contact the care team. All data is presented graphically and along with the video and audio recordings are available to the care team in real time. A feasibility pilot study is on-going (n=11) where caregivers use the notebook for > two months and then switch to using the device until surgery (> four months). Results indicate that nearly half (40%) of caregivers forgot to bring their notebook to >1 appointment limiting the value for clinical decision making. Caregivers spent equivalent time using either method, rated the device as slightly less difficult than the notebook, felt that their child benefitted from slightly improved care while using the device, and all completers reported that they would chose the device over the notebook. The device is acceptable to caregivers, offers significant advantages over current notebook based home monitoring methods and may reduce caregiver burden.This research is supported by the Claire Giannini Fund.

CORRESPONDING AUTHORS: Sarah Finocchario-Kessler, PhD, MPH, University of Kansas Medical Center, Kansas City, KS, 66160; skessler2@kumc.edu; Mark Connelly, PhD, Children's Mercy Hospitals and Clinics, University of Missouri - Kansas City, Kansas City, MO, 64108; mconnelly1@cmh.edu; Dawn Tucker, MSN, CPNP, Children's Mercy Hospitals and Clinics, Kansas City, MO, 64108; datucker@cmh.edu

Symposium 37 8:30 AM-9:45 AM

TOWARDS AN ONTOLOGY OF BEHAVIOR CHANGE: AN INNOVATIVE APPROACH TO INTERVENTION DEVELOPMENT

Susan Michie, PhD[1], Robert West, PhD[1], Kate E. Sheals, MSc[1], Rachel N. Carey, PhD[1], Lauren Connell, M.S.[1], Kai Larsen, Ph.D.[2], Victoria Gershuny, B.S.[3], Larry An, MD[4], William T. Riley, PhD[5]

[1]University College London, London, , United Kingdom; [2]University of Colorado, Boulder, Boulder, CO; [3]University of Arizona, Tucson, AZ; [4]University of Michigan, Ann Arbor, MI; [5]National Institutes of Health, Bethesda, MD

Developing interventions based on the best up-to-date evidence is hampered by current methods of synthesising evidence across very heterogeneous and often poorly reported intervention descriptions. To bring order to this field and develop new methods to facilitate the use of evidence and theory in designing interventions, the presenters have begun work developing a Behavior Change Ontology, that is, a structure that systematically represents and organises essential components of behavior change interventions. This builds on a published taxonomy of behavior change techniques (BCTTv1).In this symposium, we will present three aspects of an emerging Ontology of Behavior Change. In the first of three talks, Larry An will describe a method for conceptualising and organising intervention and contextual components within evidence-based intervention repositories. In the second, Kai Larsen will present preliminary work developing a taxonomy of behaviors that could be used to identify relevant theories. In the third, Susan Michie will present an analysis of 83 theories of behavior change in terms of their component constructs and a method for defining relationships between constructs, within and across theories. This will be illustrated by network diagrams for a sample of theories. All three talks will discuss their rationale, development to date, and both current and potential applications. The symposium will end with a discussion, led by Eric Hekler, of challenges and opportunities for this emerging Behavior Change Ontology and its application to intervention development and evaluation.This symposium is sponsored by the Theories and Techniques of Behavior Change Interventions SIG and by the Technology SIG.

Symposium 37A

INTEGRATING CONSTRUCTS ACROSS 83 THEORIES OF BEHAVIOR CHANGE: DEVELOPMENT OF A METHOD

Susan Michie, PhD

Background: Of 83 theories of behavior change identified in a multidisciplinary literature review, many show considerable overlap, whilst some have low frequency constructs of potential value. To maximise the usefulness of this resource for intervention development and evaluation, it is important to understand relationships between constructs with a view to facilitating theory selection and creating an overarching, synthetic framework within which individual theories can be located.Methods: Constructs were extracted from theory sources. Definitions and types of relationships between constructs were generated from theory sources, dictionaries and expert consensus. Several types of database were piloted and evaluated in terms of feasibility, efficiency and flexibility of specifying relationships between constructs, including similarity, causality and hierarchical structure.Results: We identified 1569 constructs in the 83 theories (mean 19, range 5-84). The database arrived at was relational, consisting of three linked tables: construct definitions, relationship definitions and relationships. Nine relationships between constructs within and across theories were identified: 'Indistinguishable', 'Similar', 'Subset/type of', 'Superset', 'Part of', 'Contains', 'Influences', 'Is influenced by', 'Acts in concert with'. In a sample of the theories, network diagrams linking the constructs by each type of relationship will be presented.Conclusions: While there are considerable similarities between constructs across theories of behavior change these are construed as showing different patterns of influence within those theories. Even within their assumed scope, most theories omit key constructs that other theories have identified as important. There is a need for a more consistent and coherent approach to development of behavior change theories.

Symposium 37B

DEVELOPING A TAXONOMY OF BEHAVIOR FOR USE IN BEHAVIOR CHANGE THEORIES

Kai Larsen, Ph.D.

Background: Different behavior change theories are relevant to different types of behavior. Deciding which theories are most relevant to a given behavior currently requires an ad hoc and informal analysis. The process should be improved by development of a taxonomy of behaviors, capturing features that allow mapping to relevant theories. This presentation describes an approach to the development of such a taxonomy.*Methods*: Leading journals in the fields of Psychology, Education, Business, Nursing, Behavioral Medicine, Management, Marketing, and Information Systems were searched for empirical articles in the past 20 years that included behavioral variables as outcomes. The variables extracted for the taxonomy were those in which behavior was defined as observable, non-autonomic, present vs absent, naturally occurring and of practical interest.A random sample of half of the behavioral variables were grouped together if they were judged to be identical. Each unique behavior was categorized using behavioral components of the World Health Organization's International Classification of Functioning, Disability and Health (ICF). This led to the "Behavior-ICF (BICF)," which was evaluated using the other half of the sample of variables.*Results:* 5,461 articles containing at least one behavioral outcome variable were identified containing 1,626 behavioral variables that met the criteria. These variables could be reliably classified using the BICF, inside a seven-level hierarchy.*Conclusions:* It is possible to reliably classify a wide range of behavioral outcome variables used in empirical studies across a range of disciplines using a development of the World Health Organization's International Classification of Functioning, Disability and Health (ICF) to be called the Behavior-ICF (BICF). This could form a starting point for analyzing linkages between different behavior change theories and different types of behavior.

Symposium 37C

APPLICATION OF A BEHAVIOR CHANGE ONTOLOGY TO IDENTIFY COMPONENTS WITHIN INTERVENTION REPOSITORIES

Larry An, MD

Background: There are currently several large repositories of evidence-based behavioral interventions, including the US National Cancer Institute's Research Into Practice program collection, the UK National Institute of Health and Care Excellence review of behavior change, and the Cochrane Collaboration database of behavioral interventions. These repositories provide examples of techniques and modes of delivery for specific behaviors and populations, which allow developers to more effectively build on the existing evidence base when designing interventions for new populations, new behaviors, or new modes of delivery. However, intervention content in existing evidence-based repositories is not structured in such a way as to allow developers to easily search and identify relevant intervention components. For this, a Behavior Change Ontology is needed. Methods & Results: We will present the development of a Behavior Change Ontology that unambiguously identifies a comprehensive set of behavior change techniques (based upon a published Behavior Change Techniques Taxonomy). This Behavior Change Ontology is used to identify and tag intervention components within a sample of evidence-based behavior change programs. We will present a preliminary interface that will allow intervention developers to search for examples of specific behavior change technique components within these programs. Conclusion: A Behavior Change Ontology allows efficient and effective use of repositories of evidence-based interventions to facilitate the development of effective interventions.

CORRESPONDING AUTHORS: Susan Michie, PhD, University College London, London, , WC1E 7HB; s.michie@ucl.ac.uk; Kai Larsen, Ph.D., University of Colorado, Boulder, Boulder, CO, 80309; kai.larsen@colorado.edu; Larry An, MD, University of Michigan, Ann Arbor, MI, 48105; lcan@umich.edu

Friday
April 24, 2015
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Panel Discussion 12 11:15 AM-12:15 PM

HOW DO WE ADAPT? A DISCUSSION ON METHODS FOR ADAPTING MHEALTH PHYSICAL ACTIVITY INTERVENTIONS

Eric B. Hekler, PhD[1], Inbal (Billie) Nahum-Shani, PhD[2], Marc A. Adams, PhD[1], Predrag Klasnja, PhD[2], Bonnie Spring, PhD, ABPP[3]

[1]Arizona State University, Phoenix, AZ; [2]University of Michigan, Ann Arbor, MI; [3]Northwestern University Feinberg School of Medicine, Chicago, IL

Smartphones and wearable/ubiquitous sensors, such as physical activity monitors, have the potential to help individuals improve their lives through behavior change by monitoring a person and then using that information to provide the most appropriate customized interventions, exactly when and where it would be most beneficial for that person. While these mHealth technologies have this capability in theory, in practice the models and decision rules required to support the adaptions on determining exactly when, where, and how much to intervene largely do not exist. There are several strategies that can be used to guide when to adapt though. The purpose of this panel is to provide a practical summary of strategies that can be used to for driving adaptations within an mHealth system. The first panelist will provide a conceptual overview of the core components of a Just-In-Time Adaptive Intervention (JITAI). Following this, the second panelist will describe his work building an adaptive SMS-based intervention for promoting physical activity based on operant shaping for defining the "decision-rule" of adaptation. The third panelist will then discuss the experimental and system design for a JITAI for physical activity that utilizes a computer science strategy for adaptation called "reinforcement learning" (note, this is different from the behavioral science version of reinforcement learning). The fourth panelist will then discuss the experimental and system design of a JITAI that would be driven by control system engineering principles. The moderator for this panel is a senior behavioral scientist with knowledge of these different approaches.

CORRESPONDING AUTHORS: Eric B. Hekler, PhD, Arizona State University, Phoenix, AZ, 85003; ehekler@asu.edu; Inbal (Billie) Nahum-Shani, PhD, University of Michigan, Ann Arbor, MI, 48106-1248; inbal@umich.edu; Marc A. Adams, PhD, Arizona State University, Phoenix, AZ, 85004; marc.adams@asu.edu; Predrag Klasnja, PhD, University of Michigan, Ann Arbor, MI, 48109; klasnja@umich.edu; Bonnie Spring, PhD, ABPP, Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; bspring@northwestern.edu

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ESTABLISHING BEH MED PROGRAMS IN HOSPITALS II: MULTIDISCIPLINARY RELATIONSHIPS & SPECIALTY SERVICES

Cori E. McMahon, PsyD[1], Kelly L. Gilrain, PhD[2], Michelle C. Fingeret, Ph.D.[3], Efrain A. Gonzalez, Psy.D.[4], David A. Moore, Psy.D.[5], Patricia Byers, MD[6], Helen L. Coons, Ph.D., ABPP[7]

[1]Cooper University Hospital, MD Anderson Cancer Center at Cooper, Woodbury, NJ; [2]Cooper University Hospital, Haddonfield, NJ; [3]MD Anderson Cancer Center, Houston, TX; [4]Jackson Behavioral Health Hospital, Jackson Memorial Medical Center, Miami, FL; [5]MD Anderson Cancer Center at Cooper University Hospital, Philadelphia, PA; [6]Jackson Memorial Medical Center, Miami, FL; [7]Denver Health and Hospital Integrated Primary Care, Denver, CO

Behavioral and social factors cause or contribute to nearly every cause of death, illness, and disability and directly cause approximately half of deaths each year. As much as 85% of physician visits are for problems that have a significant psychological and/or behavioral component such as chronic illnesses. 60% of those with depression go undetected in primary care and chronic illnesses are among the most prevalent, costly, and preventable health problems. Behavioral Medicine services integrated into medical settings can improve quality of life, promote healthy behaviors, and lower overall healthcare costs. Hospitals that integrate psychology services show reductions in hospital admissions and length of stay. In 2013, Behavioral Medicine at Cooper University Hospital received 1, 368 inpatient consults, completed over 2,100 inpatient encounters, and received 300 outpatient referrals for oncology patients alone, with 1/3 of those becoming regular patients. The program utilizes an externship training model and operates on multidisciplinary medical teams primarily within Oncology, Trauma, Emergency Medicine, Pediatrics, Palliative Care, and Ob-Gyn, also offering ETOH evaluations and family support groups in the Trauma department. That same year, Medical Psychology at Jackson Memorial Hospital received approximately 818 consults, 56% of which were for assessment of decision-making capacity and mood disorders. Creating a specialty service like the Body Image Clinic at MD Anderson Cancer Center, TX, which serves approximately 400 breast and head/neck cancer patients annually enables psychologists to focus on the impact that disfiguring cancer treatment can have on emotional, functional, and social well-being. Discuss with a panel of professionals representing diverse programs including health psychologists engaged in clinical and research work and a surgeon who utilizes integrated care as a standard of practice: integration within large hospital systems, challenges with billing and reimbursement, shaping appropriateness of referrals, managing patient volume, establishing specialty services, and fostering multidisciplinary collaboration.

CORRESPONDING AUTHORS: Kelly L. Gilrain, PhD, Cooper University Hospital, Haddonfield, NJ, 08051; gilrain-kelly@cooperhealth.edu; Michelle C. Fingeret, Ph.D., MD Anderson Cancer Center, Houston, TX, 77096; mcfinger@mdanderson.org; Efrain A. Gonzalez, Psy.D., Jackson Behavioral Health Hospital, Jackson Memorial Medical Center, Miami, FL, 33136; egonzale@jhsmiami.org; David A. Moore, Psy.D., MD Anderson Cancer Center at Cooper University Hospital, Philadelphia, PA, 19107; moore-david@cooperhealth.edu; Patricia Byers, MD, Jackson Memorial Medical Center, Miami, FL, 33136; pbyers@med.miami.edu; Helen L. Coons, Ph.D., ABPP, Denver Health and Hospital Integrated Primary Care, Denver, CO, 80205; helen.coons@dhha.org

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CAREERS IN BEHAVIORAL MEDICINE: TEACHING, TRAINING, AND COACHING PROFESSIONALS IN HEALTH CARE

Karen Oliver, Ph.D.[1], Justin M. Nash, PhD[2], Nancy Ruddy, Ph.D.[3], Michael G. Goldstein, MD[4]

[1]Brown Alpert Medical School/Providence VA Medical Center, Providence, RI; [2]Brown University / Memorial Hospital of Rhode Island, Pawtucket, RI; [3]McCann Health, Mountain Lakes, NJ; [4]Veterans Health Administration, Durham, NC

Integrating health promotion and disease prevention within healthcare systems is largely dependent on the healthcare providers who interact with patients and consumers on a regular basis. While many healthcare systems employ behavioral health specialists who can provide specialized clinical assistance in these areas, the reach of these practitioners tends to be quite small in comparison to the number of patients in health care systems. In order to achieve optimal integration, it is key to have behavioral health experts who are employed, in part or full, with the objective of educating and coaching health care providers and teams on these topics and assisting them to interact with patients in a patient-centered manner, while also helping them to efficiently integrate health promotion and disease prevention into care. This panel discussion will focus on the opportunities and challenges of behavioral medicine careers that include or emphasize health care provider education. Panelists will discuss the specific educator component of their positions across a range of healthcare settings, including primary care, family medicine, and the healthcare communications and marketing arena. They will provide the audience with information and guidance on how to develop and maintain these careers, and discussion will include a national perspective on the implementation, sustainment, and future of these types of roles.

CORRESPONDING AUTHORS: Karen Oliver, Ph.D., Brown Alpert Medical School/ Providence VA Medical Center, Providence, RI, 02906; Karen_Oliver@brown.edu; Justin M. Nash, PhD, Brown University / Memorial Hospital of Rhode Island, Pawtucket, RI, 02860; justin_nash@brown.edu; Nancy Ruddy, Ph.D., McCann Health, Mountain Lakes, NJ, 07046; nruddyphd@gmail.com; Michael G. Goldstein, MD, Veterans Health Administration, Durham, NC, 27750; michael.goldstein2@va.gov

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INFILTRATING INDUSTRY – A PANEL DISCUSSION OF BEHAVIORAL SCIENCE RESEARCH WITHIN INDUSTRY

Eric B. Hekler, PhD[1], Shabnam Hakimi, Ph.D.[2], Skyler Place, Ph.D[3], Frederick Muench, Ph.D.[4]

[1]Arizona State University, Phoenix, AZ; [2]Welltok, Inc., Denver, CO; [3]Cogito Corporation, Bosotn, MA; [4]North Shore Health System / Department of Psychiatry, Great Neck, NY

At the past several SBM annual meetings, there has been increased discussion about the role of industry within academic research. The discussions tend to emphasize issues related to academic industry partnerships and strategies for engaging with industry in a research setting. The purpose of this panel is to extend this conversation further by providing a more detailed discussion about what it is like for a behavioral scientist to work in industry and how industry is enabling behavioral scientists to do the work more efficiently. The first panelist, who works at Cogito Corp., utilizes his training in psychology and cognitive science to develop new technologies that better understand and predict human behavior. He will discuss his experiences developing cutting edge strategies for predicting behavior available to him through the resources of industry. The second panelist, who works within the CaféWell Behavioral Labs at Welltok, applies cognitive neuroscience of learning and decision making to developing more interacting and engaging environments. She will describe her experiences with affecting behavior change among the consumer-base of Welltok, a health optimization company. The third panelist, who is currently at North Shore Long Island Jewish Hospital, has a long history of working both within industry and academia. He will describe his perspective on the strengths and limitations of conducting work in each realm, particularly with an eye on producing real- world impact through his science. The panel will be moderated by an academic behavioral scientist.

CORRESPONDING AUTHORS: Shabnam Hakimi, Ph.D., Welltok, Inc., Denver, CO, 80202; shabnam.hakimi@welltok.com; Skyler Place, Ph.D, Cogito Corporation, Bosotn, MA, 02109; splace@cogitocorp.com; Frederick Muench, Ph.D., North Shore Health System / Department of Psychiatry, Great Neck, NY, 11004; fredmuench@gmail.com

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RESEARCH AT THE INTERSECTION OF CANCER AND AGING: A DISCUSSION BETWEEN AGING AND CANCER RESEARCHERS

Reginald Tucker-Seeley, ScD[1], Corinne Leach, MS PhD MPH[2], Barbara Resnick, PhD, CRNP[3], Keith Bellizzi, PhD, MPH[4]

[1]Dana-Farber Cancer Institute (DFCI)/ Harvard School of Public Health (HSPH), Boston, MA; [2]American Cancer Society, Atlanta, GA; [3]University of Maryland, Baltimore, MD; [4]University of Connecticut, Storrs, CT

The confluence of an aging population and longer cancer survivorship presents substantial research, practice, and policy implications; and across the cancer continuum from prevention to end-of-life care there remain methodological and implementation challenges that are relevant for cancer-related research with older adults. In this area of research, gaps in knowledge exist related to the within-group heterogeneity of the > 65 years of age population, multimorbidity and the substantial cost of cancer care, and the paucity of research on cancer treatment decision making among older adults. We propose a panel discussion with cancer- and aging-related researchers to highlight the complex issues at the intersection of cancer and aging research. Our goal is to increase visibility of aging and cancer research; and to describe strategies that encourage trans-disciplinary collaborations from fields such as behavioral medicine, gerontology/geriatrics, oncology, and epidemiology to address gaps in current knowledge to move the field of cancer and aging forward.

CORRESPONDING AUTHORS: Corinne Leach, MS PhD MPH, American Cancer Society, Atlanta, GA, 30309; corinne.leach@cancer.org; Barbara Resnick, PhD, CRNP, University of Maryland, Baltimore, MD, 21201; barbresnick@gmail.com; Keith Bellizzi, PhD, MPH, University of Connecticut, Storrs, CT, 06269; keith.m.bellizzi@uconn.edu

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GET THE (RIGHT) JOB: THE DO'S AND DON'TS OF NEGOTIATING A FACULTY POSITION

Elliot J. Coups, PhD[1], Kathleen Y. Wolin, ScD[2], Ellen Beckjord, PhD, MPH[3], Karen M. Emmons, PhD[4]

[1]Rutgers Cancer Institute of New Jersey, New Brunswick, NJ; [2]Coeus Health, Chicago, IL; [3]University of Pittsburgh Cancer Institute, Pittsburgh, PA; [4]Kaiser Foundation Research Institute, Oakland, CA

Congratulations! You aced your interviews for a faculty position, quickly received a job offer, and accepted without hesitation. You're well on the way to a successful career. Or are you? Are you certain that the position is a good fit and will provide you with all of the resources, support, time, and compensation that you will need to be successful and happy? Did you negotiate appropriately—or even at all—to ensure that you are making the right career move? The vast majority of academics fail to negotiate for faculty positions and women are less likely to negotiate than men. Negotiating insufficiently for a faculty position may have long-lasting adverse effects on professional productivity, advancement, and satisfaction. This timely and engaging panel session will provide a candid examination of the why, when, what, and how of successfully negotiating a faculty position. Brief presentations by three behavioral medicine professionals from diverse backgrounds, disciplines, and settings will be followed by considerable time for questions and answers and general discussion. One presenter, who is a behavioral epidemiologist, will focus on negotiating for research positions in academic medical centers. A second presenter, a clinical psychologist and behavioral medicine researcher at a comprehensive cancer center, will provide particular insight on negotiating for positions that include both research and clinical practice. The final presenter is a senior behavioral medicine scientist and research administrator with considerable experience regarding all aspects of negotiating faculty positions. The session will be chaired by a behavioral scientist faculty member employed in a medical school and school of public health. Attendees are encouraged to come prepared with questions about any aspects of negotiating faculty positions. Potential topics for discussion include (but are certainly not limited to): establishing the terms of the appointment; negotiating professionally; doing research to inform strategic negotiations; knowing what to, and not to, negotiate; handling multiple job offers; and accepting and rejecting jobs.

CORRESPONDING AUTHORS: Kathleen Y. Wolin, ScD, Coeus Health, Chicago, IL, 60654; kate@drkatewolin.com; Ellen Beckjord, PhD, MPH, University of Pittsburgh Cancer Institute, Pittsburgh, PA, 15232; beckjorde@upmc.edu; Karen M. Emmons, PhD, Kaiser Foundation Research Institute, Oakland, CA, 94612; karen.m.emmons@kp.org

Panel Discussion 18 11:15 AM-12:15 PM

ACCESSING AND ANALYZING NON-TRADITIONAL DATA: CHALLENGES, CONSIDERATIONS, AND FUNDING OPPORTUNITIES

Richard P. Moser, PhD[1], Heather Cole-Lewis, PhD, MPH, MA[2], Matthew Buman, PhD[3], Yadid Ayzenberg, M.Sc, MBA[4]

[1]National Cancer Institute, Bethesda, MD; [2]ICF International, Rockville, MD; [3]Arizona State University, Phoenix, AZ; [4]Massachusetts Institute of Technology, Cambridge, MA

Advances in technology have led to opportunities for scientific exploration through access to a variety and volume of new data sources, oftentimes referred to as 'Big Data'. These data have the potential to improve research, practice, and implementation on topics related to the national prevention strategy. Behavioral scientists can now take advantage of these non-traditional data, such as social media, search engines, wearable sensors, and mobile apps to perform innovative studies but may not know how to access and analyze these data. The purpose of this panel is to expose attendees, through applied examples, to a range of non-traditional data sources and analysis methods for behavioral health research. Panelists will also discuss challenges, considerations, and provide practical resources including funding opportunities for working with these data. The first panelist will discuss use of data from the Twitter Firehose to develop a machine learning algorithm for social media listening on the topic of e-cigarettes. The second panelist will discuss the use of 24 hour accelerometry (sensor data) to explore the dynamic interplay of sleep, sedentary behavior, and physical activity, with a specific focus on evaluating, using, and developing algorithms for data processing. The third panelist will present on the use of sensor technology to explore personal well-being, including specific details about how wearable electrodermal activity (EDA) sensors can be used to measure mood and some of the shortcomings of the technology. Each of the aforementioned speakers will discuss how to choose and access the right data, how to develop algorithms for analyzing these data, and options for combining these innovative data and methods with traditional social science data and methods. Finally, the fourth panelist will present on the NIH's perspective on non-traditional data including information about the Big Data to Knowledge (BD2K) initiative. This panelist will discuss emerging types of non-traditional data for researchers to use. Lastly, this panelist will also provide practical information about funding announcements that would be appropriate for researchers interested in accessing and analyzing these types of data.

CORRESPONDING AUTHORS: Heather Cole-Lewis, PhD, MPH, MA, ICF International, Rockville, MD, 20850; heather.cole-lewis@icfi.com; Matthew Buman, PhD, Arizona State University, Phoenix, AZ, 85004; matthew.buman@asu.edu; Yadid Ayzenberg, M.Sc, MBA, Massachusetts Institute of Technology, Cambridge, MA, 02139; yadid@media.mit.edu

Panel Discussion 19 11:15 AM-12:15 PM

RECONCEPTUALIZING HEALTH BEHAVIORS THROUGH THE LENS OF LIFESTYLE TRADEOFFS

Kristine M. Carandang, MS, OTR/L[1], Lucia Florindez, MA[2], Elizabeth Pyatak, PhD, OTR/L, CDE[2]

[1]University of Southern California, Chino Hills, CA; [2]University of Southern California, Los Angeles, CA

Health behavior research often categorizes specific activities as either beneficial or harmful to health. Using this framework, clinicians and scientists focus on ensuring that patients adopt health promoting behaviors (e.g., getting adequate sleep, limiting alcohol consumption), while avoiding potentially harmful behaviors (e.g., smoking, overconsumption of processed food). However, the dilemmas that patients with chronic illness face when integrating these recommendations into everyday practice are often more complex than such binary distinctions. They may make decisions to engage in activities that directly jeopardize their health, despite being advised against such activities by medical professionals. Patients find themselves caught between the competing demands of complying with medical recommendations and engaging in activities that are valued for dimensions that extend beyond physical health, such as mental and social well-being.Occupational science has described this phenomenon as "lifestyle tradeoff" (Jackson, et al., 2010). Using this lens, this panel will provide a framework for how to consider patients' activity choices in research and intervention planning. First, we will review theoretical tools in the social science literature to deconstruct the phenomenon of lifestyle tradeoff. We will then provide concrete examples of lifestyle tradeoffs using case studies from two translational research programs conducted among underserved populations with chronic conditions. Findings from a study of diabetes in young adults highlight the competing demands of intensive blood glucose control versus the developmentally normative exploration and risk-taking of young adulthood. Findings from a study of pressure ulcer prevention among adults with spinal cord injury illustrate the tension between adhering to recommendations for prolonged bed rest versus participating in family and community life. In presenting examples from these populations, we aim to facilitate a discussion regarding the complexity of lifestyle tradeoffs and balance, and emphasize the importance of perceived quality of life, agency, and choice in patient decision making processes, as paramount to living a fully engaged and meaningful life.

CORRESPONDING AUTHORS: Kristine M. Carandang, MS, OTR/L, University of Southern California, Chino Hills, CA, 91709; kcaranda@usc.edu; Lucia Florindez, MA, University of Southern California, Los Angeles, CA, 90089-9003; lucia.florindez@gmail.com; Elizabeth Pyatak, PhD, OTR/L, CDE, University of Southern California, Los Angeles, CA, 90089-9003; beth.pyatak@osot.usc.edu

Panel Discussion 20 11:15 AM-12:15 PM

THE FUTURE OF TRAINING IN BEHAVIORAL MEDICINE

Kathryn E. Kanzler, PsyD, ABPP[1], Jeffrey L. Goodie, PhD, ABPP[2], Donald D. McGeary, PhD, ABPP[3], William C. Isler, PhD[4], Michael Ann. Glotfelter, PsyD[4]

[1]Malcolm Grow Medical Clinics & Surgery Center/USAF, JB Andrews, MD; [2]Uniformed Services University of the Health Sciences, Bethesda, MD; [3]University of Texas Health Science Center at San Antonio, San Antonio, TX; [4]Wilford Hall Ambulatory Surgical Center/USAF, Lackland AFB, TX

The demand for quality Clinical Health Psychologists and Integrated Behavioral Health Consultants is growing as interdisciplinary healthcare becomes more widely available in the U.S. The need for progressive and innovative training methods in Behavioral Medicine is essential. The chair and four panelists will discuss their collective and individual experiences as Clinical Health Psychology (CHP) and integrated primary care (IPC) trainees, supervisors and/or training directors in a variety of educational settings. Discussion will concern behavioral medicine training at the graduate, intern, fellow and paraprofessional training levels. The first panelist will highlight CHP training at the graduate school level, from a Director of Clinical Training perspective, particularly methods for establishing a foundation in behavioral medicine. Another panelist serving as Internship Training Director (TD) will explain the unique implications of training CHP in the context of a Generalist predoctoral internship program, focusing on the fit of CHP education and principles relative to the Boulder Model of internship training. Discussion will proceed to the Clinical Health Psychology Fellowship TD panelist to emphasize the importance of advanced CHP and IPC training at the postdoctoral level, including the integration of intern supervision into fellow training and achieving competency in multiple clinical areas (e.g. tobacco cessation, weight, diabetes, chronic pain, sleep disorders, etc.) A student perspective will be presented by a CHP postdoctoral fellow panelist, who will discuss the decision to seek specialty behavioral medicine training, and share her experiences as a junior supervisor of predoctoral interns during their CHP rotation. Throughout, the Chair will facilitate the panel discussion as a clinical supervisor, as well as address the concepts of internship site collaboration and the importance of training paraprofessionals in CHP and IPC. The interactive discussion will engage audience members as they learn about the structure and methods of current training programs, application of innovative training methods, and considerations for training behavioral medicine professionals of the future.

CORRESPONDING AUTHORS: Jeffrey L. Goodie, PhD, ABPP, Uniformed Services University of the Health Sciences, Bethesda, MD, 20814-4799; Jeffrey.Goodie@usuhs.edu; Donald D. McGeary, PhD, ABPP, University of Texas Health Science Center at San Antonio, San Antonio, TX, 78229; mcgeary@uthscsa.edu; William C. Isler, PhD, Wilford Hall Ambulatory Surgical Center/USAF, Lackland AFB, TX, 78236; chuckisler6@gmail.com; Michael Ann. Glotfelter, PsyD, Wilford Hall Ambulatory Surgical Center/USAF, Lackland AFB, TX, 78236; michaelannglot@hotmail.com

Friday
April 24, 2015
12:45 PM-1:30 PM

Paper Session 21 12:45 PM-1:00 PM

COMPUTATIONAL MODELING OF BEHAVIORAL CHANGE BASED ON DUAL PROCESS MODEL

Misha Pavel, PhD[1], Bonnie Spring, PhD, ABPP[2]

[1]Northeastern University, Boston, MA; [2]Northwestern University Feinberg School of Medicine, Chicago, IL

A significant proportion of the societal healthcare burden is attributable to health-related behaviors such as smoking, poor-quality diet, excessive intake of food and alcohol and sedentary life style. While the acquisition of these behaviors appears to be effortless, their reversal is very difficult. Prior theoretical constructs that have been put forth to explain behavior change processes and guide interventions have met with only moderate success. Recent developments in sensor, communication and mobile technology open the opportunity to develop just in time adaptive interventions (JITAI) where the dynamics of the intervention match those of the behaviors to be modified. The optimization of JITAIs would, therefore, benefit from being grounded in predictive models of behavioral change. Our approach combines computational modeling for inference and prediction with a dual process theory model of behavior involving two concurrent decision processes. Type 1 process, represents automatic, habitual decisions and behaviors that are executed rapidly without conscious elaborations. Acquisition of such behaviors occurs over a long time by classical or operant conditioning, and also extinguishes slowly. Type 2 process includes cognitive decision making based on explicit problem solving. This knowledge-based process can be changed rapidly by providing appropriate information and motivation, but it can also forget just as fast. Using computational models of learning we analyzed recently published experimental data from the Make Better Choices study (Spring et al 2012). The data comprised self-monitoring of four types of diet and activity behaviors, e.g., fruits/vegetables, saturated fat, sedentary, exercise, , recorded during a 2-week baseline, 3-week intervention period and followed up for about ½ year . The model was able to account for the main features of the average data dynamics as well as for the individuals' behaviors. This approach also accounts for the observation that intentional improvements (decrease) in sedentary leisure activity effortlessly improved (decreased) saturated fat intake, by reducing snacking during watching television. We plan to discuss the application of the computational modeling approach to the design of future studies for intervention optimization.

CORRESPONDING AUTHOR: Misha Pavel, PhD, Northeastern University, Boston, MA, 02115; m.pavel@neu.edu

Paper Session 21 1:00 PM-1:15 PM

SEQUENTIAL VS. SIMULTANEOUS BEHAVIOR CHANGE WITHIN MULTIPLE HEALTH BEHAVIOR CHANGE INTERVENTIONS

Eva-Molly P. Dunbar, BA[1], Andrea L. Paiva, PhD[2], James O. Prochaska, PhD[2], Bryan Blissmer, PhD[3], Colleen A. Redding, PhD[4]

[1]University of Rhode Island, Kingston, RI; [2]University of Rhode Island / Cancer Prevention Research Center, Kingston, RI; [3]University or Rhode Island, Kingston, RI; [4]Cancer Prevention Research Center/ University of Rhode Island, Kingston, RI

In the field of multiple health behavior change there is a growing amount of research on the simultaneous treatment of multiple health risk behaviors. Yet there is little research on how people change behaviors that are treated simultaneously. To help predict behavior change, and thus prevent chronic illness on a population-level, it is necessary to advance the understanding of the patterns of behavior change. The present study examined participants with multiple health risk behaviors who have changed pairs of behaviors over time. Data was analyzed from four randomized controlled trials using Transtheoretical Model (TTM) tailored interventions and comparison groups ($N = 1{,}277$ weight management study; $N = 9{,}461$ cancer prevention study). Patterns of sequential and simultaneous behavior change across four time points (baseline, 6, 12, and 24 months) were identified for each behavior pair. Ten different patterns of change were found and collapsed into three distinct groupings of change: 1) overall simultaneous vs. sequential patterns; 2) simultaneous vs. sequential patterns during treatment (first 12 months of the study), and 3) simultaneous vs. sequential patterns for those who relapsed during the course of the study (24 months). A series of chi-square analyses were conducted to examine differences between treatment and control group participants, participants with homogeneous and heterogeneous behaviors, and participants in different Stages of Change across each behavior pair within the three distinct groupings. In addition, results will be presented regarding the proportions of individuals who changed both behaviors in a pair sequentially or simultaneously, predictors (Stage of Change, treatment, and demographic) of simultaneous versus sequential patterns of behavior change, and whether dissimilar behavior pairs (i.e., smoking, sun, diet) follow a different pattern of change than similar behaviors (i.e., physical activity, diet, and emotional eating). Results provide a better understanding of sequential versus simultaneous behavior change and can help guide multiple health behavior change interventions in the prevention of chronic illness.

CORRESPONDING AUTHOR: Eva-Molly P. Dunbar, BA, University of Rhode Island, Kingston, RI, 02881; epetittodunbar@my.uri.edu

Paper Session 21 1:15 PM-1:30 PM

MECHANISMS UNDERLYING MULTIPLE BEHAVIOR CHANGES IN THE MAKE BETTER CHOICES DIET AND ACTIVITY TRIAL

Kristin L. Schneider, PhD[1], Michael Coons, Gene McFadden[2], Andrew DeMott, Juned Siddique, PhD[2], Don Hedeker, PhD[3], Laura Aylward, BS[1], Bonnie Spring, PhD, ABPP[4]

[1]Rosalind Franklin University of Medicine & Science, North Chicago, IL; [2]Northwestern University, Chicago, IL; [3]University of Illinois at Chicago, Chicago, IL; [4]Northwestern University Feinberg School of Medicine, Chicago, IL

The Make Better Choices trial tested how to optimize healthy changes in 4 diet and activity behaviors. Adults (n=204) were randomized to 1 of 4 treatments: increase fruits/vegetables & physical activity; decrease saturated fat & sedentary leisure; decrease saturated fat & increase physical activity; increase fruit/vegetable & decrease sedentary leisure. After a 2 week baseline, treatments provided 3 weeks of remote coaching supported by mobile technology and financial incentives. Those asked to increase fruits/vegetables and decrease sedentary leisure (optimal substitution treatment per behavioral choice theory) achieved the greatest healthy change (composite change in the 4 behaviors standardized using z-scores). Those asked to decrease saturated fat and increase physical activity (familiar treatment per traditional diet) achieved least improvement (Spring 2013). We tested hypothesized mechanisms to explain why optimal substitution treatment maximized healthy changes and familiar treatment minimized them. Changes in positive and negative affect and in self-efficacy, stages of readiness to change, liking, craving and attentional bias from baseline to post-treatment for the 4 behaviors were tested as mechanisms. A macro for multiple mediation tested whether the proposed mechanisms explained the impact of treatment on change in the healthy lifestyle composite. Self-efficacy emerged as the only mediator. Optimal substitution treatment significantly increased composite self-efficacy from baseline to end of treatment (t=2.45, p=.02), which resulted in increases in the healthy lifestyle composite (indirect effect estimate=-0.0364; 95% bias corrected CI: -.1079, -.0034) compared to the other treatments. An examination of the individual behaviors revealed that participants who received the optimal substitution treatment increased their fruit/vegetable self-efficacy, which resulted in increased fruit/vegetable consumption (indirect effect estimate=-0.2761; 95% bias corrected CI: -0.6061, -0.1083). No mediators explained the lesser improvement of the familiar treatment on the healthy lifestyle composite. Targeting increased fruit/vegetable intake and decreased sedentary leisure time maximized healthy diet and activity changes via effects on self-efficacy.

CORRESPONDING AUTHOR: Kristin L. Schneider, PhD, Rosalind Franklin University of Medicine & Science, North Chicago, IL, 60064; kristin.schneider@rosalindfranklin.edu

CITATION PAPER
Paper Session 22 12:45 PM-1:00 PM

LONGITUDINAL ASSOCIATION BETWEEN DEPRESSIVE SYMPTOMS AND WALKING IMPAIRMENT IN MULTIPLE SCLEROSIS

Ipek Ensari, EdM[1], Brynn Adamson, MS[1], Robert Motl, PhD[2]

[1]University of Illinois Urbana-Champaign, Urbana, IL; [2]University of Illinois at Urbana-Champaign, Urbana, IL

Background: Worsening of depressive symptoms and walking impairment are significant burdens over the course of multiple sclerosis (MS). The reciprocal relationship between depressive symptoms and walking impairment has not been well characterized in this population.Purpose: We explored the possible reciprocal relationship between depressive symptoms and walking impairment over a period of 2 years in a cohort of people with relapsing-remitting MS (RRMS).Methods: Data were collected from 269 persons with RRMS on three occasions separated by 12 months over 2 years. Depressive symptoms were measured using the Hospital Anxiety and Depression Scale (HADS), whereas walking impairment was measured using the Multiple Sclerosis Walking Scale-12 (MSWS-12). The data were examined using longitudinal panel analysis in Mplus.Results: Baseline depressive symptoms predicted walking impairment at 1-year follow-up (path coefficient = .074), and walking impairment at 1-year follow-up predicted depressive symptoms at 2-year follow-up (path coefficient = .177), even after controlling for covariates.Conclusions: Our study provides the first evidence for initiation of a reciprocal relationship between depressive symptoms and walking impairment in people with RRMS. This should be considered in both research and treatment programs.

CORRESPONDING AUTHOR: Ipek Ensari, EdM, University of Illinois Urbana-Champaign, Urbana, IL, 61810; ensari2@illinois.edu

Paper Session 22 1:00 PM-1:15 PM

NEIGHBOURHOOD ENVIRONMENT AND DEPRESSIVE SYMPTOMS: MEDIATING ROLE OF STRESS AND SENSE OF COMMUNITY

Catherine Paquet, BSc, PhD.[1], Natasha J. Howard, BHSc (Hons) PhD[2], Neil T. Coffee, PhD[2], Graeme J. Hugo, PhD[3], Anne W. Taylor, PhD[4], Robert J. Adams, MD[3], Mark Daniel, PhD[1]

[1]University of South Australia, Adelaide, SA, , Australia; [2]University of South Australia, Adelaide,SA, , Australia; [3]The University of Adelaide, Adelaide,SA, , Australia; [4]The University of Adelaide, Adelaide, , Australia

Introduction: Various mechanisms have been proposed to explain the contribution of residential environments to mental health and well-being, including influence on stress levels and local social networks.This study aimed to assess prospective associations between depressive symptoms and social and built environmental features measured objectively or self-reported; and investigate the mediating role of perceived sense of community and experienced stress in these associations.

Methods: Adult participants in waves 2 (2005-06) and 3 (2008-10) of the North West Adelaide Health Study self-reported their depressive symptoms at both waves using the Center for Epidemiologic Studies Depression Scale and their sense of community and stress at wave 2. Environmental features at wave 2 were assessed objectively (n=2225) or through participants' perceptions (n=1368) of neighbourhood aesthetic, crime, land-use mix, infrastructure for, and barriers to walking, and access to services. Participants' wave 2 addresses were used to derive objective neighbourhood measures of crime rates, walkability, count and area of public open space using secondary data sources integrated into a Geographic Information System. Negative binomial models were used to test associations between depressive symptoms at wave 3 and neighbourhood measures while accounting for depressive symptoms at wave 2, age, education, household income, gender and geographical clustering. Objective and perceived neighbourhood measures were tested separately. Mediation was tested using path analysis.

Results: Participants reporting higher levels of neighbourhood crime subsequently reported worse depressive symptoms and this association appeared to be mediated by a lower sense of community and greater levels of stress. Participants with more positive perceptions of neighbourhood aesthetics showed fewer depressive symptoms and this was partly explained by higher sense of community. Results did not support associations between objective environmental measures and depressive symptoms.

Conclusion: Findings provide evidence that perceptions of neighbourhood aesthetics and crime are prospectively related to depressive symptoms possibly through influence on residents' sense of community and experienced stress.

CORRESPONDING AUTHOR: Catherine Paquet, BSc, PhD., University of South Australia, Adelaide, SA, , 5001; catherine.paquet@unisa.edu.au

CITATION AND MERITORIOUS PAPER
Paper Session 22 1:15 PM-1:30 PM

INTERACTION BETWEEN SMOKING AND DEPRESSIVE SYMPTOMS ON SUBCLINICAL HEART DISEASE: THE CARDIA STUDY

Allison Carroll, M.S.[1], Mercedes Carnethon, PhD[1], Kiang Liu, PhD[1], David Jacobs, PhD[2], Jesse Stewart, PhD[3], John Jeffrey. Carr, MD, MSc.[4], Brian Hitsman, PhD[1]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]University of Minnesota, Minneapolis, MN; [3]Indiana University-Purdue University Indianapolis, Indianapolis, IN; [4]Vanderbilt University, Nashville, TN

Cigarette smoking and depression are independent risk factors for heart disease, but whether the interaction between smoking and depression is associated with risk for heart disease remains unknown. The purpose of this study was to test the hypothesis that the association between smoking and coronary artery calcification (CAC) would be stronger among adults with a history of repeated elevated depressive symptoms versus those with no history of elevated depressive symptoms. Participants (at baseline: 54.5% female; 51.5% Black; age=18-30 years) were followed over 25 years in the Coronary Artery Risk Development in Young Adults (CARDIA) study. Smoking exposure was measured by cigarette packyears (Years 0, 2, 5, 7, 10, 15 and 20). Depressive symptoms were measured using the Center for Epidemiologic Studies Depression (CES-D) Scale (Years 5, 10, 15 and 20). Participants (N=2675) were classified with repeated (≥ 2 exams with elevated CES-D: scores ≥ 16; n=512), single episode (1 elevated score; n=543), or no elevated depressive symptoms (0 elevated scores; n=1620). Logistic regression was used to test the interaction of smoking exposure by elevated depressive symptom status in relation to CAC >0 at Year 25. Covariates included known sociodemographic (sex, race, age, education), behavioral (alcohol, physical activity) and clinical (hypertension, cholesterol, diabetes, body mass index) risk factors for heart disease. The smoking exposure by elevated depressive symptom group interaction was significant ($p=.002$) in that repeated depression in the presence of packyears was associated with higher odds of CAC. Within each depression group (≥ 2, 1, 0), each 10-packyear greater smoking exposure was associated with 81%, 51% and 18% higher odds of having CAC, respectively. Adults with a history of repeated elevated depressive symptoms may be at especially high risk for developing CAC with greater smoking exposure.

CORRESPONDING AUTHOR: Allison Carroll, M.S., Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; allisoncarroll2016@u.northwestern.edu

Paper Session 23 12:45 PM-1:00 PM

NATIONAL DISSEMINATION OF THE STRONGWOMEN – HEALTHY HEARTS PROGRAM: A RE-AIM ANALYSIS

Sara Folta, PhD[1], Rebecca Seguin, PhD[2], Kenneth Chui, PhD[3], Valerie Clark, MS, RD[1], Marilyn Corbin, PhD[4], Jeanne Goldberg, PhD, RD[1], Eleanor Heidkamp-Young, MS[1], Alice Lichtenstein, DSc[5], Nancy Wiker, MEd[6], Miriam Nelson, PhD[7]

[1]Friedman School of Nutrition, Tufts University, Boston, MA; [2]Division of Nutritional Sciences, Cornell University, Ithica, NY; [3]Department of Public Health and Community Medicine, School of Medicine, Tufts University, Boston, MA; [4]Penn State Extension, University Park, PA; [5]Jean Mayer USDA Human Nutrition Research Center on Aging, Tufts University, Boston, MA; [6]Penn State Extension, Lancaster, PA; [7]Friedman School of Nutrition, Tufts University, Medford, MA

Background. There is a need for dissemination of evidence-based programs to reduce CVD risk among midlife and older women. The purpose of this study was to examine factors related to dissemination of StrongWomen – Healthy Hearts nationally through the National Institute of Food and Agriculture cooperative extension network using the RE-AIM framework.*Methods*. Reach, adoption, implementation, and maintenance were assessed using survey methods. Effectiveness was assessed using a pretest-posttest within-participants design with weight change as the primary outcome and fruit and vegetable intake and physical activity level as secondary outcomes. Stepwise regression analyses were used to test for associations between leader and site characteristics and the RE-AIM components. *Results*. Overall reach into the population was 15 per 10,000. Of the 85 trained cooperative extension leaders, 41 (48.2%) adopted the program. At all sites that adopted the program, the mean change in weight was -1.1 (SD 1.6 pounds, $p < 0.001$). The average fidelity score was 4.6 (out of 5) at 4 weeks and 4.7 at both 8 and 12 weeks. Eleven of 41 (26.8%) adopting leaders maintained the program by running a second session within one year of their first session. A number of leader and site characteristics were associated with various RE-AIM components. *Conclusions.* This study provides evidence for the potential impact of the StrongWomen – Healthy Hearts program on CVD risk factors. Based on these data, the program has demonstrated that it can be readily implemented with high fidelity in a variety of settings while remaining effective. Results on leader and site characteristics associated with dissemination elements provide information on how to modify leader training and the program itself to improve public health impact as dissemination continues nationally.

CORRESPONDING AUTHOR: Sara Folta, PhD, Friedman School of Nutrition, Tufts University, Boston, MA, 02111; sara.folta@tufts.edu

Paper Session 23 1:00 PM-1:15 PM

TRANSLATING RESEARCH ON EXERCISE INTERVENTIONS FOR CAREGIVERS: A REVIEW USING THE RE-AIM FRAMEWORK.

S. Nicole Culos-Reed, PhD, Colleen A. Cuthbert, PhD Candidate

University of Calgary, Calgary, AB, Canada

Research on family caregivers (FCs) has demonstrated that the caregiver role can result in negative impacts on health. In comparison to non-caregivers, FCs experience increased rates of cardiovascular disease, depression and anxiety, and participate less in healthy behaviors such as exercise. Several exercise interventions with FCs have been conducted, however, the translation of this research to clinical practice has not occurred. The purpose of this review was to examine the evidence for exercise in FCs using RE-AIM and determine the extent to which clinical translation has been addressed. Methods: We conducted a systematic review using methods outlined by PRISMA. We included studies with exercise as the primary intervention, conducted on family members caring for an adult with any type of illness. We excluded non-English studies, study protocols, and review articles. Our initial search resulted in n=628 titles. After screening, n=25 full text articles were evaluated and n=9 studies met our criteria. To determine whether studies included the RE-AIM dimensions (reach, efficacy/effectiveness, adoption, implementation and maintenance), we used the 21-item coding tool outlined on RE-AIM.org. Each study was coded independently by the first and second authors (CC, NC-R). The results were compiled to determine the extent of reporting of RE-AIM dimensions. Results: The 9 studies were published between 1997 and 2014 and included 6 RCTs, 2 pilot studies, and 1 pre-test/post-test. The most completely reported dimensions were reach and efficacy/effectiveness. None of the studies included all 21 RE-AIM items. The most consistently reported were, inclusion criteria (89% of studies), outcome measures (100%), quality of life (78%), attrition (100%), description of staff delivering intervention (67%), and intervention type/intensity (100%). Only one study assessed outcomes 6 months post intervention, and no studies reported costs. Conclusions: Our findings are consistent with other reviews using RE-AIM to examine the generalizability and clinical translation of behavioral interventions. The lack of reporting of components of external validity is contributing to the gap between research and clinical practice. In the emerging field of FCs interventions, attention to these factors will help to bridge this gap.

CORRESPONDING AUTHOR: Colleen A. Cuthbert, PhD Candidate, University of Calgary, Calgary, AB, T3L 3C7; cacuthbe@ucalgary.ca

Paper Session 23 1:15 PM-1:30 PM

A SYSTEMATIC RE-AIM REVIEW TO ASSESS SUGAR-SWEETENED BEVERAGE INTERVENTIONS AND POLICES FOR YOUTH

Hannah G. Lane, MPH[1], Kathleen Porter, PhD, RD[1], Paul Estabrooks, PhD[2], Jamie Zoellner, PhD, RD[1]

[1]Virginia Tech, Blacksburg, VA; [2]Virginia Tech / Carilion Clinic / Virginia Tech Carilion School of Medicine, Blacksburg, VA

Sugar-sweetened beverage (SSB) consumption has been causally linked to childhood obesity. Interventions and policy changes aimed at reducing SSB consumption among youth have been shown to be effective; however, the external validity of youth-focused SSB interventions has been understudied, and therefore remains unclear. This systematic review examines the extent to which studies reported on indicators outlined by the RE-AIM (reach, effectiveness, adoption, implementation, maintenance) framework, and assesses differences in reporting by three predefined socio-ecological strategy levels: intrapersonal/interpersonal (Level 1), environment/policy (Level 2), and both intrapersonal/interpersonal and environment/policy (Level 3). Using specific inclusion criteria (clear SSB component, measure of SSB consumption, servings, or sales, and having data available before and after intervention), 59 articles reflecting 43 intervention and/or policy studies were identified systematically. Studies were coded using a validated 21-item RE-AIM coding protocol. Reporting differences among the three socio-ecological strategy levels were assessed using one-way ANOVAs. Across all 43 studies, the mean level of reporting varied by dimension (reach=28.4%, efficacy/effectiveness=43.6%, adoption=27.2%, implementation=28.7%, maintenance=17.8%). Level 2 studies (n=13) were significantly less likely than Level 1 (n=19) or Level 3 (n=11) studies to report on reach (p=.001) and effectiveness (p=.001). No significant reporting differences were found for adoption, implementation or maintenance. Current youth-focused SSB studies do not provide enough information to determine best practices or potential public health impact for researchers, public health professionals, and decision makers. To ensure the translation of evidence-based programs and policies targeting SSB reduction among youth into real-world settings, program and policy planners and evaluators should consider all dimensions of the RE-AIM framework. Future directions include effect size analysis and reach-by-effectiveness comparisons by socio-ecological level.

CORRESPONDING AUTHOR: Hannah G. Lane, MPH, Virginia Tech, Blacksburg, VA, 24060; hannah.lane11@gmail.com

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CITATION AND MERITORIOUS PAPER

Paper Session 24 12:45 PM-1:00 PM

ADOPTION OF SHARED DECISION MAKING USING DECISION AIDS AMONG UROLOGISTS

Prajakta Adsul, MBBS, MPH, PhD(abd)[1], Ricardo Wray, PhD[2], Nancy Weaver, PhD[1], Sameer Siddiqui, MD[3]

[1]Saint Louis University - College for Public Health and Social Justice, St. Louis, MO; [2]Saint Louis University, St. Louis, MO; [3]Saint Louis University - School of Medicine, St. Louis, MO

Prostate Cancer (PCa) is the most commonly diagnosed cancer in American men. However, there is evidence of widespread over treatment of PCa. In this context, urologists need to deliver preference sensitive care to make effective clinical decisions with their newly diagnosed PCa patients. Shared decision making (SDM) using decision aids (DA) has shown evidence in influencing outcomes but widespread adoption and implementation of SDM using DAs remains limited and understudied.A mixed methods approach was taken to triangulate data from (1) a systematic review of 14 DAs designed to help newly diagnosed PCa patients make treatment decisions that studied 111 characteristics including implementation and (2) a qualitative study conducted with 12 urologists to assess perceptions, implementation requirements and contextual factors that may influence adoption of SDM using DAs in routine practice. Data were triangulated across methods to highlight the complexities in the implementation of DAs for urologists to engage in SDM and to help design strategies to facilitate their uptake.Based on data triangulation, some of the urologist's preferences matched with the existing DAs while others did not. They practiced several elements of SDM in routine practice but used easily accessible, non-evidence based educational materials to facilitate SDM. Urologists were not aware of DAs and perceived them to be useful when engaging in SDM. The content review of the available DAs was lacking in terms of comprehensive information about treatment options, outcome probabilities and application of health literacy principles which was important to the urologists in the study. Most DAs placed importance on ascertaining patient values and preferences and providing decisional guidance similar to the urologists. Limitations of the DAs were noted such as being too lengthy and their inability to provide individualized risk information relevant to the patient or incorporate treatment outcomes specific to urologists' own practice.Study findings can be helpful to DA researchers/developers to design and develop implementable DAs. For urologists, the study findings provide strategies to facilitate the adoption of DAs to engage in SDM in routine practice.

CORRESPONDING AUTHOR: Prajakta Adsul, MBBS, MPH, PhD(abd), Saint Louis University - College for Public Health and Social Justice, St. Louis, MO, 63104; padsul@slu.edu

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CITATION AND MERITORIOUS PAPER

Paper Session 24 1:00 PM-1:15 PM

NOT SO STRAIGHTFORWARD: THE COMPLEX RELATIONSHIP BETWEEN KNOWLEDGE AND PROSTATE CANCER TREATMENT DECISION-MAKING

Caitlin Biddle, M.A.[1], Willie Underwood, MD, MPH, MSci[2], D. Lynn Homish[3], Heather Orom, PhD[4]

[1]State University of New York at Buffalo, Hamburg, NY; [2]Roswell Park Cancer Institute, Buffalo, NY; [3]University at Buffalo School of Public Health and Health Professions, Buffalo, NY; [4]University at Buffalo, Buffalo, NY

Introduction: Although it is assumed that prostate cancer (PCa) patients who are more informed about their diagnosis and treatment options will have less difficulty making a treatment decision, few studies have actually demonstrated this empirically. To address this gap, we explored the role of disease and treatment side-effect knowledge in decision-making among men with newly diagnosed clinically localized prostate cancer (PCa).Methods: Participants were 1174 PCa patients (82% white, 10% black, 8% Hispanic) who completed measures of their PCa knowledge and their decision-making experiences shortly after their treatment decision. We analyzed bivariate and multivariable associations between patients' PCa knowledge (expanded version of Diebert, 2007 knowledge assessment) and decisional conflict (O'Connor, 1995), satisfaction (adapted Holmes-Rovner, 1996), and an author-created decision-making difficulty scale. Multivariable linear regression models included education, perceived social status, employment status, race/ethnicity, marital status, age, self-reported Gleason score, and recruitment site.Results: In bivariate analyses, patients who had greater PCa knowledge experienced less decisional conflict and were more satisfied with the decision-making process, but reported greater difficult making the treatment decision (ps < 0.001). In multivariable analyses, greater knowledge remained significantly associated with lower decisional conflict (ps < 0.001); including all decisional conflict subscales except uncertainty. Those with more knowledge reported being more informed, greater value clarity, more supported, and perceived making effective decisions ($ps < 0.05$). Greater knowledge remained associated with more decision-making difficulty ($p < .001$), but not with satisfaction.Conclusion: There is a complex relationship between patient knowledge and treatment decision-making. While more knowledgeable patients appear to have made 'better' decisions; they also found the process more difficult, perhaps because of the inherent uncertainty of PCa treatment, information is overwhelming. Only providing information is likely insufficient for improving the treatment decision-making process; patients also need decisional support to navigate this challenging process.

CORRESPONDING AUTHOR: Caitlin Biddle, M.A., State University of New York at Buffalo, Hamburg, NY, 14075; cebiddle@buffalo.edu;

MERITORIOUS PAPER

Paper Session 24 1:15 PM-1:30 PM

CANCER PATIENTS ENGAGING IN INFORMED TREATMENT DECISION-MAKING?

Caitlin Biddle, M.A.[1], Willie Underwood, MD, MPH, MSci[2], D. Lynn Homish[3], Heather Orom, PhD[4]

[1]State University of New York at Buffalo, Hamburg, NY; [2]Roswell Park Cancer Institute, Buffalo, NY; [3]University at Buffalo School of Public Health and Health Professions, Buffalo, NY; [4]University at Buffalo, Buffalo, NY

Introduction: Collaborative treatment decision-making in which patients and physicians weigh cancer control against potential treatment side-effects is standard of care for prostate cancer (PCa). Patients, therefore, should be aware of treatment side-effects. As the most commonly diagnosed cancer in men, PCa provides a case study in which to evaluate success in shifting medicine toward a patient-centered model of care that promotes informed and shared decision-making in patients. The purpose of our study was to examine one element of this transformation–the extent to which PCa patients who had recently made their treatment decision were aware of treatment side-effects. Methods: Participants were 1174 patients (82% white, 10% black, 8% Hispanic) diagnosed with clinically localized PCa recruited from five clinical facilities between 2010 and 2014. They completed a measure of treatment side-effect knowledge shortly after making their treatment decision. We analyzed bivariate and multivariable predictors of knowledge. Multivariable models included education, perceived social status, employment status, race/ethnicity, age, self-reported Gleason score, recruitment site, and treatment choice. Results: Participants (51% chose surgery, 24% chose radiation therapy, 25% chose active surveillance) were less likely to be aware of side-effects of radiation than surgery. Men who chose radiation were the least aware of the side-effects of radiation (*ps* < .05); 39% did not know radiation therapy could cause frequent urination, 45% did not know it could cause rectal pain or discomfort, and 40% did not know it could cause erectile dysfunction. In multivariable analysis of overall side-effect knowledge (hormone, radiation therapy, and surgery side-effects), lower educational attainment, less aggressive disease, lower perceived social status, and older age were associated with lower knowledge (*ps* < .05). Conclusion: Findings indicate that the field of PCa care has yet to achieve truly informed treatment decision-making. Men choosing radiation therapy and those with low socioeconomic status have relatively greater treatment knowledge deficits. Our data are consistent with the argument in the literature that use of treatment decision-making aids has been insufficiently promoted in clinical settings.

CORRESPONDING AUTHOR: Caitlin Biddle, M.A., State University of New York at Buffalo, Hamburg, NY, 14075; cebiddle@buffalo.edu

Paper Session 25 12:45 PM-1:00 PM

THE ROLE OF INTERNALIZED HOMOPHOBIA ON DRUG USE AMONG GAY AND BISEXUAL MEN: MODERATION, MEDIATION, OR DIRECT EFFECTS?

Raymond L. Moody, BA, Christian Grov, PhD, MPH, Jeffrey T. Parsons, PhD

Center for HIV Educational Studies and Training (CHEST), City University of New York, New York, NY

Background: The minority stress process of internalized homophobia has been associated with a range of adverse health outcomes among gay and bisexual men, including depression and anxiety. However, the evidence with regard to the effect of internalized homophobia on substance use is mixed, suggesting the potential role of additional variables. Depression and anxiety symptoms have both been linked to increased substance use problems and may partially account for the inconsistent evidence linking internalized homophobia to substance use. Methods: A national sample of 217 drug using gay and bisexual men (reporting drug use in the previous 90 days), aged 18-67 (M=35.8) completed at-home surveys, including measures of sociodemographic characteristics, the Internalized Homophobia Scale, Center for Epidemiological Studies Depression Scale, sexual anxiety subscale of the Multidimensional Sexuality Questionnaire, and Drug Abuse Screening Test (DAST). Results: Adjusting for sociodemographic characteristics, path analyses indicated significant direct effects for internalized homophobia on depression (B = .305, p < .001), sexual anxiety (B = .313, p < .001), and DAST scores (B =.201, p=.003), as well as significant direct effects for depression on DAST scores (B =.214, p=.002) and sexual anxiety on DAST scores (B =.144, p=.035). Mediation analyses revealed both a direct and indirect effect of internalized homophobia on DAST scores through depression but not anxiety. The association between depression and DAST scores remained significant while controlling for internalized homophobia (B =.165, p=.024). The strength of the association between internalized homophobia and substance use was weaker in the mediation model (B =.151, p=.033) compared to the direct association (B =.201). Moderation analyses revealed no significant interactions although internalized homophobia and depression approached significance (B =.147, p=.077). Conclusions: These findings suggest that internalized homophobia is a significant risk factor for problematic drug use, depression, and sexual anxiety. Further, the association between internalized homophobia and problematic drug use may be partially mediated by depression symptoms.

CORRESPONDING AUTHOR: Raymond L. Moody, BA, Center for HIV Educational Studies and Training (CHEST), City University of New York, New York, NY, 10018; rmoody@chestnyc.org

CITATION AND MERITORIOUS PAPER

Paper Session 25 1:00PM-1:15 PM

SMOKING, INTERNALIZED HETEROSEXISM, AND HIV DISEASE MANAGEMENT AMONG MALE COUPLES

Kristi E. Gamarel, PhD[1], Torsten Neilands, PhD[2], Samantha E. Dilworth, MS[2], Jonelle Taylor, BA[2], Mallory O. Johnson, PhD[2]

[1]Alpert Medical School of Brown University, Jamaica Plain, MA; [2]University of California, San Francisco, San Francisco, CA

Background: High rates of smoking have been observed among HIV-positive individuals. Smoking has been linked to HIV-related medical complications, non-AIDS defining cancers, and negatively impacts on immune function and virologic control. Although internalized heterosexism has been related to smoking behaviors, little is known about associations between partners' reports of smoking dependence, internalized heterosexism, and HIV medication management in male couples with HIV. Methods: A sample of 266 male couples completed assessments for a cohort study examining relationship factors and HIV treatment. A computer-based survey assessed self-reported smoking behaviors, alcohol use, internalized heterosexism, and antiretroviral therapy (ART) adherence. HIV-positive men also provided a blood sample to assess viral load. Models examining the association between internalized heterosexism, smoking, and HIV disease management were conceptualized using the Actor-Partner Interdependence Model. Results: Approximately 30% of the sample reported smoking dependence. After adjusting for demographic characteristics, men in a primary relationship with a partner who reported smoking dependence had more than five-fold greater odds of reporting smoking dependence (AOR = 5.56, 95% CI = 2.65, 11.69). Higher levels of internalized heterosexism were associated with greater odds of reporting smoking dependence. Among HIV-positive men on ART (n = 371), having a partner who reported smoking dependence was associated with almost a three-fold greater odds of having a detectable viral load (AOR = 2.97, 95%CI = 1.18, 3.30). Conclusions: Our findings add new support to evidence on romantic partners influencing each other's health behaviors, and demonstrate an association between smoking and HIV disease management within male couples. Future research is warranted to understand the interpersonal and social contexts of smoking to develop interventions that meet the unique needs of male couples.

CORRESPONDING AUTHOR: Kristi E. Gamarel, PhD, Alpert Medical School of Brown University, Jamaica Plain, MA, 02130; kristi_gamarel@brown.edu

Paper Session 25 1:15 PM-1:30 PM

SMOKING CESSATION BY SEXUAL ORIENTATION: THE ROLE OF HEALTHCARE, MENTAL DISTRESS AND SUBSTANCE USE

Grant W. Farmer, PhD, MPH, MA[1], Isaiah Zoschke, MPH[2], Kathleen K. Bucholz, PhD, MPH[1], Graham A. Colditz, MD, DrPH[1], Thomas E. Burroughs, PhD[3], Deborah Bowen, PhD[4]

[1]Washington University in St. Louis, School of Medicine, St. Louis, MO; [2]Saint Louis University College for Public Health & Social Justice, St. Louis, MO; [3]Saint Louis University, St. Louis, MO; [4]University of Washington, Seattle, WA

Purpose: A growing body of evidence indicates lesbian, gay and bisexual (LGB) persons smoke at significantly higher rates than their heterosexual counterparts. However, little is known about the likelihood of quitting smoking among LGB persons relative to heterosexuals, or if specific factors (e.g., accessing healthcare, stress, substance use) predict successful quitting and maintenance of smoking cessation similarly for LGB and heterosexual persons. Methods: Data were from the 2001-12 National Health and Nutrition Examination Surveys, and included 18,429 participants; 17,007 heterosexuals, 289 gays/lesbians and 402 bisexuals. Logistic regression was used to evaluate whether the odds of quitting smoking significantly differed by sexual orientation, and if substance use (past year heavy drinking or lifetime illicit drug use), mental distress (6 or more poor mental health days per month), or having a regular place for healthcare predicted the odds of quitting among ever smokers. Linear regression was used to determine if cessation duration differed by sexual orientation, and to evaluate the influence of substance use, mental distress, and having a regular place for healthcare on cessation length. All models were adjusted for age, race/ethnicity and education. Results: Substance use, mental distress and having a regular place for healthcare were significant (p < 0.01) predictors of quitting smoking for the entire sample. Gay men were 55% less likely to quit (p=0.01) than heterosexual men; this finding remained virtually unchanged (aOR=0.54, p < .01) after accounting for all predictor variables. Substance use and mental distress predicted significantly (p < 0.01) shorter cessation duration for men. Among women, only substance use was significantly (p=0.013) associated with cessation length. On average, cessation duration for bisexual women was half that of heterosexual women (mean difference = 3.7 years, p=0.012). This finding persisted after adjustment for all predictor variables. Conclusions: Significant variation in smoking cessation exists by sexual orientation. Compared to their heterosexual counterparts, gay men are substantially less likely to quit smoking and bisexual women are substantially less likely to remain quit even after adjustment for important predictors of cessation.

CORRESPONDING AUTHOR: Grant W. Farmer, PhD, MPH, MA, Washington University in St. Louis, School of Medicine, St. Louis, MO, 63110; farmeg@wustl.edu

Friday
April 24, 2015
8:30 AM-9:45 AM

Symposium 38 8:30 AM-9:45 AM

BINGE EATING IN VETERANS

Robin M. Masheb, Ph.D.[1], Niloofar Afari, PhD[2], Gina Evans-Hudnall, PhD[3], David E. Goodrich, EdD[4]

[1]VA CT Healthcare System, North Haven, CT; [2]VA Center of Excellence for Stress and Mental Health and Department of Psychiatry, University of California, San Diego, La Jolla, CA; [3]Michael E. Debakey VA Medical Center, Humble, TX; [4]VA Ann Arbor Healthcare System, University of Michigan Department of Psychiatry, Ann Arbor, MI

While two-thirds of Americans are overweight/obese, the prevalence is even higher among Veterans where nearly 77% of those served by the Veterans Health Administration (VHA) are classified as such. Binge Eating Disorder (BED), a condition associated with obesity, affects approximately 3% of the US population and occurs more often than all other eating disorders combined. To date little research on BED among Veterans exists, but several new studies on binge eating behavior have raised concern that individuals who binge eat, regardless of whether or not they meet diagnostic criteria for BED, may be an especially vulnerable subgroup of the overweight population. This is best exemplified by a national study of over 45,000 Veterans in which those engaging in binge eating behavior, 78% of the sample, were significantly more likely, than those who did not binge, to report a broad range of comorbid mental health and medical conditions. Studies of civilian populations show that BED confers a greater risk for disease above the risk conferred by obesity alone. Also surprising is that while a greater proportion of women than men suffer from BED, a greater proportion of male than female Veterans engage in binge eating behavior. The combination of high rates of binge eating, and higher rates of overweight/obesity among Veterans compared to civilians, has led to a greater awareness that this problem should be addressed in the Veteran population. Presenter 1 will describe, and present preliminary data for, an on-going VA Office of Research and Development-funded randomized controlled trial to address binge eating with Acceptance and Commitment Therapy (ACT) in a Veteran sample. Presenter 2 will describe a VA-funded career development award that aims to improve weight management in the Veterans Health Administration (VHA) by identifying and addressing mental health and psychological factors, including binge eating, as they relate to poor weight loss outcome. Finally, Presenter 3 will present data on binge eating as a negative prognostic indicator for weight loss among Veterans receiving behavioral weight loss treatment in the VHA. Operational and policy implications for developing effective strategies to address binge eating in the context of behavioral weight loss programs for Veterans will be discussed.

Symposium 38A

HIGH FREQUENCY BINGE EATING PREDICTS WEIGHT GAIN IN VETERANS RECEIVING BEHAVIORAL WEIGHT LOSS TREATMENTS

Robin M. Masheb, Ph.D.

Two-thirds of Americans are overweight/obese, but the prevalence is higher among certain high-risk patient populations such as Veterans where nearly 77% of those served by the Veterans Health Administration (VHA) are classified as overweight/obese. Binge Eating Disorder (BED) is a clinical condition closely associated with obesity. Included in the revised Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), BED is strongly associated with high rates of psychiatric and medical comorbidity, confers a greater risk for obesity-related illnesses beyond risks for obesity alone, and affects approximately 30% of females seeking weight loss treatment. New research suggests that individuals who binge eat, regardless of whether or not they meet diagnostic criteria for BED, may be an especially vulnerable subgroup of the overweight population. This is best exemplified by a national study of over 45,000 Veterans in which those engaging in binge eating behavior, 78% of the sample, were significantly more likely to report a broad range of comorbid mental health and medical conditions, than those who did not. Given new evidence suggesting potentially high rates of binge eating among Veterans, we sought to investigate rates among Veterans obtaining weight loss treatment, and to determine whether binge eating was a negative predictor for weight loss. This study was a secondary analysis of data from a randomized effectiveness trial of the ASPIRE small changes approach to weight loss. Of the 392 overweight/obese Veterans enrolled, the majority (77.6%) reported at least one binge eating episode per week, and 6.1% reported high frequency binge eating (5 or more per week). Veterans reporting any binge eating lost half as much weight (1.4% vs. 2.7% of body weight), and decreased waist circumference by half (2.0 cm vs. 4.2 cm), compared to those reporting no binge eating. The high frequency binge eating group gained 1.4% of body weight and increased waist circumference by 0.3 cm. Overall, high rates of binge eating were observed in this sample, and binge eating was a negative predictor for weight loss outcome. These findings have operational and policy implications for developing effective strategies to address binge eating in the context of behavioral weight loss programs for Veterans.

Symposium 38B

BRIEF ACT FOR BINGE EATING AS AN ADJUNCT TO THE MOVE! PROGRAM: THE B-ACT TRIAL FOR VETERANS

Niloofar Afari, PhD

Nearly 75% of veterans are overweight or obese and those who binge eat show poorer response to weight loss interventions. Research on reducing the impact of binge or emotional eating in veterans is lacking. Acceptance and Commitment Therapy (ACT) is focused on increasing psychological flexibility and has improved weight, quality of life, and psychological functioning in studies of overweight and obese individuals with or without binge eating. The B-ACT study at the VA San Diego Healthcare System is a randomized controlled trial of an ACT group intervention for binge and emotional eating in conjunction with the VA's standard behavioral weight loss intervention (MOVE!). Participants who have completed the 8-week MOVE! Program are recruited and randomized to receive four 2-hour weekly ACT or active control groups. Key outcomes include validated measures of binge eating, other emotional eating, obesity-related quality of life, psychological flexibility, and body mass index (BMI). A total of 104 patients have been screened for the study and 58 have been randomized. At screening, male (n = 75) and female (n = 29) patients had average Binge Eating Scale (BES) scores of 18.7 (SD= 9.1) and 21.5 (SD= 10.4), respectively. The randomized patients had an average BMI of 38.9 (SD = 7.6) kg/m^2 at baseline which was after completion of at least 6 of 8 weekly MOVE! sessions and 55% had BES scores suggestive of Binge Eating Disorder (BED). Those with suggested BED had higher external and emotional eating, less overall and weight-related acceptance, and lower obesity-related quality of life relative to patients below the BED cutoff score (all p's < 0.01). Correlations of BES and BMI at baseline were not significant ($r = -0.053$, $p > 0.05$) but the correlation with the measure of psychological flexibility (AAQ) was significant ($r = 0.49$, $p < 0.001$), with higher BES scores related to greater psychological inflexibility. These preliminary findings suggest that binge eating is a substantial problem for veterans attending a behavioral weight loss program and is related to poorer quality of life and psychological inflexibility. A randomized controlled trial of a brief ACT intervention for binge eating that is designed to increase psychological flexibility may be useful in improving binge eating and weight loss outcomes for veterans.

Symposium 38C

IMPACT OF BE ON MENTAL ILLNESS, SELF-EFFICACY AND QUALITY OF LIFE AMONG VETERANS WITH BINGE EATING

Gina Evans-Hudnall, PhD

Nearly 78% of Veterans are overweight or obese and many experience associated poor self-efficacy and quality of life. Binge eating (BE) is associated with obesity. Veterans with BE often have co-occurring depression, anxiety and PTSD. Obese Veterans with co-occurring mental illness have poor weight loss outcomes. The VA developed an evidenced based weight management program (MOVE!) that addresses poor health behavior habits but does not provide treatment for BE or co-occurring mental illness barriers to weight loss. Overcoming psychological barriers can lead to weight loss and subsequent improvements in self-efficacy and quality of life. Objective: To describe how BE influences mental and physical health, self- efficacy, and quality of life using baseline data from an adjunctive mental health treatment pilot.Methods: Veterans were recruited during MOVE! for a pilot mental health treatment effectiveness trial. At baseline, participants completed the MOVE 11 and validated measures of self-efficacy, quality of life, mental health symptom severity. The MOVE 11 is an assessment of medical, psychological, and behavioral contributors to obesity and is used examine BE behaviors in Veterans. Correlational analysis was used to assess the relationships between mental and behavioral variables with BE at baseline.Results: Thirty-two participants met the criteria for BE. BE was significantly associated with high baseline scores for PTSD and anxiety (p.=042 and p=.039 respectively). BE was also significantly associated with high BMI scores (p=.021) and with low exercise self-efficacy and eating self-efficacy (p.=037 and p=.021 respectively) scores.Conclusions: BE among Veterans is associated with mental health symptom severity, BMI and self-efficacy for healthy eating and exercise. Research is needed to determine whether BE and mental health symptoms predicts poor weight loss outcome in MOVE!. Additional treatment may be needed to improve of MOVE! outcomes in Veterans with BE.

CORRESPONDING AUTHORS: Robin M. Masheb, Ph.D., VA CT Healthcare System, North Haven, CT, 06473; robin.masheb@yale.edu; Niloofar Afari, PhD, VA Center of Excellence for Stress and Mental Health and Department of Psychiatry, University of California, San Diego, La Jolla, CA, 92093; nafari@ucsd.edu; Gina Evans-Hudnall, PhD, Michael E. Debakey VA Medical Center, Humble, TX, 77346; ginae@bcm.edu

Symposium 39 1:45 PM-3:00 PM

PEER SUPPORT DESIGNED FOR DIABETES MANAGEMENT ALSO IMPROVES PSYCHOLOGICAL DISTRESS AND EMOTIONAL WELL BEING

Edwin Fisher, PhD[1], Michele Heisler, MD, MPA[2], Brian Oldenburg, PhD[3], Sarah Kowitt, MPH[4], Jeffrey S. Gonzalez, PhD[5]

[1]UNC Chapel Hill, Chapel Hill, NC; [2]University of Michigan, Ann Arbor, MI; [3]The University of Melbourne, Melbourne, Australia; [4]UNC Chapel Hill, Carrboro, NC; [5]Albert Einstein College of Medicine, Bronx, NY

Relationships among chronic disease, depression and other forms of psychological distress as well as the global burden of mental health problems, per se, make clear the importance of more broadly effective approaches to psychological distress. This symposium reports promising findings from peer support interventions that were designed to improve diabetes management but that were found also to reduce psychological distress and improve well being. All three papers focus on diabetes, of special interest because of the multiple complex links between it and depression as well as other psychological problems. From the US, Dr. Heisler will describe varied modalities of peer support – peer coach/mentor models, reciprocal peer support models – and their impacts on both physical and psychological outcomes among different populations. From Australia, Dr. Oldenburg will describe automated telephonic peer support for adults with diabetes in remote, rural areas and its provision of social support that is both valued by recipients as well as effective in improving standardized measures of mental health. From the US and the United Kingdom, Ms. Kowitt will describe a three-site qualitative project investigating how emotional support emerges in peer support and, especially, how it evolves out of more informational support for the tasks of diabetes management. Together, the findings suggest benefits of peer support not only in management of specific diseases but also in broader emotional benefits. These broader, psychological benefits may confer on peer support for varied specific problems substantial value in also addressing the global burden of mental health problems. Discussion by Dr. Jeffrey Gonzalez will examine these findings within the broader domains of relationships among chronic disease and psychological distress including depression.

Symposium 39A

PEER SUPPORT AND DEPRESSION: KEY LESSONS FROM SEVERAL DIFFERENT PEER SUPPORT MODELS AND TARGET POPULATIONS

Michele Heisler, MD, MPA

Our research team has now completed randomized controlled trials of different peer support models–both peer coach/mentor models and reciprocal peer support models in which pairs of peers both receive and provide support to each other–to improve physical and psychological outcomes. Target populations have included low-income African American and Latino adults with poorly controlled diabetes, older adults at a community hospital with at least one hospitalization for Heart Failure, Veterans with poorly controlled diabetes, and Veterans with continued depressive symptoms in spite of receiving treatment for depression. In this talk we will discuss the differing outcomes depending on the model of peer support and the target population. We will discuss key moderators and mediators of intervention effects in each of the interventions, and conclude with key lessons for effective interventions mobilizing peer support to improve physical and psychological outcomes.

Symposium 39B

MENTAL HEALTH BENEFITS AND SOCIAL SUPPORT OF AN AUTOMATED CONVERSATIONAL PROGRAM TO IMPROVE DIABETES CONTROL

Brian Oldenburg, PhD

We have evaluated the social support and mental health benefits as well as physical health outcomes and cost effectiveness of an automated interactive telephone program. The Australian Diabetes Telephone Linked Care (AUS TLC DM) incorporated key features of peer support for diabetes self-management and improved diabetes control. In the initial randomized trial, participants were Australian adults diagnosed with type 2 diabetes at least 3 months prior to enrollment and with suboptimal glycaemic control (Haemoglobin A1c (HbA1c) ≥7.5%). Participants were randomized to a usual care arm or to the intervention arm. For 6 months, participants in the latter group uploaded their past week's blood glucose levels to the TLC database via a mobile phone link prior to calling the system weekly to "converse" on one of the following topics: blood glucose monitoring, nutrition, physical activity and medication taking. Primary outcomes were HbA1c and SF36 health-related quality of life at 6 and 12 month follow-up. Secondary outcomes included key self-care behaviours and measures of depression, quality of life (QOL) and social support. The program was very engaging with an average call duration of 11 minutes and more than 15 calls/person. Participants completed on average 76% (SD=22) of their expected calls. Satisfaction with the system was high (almost 90% being satisfied with the program). Over the 6 month intervention period, glycaemic control improved significantly (people in the program showed an average HbA1c decrease from 8.7% to 7.9%, compared with 8.9% to 8.7% in the usual care arm, a significant group difference of p = 0.002). Most interestingly, the program participation also significantly improved mental health functioning on SF36 (p = 0.007). Participants' testimonials also indicate a very positive program experience, including significant "social support". The presentation will also discuss the 12 month program outcomes and how a more advanced digital platform is being currently developed to address mental health and quality of life outcomes. In summary, this study and a subsequent more 'real world' replication study have demonstrated high acceptability, feasibility and effective outcomes in terms of mental health as well as diabetes control.

Symposium 39C

EMERGENCE OF EMOTIONAL SUPPORT IN PEER SUPPORT PROGRAMS DESIGNED FOR DIABETES MANAGEMENT: A CROSS-CULTURAL STUDY

Sarah Kowitt, MPH

Emotional support is commonly reported in peer and social support interventions to assist diabetes management. However, individuals often initially deny wanting to obtain emotional support and modes of emotional support vary across cultures. This study explored how emotional support emerged in peer support designed to improve diabetes management. Semi-structured interviews (n=22) were conducted with peer supporters representing 3 distinct populations: low-income, Latinos in Chicago, middle-class Caucasians in the United Kingdom, and low-income African American women in North Carolina. Emotional support was defined as expressions of empathy, love, trust, and caring. Coding of field notes used deductive and inductive codes and consensus among 3 coders. Consistencies across setting and population were striking. Several features characterized this emergence of emotional from informational support over time. Initially, peer supporters provided information for diabetes management; after continued interaction, they came to provide substantial emotional support. Emotional support was frequently conveyed not explicitly (e.g., by discussing stressors) but implicitly, in the manner in which information was shared. Implicit modes of support include non-verbal actions that convey emotional acceptance, e.g., a walk together, but do not involve discussion of problems. This pattern of a) overlap of informational and emotional support, b) gradual emergence of emotional support and c) emphasis on implicit support was consistent across all cultures. Cross-site differences did appear regarding strategies for addressing diabetes management barriers (e.g., type of stressors) and the role of peer supporters (e.g., in Chicago, more directive support was reported). These findings suggest that peer supporters gradually provide emotional support through similar strategies across cultures and that one way in which peer support designed for diabetes management may achieve emotional benefits is through this interweaving of emotional with informational support.

CORRESPONDING AUTHORS: Michele Heisler, MD, MPA, University of Michigan, Ann Arbor, MI, 48113; mheisler@umich.edu; Brian Oldenburg, PhD, The University of Melbourne, Melbourne, 3010; brian.oldenburg@unimelb.edu.au; Sarah Kowitt, MPH, UNC Chapel Hill, Carrboro, NC, 27510; kowitt@email.unc.edu

Symposium 40 1:45 PM-3:00 PM

CULTURAL ADAPTATIONS OF BEHAVIORAL INTERVENTIONS FOR LIFESTYLE CHANGE FOR MINORITY WOMEN

Virginia Gil-Rivas, PhD[1], Phoudavone Phimphasone, MA[2], Alyssa Vela, MA[2], Tamara Scott, MPH[2], Heather Kitzman-Ulrich, PhD[3], Leilani Dodgen, MPH[3], John Wiebe, Ph.D.[4], Fary Cachelin, Brooke Palmer, B.S., M.A.[1]

[1]University of North Carolina, Charlotte, Charlotte, NC; [2]Health Psychology Ph. D. Program, Charlotte, NC; [3]University of North Texas Health Science Center, Fort Worth, TX; [4]The University of Texas at El Paso, El Paso, TX

Latinas and African American (AA) women have a higher prevalence of overweight and obesity compared to White women (CDC, 2013). Relatively few weight management interventions have been shown to be successful with these populations. These findings may be partially explained by the lack of attention to cultural, economic, contextual, social, and psychological factors that are relevant to health behavior change and maintenance. Further, in general these interventions ignore co-occurring problems such as binge eating disorder (BED) which are common among OW/OB women and that interfere with behavior change (Hudson et al., 2007). Thus, there is a need for effective behavioral interventions that are grounded on the lived experiences of minority women and that address co-occurring conditions. Importantly, these interventions should be amenable to dissemination in community and primary care settings as minority women typically approach primary care providers for health with weight and behavioral concerns. This symposium will present research findings from studies that aimed to culturally adapt and evaluate the efficacy of behavioral interventions for lifestyle change (health eating and physical activity) and weigh loss for overweight and obese Latina and AA women. These presentations included in this symposium illustrate the steps necessary to determine the need for cultural adaptation, the nature of those adaptations, and preliminary testing of the efficacy of a culturally adapted intervention. Culturally adapted evidence-based low intensity interventions that can be easily disseminated in primary care and community settings have the potential of reaching groups at high risk for obesity and chronic disease and ultimately improve clinical outcomes among "hard to reach" populations.

Symposium 40A

A CULTURAL ADAPTATION OF A LIFESTYLE INTERVENTION FOR LATINAS

Phoudavone Phimphasone, MA

Obesity is considered the second leading cause of preventable deaths in the U.S. (Danaei et al., 2009) and disproportionately affects women and racial minority populations (Ogden et al., 2014). Latinas are at a greater risk of developing obesity-related complications, such as type 2 diabetes and CVD, compared to White women (Ogden et al., 2014). There are a number of behavioral weight loss interventions for obese and overweight Latinas, however, few interventions have been found to be effective for this population. Addressing social and cultural factors that may interfere with lifestyle changes are likely to improve the acceptance and efficacy of these interventions.We conducted a qualitative study that explored the need for culturally appropriate modifications to *The LEARN Program for Weight Management, 10th Edition* (Brownell, 2004). The study explored the following questions: 1) How feasible and relevant will it be to culturally adapt the LEARN manual?; 2) What cultural components should be considered and included in the adapted LEARN manual?; and 3) What unique beliefs and contextual factors may inhibit or promote Latinas' ability to engage in health-promoting behaviors? Focus groups were conducted with Latinas recruited from the community via flyers. Preliminary findings from data collected during focus groups with a community sample of overweight and obese ($n = 7$; $M_{\mathrm{BMI}} = 35.7$, $SD = 8.4$) Latina women ($M_{\mathrm{age}} = 27.6$, $SD = 10.5$) suggest the need for both surface and deep level changes to the LEARN manual. Surface level changes included shortening each lesson, identifying key points of each lesson, and including a culturally relevant healthy eating plate. Deep level modifications include addressing the influence of cultural norms and values on eating (e.g., significant of food portions during social gatherings) and health promoting behaviors (e.g., exercise). Overall, Latinas had positive views of the LEARN manual and indicated that with some modifications it would be relevant and acceptable for use with Latina women. Learning Objectives: Understanding of cultural and social factors related to lifestyle changes among Latinas Learning the process of culturally adapating an evidence-based lifestyle intervention for weight loss<

Symposium 40B

DEVELOPING EFFECTIVE CULTURALLY RELEVANT WEIGHT MANAGEMENT PROGRAMS FOR AFRICAN AMERICAN WOMEN: BETTER ME WITHIN PROGRAM

Dodgen, L., Kitzman-Ulrich, H., Robb, J., King, A., King, G., Slater,D., & Slater J.

African American women (AA women) demonstrate higher obesity rates, and exhibit less long-term weight loss compared to Caucasian women. A recent literature review highlights the lack of culturally tailored programs for AA women to consistently produce effective weight loss and weight maintenance. AA women rate the importance of living a religious life more highly than other populations. However, few studies have evaluated the role of faith in weight management for AA women. Thus, this study aimed to adapt an evidence-based weight management program, The Diabetes Prevention Program (DPP), to be culturally tailored around faith for AA women using community-based participatory methods (CBPR). In Phase 1 focus groups were used to gather the perspectives of AA women church members and pastors (N=64, 89% female; 95% African American; mean age 46 [SD=13.0] years). The role of faith was discussed frequently as essential to behavior change from intervention location to pastor involvement and integrating faith concepts into weight management interventions. These findings, along with CBPR methods, guided the faith adaptions of the DPP that included pastor delivered weekly mini-sermons, a memory verse, prayer, faith application activity, and scriptural references. Cohort 1 of the Faith-Enhanced DPP (The Better Me Within Program) was conducted with 62 African American female participants (45.8 + 12.4 years; mean BMI = 37.5 + 8.3, mean Hemoglobin A1C = 6.23, fasting glucose = 93.0 +13.3) at three churches. Attendance rates ranged from 49% to 78% across the three sites, with low attendance rates found in churches with low fidelity based on process evaluation data. Satisfaction surveys indicated that participants found the information on weight management, physical activity, and nutrition helpful scoring 4.84, 4.6 and 4.84 respectively, on a 5-point scale. Overall, these findings indicate the importance of including faith constructs to develop culturally relevant programs. The Better Me Within Program has demonstrated initial feasibility and provides an opportunity to address obesity related health disparities in AA women in a large randomized controlled trial.

Symposium 40C

AN EXAMINATION OF EATING PATTERNS AMONG LATINAS WITH BINGE EATING DISORDER

Alyssa Vela, MA

Latinas are under-diagnosed and under-treated for BED (Franko et al., 2007) and to date, there are no published studies examining individuals' self-reported symptoms and experiences. This study aimed to gain a better understanding of binge eating disorder (BED) in Latina women by creating a rich description of their symptoms and related experiences, while also considering cultural and acculturation influences. A total of 85 Latinas were recruited from the community and organizations in Los Angeles, CA and Charlotte, NC. Demographic information, BMI, and treatment history were obtained. The Eating Disorder Examination Questionnaire (EDE-Q; Aardoom et al., 2012) was administered to determine the presence of clinically significant binge eating symptoms. Data from the EDE-Q regarding the type and amount of food eaten, the length of the binge eating episode, and the experience of loss of control were examined and coded. Several differences were identified between Spanish-speaking and English-speaking Latinas. Spanish speakers had a higher BMI, reported more episodes of binge eating in the past 30 days, had greater concern about body shape, and lower levels of depressive symptoms compared to English speakers. Interestingly, Spanish speakers reported that their overeating was related to cultural beliefs about food and its meaning in the context of interactions with their family. Spanish speaking Latinas also reported lower levels of perceived control over their binge eating episodes compared to English speakers. In contrast, English speakers were more likely to attribute their binge eating episodes to negative emotional states, a pattern that is similar to those described in studies with White women. The implications of the study's findings for the adaptation and development of culturally relevant interventions for Latina women with BE will be discussed.

Symposium 40D

CULTURAL ADAPTATION OF AN EVIDENCE BASED INTERVENTION FOR BINGE EATING FOR USE WITH AFRICAN AMERICAN WOMEN

Tamara Scott, MPH

The experience of binge eating (BE) among minorities has only recently begun to be explored in the literature. While current estimates suggest similar rates of BE and related disorders among African American (AA) women as compared to white women, research suggests that the relationship between eating, weight and body image, might be unique for AA women (Pike et al., 2001). AA women are more likely report recurrent BE and a greater number of BE episodes per week (Pike et al., 2001; Striegel-Moore et al., 2000). Unfortunately, few interventions have targeted BE behaviors in this group and even fewer considered eating within a sociocultural context. This presentation will describe the process for culturally adapting an empirically tested, low cost, guided self-help cognitive behavioral intervention for BE. Focus groups were conducted with 15 AA women who provided feedback on the intervention and how to improve the treatment to be responsive to their needs and experiences. Qualitative analyses were conducted to identify themes that guided the adaptation of the intervention. This study adds to the discourse of modifying evidenced based treatment in the context of a sociocultural framework.

CORRESPONDING AUTHORS: Phoudavone Phimphasone, MA, Health Psychology Ph. D. Program, Charlotte, NC, 28223; pphimpha@uncc.edu; Alyssa Vela, MA, Health Psychology Ph. D. Program, Charlotte, NC, 28223; avela@uncc.edu; Tamara Scott, MPH, Health Psychology Ph. D. Program, Charlotte, NC, 28223; tscott35@uncc.edu; Leilani Dodgen, MPH, University of North Texas Health Science Center, Fort Worth, TX, 76107; leilani.dodgen@unthsc.edu

Symposium 41 1:45 PM-3:00 PM

STRATEGIES FOR RETAINING TRADITIONALLY HARD TO REACH PARTICIPANTS IN WEIGHT MANAGEMENT TRIALS

Joanna Buscemi, Ph.D.[1], Jessica R. Wearing, MPH (in progress)[2], Rebecca Hunter, M.A.[3], Monica L. Baskin, PhD[4], Marian Fitzgibbon, PhD[1]

[1]University of Illinois at Chicago, Chicago, IL; [2]University of Kansas School of Medicine, KC, MO; [3]VA Palo Alto Health Care System, San Jose, CA; [4]University of Alabama at Birmingham, Birmingham, AL

Traditionally hard to reach populations, specifically minority and low-income individuals, are at increased risk for obesity and obesity-related co-morbidities, leading to significant health disparities. Concurrently, these high risk populations also experience substantial barriers to longer-term engagement and follow-up participation in weight management trials. In order to enhance the external validity of findings from trials that focus on high-risk and understudied populations, it is critical that we retain as many participants as possible in order to accurately assess initial outcomes and maintenance of behavior change. The purpose of this symposium is to describe successful retention strategies used across multiple trials targeting minority and/or low-income populations. The populations discussed in this symposium span from preschool children to adults, from both urban and rural environments. The aims of the studies cover both weight gain prevention and weight loss, and settings vary widely (e.g., school, hospital, community settings). First, Dr. Joanna Buscemi will describe successful retention strategies used across three obesity prevention trials targeting low-income and minority preschool children and their families. Next, Ms. Jessica Wearing will present retention and utilization strategies used in a recently completed randomized pilot trial of a mobile technology for obesity prevention among low-income and racial/ethnic minority girls, ages 9-14. Ms. Rebecca Hunter will describe retention strategies for a randomized controlled trial investigating the effects of a weight loss maintenance intervention delivered in groups by phone and mail to breast cancer survivors living in rural communities across three Midwestern states. Dr. Monica Baskin will describe a community-based participatory research approach to retaining African-American women in a weight loss trial in the rural Deep South. Finally, Dr. Marian Fitzgibbon will discuss the importance of tailoring strategies for specific subgroups and the critical need to allocate adequate resources for retention purposes in order to be able to have the ability to interpret and disseminate findings that are truly representative of the study populations.

Symposium 41A

RETAINING LOW-INCOME PARTICIPANTS: IMPROVING STRATEGIES ACROSS THREE CHILDHOOS OBESITY STUDIES

Joanna Buscemi, Ph.D.

Retaining low-income and/or minority participants in trials presents a unique set of challenges. Economic disadvantage, distrust of research trials, and communication barriers have been cited as some of the main obstacles to recruiting and retaining low-income and minority participants in health-related research. We propose to describe successful retention strategies used across three longitudinal childhood obesity prevention trials. Hip Hop to Health (HH) was a randomized controlled trial testing the efficacy of a preschool-based obesity prevention intervention among predominately African-American children. Retention was 88.5% at 14 weeks post-intervention, 70.6% at 1-year, and 73% at 2-year follow up. Primary retention strategies for HH included: 1) collaborating with known community entities to increase program credibility; 2) holding all follow-up sessions at the same location to improve relationship building and convenience; 3) strategically developing an interview protocol to include detailed contact information; and 4) developing a detailed participant tracking protocol. During our follow up trial, Hip-Hop to Health Jr. Obesity Prevention Effectiveness Trial (HH Effectiveness), 87% of participants completed a full assessment at 1-year. In addition to the retention strategies employed during HH, we: 1) increased project identity integration with preschool curriculum; 2) emphasized consistency of staff and participant relationship building; and 3) hired staff with previous community service experience. In a third study, we assessed dietary quality among WIC recipients across three time points. Retention rates were 91% retention at 12 months and 89% at 18-months. We attribute the high retention rates in the WIC study to the development of a home visit protocol for participants who were unable to travel to WIC sites for follow up. We will conclude with a summary of key strategies and suggestions for future research.

Symposium 41B

STRATEGIES TO ENHANCE RETENTION AND DEVICE UTILIZATION IN A MOBILE TECHNOLOGY OBESITY PREVENTION TRIAL

Jessica R. Wearing, MPH (in progress)

The majority of obesity prevention interventions involve intensive in-person approaches that are limited in their cost, sustainability, and reach. Mobile technologies (e.g., MT; smartphones, tablets) have potential for wide-scale disseminability but, to succeed, they must be delivered at the appropriate dose. Previous trials of MT in youth have experienced sub-optimal usage rates with substantial drop-off over time. The current paper describes the retention and utilization rates of a recently completed randomized pilot trial of MT for obesity prevention. Fifty-one low-income, racial/ethnic minority girls (9−14 years) were randomized to a MT (n=26) or control (n=25) condition. Both conditions included three, 4-week modules that targeted fruits/vegetables, sugar-sweetened beverages, and screen time. The mobile intervention prompted real-time goal setting and self-monitoring and provided tips, feedback, and positive reinforcement related to the target behaviors 5 times per day for 12 weeks (450 prompts total). Controls received the same content in a written manual but with no prompting. Retention was 98.0%, 88.2%, and 86.3% at Weeks 4, 8, and 12, respectively. Notably, girls in the MT group liked the program (average rating of enjoyment=4.5 out of 5.0), used the program on 63% of days, including continued use on 48% of days at Week 12, and responded to an average of 2.1 prompts/day. A positive association was found between MT use and behavior change. Successful retention is attributed to partnering with a community organization, where all follow-up sessions were conducted, and flexibility in scheduling. Successful MT utilization is attributed to: 1) extensive involvement of girls throughout the MT development and pilot testing phases and 2) a novel reward system, designed by girls, where they earned songs of their choosing for responding to 4 out of 5 daily prompts. An in-depth description of each strategy, along with suggestions for translating the strategies into development of effective MT interventions that appeal to youth and achieve high rates of use will be provided.

Symposium 41C

STRATEGIES TO PROMOTE RETENTION IN A WEIGHT CONTROL INTERVENTION AMONG RURAL BREAST CANCER SURVIVORS

Rebecca Hunter, M.A.

Rural residents experience many of the same health disparities as other minority groups including poorer lifestyle behaviors and higher obesity rates. Rural cancer survivors have less access to survivorship care, poorer mental health and quality of life, and limited access to lifestyle intervention. Geographic isolation and travel requirements pose additional barriers to successfully reaching and retaining this group in effective lifestyle interventions. Here we describe the retention strategies for a randomized controlled trial investigating the effects of a weight loss maintenance intervention delivered in groups by phone and mail to breast cancer survivors living in rural communities across three Midwestern states. All data collection visits were conducted in-person at local cancer centers or hospitals. Retention was 93% at 6 months. Among those who lost 5% of baseline weight and entered the weight loss maintenance phase of the intervention, retention was 90% at 12 months and 84% at 18 months. Strategies to promote retention included: 1) developing close partnerships with local cancer centers and providers such that participants associated their study participation with their on-going cancer care, 2) closely following a standardized retention protocol for contacting participants after missed sessions or lapses in self-monitoring, 3) using multiple modalities including text messaging to contact participants, 4) developing and maintaining strong rapport between study counselors, staff, and participants, 5) sending birthday and holiday cards, 6) scheduling appointments 6 weeks in advance, and 7) providing mileage reimbursement in addition to data collection visit incentives. The applicability of these strategies across settings and underserved populations will be highlighted.

Symposium 41D

RETENTION OF AFRICAN AMERICAN WOMEN IN A COMMUNITY-BASED WEIGHT LOSS TRIAL IN THE RURAL DEEP SOUTH

Monica L. Baskin, PhD

Over 80% of African American women are overweight or obese in the U.S. Data further suggests that rural vs. urban residents are at greater risk for obesity and related chronic conditions. Effective strategies to engage and retain this vulnerable group in weight loss programs are needed, though prior studies have had limited success. Using a community-based participatory research (CBPR) approach, the Deep South Network for Cancer Control developed and is testing a 2-year weight loss trial in eight rural counties in Alabama and Mississippi. Field-based project staff from each county, aided by trained local community health advisors, recruited 920 potentially-eligible women for the trial. From these women, 409 participants were eligible and enrolled after the final eligibility assessment. Throughout the program, local staff and volunteers maintain frequent contact with participants (phone, mail, "house calls"). Retention rates at 6- and 12-months for the full sample were available for this analysis. At baseline, women in the trial had a mean age of 46.5 (SD=9.9) and mean BMI of 38.6 (SD=8.0). They were also largely lower income with 63% reporting annual household incomes below $29,000. At the end of 6 months of weekly face-to-face sessions, 99.5% (n=407) of women were retained in the program. At 12-months, 97.8% (n=400) women had continued in the program for the additional bi-weekly, then monthly face-to-face sessions. Our CBPR approach to engage rural and primarily lower-income African American women in a weight loss trial was successful in retaining the vast majority of participants through the most active phase of a 2-year weight loss trial.

CORRESPONDING AUTHORS: Joanna Buscemi, Ph.D., University of Illinois at Chicago, Chicago, IL, 60608; jbuscemi@uic.edu; Jessica R. Wearing, Masters of Public Health (in progress), University of Kansas School of Medicine, KC, MO, 64114; jwearing@kumc.edu; Rebecca Hunter, M.A., VA Palo Alto Health Care System, San Jose, CA, 95128; becky.hunter1027@gmail.com; Monica L. Baskin, PhD, University of Alabama at Birmingham, Birmingham, AL, 35244-4410; mbaskin@uabmc.edu

Symposium 42 1:45 PM-3:00 PM

MONITORING, MEASURING, MODELING AND CHANGING BEHAVIOR IN REAL TIME

Donna Spruijt-Metz, MFA, PhD[1], Wendy Nilsen, PhD[2], Santosh Kumar, PhD[3], Peter Pirolli, Ph.D.[4], Michael Youngblood, PhD[5]

[1]Center for Economic and Social Research, University of Southern California, Los Angeles, CA; [2]National Institutes of Health, Bethesda, MD; [3]Universeity of Memphis, Memphis, TN; [4]Palo Alto Research Center, Palo Alto, CA; [5]PARC, a Xerox company, Palo Alto,, CA

The 2012 *International Workshop on New Computationally-Enabled Theoretical Models to Support Health Behavior Change and Maintenance*, funded by the NSF, NIH and European Commission, identified a set of fundamental scientific and engineering opportunities; along with gaps to understanding behavior in real time. One of the major challenges delineated at the workshop was temporally dense, contextually rich digital data to develop computational models of behavior that could be used to guide interventions in real time. In this symposium, we bring together scientists from computer science, behavioral health, cognitive science, and interactive systems research to showcase the progress in this field. The first presentation will outline some of the newest developments in the 'big data' emanating from passive and active sensing in pervasive computing. The second presentation will discuss how we might use current behavioral theories to conceptually seed new, real-time models of behavior. The third presentation will show some of the newest work in modeling using disruptive technologies – i.e. new ways of modeling 'big' or 'broad' behavioral and health data. As an expert in the field, our discussant will bring the three strands together to outline the next generation research agenda for transdisciplinary, dynamic behavioral theory development.

Symposium 42A

WHAT ISN'T MEASURED ISN'T MODELED: CONCEPTUALLY SEEDING NEW DYNAMIC THEORIES OF BEHAVIOR

Donna Spruijt-Metz, MFA, PhD

Streaming data from wearable and deployable sensors and mobile phones, along with such sources as social media, credit cards, web use, ecological momentary assessment, traditional self-report and observational techniques provide first-ever opportunities to develop dynamic and mathematical models of momentary behavior. These models will be able to identify temporal and causal sequences to understand and predict behavior as it changes. For these new models to be able to provide a sturdy prescriptive framework upon which to base Real-Time Adaptive Interventions, they need to be dynamic, momentary, personalizable, contextualized, adaptable, data driven, and yet conceptually seeded. The process of developing new models demand transdisciplinary choices in three major areas: 1) Monitoring: i.e. what falls under the rubric of 'behavior'? What choices need to be made, and by whom, so that what is monitored takes into account overt behaviors plus salient influences upon those behaviors? Considerations here include (but are not limited to) participant burden and limitations of technology. 2) Measurement: 'Big' or 'broad' data holds 'variables' that have yet to be identified. Fusion of various data streams will afford new constructs. Behaviorists, computer scientists and data modelers will need to work together to identify these new constructs, understand how they 'behave', and integrate them into behavioral theory. 3) Modeling: New models of behavior should be conceptually seeded with current behavioral theories. By what process might we 'cycle out' constructs when they no longer appear to contribute to the model, and cycle in new ones as they are 'discovered' in an iterative fashion? This talk will provide an example of conceptually seeding a real-time model of physical activity behavior in a transdisciplinary team. Feedback loops (i.e. behaviors or events or states that spiral to effect themselves or other behaviors, events or states), 'intervention' effects (i.e. effects of events, states, or environments upon behaviors that wax and wane in unexpected forms and timeframes), using current theory to 'seed' new models, and the emergence of 'new' variables will be considered.

Symposium 42B

IS THE USER READY TO RECEIVE A SENSOR-TRIGGERED JUST-IN-TIME MOBILE INERVENTION?

Santosh Kumar, PhD

Recent advances in the sensing and computational capacity of mobile devices have opened up enormous opportunities to improve patients' health and well-being. They can quantify dynamic changes in an individual's health state as well as key physical, biological, behavioral, social, and environmental factors that contribute to health and disease risk, anytime and anywhere. Such real-time monitoring can accelerate health research and optimize care delivery, e.g., via just-in-time (JIT) personalized interventions. Such interventions, however, are unanticipated and will not succeed unless the user is available to be engaged physically, mentally, and socially. The same mobile sensor data that are poised to be used in finding the triggers for delivering a JIT intervention could also be used to determine a user's availability to be engaged in a JIT intervention. This talk will describe some recent results which show that user's availability can be detected with 75% accuracy. Users are found to be usually available when they are outside walking outside of their home or work, or even if just outside of their home or work location. But, they are usually not available when driving or at work. It is also observed that participants are more available when they are happy or energetic versus when they are stressed.

Symposium 42C

MODELING ASSESSMENT AND INTERVENTIONS IN A BEHAVIOR-CHANGE SMARTPHONE SYSTEM

Peter Pirolli, PhD

The mobile, ubiquitous computing future is here and fueled by app-enabled smartphone platforms carried by 1 in 4 people on Earth. These devices provide great opportunities for projecting behavior-change methods into everyday life at large economies of scale. They also provide an excellent opportunity for collecting rich, fine-grained data necessary for a new generation of behavior-change science and technology including new models used to understand and improve health and wellness.As part of our research work at PARC, we created a new behavior-change smartphone platform and application called Fittle (www.fittle.org), which delivers ecological momentary interventions, customized health programs, and group support to help people progressively master healthy habits and improve their health and wellness. Core to Fittle are user models that guide customized decisions in the system to assist the user and their social group in accomplishing goals. We collect and use data to predict user compliance and engagement in order to suggest appropriate activities within their skill and environmental constraints assisting them in reaching goals and coaching them through behavior mastery in a social mobile experience.In our talk, we will demonstrate the Fittle platform and discuss the underlying technologies that include user modeling, activity and behavior planning, personalized coaching through artificial intelligence, and building social accountability. We will also present a summary of results of efficacy and engagement over five different field studies that highlight significant improvements in health as well as the positive benefits of the social group Fittle provides.

CORRESPONDING AUTHORS: Donna Spruijt-Metz, MFA, PhD, Center for Economic and Social Research, University of Southern California, Los Angeles, CA, 90004; dmetz@usc.edu; Santosh Kumar, PhD, Universeity of Memphis, Memphis, TN, 38152; skumar4@memphis.edu; Peter Pirolli, Ph.D., Palo Alto Research Center, Palo Alto, CA, 94304; pirolli@parc.com; Michael Youngblood, PhD, PARC, a Xerox company, Palo Alto,, CA, 94304; michael.youngblood@parc.com

Symposium 43 1:45 PM-3:00 PM

SBM/ACSM CO-SPONSORED SYMPOSIUM: TECHNOLOGY, EXERCISE, AND HEALTHCARE: USING EXERCISE IN MEDICINE

Sherri Sheinfeld Gorin, Ph.D.[1], Beth Lewis, PhD[2], Matthew Buman, PhD[3], Caroline R. Richardson, MD[4], Melanie Hingle, PhD, MPH, RD[5], Amy D. Rickman, RD, PhD[6], David X. Marquez, PhD[7], Lynette Craft, PhD[8]

[1]Leidos (NCI) and New York Physicians against Cancer (NYPAC), New York, NY; [2]University of Minnesota, Minneapolis, MN; [3]Arizona State University, Phoenix, AZ; [4]University of Michigan / Ann Arbor VA Medical Center, Ann Arbor, MI; [5]University of Arizona, Tucson, AZ; [6]University of Pittsburgh, Cranberry Twp, PA; [7]University of Illinois at Chicago, Chicago, IL; [8]American College of Sports Medicine, Chicago, IL

Physical inactivity is related to several health problems included increased risk of heart disease, type II diabetes, and some types of cancers. Despite these health issues associated with an inactive lifestyle, only 5% of Americans participate in the recommended levels of physical activity (PA) based on objective assessments of physical activity. Behavioral interventions are efficacious for increasing physical activity; however, these interventions can be costly, and the reach among diverse populations can be limited. In order to decrease the cost associated with these interventions, researchers have applied innovative technologies to increase the reach of physical activity interventions, particularly among diverse populations. The purpose of this symposium is to explore the varied technologies that have been used to increase participation in physical activity within clinical settings, and to examine the evidence for their use. In a review of the literature, the first presenter finds that there are few studies examining the impact of SMS on PA; generally, they have weak methods. Notably absent are formative and process evaluation data on content development and dosage. She presents findings from their formative work on the impact of SMS on increasing PA, sharing "best practices" for the design, implementation, and evaluation of these studies. The second presenter will examine the applications of a smartphone app for PA, sedentary behavior, and sleep behavior change in both a VA and an oncology setting for breast cancer survivors. He will share feasibility data on wearable sensors in hospital settings and post-hospitalization. The third presenter will examine the potential integration of these technologies within primary care, using the Blue Cross Blue Shield physical activity program as an exemplar. Our discussant will highlight the integration of these technologies for physical activity within multiple settings, among multiple disciplines, within the Affordable Care Act policy environment.

Symposium 43A

SMARTPHONES AND WEARABLES: EXTENDING THE REACH OF THE CLINIC FOR PHYSICAL ACTIVITY PROMOTION

Matthew Buman, PhD

Physical activity is recommended to manage symptoms and improve health among most clinical populations. There are challenges in assessing, counseling, and referring clinical populations for physical activity. Personal technologies such as smartphones and wearable sensors are emerging as tools to support clinical services and extend the reach of the clinical encounter. This presentation will describe the development and practice of delivering personal technologies for physical activity promotion in three diverse clinical settings. US Veteran and breast cancer survivor populations are at disproportionate risk for cardiometabolic disease and recurrent disease that may be reduced by healthy lifestyle behaviors. Physical activity may have synergistic effects with other health behaviors during 24 hours. *BeWell24*, a multicomponent smartphone "app" was developed to leverage dependencies among sleep, sedentary behavior (i.e. sitting), and physical activity. It was developed with a user-centered iterative design framework that engaged interdisciplinary clinical primary care and oncology specialty teams (n=29) and targeted clinical populations (n=9). Insights from working in these populations include: unique design constraints for app development, initial efficacy of the app (n=50), privacy/confidentiality concerns from patients and providers, and integration of the app within existing clinical practice. Wearable sensors may be an important adjunct clinical service for heart failure patients given their ability to continuously monitor behaviors and enhance communication. Our team has deployed wearable sensors among patients (n=30) in a network of three local hospitals that passively monitor ambulatory activity and postural allocation (lying down, sitting, and standing) both during and following hospitalization. The goal of this work is to identify early behavioral markers of 30-day hospital readmission and to equip transitional care teams with behavioral data to enhance care. Opportunities and challenges of developing and delivering these technologies in diverse populations will be discussed with an emphasis on working with clinical teams throughout the design and deployment processes. Personal technologies offer new opportunities for promoting physical activity.

Symposium 43B

HEALTH AND UTILIZATION OUTCOMES OF A LARGE SCALE INTERNET MEDIATED WALKING PROGRAM USING UPLOADING PEDOMETERS

Caroline R. Richardson, MD

Employee wellness programs are expanding despite limited evidence that they improve outcomes or decrease costs. In this study, we examine health, health care utilization and cost outcomes in a large cohort of individuals who participated in Blue Care Network's Healthy Blue Living (BCN HBL) employee wellness program for obese individuals. In order to be eligible for BCN HBL lower cost health insurance plan, individuals who had a BMI of > 30 were required to self-selected into one of two programs, either Weight Watchers (WW), an in-person group based weight loss program or Walkingspree (WS), an online walking program using uploading pedometers. Pre-and post-participation health measures of weight loss, blood pressure, cholesterol, smoking status, and depression were available on 63% of the participants. In addition to these health outcomes, claims data was linked to program participation data to determine the impact of the two programs on health care associated utilization and costs. Of the 15,082 individuals eligible to enroll in one of the two program, 9,532 (WW n = 4,271, WS n= 5,261) participants submitted both pre-and approximately 1 year post program health outcome data on a health qualifying form completed by their physician. Those who chose WW were slightly older (mean age in WW = 48.5 (10.5), mean age in WS = 46.7 (10.1), p < .001). Women were much more likely to choose WW while men were much more likely to choose WS. Baseline weight was similar between the two groups but BMI 1.8 points higher in the WW group (p = < .001). Those who chose WW lost significantly more weight over one year than those in the WS program (difference of differences adjusting for baseline weigh and sex = 6.42 lbs, p < .001). Similarly, WW participants improved more in blood pressure and cholesterol than WS participants. There was no difference between arms or significant pre-post change in depression scores or smoking status A group based in-person weight loss program resulted in more improvement in health parameters than an online walking program for obese insured individuals. The two programs differed in terms of implementation barriers and in their impact on health care utilization and the differences varied by the type health care service utilized.

Symposium 43C

TEXT MESSAGING IN PHYSICAL ACTIVITY PROMOTION: BEST PRACTIVES AND LESSONS LEARNED FROM THE FIELD

Melanie Hingle, PhD, MPH, RD

Physical inactivity is a leading risk factor for obesity and early mortality. Ubiquitous mobile phone ownership and the popularity of short message service (SMS) (text messaging) for informal communication presents an opportunity to expand our reach to individuals with information, strategies, and encouragement to support physical activity (PA) behavior change. As evidenced by the burgeoning "mobile health" literature, SMS has been widely used to prompt health behavior change, including PA; however, much room for improvement exists. Published studies of the use of SMS for behavior change lack rigor; their impacts on behavior change have been modest, participant diversity is rarely addressed, and scaled-up effectiveness trials are rare. There are few studies of the impact of SMS on PA; these also have weak methods, including self-reported PA. Notably absent are formative and process evaluation data (i.e., content development and intervention "dose"). Findings from formative work with adults and youth suggest content developed specifically for SMS and confirmed by participants as relevant, readable, and useful, and information about when, how often, and under what circumstances participants might wish to receive SMS are critical to efficacious programs. Across studies, messages containing positive phrases and specific strategies for PA/diet improvement were rated highest. Lowest rated messages used jargon, contained too many numbers or rhetorically phrased content (e.g., "Did you know …"), or were not specific or relevant. Adult participants thought an SMS-based weight management program would be effective; youth agreed, but with caveats. Potential barriers to participation included SMS-associated fees, "too many" messages, or repetitive content. Customized delivery time and frequency (including 2-way interactions between participant/program) were desired features. We conclude with best practices for future studies. Advancing the science of behavior change with technology will require thoughtful, targeted work spanning diverse disciplines and fields, including human-computer interaction, behavioral health, and implementation science.

CORRESPONDING AUTHORS: Matthew Buman, PhD, Arizona State University, Phoenix, AZ, 85004; matthew.buman@asu.edu; Caroline R. Richardson, MD, University of Michigan / Ann Arbor VA Medical Center, Ann Arbor, MI, 48104; caroli@umich.edu; Melanie Hingle, PhD, MPH, RD, University of Arizona, Tucson, AZ, 85721; hinglem@email.arizona.edu

Symposium 44 1:45 PM-3:00 PM

IMPROVING MENTAL HEALTH BARRIERS TO DISEASE MANAGEMENT IN MEDICALLY COMPLEX VETERANS

Gina Evans-Hudnall, PhD[1], Patricia Dubbert, PhD[2], Elyse Thakur, MA[3]

[1]Michael E. Debakey VA Medical Center, Humble, TX; [2]Little Rock GRECC, Little Rock, AR; [3]Baylor College of Medicine, Houston, TX

This symposium will detail three intervention based studies that aim to improve physical health outcomes among Veterans with co-occurring mental health symptoms seeking care in the Veterans Health Administration. In the first presentation, a VA clinical researcher will present findings from a randomized control trial conducted in the VHA aimed at improving COPD functioning among Veterans with co-occurring mental health symptoms. In the second presentation, a second clinical researcher will describe a VA-funded Quality Improvement Project that aims to improve physical health and affective symptoms by incorporating a walking regimen in mental health rehabilitation programs among Veterans with severe mental and chronic health conditions. Finally, a third VA clinical researcher will describe feasibility of an on-going VA Career Development Award funded randomized controlled trial, conducted at the Michael E. Debakey VA Medical Center, to address psychological barriers to weight loss and participation in MOVE!. She will also share preliminary psychological symptom, weight and health behavior change outcomes. The third clinical researcher, will also serve as discussant on this symposium. In addition to directing questions from the audience, she will discuss the operational and policy implications for integrating adjunctive mental health services into various primary care and specialty clinics to address psychological barriers to physical health outcomes for Veterans.

Symposium 44A

FEASIBILITY OF A PILOT INTERVENTION TO IMPROVE PARTICIPATION IN MOVE! FOR VETERANS WITH DEPRESSION, ANXIETY AND PTSD

Gina Evans-Hudnall, PhD

Background: Obese Veterans with co-existing depression, anxiety and PTSD experience difficulties with weight management. MOVE! is an evidenced based weight management program within the VA system. Veterans with mental illness demonstrate psychological barriers to engagement. We developed and tested a telephone based pilot intervention (HELP) aimed at decreasing psychological related barriers to participation in MOVE! among Veterans with depression, anxiety and PTSD.Objective: Describe feasibility and preliminary findings of HELP.Methods: Veterans were recruited during the initial MOVE! session. Participants were administered validated mental health, self-efficacy and quality of life assessments at baseline and eight weeks and were provided anxiety or depression workbooks dependent upon baseline mental health scores. Treatment consisted of 8 (6 core and 2 electives) weekly CBT based mental health treatment sessions. Feasibility and change in mean scores and effect sizes were calculated.

Results: Sixteen participants expressed interest, 12 completed the consent process, 3 could not be reached after the consent process and 2 were lost to follow up. Nine received at least 1 session and 7 participants completed HELP. All 7 participants attended >5 MOVE! sessions, 5 walked over 10,000 > 3 times a week, and 6 engaged in physical activity beyond walking. There were significant improvements in anxiety (p=.037) and depression (.042) scores. There were moderate to large effect sizes in avoidance (d=.78), eating self-efficacy (d=.62), and quality of life (d=.58) subscale scores. Conclusions: Veterans with mental health symptoms have poor outcomes in MOVE!. Tailored mental health treatment can help with MOVE! engagement and improve both mental health symptoms and health behaviors which may improved physical health outcomes.

Symposium 44B

AFFECTIVE RESPONSE TO EXERCISE IN VETERANS ATTENDING MENTAL HEALTH REHABILITATION PROGRAMS

Patricia Dubbert, PhD

Veterans with mental health problems report low levels of physical activity, increasing risk for chronic disease and functional decline. Studies in healthy adult populations have observed positive affective response with exercise that predicts adherence to future exercise. During a quality improvement project, we assessed affect reported by 100 military veterans (33% aged 18-39, 44% aged 40-59, 22% aged 60 and older) Before and After exercise sessions offered during rehabilitation programs for substance abuse (77%) or post-traumatic stress disorder (22%). The project participants reported cardio (12%), strength (47%), and both (41%) types of exercise during their 1 hour sessions. The 12-item Exercise Feelings Inventory (EFI) produced scores for 4 scales: Engagement, Revitalization, Tranquility, and Exhaustion. Before exercise ratings were negatively correlated with After exercise scores (r's from -.42 to -.55; p's < .001) and with changes in affect After exercise (r's from -.51 to -.61; p's < .001). The finding that those reporting the most negative affect Before exercise reported the greatest improvements After exercise is consistent with observations in research with healthy adults. Perceived exertion during exercise was also assessed on a 10-point scale and ranged from 1 (very weak) to 10 (very, very strong). After controlling for Before exercise ratings, changes in all EFI scores were significantly and positively associated with perceived exertion (p's < .01). Our results suggest veterans in treatment for mental health disorders experienced beneficial affective changes after exercising that could contribute to their recovery and future exercise participation.

Symposium 44C

PREDICTORS OF ANXIETY IN VETERANS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Elyse Thakur, MA

Background: Clinically elevated symptoms of anxiety and depression are common among patients with chronic obstructive pulmonary disease (COPD) and contribute to worse health outcomes. Anxiety may trigger and exacerbate symptoms of COPD; however, what influences the development of anxiety is unknown. Cognitive factors (self-efficacy and illness intrusiveness) have been shown to predict depression in COPD patients. Locus of control and maladaptive coping have been linked with depression in patients with CHF. However, little is known about which psychological factors predict anxiety in COPD, as compared to those that predict depression. To better direct clinical care, it is imperative to identify what contributes to anxiety in this population.

Objective: Examined clinical factors associated with COPD in veterans.Methods: Patients were 227 veterans with COPD (M age = 66) from two VA medical hospitals who screened positively for anxiety and/or depression and later found to have clinically elevated symptoms according to the Brief Anxiety Inventory and Physical Health Questionnaire-9, respectively. Other validated measures assessed self-efficacy, locus of control, illness intrusiveness, and coping. All measures were administered via phone. We examined pearson correlations between study variables and conducted a multiple linear regression predicting anxiety using variables that had significant univariate relationships as predictors.Results: Anxiety was significantly related to illness intrusiveness, self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, self-blame, and an external locus of control. When these variables were included in a one-step regression, illness intrusiveness(b=.16, p < .05), denial (b =.18, p < .05), substance use (b=.19 , p < .05), behavioral disengagement (b =.17, p < .05) and an external locus of control (b=.13, p < .05) predicted anxiety. Conclusions: Cognitive factors (illness intrusiveness, maladaptive coping and locus of control) may play an important role in the development and treatment of anxiety in COPD patients.

CORRESPONDING AUTHORS: Gina Evans-Hudnall, PhD, Michael E. Debakey VA Medical Center, Humble, TX, 77346; ginae@bcm.edu; Patricia Dubbert, PhD, Little Rock GRECC, Little Rock, AR, 72205; minddoctor2001@aol.com; Elyse Thakur, MA, Baylor College of Medicine, Houston, TX, 77030; elyse.thakur@bcm.edu

Symposium 45 1:45 PM-3:00 PM

THE TRAJECTORY OF RECOVERY IN HEMATOPOIETIC CELL TRANSPLANT: FROM GENETIC TO COMMUNITY INFLUENCES

Donna M. Posluszny, PhD[1], Heather Jim, PhD[2], Karen L. Syrjala, PhD[3], Margaret Bevans, PhD[4]

[1]University of Pittsburgh School of Medicine, Pittsburgh, PA; [2]Moffitt Cancer Center, Tampa, FL; [3]Fred Hutchinson Cancer Research Center, Univ of Washington, Seattle, WA; [4]National Insitutes of Health Clinical Center, Bethesda, MD

This symposium will focus on psychosocial and biobehavioral aspects of hematopoietic cell transplantation (HCT), from newly-discharged patients to long-term survivors in their home communities. HCT is a lifesaving yet risky treatment for hematologic malignancies, with major medical demands and lifestyle disruption. Patients face immediate risks such as infection and graft loss as well as multiple medical complications that can span many years post-HCT. The first part of the presentation will focus on the first eight weeks post-hospital discharge, a medically critical period. Patients and their family caregivers must work as a team to adhere to the multi component post-HCT medical regimen which includes a complex schedule of multiple daily medications, catheter care, frequent medical appointments, diet and social activity restrictions, and health monitoring. Despite the clinical importance of adherence, little research has examined rates or risk factors for nonadherence in this population. Adherence rates will be presented and factors that impact adherence, including distress levels in patients and caregivers, will be discussed. The second part of the presentation will discuss genetic associations with depression and fatigue, two of the most common symptoms experienced by HCT patients. HCT patients are unique in that they have their own DNA plus that of their donor. This novel investigation examines how both patient and donor genetic variants affect patients' experience of depression and fatigue over the first year post-HCT and future considerations for genetic investigations will be offered. The third part of the presentation will focus on the needs of long term post-HCT survivors and present the use of a randomized controlled trial tailored website. Given known nonadherence to guidelines, understanding how best to reach survivors who may benefit from behavioral and health care guidance is critical, as is developing efficacious interventions that are feasible and reach communities where patients return after HCT. Factors related to patients use of the website and considerations for addressing HCT survivorship needs will be discussed. The discussant will address issues and approaches to meeting the changing needs of HCT recipients as they move through the trajectory of their post-HCT lives.

Symposium 45A

DISTRESS AND ADHERENCE IN ALLOGENEIC HEMATOPOIETIC CELL TRAN SPLANTATION PATIENTS AND CAREGIVERS

Donna M. Posluszny, PhD, Dana H Bovbjerg, Mounzer Agha, Jing-Zhou Hou, Anastasios Raptis, Rafic Farah, Michael Boyiadzis, Mary Amanda Dew

Background: Allogeneic HCT is a potentially curative therapy for hematologic disease but is associated with multiple complications and significant stress to patients and family caregivers (CGs). To enhance outcomes and minimize risks, patients and CGs must work together to carefully adhere to the multi-component post-HCT medical regimen, consisting of multiple daily medications, frequent clinic visits, strict catheter care, health monitoring, and dietary and lifestyle restrictions. Despite the clinical importance of regimen adherence, particularly directly after hospital discharge, it is not well known to what degree HCT patient-CG dyads adhere to it and whether factors such as distress impact adherence. Method: Consecutive patients (n=44, 22 men; mean age 53.0; 98% white) and their CGs (n=44, 13 men; mean age 51.2; all white) were recruited at a single medical center, signed informed consent and separately completed assessments prior to HCT (demographics and Hospital Anxiety and Depression Scale (HADS) and 4 and 8 weeks post discharge (HADS) and reported on adherence to key tasks of the post HCT medical regimen. Results: Prior to HCT, CGs were more anxious and depressed than patients t(41)=-2.326; p=.025 and t(39)=-2.740; p=.009) and they remained more anxious than patients after the transplant. CGs' anxiety did not decrease over time. Although patients became less anxious over time F(2,74=8.521; p=.001) their depression increased F(2,72=5.183; p=.008). All patient-CG dyads reported nonadherence to ≥1 aspect of the regimen; 35% were nonadherent to taking medications, 29-42% were nonadherent to catheter care, and over half were nonadherent to lifestyle behaviors. Patients with higher anxiety were less likely to perform self-care behaviors (e.g., r=-.31; p=.05 for daily bathing; r=-.36; p=.028 for brushing teeth) or follow diet/exercise guidelines (r=-.38; p=.014). CG anxiety was negatively related to patients successfully avoiding crowds r-.39; p=.014; CG depression was correlated with poorer patient immunosuppressant adherence r=-.33; p=.044. Conclusion: Post-HCT regimen adherence is problematic and may be worsened by patient and CG distress. Intervention is needed to enhance adherence and thereby promote optimal subsequent physical and emotional health outcomes. (K23CA149082)

Symposium 45B

GENETIC ASSOCIATIONS WITH DEPRESSION AND FATIGUE IN HEMATOPOIETIC CELL TRANSPLANT (HCT) RECIPIENTS

Heather Jim, PhD, Brian D. Gonzalez, Brent J. Small, Jong Park, Hui-Yi Lin, Charissa Hicks, Claudio Anasetti, Paul B. Jacobsen

Background: Depression and fatigue are common among hematologic cancer patients treated with allogeneic HCT. Previous studies have found genetic variants to be associated with depression and fatigue in breast and prostate cancer patients. No studies have examined these relationships in allogeneic HCT recipients who, unlike other cancer patients, have both their own DNA and that of their donor following transplant.Methods: Data were collected as part of a larger study of quality of life in allogeneic HCT recipients. Blood was collected from HCT patients and their donors prior to HCT. Self-report measures of depression (CESD) and fatigue (FSI) were collected from patients prior to HCT (T1) and 90 days (T2) and 1 year (T3) post-HCT. A total of 384 genetic variants were selected based on a literature review and genotyped on a custom Illumina BeadChip microarray. Regression analyses were conducted separately for patient and donor variants. To adjust for multiple comparisons, significant variants were defined as those with a false discovery rate q-value ≤20%.Results: The sample consisted of 60 patient-donor pairs (mean patient age: 51, 35% female). Mean levels of depression and fatigue did not change significantly over time (*p* values ≥.29). A total of 267 variants were retained for analysis based on quality control, Hardy-Weinberg equilibrium, and minor allele frequency ≥.20 in the sample. Patient rs4311 in *ACE* (*p*=7.5 x10^{-4}) and donor rs610932 in *MS4A6A* (*p*=4.8x10^{-4}) were associated with increases in depression from T1 to T2, while donor rs1928040 in *HTR2A* (*p*=5.5x10^{-4}) and rs6311 in *HTR2A* (*p*=1.5x10^{-3}) were associated with increases in depression from T1 to T3. Patient rs689021 in *SORL1* (*p*=6.0x10^{-5}), donor rs655888 in *HTR2A* (*p*=1.9x10^{-3}), donor rs643627 in *HTR2A* (*p*=1.9x10^{-3}), and donor rs1130409 in *APEX1* (*p*=1.6x10^{-3}) were associated with increases in fatigue from T1 to T2. No variants were associated with changes in fatigue from T1 to T3. Conclusions: Data suggest that variants in genes regulating vasoconstriction (*ACE*), lipid metabolism (*SORL1*, *APEX1*), and the serotonergic system (*HTR2A*) predict changes in depression and fatigue in allogeneic HCT patients. Findings implicate both the patient's own genetic inheritance as well as that of the donor.Funding: K07 CA148399

Symposium 45C

DO HEMATOPOIETIC CELL TRANSPLANTATION HCT) SURVIVORS USE AN ONLINE PROGRAM TAILORED TO THEIR NEEDS?

Karen L. Syrjala, PhD, Jean C Yi, Marie-Laure Crouch, Samantha B Artherholt, Allison C Stover, Mary ED Flowers, Wendy Leisenring

Introduction: Long-term cancer survivors treated with HCT have elevated emotional, functional and medical needs. Online programs may be an optimal way to treat distress, depression, fatigue, and adherence to health care guidelines after survivors return home, provided survivors will utilize materials. Analyses examined whether those with greater needs were at least as likely as those without targeted needs to use INSPIRE, a randomized controlled trial tailored online program.
Method: All 3-18 year HCT survivors treated at a single center were eligible if they were age 18+, had HCT for a hematologic malignancy with no relapse or second cancer in 2 years, and had internet access, email and adequate English to complete assessments. Consenting survivors were randomized to immediate or delayed INSPIRE website access. Assessment included the Fatigue Symptom Inventory, Cancer and Treatment Distress, Health Care Utilization (HCU), comorbidity index, and Symptom Checklist 90-R Depression. Those ineligible for randomization due to severe depression but who provided baseline assessment were given access and are included in analyses (n=16). Logistic regressions examined associations between having each need (categorized by IQR as none, mild-moderate, severe) and likelihood of viewing 3+ site pages.
Results: Of 1311 eligible for the study, 854 consented and 451 received immediate INSPIRE access. The 451 participants were 56% male, 93% white, non-Hispanic, mean age 52 (SD 12). Median pages viewed was 7 (IQR 0, 20; range 0, 186). Whether 3+ pages were viewed did not differ by race, ethnicity, income, education, computer familiarity or type of HCT. After adjusting for age >39, female, history of chronic graft versus host disease and P=.014), fatigue (OR 1.73 & 1.62, *P*=.042) or 2-4 comorbidities (OR 2.09 & 1.14, *P*=.009) were more likely to view 3+ pages. Those with elevated depression or lower HCU adherence had similar likelihood of viewing 3+ pages (*P*= 0.39 and 0.69).
Discussion: Long-term HCT survivors with elevated needs were as or more likely to use a tailored website compared to survivors without needs. Thus online technology provides a method with community reach for treating HCT survivors. [Funding: R01 CA112631 & R01 CA160684]

CORRESPONDING AUTHORS: Donna M. Posluszny, PhD, University of Pittsburgh School of Medicine, Pittsburgh, PA, 15232; poslusznydm@upmc.edu; Heather Jim, PhD, Moffitt Cancer Center, Tampa, FL, 33647; heather.jim@moffitt.org; Karen L. Syrjala, PhD, Fred Hutchinson Cancer Research Center, Univ of Washington, Seattle, WA, 98109; ksyrjala@fhcrc.org

Symposium 46 1:45 PM-3:00 PM

A KNOWLEDGE-BUILDING APPROACH FOR FASTER TRANSLATION OF BEHAVIORAL CHANGE INNOVATIONS INTO PRACTICE

Edward J. Miech, Ed.D.[1], Laura Damschroder, MS, MPH[2], Thomas Houston, MD, MPH[3], Kai Larsen, Ph.D.[4]

[1]HSR&D Center for Health Information & Communication; VA Stroke QUERI, Indianapolis, IN; [2]VA Ann Arbor Center for Clinical Management Research, Ann Arbor, MI; [3]VA CHOIR, Bedford, MA; [4]University of Colorado, Boulder, Boulder, CO

Evidence-based behavior change programs too often fail to get implemented and sustained in real-world settings and thus too few patients are able to benefit from these programs. A strategic knowledge-building framework will be presented that is aligned with the Behavior Change Ontology presented at SBM's 35th Annual Meeting but that is adapted to identify evidence-based pathways of change at the collective-level (e.g., hospital settings). This knowledge is crucial to learning what works where and why, which in turn, will inform implementation strategies that maximize the chances for successful sustained use of an innovation. Four research gaps need to be addressed: 1) resolve inconsistencies in theoretical constructs; 2) develop measures of determinants of successful implementation; 3) link implementation techniques to address those determinants; and 4) develop hypothesized pathways of change. Use of common language, terminology, and constructs will enable hypothesis testing across a range of diverse studies that otherwise is not possible or is significantly stymied by the current research gaps. Three presentations will each demonstrate how progress in one or more of these research gaps contributes to more efficient knowledge-building: 1) recommendations will be presented to address the fact that champions are frequently referred to in published research as one type of agent of change but inconsistent definitions and concepts hinder our ability to build knowledge about their role and behaviors; 2) how consistent use of a theory-based framework of constructs can contribute to more efficient and useful syntheses of findings across studies; and 3) light-touch high dissemination technology-assisted change techniques are identified based on six trials along with insights about the circumstances under which they are effective.

Symposium 46A

THE JINGLE-JANGLE FALLACY VIS-À-VIS CHAMPIONS IN HEALTHCARE-RELATED IMPLEMENTATION

Edward J. Miech, Ed.D.; Laura Damschroder, MS, MPH; Teresa M. Damush, PhD

Background: One of the major challenges in investigating the role of champions in healthcare-related implementation is that different terms have been used over the last twenty years in the published literature to refer to the underlying construct of "champion." This conundrum has been referred to elsewhere as the "jingle-jangle fallacy" (Van Petegem, 2013). This instability in the use of language and the lack of fixed, formal and universally accepted definitions has led to potential confusion, making it more difficult to understand why champions are cited so often as key to the implementation process. Objective: We conducted a systematic review on champions to establish the current state of the literature on this construct and to bring greater clarity to an important construct in implementation science. Methods: The Consolidated Framework for Implementation Research (CFIR) served as the conceptual and theoretical framework guiding this systematic review. In this systematic review, we defined the construct of "champion" as an implementation-related role occupied by people who are internal to an organization, have an intrinsic interest and commitment to implementing a change, are enthusiastic, dynamic, personable, persistent, and have strength of conviction. This systematic review was limited to research articles in peer-reviewed, English-language journals published in 1980 or later that were indexed in MEDLINE and accessible in full-text format. Results:There was a sharp increase in the number of articles on champions meeting inclusion criteria starting in 2011. Many different variations on the term "champion" itself appeared in the dataset, including clinical champion, physician champion, program champion, and nurse champion, among others. While the terms "change agent" and "opinion leader" typically refer to specific roles distinct and apart from the champion role, both terms were used by studies in the dataset to refer directly to the champion construct.Conclusions: Champions have been cited much more frequently in research on healthcare-related implementation since 2011. For this construct, the simple term "champion" and the CFIR definition provide clear, parsimonious and accurate language.

Symposium 46B

SYNTHESIS OF STUDIES USING THE CONSOLODATED FRAMEWORK FOR IMPLEMENTATION RESEARCH (CFIR)

Laura Damschroder, MS, MPH; Caitlin Reardon, MPH; and Julie C. Lowery, PhD

Background: Systematic syntheses are needed to understand what interventions and implementation strategies work where and why. However, most syntheses highlight the need for more research into contextual factors.Objective: Study objective was to synthesize findings from 6 implementation studies that were conducted in Veterans Affairs (VA) and that all systematically assessed context using the Consolidated Framework for Implementation Research (CFIR).Methods: Multiple qualitative analysis (including Qualitative Comparative Analysis (QCA)) methods were used to identify contextual factors that contributed to implementation success.Results: Evaluations of 6 implementations of 6 innovations across 47 facilities were included. CFIR constructs for which data were available across all evaluations included: 1) Intervention Characteristics: Adaptability, Design Quality & Packaging; 2) Inner Setting: Networks & Communications, Compatibility, Leadership Engagement, Available Resources; and 3) Process: Reflecting & Evaluating. Constructs most often associated with success will be highlighted. For example, 71% of sites with high implementation success had positive ratings for Compatibility and 89% of sites with a positive rating for Reflecting & Evaluating achieved high implementation success. Conversely, lack of positive ratings for Reflecting & Evaluating was highly associated with low implementation success. Several combinations of high and low ratings of constructs were identified as guaranteeing high implementation success. We will also recommend best practices to improve data quality and operationalization of CFIR constructs to better enable comparisons across studies.Conclusions:Data from multiple implementation studies, that each used the same conceptual framework can be combined and analyzed to identify key contextual factors for achieving implementation success.

Symposium 46C

TECHNOLOGY-ASSISTED IMPLEMENTATION RESEARCH

Thomas Houston, MD, MPH; Rajani Sadasivan; Thomas English

Background: Six large technology-assisted pragmatic trials designed to improve quality, using web-based, email, and mobile interventions, have recruited and randomized over 500 community and VA-owned clinical practices, and have measured change in provider performance and improvement in physiologic and behavioral measures in patients. Objective: We will review findings in the context of the larger literature. Methods: To identify lessons learned, we interviewed investigators, abstracted publications and presentations, and reviewed similar literature.Results: All six trials included similar components web-delivered case-based education, longitudinal "spaced education" and motivational reminder emails, downloadable materials, and summaries of recent evidence delivered through longitudinal outreach. Some trials included incentives (continuing education credit, vouchers for text books) and performance audit and feedback. Of the trials, three (focusing chlamydia screening guideline adoption, reduction of risky prescribing in musculoskeletal pain, and quality improvement for smoking cessation) were successful in improving provider performance measures. One large VA study targeting post-myocardial infarction care had mixed results (significant improvement in provision of beta-blockers, no change in ACE-inhibitor of aspirin), and one focused on Diabetes was negative. Conclusions: Light-touch, high dissemination technology-assisted interventions were more successful when the targeted provider behavior (performance measures) was low at baseline, where the intervention was new, and where specific techniques were used to enhance engagement over time.

CORRESPONDING AUTHORS: Edward J. Miech, Ed.D., HSR&D Center for Health Information & Communication; VA Stroke QUERI, Indianapolis, IN, 46205; edward.miech@va.gov; Laura Damschroder, MS, MPH, VA Ann Arbor Center for Clinical Management Research, Ann Arbor, MI, 48109-2800; laura.damschroder@va.gov; Thomas Houston, MD, MPH, VA CHOIR, Bedford, MA, 01730; thomas.houston2@va.gov

Symposium 47 1:45 PM-3:00 PM

NEW APPROACHES TO SEDENTARY BEHAVIOR INTERVENTIONS ACROSS THE LIFESPAN

David E. Conroy, PhD[1], Sara M. St. George, PhD[2], Christine Pellegrini, PhD[3], Jaclyn P. Maher, M.S.[4], Jeff Vallance, PhD[5]

[1]Northwestern University, Chicago, IL; [2]University of Miami Miller School of Medicine, Miami, FL; [3]Northwestern University Feinberg School of Medicine, Chicago, IL; [4]The Pennsylvania State University, University Park, PA; [5]Athabasca University, Athabasca, AB, Canada

Accumulating clinical and population health research indicate that excessive sedentary behavior increases health risks in children, adults, and older adults independent of physical activity levels. Sedentary behavior presents unique challenges for behavior change given its high-volume, pervasive, and largely habitual nature. This symposium highlights three different approaches to sedentary behavior change interventions with different populations. The first presentation will describe how motivational and social processes were targeted to modify sedentary behavior in African-American adolescents and their parents. Intervention effects in this study varied as a function of the outcome measure (accelerometer vs self-report) and family member (youth vs parents). The second presentation will describe a technology-enabled self-monitoring intervention to interrupt prolonged bouts of sedentary behavior in adults with diabetes. This approach increased light-intensity physical activity but did not significantly reduce sedentary behavior or sit-to-stand transitions ("breaks") measured via accelerometry. The final presentation will review a motivational intervention delivered using video and group discussions to reduce sitting time in older adults. This hybrid intervention was accepted by participants and reduced weekday but not weekend sitting time (self-reported). All three presentations address the feasibility of these approaches and indicate a readiness to conduct randomized controlled trials on interventions to reduce sedentary behavior from youth to older adulthood. The discussant will place this work in the broader context of contemporary scholarship on sedentary behavior and health behavior change, highlight emerging challenges in sedentary behavior change, and integrate findings from these presentations to propose core sedentary behavior change mechanisms across the lifespan.

Symposium 47A

PROJECT SHINE: SEDENTARY BEHAVIOR VS PHYSICAL OUTCOMES IN AFRICAN AMERICAN PARENTS VS YOUTH

Sara M. St. George, PhD

This study examined the efficacy of a family-based health promotion intervention for improving a range of sedentary behavior (SB) and physical activity (PA) outcomes in African American adolescents and their parents. The intervention (Project SHINE: Supporting Health Interactively through Nutrition and Exercise) integrated Social Cognitive, Self-Determination, and Family Systems Theories (behavioral skills, autonomy-support, communication, monitoring) to develop a positive family approach for improving SB, PA, and diet. A total of 89 adolescents (12.5±1.4 yrs; 61% girls; 48% obese) and their caregivers (41.5±8.5 yrs; 92% females; 74% obese) were randomized to either a 6-week parenting intervention or general health education program. Participants were provided with choice on target behaviors and self-monitoring tools, given feedback on goals to meet national guidelines, and participated in activities to promote positive family interactions. Adolescents and parents provided 7-day accelerometry estimates of activity levels and cutpoints for SB, light PA and moderate-to-vigorous PA were calculated. Self-reported SB was also obtained from adolescents using a validated scale. Regression models that incorporated multiple imputations (m=20) for missing data and controlled for baseline variables demonstrated a significant intervention effect on adolescent self-reported SB (B=-28.76, se=9.65, $p < .01$), indicating greater reductions in weekly hours of SB for intervention (baseline M=123.75, se=13.53; post M=98.71, se=7.07) versus comparison youth (baseline M=113.28, se=12.75; post M=120.31, se=9.17). This effect was not replicated with accelerometry estimates of youth SB. For parents, there was a significant intervention effect on MVPA (B=9.43, se=4.21, $p < .05$) showing greater increases in minutes per day for intervention (baseline M=18.98, se=1.93; post M=27.26, se=2.62) versus comparison caregivers (baseline M=20.88, se=2.49; post M=18.75, se=3.57). Findings suggest a family-based intervention that targets SB and PA intensities may need to be tailored differently for youth and parents. Further research is needed to understand whether self-reported SB in youth is a useful indicator given the lack of consistent findings with accelerometry data in this study.

Symposium 47B

THE FEASIBILITY OF INTERUPTING SEDENTARY TIME USING NEAT! TECHNOLOGY IN ADULTS WITH DIABETES

Christine Pellegrini, Ph.D.

Recent evidence suggests that interrupting sedentary time with light or moderate intensity physical activity may help to reduce postprandial glucose and insulin responses. This study examined the acceptability of a smartphone application (*NEAT!*) designed to interrupt prolonged bouts of sedentary behavior in adults with diabetes over a one month period. Nine adults with diabetes were recruited to participate. Participants were 77.8% female with an average age of 53.1 (10.7) years and BMI of 37.4 (9.9) kg/m^2. Eight participants (89%) completed the intervention. One participant was excluded from usage analyses due to technology issues. The *NEAT!* smartphone application works in conjunction with a Bluetooth-enabled accelerometer to encourage users to stand up for $\geq$2 minutes after $\geq$ 20 minutes of sedentary behavior. When a prompt was initiated, participants would chose an option: 1) Stand, 2) Extend, 3) Can't Stand, or 4) Ignore. Acceptability and usage of *NEAT!* over the one month period were examined. Results: Participants used *NEAT!* on average 23.4 (7.2) days for 7.7 (2.7) hours/day. On average, participants were prompted to stand up 6.5 (3.1) times/day. Of the total prompts, participants responded 69.8% Stand, 22.1% Can't Stand, 7.3% Ignore, and 0.8% Extend. The majority of participants (87.5%) agreed that the technology made it easier to break up sitting time and motivated them to stand up more. The percent of day in light intensity activity increased by 6.1%, however there were no significant changes in sedentary time or breaks in sedentary behavior. Based on this pilot study, *NEAT!* appears to be a feasible and acceptable technology to interrupt prolonged periods of sitting. Future studies are needed to examine the effectiveness of this technology in modifying behaviors among a larger sample size.

Symposium 47C

THE FEASIBILITY OF A HYBRID INTERVENTION TO REDUCE SEDENTARY BEHAVIOR IN OLDER ADULTS

Jaclyn P. Maher, M.S.

Older adults are the fastest growing segment of the population and they engage in the greatest volume of sedentary behavior (SB). Given the health risks of SB, interventions to reduce SB in older adults are needed to promote healthy aging. Interventions to date have had limited potential for broad dissemination. This study evaluated the feasibility (including the acceptability, safety, and preliminary efficacy) of a hybrid intervention that combined video-based content delivery with group discussions to reduce SB in older adults. Five local senior centers were approached to participate and four were randomized. Intervention content focused on either SB (n = 25) or social isolation (n = 17). In session 1, participants were familiarized with the study procedures. One week later (session 2) participants received the hybrid intervention in a group setting. One week later (session 3) participants engaged in group discussions regarding progress made in changing their behavior. Results revealed that the hybrid program is feasible due to high recruitment (80% at the center level) and measurement completion (>97% at the participant level) rates. Acceptability was indicated by the majority of participants describing the program as relevant to their daily life (88%) and being willing to recommend the program to a friend (86%). The most commonly cited adverse event was mild muscle soreness (9%). Repeated measures ANOVA revealed a significant group X time interaction for self-reported weekday but not weekend SB. The intervention group significantly decreased their weekday SB in the week after the intervention by an average of 132.6 minutes/day (d = .83) whereas the control group did not significantly change their weekday SB. This hybrid intervention was effective at both engaging participants and reducing SB; it also has the potential for broad dissemination due to its use of widely-available technology to support delivery by paraprofessionals with limited training.

CORRESPONDING AUTHORS: Sara M. St. George, PhD, University of Miami Miller School of Medicine, Miami, FL, 33136; s.stgeorge@med.miami.edu; Christine Pellegrini, PhD, Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; c-pellegrini@northwestern.edu; Jaclyn P. Maher, M.S., The Pennsylvania State University, University Park, PA, 16802; jpm5092@psu.edu

Symposium 48 1:45 PM-3:00 PM

MIND THE GAPS: USING THEORY-BASED TOBACCO PREVENTION AND CONTROL RESEARCH TO INFORM REGULATORY SCIENCE

Marcella H. Boynton, PhD[1], David B. Portnoy, PhD, MPH[2], Seth M. Noar, PhD[3], Brian Flaherty, PhD[4], Rachel Grana, PhD, MPH[5]

[1]University of North Carolina at Chapel Hill, Chapel Hill, NC; [2]U.S. Food and Drug Administration, Silver Spring, MD; [3]UNC Chapel Hill, Chapel Hill, NC; [4]University of Washington, Seattle, WA; [5]National Cancer Institute, Bethesda, MD

Tobacco use is one of the leading causes of preventable death, both in the United States (U.S.) and internationally. Many governments have put regulations in place aimed at informing the public of the dangers of tobacco and at decreasing the negative health impact of tobacco-related health conditions. In 2009, the landmark passage of the Family Smoking Prevention and Tobacco Control Act gave the Food and Drug Administration (FDA) new authorities to regulate tobacco products. As a result of this regulatory expansion, there is a substantial need for innovative, theory-based tobacco research to inform FDA efforts. In response, a number of tobacco-related studies and research centers have recently been funded, thereby creating major new opportunities for health behavior researchers to contribute to tobacco prevention research. The purpose of this symposium is to highlight three studies that employ a theory-based exploration of issues directly relevant to tobacco regulatory science as well as to identify gaps in the research literature that, when addressed, will further facilitate the successful implementation of evidence-based tobacco policy, ultimately decreasing tobacco use.

Symposium 48A

GRAPHIC CIGARETTE PACK WARNINGS: A META-ANALYSIS OF EXPERIMENTAL STUDIES

Seth M. Noar, PhD

Objective. Graphic warnings on cigarette packs are a global tobacco control strategy that the Food and Drug Administration (FDA) is trying to implement in the U.S. To inform international research and public policy, we conducted the first meta-analysis of the graphic cigarette pack warnings experimental literature.

Data sources. We systematically searched seven computerized databases in April of 2013 using several search terms. We also searched reference lists of review articles and all primary articles that met inclusion criteria.Study selection. We included experiments that reported data on both graphic and text-only cigarette pack warnings. Thirty-five articles reporting data on 48 independent samples (N=33,613) met criteria.Data extraction and synthesis. Two independent coders coded all study characteristics. We computed effect sizes from data extracted from study reports and combined them using random effects meta-analysis.Results. We organized the wide array of dependent variables assessed in studies into a conceptual model based upon communication and behavioral theory. Graphic warnings were more effective than text-only warnings for 20 of 25 outcomes (all $p < .05$). Relative to text-only warnings, graphic warnings 1) attracted and held attention better; 2) garnered stronger warning reactions (e.g., fear); 3) elicited more negative pack attitudes and negative smoking attitudes; and 4) more effectively increased intentions to not start smoking and to quit smoking. Participants also perceived graphic warnings as being more effective than text-only warnings. However, graphic warnings elicited more reactance than text-only warnings and had no observed effects on some outcomes, including beliefs about smoking harms and self-efficacy.Conclusions. The evidence from this international body of literature supports graphic cigarette pack warnings as a more effective policy than text-only warnings. Gaps in the research literature include a lack of assessment of smoking behavior and a lack of theoretical research on how warnings exert their effects.

Symposium 48B

TOWARD BETTER CHARACTERIZING VARIABILITY IN CIGARETTE SMOKING AMONG PRIORITY POPULATIONS

Brian Flaherty, PhD

Tobacco-related health disparities (TRHD) among under-served populations such as African Americans (AA) and Latinos are a significant public health challenge. Reduction or elimination of disparities likely will require multiple avenues of intervention, from individual to regulatory. Correspondingly, factors thought to contribute to TRHD span the range from individual to societal. One key to our understanding of TRHD is to clearly understand tobacco use within priority populations. We used exploratory latent class analysis to identify prevalent smoking patterns among AA women (*N*=1644), AA men (*N*=1346), Latina women (*N*=959) and Latino men (*N*=1292). Items included smoking frequency, menthol and light cigarette preferences, age of onset, duration of smoking, average cigarettes per day, and minutes to first cigarette. One advantage of this approach is that associations among all variables are used to group participants into homogeneous class or patterns of smokers. Associations between classes and socio-demographic risk factors for smoking were also examined to help understand potential underlying differentiation of the classes. Final models identified 9 classes for AA women, 8 classes for AA men, 7 classes for Latina women, and 9 classes for Latino men. The majority of classes identified comprised daily smokers, however, there was wide variability across the daily patterns. Gender differences emerged too, for example, Latinas had more variation in daily smoking compared to Latino males. Smoking among AA and Latino men and women exhibited great variability. Several profiles suggest that smoking may manifest differently for subgroups which may result in these smokers being overlooked by prevention efforts and decrease the efficacy of current smoking regulation. Findings from the current study begin a fuller understanding of smoking characteristics among AA & Latino male and female smokers which may, in turn, inform targeted prevention and broader regulatory efforts.

Symposium 48C

E-CIGARETTES: RESEARCH GAPS AND OPPORTUNITIES FOR HEALTH BEHAVIOR RESEARCHERS

Rachel Grana, PhD, MPH

E-cigarette products have been available in the US since about 2007, in a variety of tobacco, fruit and candy flavors, with marketing online and on television claiming products are useful for reducing/quitting smoking and as a way to "smoke anywhere." The FDA put forth proposed rulemaking in April 2014 to include e-cigarettes under their tobacco regulatory authority. FDA must consider the total effect of tobacco products on public health as part of their rulemaking, including risks and benefits among youth and adults, smokers, nonsmokers and former smokers. E-cigarette research is rapidly emerging and debate in the public health community about the potential risks and benefits of the products continues, with some viewing the products as "harm reduction" tools for smokers, and others as a potential threat to progress achieved in tobacco control, particularly with respect to prevention and smokefree laws. In 2011, 6.2% of U.S. adults had tried e-cigarettes and in 2012, 6.8% of youth had tried them, with use highest among current smokers. However, a recent analysis of U.S. data from 2011-2013 revealed a tripling of e-cigarette trial among youth who had never smoked conventional cigarettes and increased susceptibility to conventional cigarette smoking among never-smoking youth who had tried e-cigarettes compared to non-triers. Among both adults and youth, some studies show that e-cigarette trial is associated with intending and trying to quit smoking, but evidence supporting e-cigarette use for smoking cessation is lacking. Many studies published to date about e-cigarette use correlates are cross-sectional or among convenience samples, providing only a hint to the underlying motivations and correlates of use. This presentation will review studies published to date about correlates of e-cigarette use, and discuss the research gaps and opportunities for health behavior researchers. Health behavior research, particularly the application of health behavior theories and models, is critical to understanding the contextual determinants and psychosocial predictors facilitating/hindering e-cigarette use.

CORRESPONDING AUTHORS: Seth M. Noar, PhD, UNC Chapel Hill, Chapel Hill, NC, 27599; noar@email.unc.edu; Brian Flaherty, PhD, University of Washington, Seattle, WA, 98195-1525; bxf4@u.washington.edu; Rachel Grana, PhD, MPH, National Cancer Institute, Bethesda, MD, 20892; granar@mail.nih.gov

Symposium 49 1:45 PM-3:00 PM

MULTI-LEVEL RESEARCH CHANGING DIET AND PHYSICAL ACTIVITY AMONG UNDERSERVED POPULATIONS

Deborah Bowen, PhD[1], Lisa M. Quintiliani, PhD[2], Dori Rosenberg, PhD, MPH[3], Monica L. Baskin, PhD[4], Stephen Taplin, MD, MPH[5]

[1]University of Washington, Seattle, WA; [2]Boston University, Boston, MA; [3]Group Health Research Institute, Seattle, WA; [4]University of Alabama at Birmingham, Birmingham, AL; [5]National Institutes of Health, Bethesda, MD

Research aimed at changing multiple levels (individual, inter-personal, organizational, policy) is a relatively new area of intervention design and analysis, but one that might yield productive intervention findings if evaluated. This symposium presents innovative multi-level research to improve methods of increasing and maintaining health-enhancing physical activity and dietary changes to make meaningful and lasting change in health. We will present the baseline data and preliminary results of three separate studies, each a multi-level study targeting a population that needs research attention. These multi-level interventions all have potential to be generalizable, scalable, implementable, and sustained in real-world settings. Each of these interventions, if efficacious, could push the target population along the continuum toward achieving the 2008 Physical Activity and 2010 Dietary Guidelines for Americans as appropriate to the participants' health, abilities, and conditions. The interventions to be presented include diverse strategies delivered at multiple levels. Each investigator will present the study design and intervention design, theoretical model, and short term diet and/or physical activity outcome data for their intervention. Investigators will also detail how they would refine their interventions and how they have made use of innovative partnerships within and across sectors of community to conduct this research. Dr. Lisa Quintiliani will present the short term results of a randomized trial in public housing developments to increase regular physical activity and healthy eating behaviors among ethnically diverse public housing residents. Dr Monica Baskin and colleagues will the results for a multi-level weight management intervention among rural Black women in the Deep South. Dr. Dori Rosenburg and colleagues will present the individual behavioral and built environment changes for a multi-level approach to changing physical activity among very old adults. We will close with a discussant from NCI, Dr. Stephen Taplin, who will comment on the commonalities and differences among the studies with implications for methodology and design of future multilevel intervention research.

Symposium 49A

IMPLEMENTATION AND EVALUATION OF A MULTI-LEVEL OBESITY INTERVENTION AMONG PUBLIC HOUSING RESIDENTS

Lisa M. Quintiliani, PhD

Introduction: Racial/ethnic minority and low-socioeconomic status populations often face both higher prevalence of obesity and chronic diseases. Weight loss interventions that are designed to have broad reach, address multiple levels of influence, and consider the particular needs of health disparity-facing groups may have a greater impact than interventions aimed solely at the individual level

Methods: The Healthy Families study is a group randomized trial, in which 5 housing developments were randomized to receive all intervention activities and 5 to an assessment only control group. Intervention activities were promoted by community health workers and targeted weight-related behaviors according to multiple environmental levels: community (e.g., walking groups, resource maps), housing development (health screenings, cooking demonstrations), consumer (mobile food bus), and information (social media).</p> Results: A cohort of 211 (intervention=116; control=95) women and daughter pairs formed the evaluation cohort (RR=46.44%). Overall, the majority of participants were Latino (63%), had public health insurance (79.1%), and have a high school education or less (64%). The only significant difference between randomized groups was race/ethnicity, with more Black or African American residents in the intervention group (28% vs. 19%, p=0.0146). The 1-year follow-up assessment is nearing completion, with results on weight (primary) and nutrition and physical activity behaviors (secondary) outcomes to be presented in Spring 2015. Challenges included implementing certain intervention activities year-round (e.g., walking groups during the winter months) and ensuring high numbers of participants from each development were involved in as many of the intervention activities as possible.

Conclusions: This multi-level intervention approach focused on weight is designed to have an impact on multiple environments in public housing, and to have high potential to be implemented after the conclusion of the research study

Symposium 49B

MULTILEVEL INTERVENTION FOR PHYSICAL ACTIVITY IN RETIREMENT COMMUNITIES (MIPARC)

Dori Rosenberg, PhD, MPH

Introduction: Older adults have high levels of inactivity. The built environment is known to impact older adult physical activity (PA). We examined the effects of a multilevel intervention for physical activity in retirement communities (MIPARC) based on the ecological model.

Methods: Participants (N = 11 sites; mean age = 84) were randomized to receive an attention control (group-based healthy aging education; N = 156) or the MIPARC intervention (N = 151). MIPARC targeted individual-level personal and interpersonal variables (e.g. preferences, confidence, and social support through 4 health coaching calls and biweekly in-person group meetings led partially by trained peer leaders), changing perceptions of the built environment (site and neighborhood walking route maps and peer-led events on site), and advocacy training for changes to the built environment. PA was measured with a waist worn accelerometer (Actigraph GT3X) at baseline and 6 months using a threshold of minutes spent at greater than 760 counts per minute. Generalized linear mixed models were conducted to examine between group changes in PA while adjusting for educational cluster, accelerometer wear time and demographics.

Results: Women receiving the MIPARC intervention had an increase of 66 minutes per week and men had a 131 minute increase at 3 months compared to no increase among controls (all p's < 0.01). Findings remained elevated above baseline at 6 months in men (p's <0.01). MIPARC resulted in several built environment changes (e.g. increasing crossing times at intersections) and successful peer led events (such as group walks). All sites had peer leaders that continued the program after 6 months.

Conclusions: This study provides evidence that a multilevel approach is effective in improving physical activity among very old adults. We believe our approach will lead to improved maintenance of PA due to structural changes to the environment and trained peer leaders being able to continue programmatic efforts and will be able to assess this with 12 month results which will be collected.

Symposium 49C

MULTILEVEL INTERVENTION FOR WEIGHT LOSS AMONG AFRICAN AMERICAN WOMEN IN THE RURAL DEEP SOUTH

Monica L. Baskin, PhD

Introduction: Obesity is a risk factor for cancer. African American women (of whom over 80% are overweight or obese) and rural residents are at particularly high risk. Rural communities often have limited health promoting environments. As part of an ongoing academic-community partnership to reduce cancer disparities, this study tests a multi-level weight loss intervention among African American women living in rural Alabama and Mississippi.

Methods: Counties (N=8) were randomized to a group-based weight loss program (Group 1) or group-based weight loss program plus community-level interventions (Group 2). The group-based program targets individual- and interpersonal-level factors (e.g., self-monitoring, goal setting, stress management, social support). In Year 1, participants attend face-to-face meetings (weekly for 6 months, tapered to monthly) led by trained local staff. In Year 2, participants receive monthly motivational phone calls from trained community health advisors. Group 2 also receive funds to implement community-level strategies to support healthy eating and physical activity. Measured BMI, waist circumference, and clinical outcomes (e.g., blood pressure, lipids, glucose) were evaluated at baseline and 6-months to assess preliminary findings.

Results: women (Group 1=154; Group 2=255) enrolled in the study. Mean age was 46.5±9.9 and BMI was 38.5 ± 8.05 at baseline. Interim analyses suggested mean improvements in weight status and nearly all clinical outcomes across both groups. Magnitude of improvement from baseline to 6-month was generally higher for Group 2 than Group 1: BMI (-1.21 ±1.85 vs. -1.09±2.79), waist circumference (cm) (-4.03±7.13 vs. -1.32±6.59), systolic blood pressure (mmHG) (-4.98±15.84 vs.1.26±12.90), diastolic blood pressure (mmHG) (-3.16 ±10.20 vs. 1.91±8.90), triglycerides (mg/dL) (-26.12±102.49 vs. 15.95±76.57), and glucose (mg/dL) (-0.95±14.8 vs. 1.98±14.49). Conclusions: This study supports the effective translation of a multi-level weight management intervention in rural communities in the Deep South. Preliminary findings suggest improvements in health outcomes and good potential for program sustainability.

CORRESPONDING AUTHORS: Lisa M. Quintiliani, PhD, Boston University, Boston, MA, 02459; lisa.quintiliani@bmc.org; Dori Rosenberg, PhD, MPH, Group Health Research Institute, Seattle, WA, 98101; rosenberg.d@ghc.org; Monica L. Baskin, PhD, University of Alabama at Birmingham, Birmingham, AL, 35244-4410; mbaskin@uabmc.edu

Symposium 50 1:45 PM-3:00 PM

WHAT IS THE NEXT-GENERATION PIPELINE FOR DEVELOPING AND EVALUATING HEALTH BEHAVIOR INTERVENTIONS?

Eric B. Hekler, PhD[1], William T. Riley, PhD[2], Linda M. Collins, PhD[3], Kevin Patrick, MD, MS[4]

[1]Arizona State University, Phoenix, AZ; [2]National Institutes of Health, Bethesda, MD; [3]The Pennsylvania State University, State College, PA; [4]University of California, San Diego, La Jolla, CA

BACKGROUND: There is increased recognition that there are problems with the current development and dissemination model for health behavior-change interventions. The classic development pipeline for behavioral interventions was modeled after pharmaceutical intervention practices and corresponded to a series of progressive phases. One of the earliest challenges to this paradigm was Glasgow et al's RE-AIM framework. Since Glasgow et al's seminal work, several alternative and complementary research pipelines for health behavior-change interventions have been proposed. PURPOSE: The purpose of this symposium is to present emerging approaches to facilitate more rapid knowledge generation, dissemination an implementation of potent health behavior-change interventions. PLAN: The first presenter will discuss his work on establishing a Rapid, Relevant, and Responsive (R3) research strategy. The second presenter will describe her Multiphase Optimization Strategy (MOST) for developing optimized interventions. The third presenter will describe an emerging research pipeline, Agile Science, which is applying lessons and methods from the technology industry (e.g., Agile Software development, user-centered design, and Lean Start-Up methods) to the development of health behavior-change interventions. Finally, the discussant for this symposium will summarize key points from the talk but also describe his efforts developing a Health Data Exploration Network which is exploring how to capitalize on new sources of personal health data to accelerate and open up behavioral science research and practice.

Symposium 50A

AGILE SCIENCE

Eric B. Hekler, PhD

There is increasing recognition that the current process for creating behavioral interventions is inefficient and producing minimally potent interventions. Lessons from other sectors (e.g., Agile software, Lean Start-Up, and User-Centered Design) provide examples for improving the efficiency and impact of intervention research. The goal of this part of the symposium is to describe the on-going development of a research development model that borrows from other sectors, particularly Agile Software Development, to establish an alternative pipeline for research development. Similar to the Agile Software Manifesto, Agile Science includes high-level values and guiding principles that can be used to support a constant evaluation of the methods used to achieve these values. In addition, Agile Science places strong emphasis on breaking down the development of behavioral interventions into small, actionable, and testable "sprints" that can facilitate a rapid, evidence-based development of a behavioral intervention. Based on a grant from the Robert Wood Johnson Foundation, the presenter and colleagues are actively developing both the Agile Science Methodology and an accompanying technology tool that can support the use of the methodology. A report on the on-going development of Agile Science Methods will be discussed during this talk.

Symposium 50B

RAPID, RELEVANT, AND RESPONSIVE RESEARCH

William T. Riley, PhD

The current health research pipeline for behavioral interventions is painstakingly slow. This slow pace often corresponds to research findings that are often obsolete by the time they have been disseminated. The purpose of this symposium is to describe the current state of the research on a Rapid, Responsive, and Relevant (R3) research pipeline. The purpose of R3 is to delineate alternative best practices for streamlining the entire research enterprise. Key strategies to incorporate into R3 include increased greater stakeholder involvement, utilization of more innovative research designs, streamlining the review processes, and creating and/or better leveraging research infrastructure. An important initial strategy currently being examined within the R3 framework is the development of better strategies for supporting early-stage pilot work. In addition, a broader discussion on the requirements for culture change within the research community will be emphasized with a shift from emphasizing methodological rigor only to also valuing responsiveness, relevance, and reach.

Symposium 50C

MULTIPHASE OPTIMIZATION STRATEGY

Linda M. Collins, PhD

The vast majority of behavioral interventions that are tested within randomized controlled trials include multiple components to the intervention. For example, the diabetes prevention program, an evidence-based weight loss intervention, includes 16 unique components. While the results from this final RCT can support insights on the utility of this overall package, the traditional development model does not foster optimization of the interventions to ensure the utility of each component within the intervention. The purpose of this talk will be to describe the multiphase optimization strategy (MOST). MOST is a comprehensive, principled, engineering-inspired framework for optimizing and evaluating multi-component behavioral interventions. While MOST does include a randomized controlled trial (RCT) for evaluation of the intervention package, it also includes other phases to the research focused on intervention optimization based on criteria selected by the scientist. Optimization can focus on other criteria such as the development of the most cost-effective, or rapidly completed behavioral intervention for achieving some pre-specified criterion goal. MOST is designed to be a pragmatic, resource-efficient strategy for developing optimized behavioral interventions.

CORRESPONDING AUTHORS: Eric B. Hekler, PhD, Arizona State University, Phoenix, AZ, 85003; ehekler@asu.edu; William T. Riley, PhD, National Institutes of Health, Bethesda, MD, 20892; wiriley@mail.nih.gov; Linda M. Collins, PhD, The Pennsylvania State University, State College, PA, 16801; lmcollins@psu.edu

Friday
April 24, 2015
3:15 PM-4:45 PM

Paper Session 26 3:15 PM-3:33 PM

THE RELATIONSHIP OF ANXIETY AND DEPRESSION TO SUBJECTIVE WELL-BEING IN A MAINLAND CHINESE SAMPLE

Amy Wachholtz, PhD, MDiv, MS[1], Christopher Malone, BA[2]

[1]University of Massachusetts Medical School, Worcester, MA; [2]Univ of Mass Medical School/Mass School of Prof Psych, Worcester, MA

Objective: While most of the Chinese population resides in mainland China, research examining mental illness in China has focused on major mental illness in semi-autonomous regions of the country (e.g. Hong Kong, Taiwan). Political, social, and cultural barriers have stymied research assessing mental illness in mainland China resulting in a need for mental health information of this population. This present study examines less severe forms mental illness in a mainland Chinese sample.
Methods: Standardized surveys in simplified Chinese measuring the degree of anxiety and depressions (Hospital Anxiety and Depression Scale) and multiple aspects of well-being (FACIT–SP-NI, and Body Mind Spirit Well-Being Inventory) were administered to 60 mainland Chinese residents (M= 29.6 years, SD=10.12).
Results: Depression and anxiety were significantly correlated with multiple domains of psychological, physical, and spiritual well-being ($p < .05$'s) except for the Faith measure of the FACIT-SP Scale.

Conclusion: The results demonstrate that depression and anxiety have a strong inverse relationship to mainland Chinese residents' perceptions of well-being. The results of this study support the use of survey measures in research conducted in mainland China while simultaneously cautioning against the use of western focused spirituality measures. This study both validates the impact of affect on well-being while expanding the limited research concerning anxiety and depression among mainland Chinese residents.

CORRESPONDING AUTHOR: Amy Wachholtz, PhD, MDiv, MS, University of Massachusetts Medical School, Worcester, MA, 01655; amy.wachholtz@umassmemorial.org

Paper Session 26 3:33 PM-3:51 PM

DIAGNOSIS AND TREATMENT OF DEPRESSION AMONG LATINO MSM LIVING WITH HIV/AIDS ON THE U.S.-MEXICO BORDER

Oscar Beltran, Ph.D.[1], Michele G. Shedlin, PhD[2]

[1]University of Texas at El Paso, El Paso, TX; [2]NYU, NYC, NY

Latino men who have sex with men (MSM) is one of the minority groups disproportionally affected by HIV/AIDS. Structural barriers and cultural factors affect the way that this group seeks and experiences mental health services. This is especially true for Latino MSM living on the U.S.-Mexico border. This qualitative research is part of a larger study which focused on antiretroviral adherence in a US-Mexico Border community-based clinic. A sub-sample of 40 Latino MSM living with HIV/AIDS were interviewed to explore their experience with health services and to identify factors affecting their mental health. Data were collected using in-depth semi-structured interviews, observation, and a self-reported depression measure (BDI-II) for triangulation purposes. Interviews were recorded and transcribed verbatim by the research team. The coding, content extraction, and thematic analysis were conducted using qualitative data analysis software. Descriptive statistics were used to present sample demographics, proportions, and depression scores. Results indicated that 97.5% (n=39) of participants reported depressive symptoms in both the interview and the BDI-II. From those participants who reported depressive symptoms, 25% (n=10) fell under the "severe depression" category of the BDI-II, and only 30% of the total sample (n=12) were receiving antidepressants and/or counseling services. Access to affordable healthcare services, job insecurity, and border violence were the primary factors affecting participants' care seeking for depression. An important gap in the management and treatment of depression in this population was identified. Strategies to ensure optimal care of Latino MSM in the region require an understanding of the cultural and socio-political context of the U.S.-Mexico border region as well as frequent screening and early treatment of depression.

CORRESPONDING AUTHOR: Oscar Beltran, Ph.D., University of Texas at El Paso, El Paso, TX, 79968; obeltran@miners.utep.edu

Paper Session 26 3:51 PM-4:09 PM

MENTAL HEALTH IN CHINA: STIGMA, FAMILY OBLIGATIONS, AND THE POTENTIAL OF PEER SUPPORT

Shelly Yu, MPH[1], Sarah Kowitt, MPH[2], Edwin Fisher, PhD[3], Gongying Li, Professor[4]

[1]The Advisory Board Company, Chapel Hill, NC; [2]UNC Chapel Hill, Carrboro, NC; [3]UNC Chapel Hill, Chapel Hill, NC; [4]Institute of Behavioral Medicine, Jining Medical University, JINING, 272013, Shandong province, China., Jining, NC, China, Peoples Rep

Although the exact prevalence of mental illness in China is unknown, research has suggested a substantial burden exists with multiple barriers preventing individuals from seeking formal and informal care. This study explored how stigma and familial obligation influenced accessibility of social support for patients with depression in China. Semi-structured qualitative interviews were conducted with five psychiatrists and 15 patients from different wards at a psychiatric hospital in Jining, Shandong Province of China. Using a combination of deductive and inductive codes, emergent patterns across transcripts were identified. Results indicated that patients reported a variety of barriers that prevented them from a) receiving medical treatment for depression and b) relying on informal social support from family members. Specifically, patients reported concerns about experiencing stigma amongst themselves and family members (i.e., “affiliate stigma”) and worried about burdening family members with their mental health-related problems. Additionally, patients reported minimizing psychological symptoms by focusing on somatic concerns (e.g., fatigue, pain) and described community norms that placed individuals as responsible for the source of mental illness—both of which reduced their willingness to seek professional help. Circumventing these barriers, peer support (i.e., support from others with depression) was viewed by patients as an acceptable means of exchanging information and relying on others for support without burdening those within their social networks. These findings suggest that due to the gaps in the accessibility of formal and informal care for mental health, peer support represents an important source of information, camaraderie, and assistance for those with depression. Community-based peer support programs emphasizing confidentiality and communal activities could be designed to help reduce the burden of unmet mental health care need in China.

CORRESPONDING AUTHOR: Sarah Kowitt, MPH, UNC Chapel Hill, Carrboro, NC, 27510; kowitt@email.unc.edu

Paper Session 26 4:09 PM-4:27 PM

DOES PERCEIVED DISCRIMINATION AFFECT DEPRESSION AMONG IMMIGRANTS IN A NEW DESTINATION?

Chaelin Karen Ra, MPH[1], Jimi Huh, PhD[1], Youngtae Cho, Ph.D.[2]

[1]University of Southern California, Los Angeles, CA; [2]Seoul National University, Seoul, , Korea, Republic Of

Background: Previous studies demonstrated the positive association between perceived discrimination and depression in the countries that traditionally hosted immigrants. However, recent trends in international migration show that there has been a significant increase of immigrant population in East Asian countries. These newer host countries have different social contexts from traditional ones. Yet mental health among immigrants and its relationship to discrimination in new receiving countries is poorly understood. Thus, this study aimed to examine the association between perceived discrimination and depressive symptoms (e.g. feeling “blue”) among immigrants in one of the newer host countries, South Korea. Moreover, our team investigated if acculturation and social support play as moderators to depressive symptoms.Methods: This study used survey data from the 2012 Korean Social Survey on Foreign Residents (N=1337), restricted to adults 20 years or older. We combined 7 questions to measure discrimination and 6 questions (Kessler 6) to measure depressive symptoms. Two proxy measures were used for the level of acculturation– Korean language fluency and years lived in South Korea. Relevant social support was also measured with 3 items, having at least one close friend from – same ethnic, Korean and other group. Multiple logistic regression models were conducted to estimate the association between perceived discrimination and social support to depressive symptoms among immigrants in South Korea.Results: Perceived discrimination showed a strong association (0.097, $p < .0001$) with depression among immigrants controlling for sociodemographic characteristics (sex, age, educational attainment, household income, country of origin and current visa status), level of acculturation (language fluency and length of stay) and social support (within the same ethnic group, from Korean friends and from others). Furthermore, fluency in Korean language (-0.05, $p=0.03$) and social support from Korean friends (-0.13, $p=0.07$) moderated the effects of perceived discrimination on depressive symptoms.Conclusion: Community-level interventions providing immigrants opportunities to increase social network with members in a host country might be helpful resources for improving mental health among immigrants in South Korea.

CORRESPONDING AUTHOR: Chaelin Karen Ra, MPH, University of Southern California, Los Angeles, CA, 90004; chaelinr@usc.edu

Paper Session 26 4:27 PM-4:45 PM

QUEER BLUES! DEPRESSION IN THE LGBT COMMUNITIES: SELF-ESTEEM, GUILT AND PERCEIVED STRESS

AJ Guerrero, B.A.[1], Mark Vosvick, M.ED., MBA, PhD[2]

[1]University of North Texas, Round Rock, TX; [2]University of North Texas, Denton, TX

Lesbians, gay men, bisexuals and transgender persons (LGBT) are at risk for stigmatization and discrimination for their sexual and gender minority status, which can contribute to mental health issues such as minority stress (Meyer, 2003). Perceived stress is related to depression (Rusli, Edinmansyah & Naing, 2008). Research suggests that LGBT people are likely to be at risk for depression (Cochran, Sullivan & Mays, 2003). Research suggests a negative association between self-esteem and depression (Lakey, 2014). Meyer (2003) suggests LGBT people may hide their sexual or gender identity out of guilt or fear. This concealment of identity may cut off ties with social support and can negatively affect levels of depression (Major & Gramzow,1999).We gathered self-report data from a stratified convenience sample of 147 self-identified LGBT participants recruited from community-based organizations in the Dallas/Fort Worth area. We measured guilt using *Morality-Conscience Guilt subscale* in the Revised Mosher Guilt Inventory (Mosher, 1998; $\alpha = .90$), self-esteem using the Rosenberg Self-Esteem Scale (Rosenberg, Schooler & Schoenbach, 1989; $\alpha = .78$), perceived stress using the Perceived Stress Scale (Cohen, Kamarck & Mermelstein, 1983; $\alpha = .84$) and depression using the Center for Epidemiological Studies Depression Scale (Radloff, 1977; $\alpha = .85$).Controlling for age, education, gender, ethnicity and sexual orientation, our hierarchical regression analysis revealed that self-esteem, guilt and perceived stress accounted for 59% of the total variance in depression, adj. $R^2 = .59$, $F(3,123) = 51.21$, $p< .001$. Self-esteem [$\beta = -.45$, $t(147) = -5.19$, $p< .001$], guilt [$\beta = .15$, $t(147) = 2.18$, $p< .05$] and perceived stress [$\beta=.28$, $t(147) = 3.29$, $p=.001$] were significantly associated with depression.Our results add to the growing body of literature suggesting that mental health factors such as self-esteem and perceived stress may play important roles in health behaviors for the LGBT communities. Reducing guilt and perceived stress may be associated with positive health behavior change associated with a decrease in levels of depression. Our findings have the potential to improve health behaviors for LGBT persons by decreasing their levels of depression.

CORRESPONDING AUTHOR: AJ Guerrero, B.A., University of North Texas, Round Rock, TX, 78681; ajguerreroisnot@gmail.com

MERITORIOUS PAPER

Paper Session 27 3:15 PM-3:33 PM

CALORIE MENU LABEL USERS MAY BE SAVING CALORIES BY ORDERING HEALTHIER SIDES AND BEVERAGES

Jessie Green, MS, RDN[1], Punam Ohri-Vachaspati, PhD, RD[2]

[1]Arizona State University, Chandler, AZ; [2]Arizona State University, Phoenix, AZ

Background: Soon restaurants with 20 or more locations nation-wide will be required to post calorie information on menus. Menu labeling is part of the 2010 Affordable Care Act, and the FDA is in the final phase of releasing implementation guidelines. Previous results from our parent study show that those who reported using calorie information posted at a major fast-food chain purchased 146 fewer calories than those who did not use the information. Most of the sides and beverages offered at fast-food restaurants are energy dense and nutrient poor. The aim of the present study was to determine if patrons who used menu labeling were more likely to order healthier sides and beverages compared to those who did not report using calorie information.

Methods: Customer receipts and survey data was collected from 329 participants using street-intercept survey methodology at 29 restaurant locations of a major fast-food chain in low- and high-income neighborhoods throughout the Phoenix metropolitan area.Results: There were significant differences between users and non-users of menu labeling with regard to types of sides ordered ($p < 0.05$). Fewer (41.5%) patrons who reported using calorie menu labeling purchased an unhealthy side dish (ice cream, pastry or french fries), compared to those who did not use menu labeling when deciding what to order (57.4%). Among users, 7.5% ordered a healthy side dish (apples, a side salad, or yogurt) compared to 2.5% of non-users. Additionally, 50.9% of label users did not order a side dish compared to 40.1% of non-users. Significant differences were also observed in types of beverages ordered ($p < 0.01$). Calorie menu labeling users were more likely to order low- or no-calorie beverages than non-users (31.4% and 11.3%, respectively). Further, 31.3% of non-users ordered a soda whereas only 21.6% of users ordered a soda. Interestingly, 34.2% of non-users skipped ordering a beverage all together, whereas only 25.5% of users did. Conclusion: Calorie menu labeling use at fast-food restaurants was associated with healthier and fewer side and beverage orders. Sides and beverages ordered at fast-food restaurants can be major contributors to non-nutritive, energy-dense calories. Calorie menu labeling may be a useful tool to help patrons make more healthful decisions related to side and beverage orders.

CORRESPONDING AUTHOR: Jessie Green, MS, RDN, Arizona State University, Chandler, AZ, 85225; jegreen7@asu.edu

Paper Session 27 3:33 PM-3:51 PM

DOES REACTANCE TO GRAPHIC CIGARETTE PACK WARNINGS WEAKEN THEIR IMPACT?

Marissa G. Hall, MSPH[1], Paschal Sheeran, PhD[2], Seth M. Noar, PhD[3], Kurt M. Ribisl, PhD[4], Laura E. Bach, MPH[5], Noel Brewer, PhD[2]

[1]Gillings School of Global Public Health, University of North Carolina, Chapel Hill, NC; [2]University of North Carolina at Chapel Hill, Chapel Hill, NC; [3]UNC Chapel Hill, Chapel Hill, NC; [4]UNC Gillings School of Global Public Health, Chapel Hill, NC; [5]Gillings School of Global Public Health, University of North Carolina-Chapel Hill, Chapel Hill, NC

BACKGROUND Graphic cigarette warnings may encourage people to stop smoking, but they may also elicit reactance, a motivation to resist the warning. We sought to examine experimentally whether reactance weakens the impact of exposure to graphic warnings.

METHODS The experiment randomized a national sample of adult smokers to view 1 of 5 graphic warnings (n=510) or 1 of 5 text-only warnings (n=87) on a mocked-up cigarette pack on a computer screen. We measured reactance to warnings using our newly-developed Reactance to Health Warnings Scale (RaHW) Scale. The 27-item scale has high internal consistency across its 9 subscales (mean α=0.81) and robust 3-week test-retest reliability (mean r=0.66). The outcome was perceived effectiveness, assessed using 3-items that asked smokers to evaluate how much having the warning on their cigarette packs would make them want to quit smoking, make them concerned about the health effects of smoking, and discourage non-smokers from starting smoking (α=0.83).

RESULTS Smokers rated graphic warnings as more effective than text-only warnings (β=0.35, p<.01). However, graphic warnings elicited more reactance on 4 of the scale's 9 dimensions: anger, perceived exaggeration, government interference and manipulation (all p<.05). Furthermore, mediational analyses showed that these 4 dimensions of reactance each suppressed the overall positive relationship between graphic warning exposure and perceived effectiveness (p<.05).

CONCLUSION Smokers perceived graphic cigarette warnings as more effective than text-only warnings, but reactance to the warnings weakened this effect. Future research should confirm these findings in a study with longer-term behavioral outcomes and examine whether graphic warnings that elicit less reactance are more effective.

CORRESPONDING AUTHOR: Marissa G. Hall, MSPH, Gillings School of Global Public Health, University of North Carolina, Chapel Hill, NC, 27599-7440; mghall@unc.edu

Paper Session 27 3:51 PM-4:09 PM

SOCIAL REACTIONS TO GRAPHIC CIGARETTE PACK WARNINGS: A PILOT STUDY

Marissa G. Hall, MSPH[1], Laura E. Bach, MPH[2], Seth M. Noar, PhD[3], Kurt M. Ribisl, PhD[4], Noel Brewer, PhD[5]

[1]Gillings School of Global Public Health, University of North Carolina, Chapel Hill, NC; [2]Gillings School of Global Public Health, University of North Carolina-Chapel Hill, Chapel Hill, NC; [3]UNC Chapel Hill, Chapel Hill, NC; [4]UNC Gillings School of Global Public Health, Chapel Hill, NC; [5]University of North Carolina at Chapel Hill, Chapel Hill, NC

OBJECTIVE. Graphic warnings on cigarette packs may spark social interactions that in turn influence smokers' reactions to the warnings. We aimed to describe social interactions about graphic warnings in a longitudinal pilot study of smokers. METHODS. We labeled 33 adult US smokers' cigarette packs with 1 of 5 graphic warnings for 4 weeks, and smokers completed a survey once per week. Smokers were highly compliant with the study protocol, smoking 93% of their cigarettes from labeled packs. We measured the frequency and content of conversations about the warnings, as well as frequency of talking about the health risks of smoking and quitting smoking. RESULTS. Nearly all smokers (94%) had at least one conversation about the warnings during the 4 weeks, talking to others about the warning 2.3 times per week. Among participants who had at least one conversation about the warning, 87% talked to a friend, 61% talked to a family member besides a spouse or child, 45% talked to a spouse or significant other, 39% talked to a co-worker, 29% talked to someone they did not previously know, 13% talked to children, and 13% talked to a medical professional. Smokers reported talking about whether the warning would encourage smokers to quit smoking (77%), whether the warning would make the participant want to quit smoking (77%), whether the warning would discourage non-smokers from starting to smoke (71%), and whether graphic warnings should be on cigarette packs (65%). Smokers talked about the health risks of smoking more frequently after one week of exposure to graphic warnings, compared to the week prior to beginning the study as reported at baseline (0.9 vs. 2.8 times per week, $p < .05$). Similarly, smokers talked about quitting smoking more frequently after one week of exposure compared to the week before beginning the study (1.6 vs. 2.5 times per week, $p < .05$). CONCLUSIONS. Graphic warnings sparked conversations about the warnings, quitting smoking, and the health risks of smoking. Social reactions to graphic warnings are understudied and should be examined as a potential moderator of behavior change given the high prevalence of conversation found in our study.

CORRESPONDING AUTHOR: Marissa G. Hall, MSPH, Gillings School of Global Public Health, University of North Carolina, Chapel Hill, NC, 27599-7440; mghall@unc.edu

Paper Session 27 4:09 PM-4:27 PM

WORDS VERSUS NUMBERS: HEALTH INFORMATION PREFERENCE ACROSS ETHNICITY AND LANGUAGE

Mallory G. Cases, MPH, CPH, Allyson L. Varley, MPH, Michael Crawford, MPH, Peter S. Hendricks, PhD

University of Alabama at Birmingham, Birmingham, AL

INTRODUCTION: Health numeracy, the skills needed to understand and use quantitative health information, is linked to greater cancer screening engagement, perception of provider communication quality, and health information seeking, as well as more accurate risk perceptions. Most health communication includes numbers and statistics and it is vital patients have basic numeracy skills. Inadequate population-wide health numeracy renders most health messages misunderstood. METHODS: Health Information National Trends Survey is a nationally representative sample collected in 2007 to address the American public's access to and use of cancer-related information. We compared Non-Hispanic English-speakers (n=3443), Hispanic English-speakers (n=152), and Hispanic Spanish-speakers (n=155) to better examine the influence of linguistic and ethnic differences in factors related to health numeracy. RESULTS: Non-Hispanic English-speakers reported greater understanding of medical statistics and less discomfort with numbers and statistics than both Hispanic groups. Spanish-speaking Hispanics reported more frustration when searching for health information than both English-speaking groups. "When told the chances of something," English-speaking Non-Hispanics reported a greater preference for numbers and statistics over words than both Hispanic groups, English-speaking Hispanics reported a greater preference for numbers and statistics over words than Spanish-speaking Hispanics, and Spanish-speaking Hispanics reported a greater preference for words over numbers and statistics than both English-speaking groups. All groups report an equivalent dependence on numbers and statistics when making health decisions. DISCUSSION: Health communication appears to be tailored to Non-Hispanic English-speakers at some expense to Hispanic English-Speakers and Hispanic Spanish-speakers. Health communication interventions should consider tailoring to the growing Hispanic population in the U.S., with equal emphasis placed on words as well as numbers and statistics.

CORRESPONDING AUTHOR: Mallory G. Cases, MPH, CPH, University of Alabama at Birmingham, Birmingham, AL, 35294; mgcases@uab.edu

Paper Session 27 4:27 PM-4:45 PM

USING IMAGES OF NEGATIVE HEALTH CONSEQUENCES TO INCREASE HEALTHY FOOD CHOICES

Gareth J. Hollands, MA MSc PhD, Theresa M. Marteau, BSc, MSc, PhD, FMedSci, AcSS

Behaviour and Health Research Unit, University of Cambridge, Cambridge, , United Kingdom

Objective: To examine the effect of presenting images of foods paired with images of potential health consequences of consumption, on food choice behavior and implicit and explicit attitudes.Methods: Participants (N=711) were randomly allocated to one of six conditioning procedures that paired images of i) energy-dense snack foods and ii) fruit, with each of the following: i) images of negative health consequences; ii) images of positive health consequences; iii) a no image control. The primary outcome was food choice behavior assessed post-intervention. Implicit attitudes (pre- and post-intervention) and explicit attitudes (post-intervention) were also assessed.

Results: Pairing images of energy-dense snack foods with images of negative health consequences led to more healthy food choices in a behavioral preference task, with participants more likely to choose fruit rather than snack items, relative to positive and no image conditions. This relationship was mediated by changes in implicit attitudes.Pairing snack foods with positive images did not affect behavior. For images of fruit, neither pairing with negative nor positive images changed behavior.Conclusion: This study replicates and extends previous research showing that presenting images of unhealthy foods with those of negative health consequences increases healthy food choices. Pairing images of healthy foods with those of positive health consequences is not an equivalently effective way to increase healthy food choices.

CORRESPONDING AUTHOR: Gareth J. Hollands, MA MSc PhD, Behaviour and Health Research Unit, University of Cambridge, Cambridge, , CB2 0SR; gareth.hollands@medschl.cam.ac.uk

Paper Session 28 3:15 PM-3:33 PM

STRESS-EATERS: RELATIONSHIPS BETWEEN SUBJECTIVE AND OBJECTIVE STRESS AND EATING BEHAVIORS

Emily G. Lattie, M.S., Joyce A Corsica, Ph.D., Megan M Hood, Ph.D.

Rush University Medical Center, Chicago, IL

Stress can negatively influence eating behaviors in both animals and humans. To gain a better understanding of this phenomenon and to examine the multifaceted nature of stress and eating, this study examined the relationships between measures of subjective and objective stress and measures of eating behaviors.Study participants were adults (n = 53; 98% female; M age = 45.5 years, M BMI = 34.9, BMI range 24.4 – 59.8) who self-identified as stress-eaters. They completed the Perceived Stress Scale (PSS) and the Social Readjustment Rating Scale (SRRS) to measure perceived stress and objective life event stress, as well as measures of food craving (Food Craving Inventory-II; FCI-II), stress eating (Eating and Appraisal Due to Emotions and Stress Questionnaire; EADES) and mindful eating practices (Mindful Eating Questionnaire; MEQ) at a single time point. SRRS scores were used to categorize participants as being at low, moderate, or high risk for stress-related health issues. Analyses of variance (ANOVAs) were used to examine relations between SRRS scores and PSS, FCI-II, and MEQ scores. Pearson correlations were used to examine relations between PSS scores and both FCI-II and MEQ scores.Perceived stress and stressful life events were not related ($p > .25$). Higher perceived stress (PSS) was associated with more stress eating (EADES stress eating) and disinhibition, poorer emotional responses (MEQ disinhibition and emotional response scores), and greater cravings for sweets and carbohydrates (all p's < .05). Individuals at low risk for stress-related health issues reported marginally fewer carbohydrate cravings on the FCI-II ($p = .09$) and less distracted eating on the MEQ ($p = .06$) than those at high risk.These results provide support for subjective, or perceived, stress and objective, or life event, stress as distinct constructs among stress-eaters, with perceived stress serving as a more significant contributor to food craving and non-mindful eating. Interventions that target the perception of stress may be particularly effective in reducing problematic eating behaviors. Further, these results highlight the relation between stress and carbohydrate craving and suggest potential benefit in targeting high carbohydrate foods in stress-eating interventions.

CORRESPONDING AUTHOR: Emily G. Lattie, M.S., Rush University Medical Center, Chicago, IL, 60618; emily_g_lattie@rush.edu

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EATING BEHAVIOR AND EMOTIONAL STATE: DIFFERENTIAL EFFECTS OF IMPLICIT LIKING AND HEDONIC HUNGER

Hallie Espel, B.I.S., Meghan L. Butryn, PhD, Stephanie P. Goldstein, B.S., Evan Forman, PhD

Drexel University, Philadelphia, PA

Emotional eating is elevated among overweight and obese individuals, particularly women, and is known to promote overeating episodes and weight gain. Although implicit liking for highly palatable foods and appetitive drives for eating (hedonic hunger) contribute to overeating, their effects may differ depending on emotional state. We hypothesized that: (1) hedonic hunger would positively predict emotional eating; (2) implicit liking would predict both emotional eating and actual food consumption (in a neutral emotional state); and (3) the effect of hedonic hunger on emotional eating would be influenced by implicit liking.Overweight men and women ($N = 144$) completed measures of implicit liking for palatable foods (computerized implicit association task), hedonic hunger (Power of Food Scale), self-reported emotional eating (subscale of the Three-Factor Eating Questionnaire-R18), and palatable food intake under neutral conditions (sham taste test), prior to entering behavioral weight loss treatment.Emotional eating was predicted by hedonic hunger ($\beta = .59$; $p < .01$) and an interaction between hedonic hunger and implicit liking ($\beta = .22$; $p < .01$); thus, implicit liking predicted greater emotional eating, but only for those with high hedonic hunger. Neutral state food consumption was predicted only by implicit liking ($\beta = .23$; $p = .02$; controlling for BMI); no main effect of hedonic hunger or interaction effect was detected.Results indicated that hedonic hunger was strongly associated with emotional eating among overweight women. Furthermore, among those with high hedonic hunger, positive implicit liking for palatable foods corresponded to greater emotional eating. In contrast, only implicit liking appeared to promote more general overeating, under presumably neutral affective states (e.g., “mindless eating”). Thus, the effects of implicit liking and hedonic hunger on eating behavior may depend on emotional state. Results are limited by the use of a self-report measure for emotional eating, and replication is warranted using behavioral or experimental measures. Nonetheless, these findings highlight the importance of targeting both implicit liking and hedonic (appetitive) drives for eating in the treatment of overweight and obesity.

CORRESPONDING AUTHOR: Hallie Espel, B.I.S., Drexel University, Philadelphia, PA, 19104; hmespel@gmail.com

Paper Session 28 3:51 PM-4:09 PM

EXAMINATION OF THE EFFECT OF REGULAR EXERCISE AND EXERCISE DEPENDENCE ON QUALITY OF LIFE IN WOMEN WITH EATING DISORDERS

Brian Cook, PhD[1], Lisa Leininger, Ed.D.[2], Kendra Contente[2]

[1]California State University Monterey Bay, Seaside, CA; [2]California State University Monterey BAy, Seaside, CA

Recent research has found support for a mediation effect of exercise dependence (EDS) on the relationship between eating disorders and disease specific quality of life (EDQOL). A growing body of research suggests that exercise absent of exercise dependence may positively influence eating disorders and EDQOL. However, no studies have yet quantified the effect of EDS and regular exercise on EDQOL. Therefore, the purpose of this study was to compare the effect of regular exercise and EDS on EDQOL. We hypothesized that EDS will predict increases in EDQOL detriments. Our sample was 43 female university students who met criteria for anorexia nervosa or bulimia nervosa (*M* age=19.95+2.15 years, *M* body mass index [BMI]=21.61+3.37). Participants completed the Eating Disorder Diagnostic Scale (EDDS), Eating Disorders Quality of Life Instrument (EDQOL), EDS Scale (EDS), and Leisure -time Exercise Questionnaire (LTEQ). A series of multiple regressions analyses were performed with EDS and LTEQ scores regressed on each domain of EDQOL. Only EDS predicted detriments in overall EDQOL (β=.69, $p < .01$) and psychological (β=.48, p=.04), financial (β=.56, p=.02), and work domains of EDQOL (β=.60, p=.01). LTEQ (β=-.51, p=.03) and EDS (β=.67, $p < .01$) both predicted detriments in the physiological/cognitive domain of EDQOL. Our results are the first to quantify the effect of exercise pathology on EDQOL and distinguish the effect of regular exercise from exercise pathology on EDQOL. Results suggest that exercise in the absence of EDS may not be responsible for EDQOL detriments. These results support a growing body of research suggesting exercise in the absence of exercise pathology may be an effective behavioral medicine intervention for individuals with eating disorders.

CORRESPONDING AUTHOR: Brian Cook, PhD, California State University Monterey Bay, Seaside, CA, 93955; briancook@csumb.edu

Paper Session 28 4:09 PM-4:27 PM

OVERVALUATION OF SHAPE AND WEIGHT, BINGE EATING, AND EATING DISORDER PSYCHOPATHOLOGY IN ADULTS SEEKING WEIGHT LOSS TREATMENT

Sylvia Herbozo, PhD[1], Serena Stevens, MA[1], Elena Duong, BS[2], Elizabeth Wolpern, BA[1]

[1]Loma Linda University, Loma Linda, CA; [2]Loma LInda University, Loma Linda, CA

Prior research has shown that greater binge eating severity and eating disorder psychopathology is associated with overvaluation of shape and weight in individuals with binge eating disorder (BED). Few studies have focused on overvaluation of shape and weight in overweight and obese individuals without BED. The current study examined shape and weight overvaluation, binge eating, and other eating disorder psychopathology in an ethnically diverse sample of overweight and obese adults seeking weight loss treatment. Participants were 65 adults aged 18 to 74 ($M = 49.03$, $SD = 14.27$), with a mean body mass of 37.82 ($SD = 7.62$). Before the start of treatment, participants completed a battery of self-report questionnaires. Participants were categorized into a shape/weight overvaluation group (n = 36) or no shape/weight overvaluation group (n = 28) based on their responses to items assessing overvaluation of shape and overvaluation of weight which were averaged to form a composite score. Approximately 22% of participants in the shape/weight overvaluation group and 14.3% of those in the no shape/weight overvaluation reported binge eating, on average, at least once a week in the past 4 weeks, which meets diagnostic criteria for BED with regards to the frequency of binge eating. There were no significant group differences in the proportion of adults who engaged in such binge eating episodes. Result also indicated that the shape/weight overvaluation and no shape/weight overvaluation groups were not significantly different in terms of dietary restraint. However, the shape/weight overvaluation group had significantly higher levels of body dissatisfaction, eating concern, shape concern and weight concern. These findings suggest that overweight and obese adults with overvaluation of shape/weight may be at greater risk for binge eating given their higher levels of eating disorder psychopathology compared to those without such overvaluation. Additional research examining shape/weight overvaluation and associated factors in weight loss treatment seeking adults is needed to help inform intervention efforts for obesity and BED.

CORRESPONDING AUTHOR: Sylvia Herbozo, PhD, Loma Linda University, Loma Linda, CA, 92350; sherbozo@llu.edu

Paper Session 28 4:27 PM-4:45 PM

OBJECTIVE BINGE EATING PREDICTS BEHAVIORAL COMPENSATION FOLLOWING EXERCISE.

Rebecca L. Emery, B.A., B.S.[1], Michele D. Levine, Ph.D.[2]

[1]University of Pittsburgh, Pittsburgh, PA; [2]University of Pittsburgh Medical Center, Pittsburgh, PA

Although exercise produces an acute energy deficit, there is substantial variability in behavioral and biological responses to exercise that influence propensity for weight change. Indeed, some individuals compensate for exercise by increasing energy intake or decreasing energy expenditure, leading to a positive energy balance. This maladaptive pattern of behavioral compensation ultimately undermines the efficacy of exercise as a weight loss strategy. The present study aimed to identify individual differences that elevate risk for a positive energy balance following exercise. Participants were 48 overweight or obese (BMI ≥ 25), sedentary women. On average, women were 21.33 (*SD* = 2.09) years old and 62.5% were white. Women completed self-report measures of eating pathology and behavior and participated in two experimental conditions, exercise and nonexercise, one week apart in a counterbalanced order. Energy intake and energy expenditure were measured for 24-hours following each condition to compute an estimate of energy balance. Women were defined as compensators if they increased energy intake, decreased energy expenditure, or had a higher energy balance on the exercise day relative to the nonexercise day. Of the sample, 63% were compensators, with 57% compensating by solely increasing energy intake, 27% compensating by solely reducing energy expenditure, and 17% compensating by both increasing energy intake and reducing energy expenditure. Separate linear mixed effects models were used to identify predictors of behavioral compensation following exercise. Objective binge eating predicted behavioral compensation beyond relevant covariate effects, such that women who reported objective binge eating had a higher energy balance on the exercise day relative to the nonexercise day ($B = 742.37$; $SE = 347.85$; $p < .05$). Furthermore, women who reported objective binge eating were more sedentary ($B = 59.22$; $SE = 28.80$; $p < .05$) and less physically active ($B = -42.48$; $SE = 20.95$; $p < .05$) on the exercise day relative to the nonexercise day. These findings provide preliminary evidence that women who report current objective binge eating may benefit from additional self-regulatory techniques to address compensatory responses to exercise.

CORRESPONDING AUTHOR: Rebecca L. Emery, B.A., B.S., University of Pittsburgh, Pittsburgh, PA, 15221; rle21@pitt.edu

Paper Session 29 3:15 PM-3:33 PM

PATIENT CHARACTERISTICS ASSOCIATED WITH ENGAGEMENT IN A TYPE 2 DIABETES MHEALTH INTERVENTION

Lyndsay A. Nelson, PhD[1], Shelagh A. Mulvaney, PhD[2], Yun Xian Ho, PhD[3], Kevin B. Johnson, MD, MS[1], Chandra Y. Osborn, PhD, MPH[1]

[1]Vanderbilt University, Nashville, TN; [2]Vanderbilt University Medical Center, Nashville, TN; [3]Vanderbilty University Medical School, Cambridge, MA

Medication non-adherence among people with type 2 diabetes mellitus (T2DM) is common and associated with worse glycemic control. Mobile interventions can improve adherence, but rely on engagement that is often very low. We tested the relationships between patients' characteristics and 3-month engagement with a short messaging service (SMS) and interactive voice response (IVR) intervention. We recruited adults (N=80) with T2DM who were prescribed medications and had an SMS-enabled cell phone. We collected demographics, responses to the Short Test of Functional Health Literacy in Adults, a measure of adherence-related beliefs, the Patient Health Questionnaire-2, and reviewed medical charts. We used the SuperEgo platform to develop the Messaging for Diabetes (MED) intervention, which sent a daily 1-way text addressing barriers, a daily 2-way text assessing adherence, and a weekly IVR call with adherence feedback and open-ended questions. Spearman's rho, Mann–Whitney U, and Kruskal–Wallis one-way ANOVA tests examined relationships. Participants were 50.1 ± 10.5 years old; 67.5% female; 62.5% African American; 20% < $15K; 35% uninsured; 63.8% on insulin, with a T2DM duration of 9.6 ± 6.4 years and an A1c of 8.2% ± 2.0%. Participants replied to 84.1% of daily 2-way texts and 57.9% of weekly IVR calls. Sociodemographics, depressive symptoms and insulin use were not associated with replies to daily 2-way texts, but having less favorable adherence-related beliefs (ρ=.29, p=.02), less health literacy (ρ=.26, p=.02), and T2DM longer (ρ=-.25, p=.03) were each associated with fewer text replies. Gender, age, race, income, insulin use, and T2DM duration were not associated with weekly IVR responses, but having less education (ρ=.31, p=.01), less favorable adherence-related beliefs (ρ=.31, p=.01), less health literacy (ρ=-.31, p=.01), and more depressive symptoms (ρ=-.27, p=.02), were each associated with fewer IVR responses. Contrary to popular belief, age and race were not associated with text or call engagement, whereas adherence-related beliefs and health literacy were related to both, and should be addressed in future mHealth interventions. By targeting factors associated with low engagement, better adherence and health outcomes can be achieved more effectively.

CORRESPONDING AUTHOR: Lyndsay A. Nelson, PhD, Vanderbilt University, Nashville, TN, 37203; lyndsay.a.nelson@vanderbilt.edu

CITATION AND MERITORIOUS PAPER

Paper Session 29 3:33 PM-3:51 PM

HEALTH COMMUNICATION IN SOCIAL MEDIA: MESSAGE FEATURES PREDICTING USER ENGAGEMENT ON DIABETES-RELATED FACEBOOK PAGES

Holly Rus, B.A., Linda Cameron, Ph.D.

University of California, Merced, Merced, CA

Social media provides unprecedented opportunities for health communication. Identifying features of online health communications that predict user engagement can help leverage this global resource for enhancing health care, including self-management of chronic conditions such as diabetes. Health communications ($n = 500$) within the 10 most popular diabetes-related Facebook pages were analyzed to identify message features predictive of user engagement. Drawing on the Common-Sense Model of Illness Self-Regulation and health communication theory, we hypothesized that message features of imagery, social support and sharing, positive affect, positive self-identity as a person with diabetes, use of external website links, solicitation of user input, and illness representation attributes (symptoms, cause, consequences, control, and timeline) would predict higher levels of user engagement (number of likes, shares, and comments). Posts were identified as health communications based on criteria developed by the National Cancer Institute and coded for presence of message features. User response was measured using the total number of likes, shares, and comments within seven days of posting. Specific features predicted different forms of user engagement (i.e., liking, sharing, or commenting). Multi-level negative binomial regressions revealed that presence of imagery ($B_{likes} = 1.45$, $B_{shares} = 2.43$), social support ($B_{comments} = 0.97$), positive identity ($B_{shares} = 0.78$), solicitation of user input ($B_{comments} = 0.77$), negative affect ($B_{comments} = 1.07$), and consequence attributes ($B_{shares} = 0.88$) predicted higher user engagement while use of external links ($B_{likes} = -0.81$, $B_{shares} = -0.98$), negative affect ($B_{shares} = -0.91$), solicitation of user input, ($B_{shares} = -1.19$), and positive identity ($B_{comments} = -0.78$) predicted lower engagement (all *p*'s < .05). These findings hold promise for guiding targeted communication design in health-related social media.

CORRESPONDING AUTHOR: Holly Rus, B.A., University of California, Merced, Merced, CA, 95348; hrus@ucmerced.edu

Paper Session 29 3:51 PM-4:09 PM

BEHAVIORAL DESIGN TO FACILITATE MHEALTH PATIENT ENGAGEMENT

Robin C. Anthony Kouyate, PhD, MA, Calvin C. Wilhide, III., PhD, Malinda Peeples, RN, MS, CDE, Joseph Isenberg, MS, Anand K. Iyer, PhD, MBA

WellDoc, Inc, Baltimore, MD

mHealth behavioral design that translates theory, evidence, and best practices into a mobile health platform that drives ongoing user engagement has the potential to facilitate the delivery of effective self-management interventions. Little is known about how users engage with mHealth applications that support self-management in a real-world setting, and whether their natural patterns of usage facilitate exposure to interventions that deliver self-management feedback associated with improved behavioral outcomes (e.g. blood glucose pair checking, problem-solving), and ultimately clinical outcomes (e.g. A1c, glycemic control).For individuals with type 2 diabetes, studies have demonstrated that self-monitoring of blood glucose (SMBG) has the potential to contribute to glycemic control among insulin and noninsulin using patients. Evidence suggests that structured SMBG is most effective when BG data are gathered according to a regimen, interpreted, and utilized to make appropriate self-management decisions. This is an exploratory analysis of patient engagement, SMBG activity, and exposure to real-time feedback interventions in a theory and evidence-based mHealth product. SMBG feedback was operationalized as "real-time feedback coaching" that provides actionable messages to users when BGs values are recorded within two hours of checking. Data analyses were conducted of patient engagement data (N=100 patients) over a six-month period of using mobile prescription therapy (MPT) prescribed by 53 providers.The mHealth platform design facilitated exposure to the real-time feedback intervention with 71% of users recording BGs within two hours of BG checking, resulting in the delivery of 3,393 real-time tailored, and personalized feedback messages. The average age of users was 54 years (range: 25 - 77 years of age). Half of the patients were men and half were women. Among the 100 patients, 1% was not on glycemic medications, 36% took oral glycemic medications, 13% used non-insulin injectables, and 46% took insulin, and 4% did not record their medication.This is first in a series of analyses to explore engagement in mHealth and its impact on patient self-management behaviors in a real-world setting. Implications of the findings will be discussed in terms of mHealth intervention design. The study lays the foundation for future analyses data of patterns recorded in relation to behavioral and clinical outcomes.

CORRESPONDING AUTHOR: Robin C. Anthony Kouyate, PhD, MA, WellDoc, Inc, Baltimore, MD, 21202; rakouyate@welldocinc.com

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DIABETES EDUCATORS' INSIGHTS ON CONNECTING SMARTPHONES WITH ELECTRONIC DIABETES EDUCATION SYSTEM

Jing Wang, PhD, MPH, RN[1], Mirae Kim, BSNc[1], Linda M. Siminerio, PhD, RN, CDE[2]

[1]University of Texas Health Science Center at Houston School of Nursing, Houston, TX; [2]University of Pittsburgh Diabetes Institute, Pittsburgh, PA

Introduction: Chronicle Diabetes is a nationally used web-based system for diabetes education documentation with behavioral goal setting functions. However, ways to follow up with patient behavioral goals can be challenging for both patients and clinicians. Thus, we aim to seek educators' insights in developing an interface within Chronicle to transfer smartphone collected self-monitoring (SM) information from patients to diabetes educators to facilitate follow up with behavioral goals. Methods: We conducted a descriptive qualitative study including individual and group interviews to seek educators' perspectives in usability and interface development preferences in developing such a connected system. Educators can use the Chronicle Diabetes system to set behavioral goals with their patients. A protocol with open-ended questions was used to ask about educators' preferences which and how smartphone collected diet, physical activity (PA), and sleep information in Chronicle Diabetes system. Interview data were transcribed verbatim and analyzed for common themes. Results: Eight diabetes educators (3RNs, 5 RDs) with an average of 22 years practice, 13 years diabetes education experience, and 1.75 years using Chronicle Diabete system were recruited from Pittsburgh and Houston. Five themes emerged from the discussion. First, enthusiasm of diet and physical activity data was demonstrated, while sleep data was not emphasized as much. Second, educators value viewing detailed dietary macronutrients and PA data, however, they prefer different details depending on patients' needs and conditions, and in relation to their behavioral goals. Third, educators with different education background have various preferences on customization of diet and PA data and time intervals. Fourth, all liked integration of smartphone collected data into Chronicle Diabetes and preferrably with current electronic health record (EHR) systems. Five, a healthcare team and central EHR system need to be formed for educators to share summary of SM data with other providers. Conclusions: Flexibility for educators to track details of smartphone collected diet and PA information is needed, and integration into Chronicle Diabetes and EHR systems is valuable for educators to track patients and share with other health care team members.

CORRESPONDING AUTHOR: Jing Wang, PhD, MPH, RN, University of Texas Health Science Center at Houston School of Nursing, Houston, TX, 77030; jing.wang@uth.tmc.edu

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THE PREVENT ONLINE DIABETES PREVENTION PROGRAM: 2-YEAR TRIAL OUTCOMES

Cameron Sepah, PhD, Luohua Jiang, Anne Peters

UCSF Medical School, Omada Health, San Francsico, CA

PurposeSince the Diabetes Prevention Program (DPP) clinical trial showed that lifestyle intervention reduced the incidence of diabetes by 58%, numerous studies have translated the DPP in various settings and delivery mechanisms. However, no study to date has examined the impact of an online DPP lifestyle intervention beyond 1 year of follow-up. Thus, the purpose of this study was to evaluate the 2-year clinical outcomes of the *Prevent* online DPP trial. Methods220 participants previously diagnosed with prediabetes were recruited online and enrolled in Prevent, a DPP-based group lifestyle intervention that integrates a private online social network, weekly lessons, health coaching, and a wireless scale and pedometer. Participants underwent a core 16-week intensive lifestyle change intervention and were then offered to continue with a post-core lifestyle change maintenance intervention, with the entire intervention totaling 12 months. Participants' engagement, weight, and A1c were remotely tracked via the online website and biometric testing. ResultsOut of 220 enrollees, 187 participants met CDC inclusion for the core program and were followed for two years. Previously published results on 1-year outcomes showed that participants achieved an average weight loss of 4.8% at 12 months and 0.37% reduction in. At the current 2-year follow-up, these participants achieved an average weight loss of 4.0% and 0.40% reduction in A1c. ConclusionResults indicate that at 2-year follow-up, *Prevent* participants continue to show clinically significant reductions in weight and A1c. Thus, results suggest that online delivery platforms like *Prevent* can provide long-term behavioral intervention and follow-up, and achieve sustained clinical outcomes that have relevance to preventing chronic disease.

CORRESPONDING AUTHOR: Cameron Sepah, PhD, UCSF Medical School, Omada Health, San Francsico, CA, 94111; cameron@omadahealth.com

CITATION PAPER

Paper Session 30 3:15 PM-3:33 PM

TEACHING MEDICAL STUDENTS TO HELP PATIENTS QUIT SMOKING: RESULTS OF A 10 MEDICAL SCHOOL RANDOMIZED CONTROLLED TRIAL

Judith K. Ockene, PhD[1], Rashelle B. Hayes, PhD[1], Sybil Crawford, PhD[2], Linda C. Churchill, MS[2], Denise Jolicoeur, MPH, CHES[1], Michael Adams, M.D., FACP[3], Sean P. David, M.D., S.M., D.Phil.[4], Robin Gross, MD[5], Kathryn N. Huggett, PhD[6], Catherine Okuliar, MD[7], Alan Geller, MPH, RN[8]

[1]UMASS Medical School, Worcester, MA; [2]University of Massachusetts Medical School, Worcester, MA; [3]Georgetown University School of Medcine, Washington, DC; [4]Stanford University School of Medicine, Palo Alto, CA; [5]Georgetown University, Washington, DC; [6]Creighton University School of Medicine, Omaha, NE; [7]Georgetown University Hospital, Washington, DC; [8]Department of Social and Behavioral Sciences, Harvard School of Public Health, Boston, MA

Objective: Teaching future physicians how to treat tobacco dependence is vital. This study assessed the effect of a multi-year, multi-modal tobacco dependence treatment curriculum on 1) medical students' 5A counseling skills during an objective structured clinical encounter (OSCE), and on 2) self-reported self-efficacy of tobacco counseling skills.
Methods: 10 U.S. medical schools were randomized to receive the multi-modal tobacco dependence treatment educational intervention (MME) or traditional tobacco treatment education (TE). MME consisted of a web-course and interactive practice (i.e. role playing) as 1st year students and booster video-based education as 3rd year students. Preceptors from MME Family or Internal Medicine clerkships received an Academic Detailing module that focused on modeling, observing, and providing tobacco dependence treatment instruction to students as 3rd years.
Results: School OSCE scores were compared for students in schools randomized to MME with students in schools randomized to TE, adjusting for pre-intervention school-level means and accounting for within-school correlation. Self-efficacy skill score for each 5A skill was assessed among students prior to and after participating in the MME intervention. Compared to TE students, MME students on the OSCE were more likely to complete several 5A behaviors (ORs range from 1.7 to 7.8; *ps*< .05; N=1102), most of which were "Assist" or "Arrange" related behaviors. Total OSCE behaviors, however, did not differ. MME students compared with TE also showed greater change in self-efficacy for several 5A behaviors (i.e. "Assess", "Assist", & "Arrange"), including providing pharmacotherapy (*ps*< .05; N=1049). MME satisfaction ratings from students were high; 91% were "Somewhat/Very Satisfied" with the web-course, and 90.5% and 96.9% reported similarly for the role-play and video-booster sessions respectively.
Conclusions: This is the first randomized trial comparing a multi-year, multi-modal tobacco dependence treatment curriculum to traditional tobacco education in multiple US medical schools. Results show that it is beneficial in the short-term and appears to be acceptable to medical students. Future research should take into account lessons learned from implementing a medical school curriculum in the context of a research study.

CORRESPONDING AUTHOR: Judith K. Ockene, PhD, UMASS Medical School, Worcester, MA, 01655; judith.ockene@umassmed.edu

Paper Session 30 3:33 PM-3:51 PM

THE ROLE OF IDENTITY-RELATED MOTIVATION TO QUIT AND SMOKING ATTITUDES IN PERSONS LIVING WITH HIV

Georgios Kypriotakis, PhD[1], Damon J. Vidrine, DrPH[2]

[1]UT MD Anderson Cancer Center, Houston, TX; [2]The University of Texas MD Anderson Cancer Center, Houston, TX

Cigarette smoking among persons living with human immunodeficiency virus (HIV) (PLWH) is estimated to be 2 to 3 times higher than those found in the general population, with estimates ranging from 45% to 70%. Moreover, about 60 % of deaths among PLWH can be attributed to smoking which is an important factor for developing serious illnesses. Quitting smoking should not only reduce the risk of chronic illnesses and overall mortality but also improve virological responses to therapies. The purpose of this study was to explore the role of identity-related motivation to quit and self-efficacy on HIV perceived impact and intention to quit smoking, and to discover specific mediating pathways to quit intention. In addition, we tested for heterogeneity of these effects by HIV progression status. We analyzed 383 participants recruited from a large safety net HIV clinic in Houston, Texas. The sample comprised current smokers who had recently initiated HIV care. We examined the intervening roles of identity-based motivation to quit and smoking self-efficacy between perceived HIV disease impact and smoking attitudes in a multiple mediator model that allows examining the role of each mediator controlling for the effects of the other. A major finding from the current study was that identity-related motivation for smoking abstinence was an important direct predictor and mediator of smoking attitudes. Identity-related motivation also had significant direct and indirect effects on smoking self-efficacy, as well as on other variables related to HIV. Specifically, identity-related motivation was associated with intention to quit smoking (beta=.33, $p < .001$) as was self-efficacy (beta .18, $p < .001$). In addition, identity-related motivation had significant indirect effects of HIV-related illness impact. Finally, heterogeneity of the effects was observed between two stages of HIV progression. The role of identity-related motivation and self-efficacy on smoking attitudes is both significant and heterogeneous. Since the network of effects between identity-related motivation, self-efficacy, HIV-disease impact and smoking attitudes vary by HIV stage, smoking interventions should reflect this heterogeneity in effects. For example, our findings suggest that an intervening to increase levels of identity related motivation may be more effective in individuals with advanced HIV disease than in those in early stage of HIV disease.

CORRESPONDING AUTHOR: Georgios Kypriotakis, PhD, UT MD Anderson Cancer Center, Houston, TX, 77030; gkypriotakis@mdanderson.org

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SMOKING BEHAVIORS AMONG URBAN VERSUS RURAL PREGNANT WOMEN ENROLLED IN THE KANSAS WIC PROGRAM

Lisette T. Jacobson, PhD, MPA, MA[1], Taneisha Scheuermann, PhD[2], Michelle Redmond, PhD[1], Tracie Collins, MD, MPH[1], Frank Dong, PhD[3]

[1]University of Kansas School of Medicine, Wichita, KS; [2]University of Kansas School of Medicine, Kansas City, KS; [3]University of Kansas School of Medicine-Wichita,

Background: Smoking during pregnancy is associated with poor birth outcomes including premature birth, birth defects, and infant death. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a public nutritional assistance program for low-income pregnant women and their children up to age five. This study provides insight into maternal characteristics associated with smoking and pregnancy among urban versus rural women enrolled in the Kansas WIC program. Methods: A secondary analysis was conducted using the Pregnancy Nutrition Surveillance System dataset of enrolled women between 2005 and 2011. Geographic residency status was obtained through application of the Census tract-based rural-urban commuting area codes. Descriptive variables included maternal demographics and smoking behaviors. Differences in smoking rates before, during, and after pregnancy were examined among urban versus rural women. Chi-square tests of association were used to assess differences. A P-value of ≤ .05 was considered statistically significant. A seven-year trend analysis by rural and urban residency was conducted. Results: The total sample size averaged 17,726 women for years 2005 through 2011. Statistically significant differences regarding socio-demographics and smoking behaviors for urban and rural WIC participants were observed. Most participants who smoked were 20 to 29 years old, rural high school graduates smoked at higher rates than urban graduates, rural smokers were primarily non-Hispanic white and urban smokers were primarily non-Hispanic black or Hispanic, and rural women earning ≥ $10,000/year smoked at higher rates than urban women. Altogether, low-income, rural pregnant women in Kansas smoked at significantly higher rates before, during, and after pregnancy compared to their urban counterparts. High smoking rates have remained unchanged since 2008. Conclusions: Results from this study indicate that the WIC population in rural areas may have different needs regarding smoking cessation programming than the urban WIC population. Interventions must be culturally, geographically, and demographically appropriate. Findings help inform WIC program administrators and assist in enhancing current smoking cessation services to the Kansas WIC population.

CORRESPONDING AUTHOR: Lisette T. Jacobson, PhD, MPA, MA, University of Kansas School of Medicine, Wichita, KS, 67214; ljacobson@kumc.edu

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COGNITIVE-BEHAVIORAL APPROACH TO PROMOTE TOBACCO-FREE LIVING FOR PREGNANT AND POSTPARTUM INNER CITY WOMEN SMOKERS

Suzanne Miller, PhD[1], Minsun Lee, Ph.D.[2], Kuang-Yi Wen, PhD[1]

[1]Cancer Prevention and Control/Fox Chase Cancer Center, Philadelphia, PA; [2]Fox Chase Cancer Center Temple Health, Philadelphia, PA

Objectives: Based on the Cognitive-Social Health Information Procession (C-SHIP) model, we developed a targeted cognitive behavioral intervention to promote tobacco-free living among underserved pregnant and postpartum women who were smokers. The aim of this study was to compare the C-SHIP based Cognitive-Behavioral Counseling (CBC) smoking cessation intervention with a fairly intensive Best Practice control condition (BP) which provided smoking cessation counseling based on the 5A's framework. This study also aimed to evaluate the impact of the CBC intervention on mediators of behavior change (i.e., enhanced self-efficacy; high pros and low cons of quitting; reduced emotional distress).Methods: Inner city pregnant women (N=277) were randomized to either the CBC condition or to the BP condition, both of which consisted of two prenatal (13-25 weeks gestation and 26-38 weeks gestation) and two postpartum contacts (1- and 2-months postpartum). Self-reported 7-day point prevalence abstinence, which was biochemically verified on a subset through saliva cotinine level, was obtained at baseline (13-25 weeks gestation), late pregnancy (26-38 weeks gestation), and 1- and 5-months postpartum. Mediating variables including Quitting self-efficacy, Pros and Cons of Quitting, and Affective distress about quitting, were measured at baseline, 1-month, and 5-months postpartum. Results: Smoking cessation rates were not significantly different between the CBC and BP groups at the follow-up time points in an intent-to-treat analysis. However, among those who participated in the final 5-month postpartum follow-up assessment, women in the CBC group were significantly more likely to be abstinent (37.3% vs. 19.0%) than control group women. Mediation analysis using the INDIRECT procedure revealed that higher Quitting self-efficacy and more Cons of quitting mediated the impact of the CBC condition on smoking cessation for women who attended the 5-month postpartum follow-up.Conclusions: The C-SHIP based CBC has the potential to increase postpartum smoking abstinence for women who are adherent to the assessment component over time. Further it is important to assess and address quitting self-efficacy and the cons of quitting of smoking in this vulnerable population, to increase smoke free living.

CORRESPONDING AUTHOR: Suzanne Miller, PhD, Cancer Prevention and Control/Fox Chase Cancer Center, Philadelphia, PA, 19111; suzanne.miller@fccc.edu

Paper Session 30 4:27 PM-4:45 PM

POSTPARTUM SMOKING RELAPSE: THE ROLE OF FAMILY IN THE HEALTH BEHAVIOR CHOICES OF NEW MOTHERS

Beth A. Bailey, PhD, Andrea Clements, PhD

East Tennessee State University, Johnson City, TN

Despite high rates of pregnancy tobacco intervention success, the majority of women return to smoking after delivery. Many contributing factors have been noted including depression, stress, infant health, and desire for weight loss. However, the role of a woman's family in this process is less understood. The study goal was to examine the potential relative impact of family factors on smoking resumption after delivery. Participants were 227 women from rural Southern Appalachia who successfully quit smoking while participating in a pregnancy smoking intervention. At 6 weeks post-partum, participants were interviewed and medical charts reviewed. Logistic regression analysis examined the impact of demographic factors (age, income, education, marital status), infant health (low birth weight status, NICU admission), amount of pregnancy weight gain, maternal mental health (depression, stress), and family factors (other smokers in the home, perceived support from family members for continued smoking abstinence) on smoking status at 6 weeks postpartum. Within 6 weeks of delivery, the majority of women (56%) had resumed smoking. While the predictors as a set accounted for over one quarter of the variance in postpartum smoking status (R^2=.282), only family factors independently predicted ($p < .05$) smoking relapse. Living with at least one smoker increased the risk of smoking relapse more than three-fold (adjusted OR=3.10, p=.016), while women who indicated that their family members were less than "very supportive" of their efforts to remain smoke-free were more than two and a half times more likely than those who felt family members were "very supportive" to resume smoking (adjOR=2.65, p=.041). Finally, compared with those who were married, unmarried women were nearly three and a half times more likely to be smoking at 6 weeks postpartum (adjOR=3.47, p=.018). Findings suggest that postpartum smoking relapse prevention programs that also target family members for cessation and involve building family support for new mothers could not only reduce infant smoke exposure, but may also increase the likelihood that women who successfully quit smoking during pregnancy will remain smoke-free after delivery.

CORRESPONDING AUTHOR: Beth A. Bailey, PhD, East Tennessee State University, Johnson City, TN, 37614; nordstro@etsu.edu

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THE WITHIN-DAY LINKS BETWEEN LONELY EPISODES AND CLINICAL PAIN IN INDIVIDUALS WITH FIBROMYALGIA

Laurie Wolf, M.A., Mary C. Davis, Ph.D, Ellen W. Yeung, Ph.D

Arizona State University, Tempe, AZ

Objective: This daily diary study examined whether morning increases in loneliness relate to worsened evening bodily pain through afternoon negative pain cognitions among individuals with fibromyalgia (FM). It also explored whether the impact of lonely episodes on pain cognitions and bodily pain differed for individuals high versus low in their level of positive social relations. Methods: 220 participants with FM completed electronic diaries 3 times a day for 21 days to assess loneliness, negative pain cognitions, bodily pain, and social enjoyment. Multilevel structural equation modeling was used to examine within-person relations of morning increases in loneliness, afternoon negative pain cognitions, and evening pain, controlling for morning pain, and to examine the moderating effects of average level of social enjoyment. Results: Daily increases in loneliness predicted greater afternoon maladaptive pain cognitions, which in turn predicted worsened evening pain. Afternoon maladaptive pain cognitions fully mediated the relations between morning loneliness and evening pain. Further, relations between morning loneliness and afternoon negative pain cognitions were stronger among individuals with high versus low levels of social enjoyment. Conclusions: Lonely episodes are associated with subsequent increases in negative patterns of thinking about pain, which in turn predict subsequent increases in bodily pain within a day. This process may be especially detrimental for individuals accustomed to a positive social environment, as lonely episodes may represent a decline in their usual level of social functioning. Because pain cognitions mediate the loneliness—pain link, FM interventions may benefit from addressing individuals' vulnerability to maladaptive cognitions following lonely episodes.

CORRESPONDING AUTHOR: Laurie Wolf, M.A., Arizona State University, Tempe, AZ, 85287; ldwolf@asu.edu

Paper Session 31 3:33 PM-3:51 PM

PREDICTING SPINAL CORD STIMULATOR TRIAL AND IMPLANT OUTCOMES FOR PATIENTS WITH CHRONIC LOW BACK PAIN

Claude E. Davis, PhD[1], Brandon N. Kyle, PhD[2], Qiang Wu, PhD[3], Juan Firnhaber, MD[4], Jacob Thorp, PT, DHS[2]

[1]School of Dental Medicine at East Carolina University, Greenville, NC; [2]East Carolina University, Greenville, NC; [3]East Carolina University, Greenville, ND; [4]East Carolina Pain Consultants, Greenville, NC

Psychological evaluations of patients with chronic low back pain prior to consideration of spinal cord stimulator (SCS) trials and permanent surgical implants may predict trial and implant outcomes. Many factors, including psychological, third-party payer approvals, finances, and patient and physician decision-making may determine whether patients may proceed to a trial and implant, the time to trial and implant, and the relative success of SCS in reducing pain and improving function. Patients rated pain and pain interference with a 0-10 graphical numerical rating scale, and also completed the Center for Epidemiological Studies Depression Scale, the Pain Anxiety Symptoms Scale-20, the Pain Catastrophizing Scale, and the Pittsburgh Sleep Quality Index. Of 102 patients having pre-SCS psychological evaluations (43 % F, 79 % White, Mean Age = 54, SD = 14), 48 proceeded to a week long trial and 33 to permanent surgical implant. Those having a trial were older (p=.03), older patients had trials sooner (p=.021), and a greater proportion of women than men had an implant after having a trial (p=.001). Logistic and linear regressions were used to model best predictors ($p < .10$) of having a trial, implant, and time to trial and implant. Pain ratings during functional tests (such as walking, standing, bending) decreased significantly pre to post ($p < .001$) in patients having SCS trials, and predictors of these ratings examined. Regressions showed lower BMI (p=.09), less depression (p=.01), and better sleep (p=.02) at baseline predicted having a trial. Depression (p=.03) and pain interference (p=.08) predicted a longer time to trial. While psychological variables broadly related to pain levels at baseline and depression and pain catastrophizing significantly related to some pre-trial pain ratings ($p < .03$), psychological variables were not related to changes in pain with the SCS trial or post-trial pain. Pain interference at baseline (p=.04) and post-trial pain levels ($p < .03$) were predictive of having an implant and lower trial pain predictive of shorter time to implant ($p < .03$). These results show that psychological variables are important in selecting which patients proceed to trial and predict pre-trial pain levels, but not trial results. Pain reduction predicted proceeding to a permanent SCS implant.

CORRESPONDING AUTHOR: Claude E. Davis, PhD, School of Dental Medicine at East Carolina University, Greenville, NC, 27834; daviscl@ecu.edu

Paper Session 31 3:51 PM-4:09 PM

PAIN-RELATED AVOIDANCE OF ACTIVITIES IN EARLY KNEE OSTEOARTHRITIS: 5-YEAR FOLLOW-UP STUDY

Jasmijn Holla, PhD[1], Marike van der Leeden, PhD[2], Leo Roorda, MD, PT, PhD[2], Wim Hilberdink, PT[3], Joost Dekker, PhD[4]

[1]Reade, Center for Rehabilitation and Rheumatology, Amsterdam, , Netherlands; [2]Reade, Amsterdam, , Netherlands; [3]PCCR, Groningen, , Netherlands; [4]VU University Medical Center Amsterdam, Amsterdam, Netherlands

Objective. It has been hypothesized (i) that pain and low vitality lead to an increase in avoidance of activities in persons with early symptomatic knee osteoarthritis (OA), and (ii) that avoidance of activities leads to an increase in activity limitations. The present study aimed to evaluate these hypotheses. Methods. Baseline, 2-year and 5-year follow-up data of 828 participants from the Cohort Hip and Cohort Knee (CHECK) study with early symptomatic knee OA were used. Autoregressive generalized estimating equations (GEE) and linear regression models were used to analyze the longitudinal and cross-sectional associations between self-reported knee pain, vitality, pain-related avoidance of activities and activity limitations. The models were adjusted for the covariates age, gender, education level, body-mass index, comorbidity, radiographic severity, and hip pain.Results. (i) In longitudinal analyses, knee pain and vitality predicted a subsequent increase in avoidance of activities. (ii) Pain-related avoidance of activities predicted a subsequent increase in activity limitations, however this relationship lost statistical significance ($p = 0.089$) after adjustment for covariates. Cross-sectional analyses showed strong relationships between knee pain, low vitality, pain-related avoidance of activities and activity limitations at all time-points.Conclusions. In persons with early symptomatic knee OA, knee pain and low vitality lead to a subsequent increase in avoidance of activities. Pain-related avoidance of activities is related to activity limitations at inception of symptoms but also years later. Therefore, it can be recommended to monitor and target avoidance of activities at different stages of the disease.

CORRESPONDING AUTHOR: Joost Dekker, PhD, VU University Medical Center Amsterdam, Amsterdam, 1007 MB; j.dekker@vumc.nl

CITATION PAPER
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DAILY POSITIVE MOOD AND PAIN MEDIATE THE SLEEP QUALITY – ACTIVITY INTERFERENCE LINK IN FIBROMYALGIA

Dhwani J. Kothari, M.A.[1], Mary C. Davis, Ph.D[1], Ellen W. Yeung, Ph.D[1], Howard A. Tennen, Ph.D[2]

[1]Arizona State University, Tempe, AZ; [2]University of Connecticut Health Center, Farmington, CT

Fibromyalgia (FM) is a chronic pain condition often resulting in functional impairments. Nonrestorative sleep is a prominent symptom of FM that is related to disability, but the day-to-day mechanisms relating the prior night's sleep quality to next day reports of disability have not been examined. The current study examined the within-day relations among early-morning reports of sleep quality last night, late-morning reports of pain and positive affect, and end-of-day reports of activity interference. Specifically, we tested whether pain and positive affect mediated the association between sleep quality and subsequent activity interference. Data were drawn from electronic diary reports, collected from 220 FM patients for 21 consecutive days. Multilevel Structural Equation Modeling was performed to estimate the direct and mediated effects at the within-person level. Results showed that pain and positive affect both mediated the relation between sleep quality and activity interference; that is, early-morning reports of poor sleep quality last night predicted higher levels of pain and lower levels of positive affect at late-morning. Increased late-morning pain and decreased positive affect, in turn, predicted higher end-of-day activity interference. Additionally, positive affect was a stronger mediator than pain. In summary, the findings identify two parallel mechanisms, pain and positive affect, through which the prior night's sleep predicts disability the next day in FM patients. Further, results highlight the potential utility of boosting positive affect following a poor night's sleep as one means of preserving daily function in FM.

CORRESPONDING AUTHOR: Dhwani J. Kothari, M.A., Arizona State University, Tempe, AZ, 85282; dhwani.j.kothari@gmail.com

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SLEEP QUALITY, PAIN AND FUNCTION IN PEOPLE WITH CHRONIC LOW BACK PAIN: A DAILY DIARY STUDY

John Burns, PhD[1], James Gerhart, PhD[2], Stephen Bruehl, PhD[3], David Smith, PhD[4], Kristina Post, PhD[5], Francis J. Keefe, PhD[6]

[1]Rush University Medical Center, Chicago, IA; [2]Rush University Medical Center, Chicago, IL; [3]Vanderbilt University School of Medicine, Nahville, TN; [4]University of Notre Dame, Notre Dame, IN; [5]University of La Verne, La Verne, CA; [6]Duke University Medical Center, Durham, NC

Poor sleep quality appears to be related to greater pain intensity and poorer function for people with chronic low back pain (CLBP), although causal direction is unclear. We investigated lagged and cross-lagged longitudinal associations between patient-reported sleep quality and pain-related factors. We also examined links between patient reported sleep quality and spouse ratings of patient pain and function. CLBP patients and their spouses (N= 105 couples) completed diary assessments 5 times/day for 14 days. Data were analyzed with mixed models. For lagged effects, results indicated that poorer patient-reported sleep quality was significantly associated with greater patient-reported pain intensity, pain interference, and downtime (B's >-.09, t's> -2.89, p's < .003) over the following day. Poorer patient-reported sleep quality was significantly associated with greater spouse-observed patient pain severity and more frequent patient pain behaviors (B's >-.17, t's >-2.58, p's < .01). For reverse, cross-lagged effects, results indicated that greater patient-reported pain intensity and pain interference over the course of the day were significantly related to poorer patient-reported sleep the next night (B's>-.02, t's>-2.63, p's < .01). Greater spouse-reported patient physical activity level over the course of the day was related to better patient-reported sleep quality the next night (B=.02, t=2.34 p=.02). Results strongly support the notion the poor sleep quality the prior night detrimentally affects pain and function of people with CLBP the next day. Indeed, changes in patient behavior linked to poor sleep were dramatic enough to be noticed and reported by their spouses. Results also support the reverse, cross-lagged pathway, although effects were not as consistent in these data as for the lagged effects. Still, it may be the case that both lagged and cross-lagged pathways are active, and thus people with CLBP may be vulnerable to a negative spiral in which poor sleep quality affects pain and function the following day which in turn hampers sleep the following night. Behavioral pain management strategies may need to be augmented with behavioral sleep medicine to disrupt this negative spiral.

CORRESPONDING AUTHOR: John Burns, PhD, Rush University Medical Center, Chicago, IA, 60612; john_burns@rush.edu

Paper Session 32 3:15 PM-3:33 PM

LOSING WEIGHT WITH A LITTLE HELP FROM MY FRIENDS

Jennifer L. Warnick, BA, Christine Pellegrini, PhD, Bonnie Spring, PhD, ABPP

Northwestern University Feinberg School of Medicine, Chicago, IL

Background: Reducing group sessions and using technology are two ways to reduce the cost and burden of intensive weight loss interventions. Among participants in a randomized weight loss trial comparing an abbreviated standard (STND), self-guided (SELF), or technology-supported (TECH) program, we examined participants' perceptions of what was helpful to their weight loss efforts.Methods: Obese adults (n=96) were randomized to STND, SELF, or TECH. STND and TECH received 8 in-person group sessions, regular coaching calls, and personal diet, activity, and weight loss goals. SELF and STND self-monitored diet, activity, and weight daily on paper, while TECH used a smartphone application and activity monitor to self-monitor and communicate with group members. SELF did not receive coaching calls or group sessions. Participants answered open-ended questions to qualitatively assess perceptions of the program at 12-months. All responses were analyzed using inductive thematic analysis and compared with percentage analysis. Results: 83 participants (84% female, age=39.3(11.7), BMI=34.6(3.0) kg/m^2) completed the survey (STND 88%; SELF 78%; TECH 94%). The theme that emerged as the most helpful to participants' weight loss was perceived social support (STND 71%, SELF 48%, TECH 30%). Social support was defined by participants as coaching calls, group meetings, and staff interactions. Many participants sought additional support (STND 71%, SELF 58%, TECH 47%). The majority of TECH participants (83.33%) identified the technology as most helpful to their weight loss. Participants in all conditions wanted increased use of technology (STND 21%, SELF 25%, TECH 33%).Conclusion: The data suggests that participants perceive social support and technology as the most helpful to achieve weight loss. Given the perceived importance of social support, future technology-supported interventions should include social support components to increase participant perceived effectiveness.

CORRESPONDING AUTHOR: Jennifer L. Warnick, BA, Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; j-warnick@northwestern.edu

Paper Session 32 3:33 PM-3:51 PM

SOCIAL NETWORKS AND WEIGHT LOSS: EVIDENCE FOR BOTH POSITIVE AND NEGATIVE INFLUENCES

Ginger Winston, MD MPH[1], Erica Phillips-Caesar, MD MS[2], Elaine Wethington, PhD[3], Rosio Ramos, BS[2], Mary Charlson, MD[2]

[1]George Washington University, Washington, DC; [2]Weill Cornell Medical College, New York, NY; [3]Cornell University, Ithaca, NY

Background: Weight loss interventions incorporating network support have shown inconsistent results. A better understanding of how networks influence weight loss is needed. Methods: Adults with body mass index (BMI) ≥ 25 kg/m^2 enrolled in the Small Changes and Lasting Effects (SCALE) weight loss RCT were included in the analysis. Participants set small change eating and physical activity goals and were followed for one year. At study close-out, participants listed their social network members and whether they helped or undermined eating and physical activity goals. Mean weight loss was compared between participants with network help vs. network undermining. A regression model was used to examine the relationship between weight loss and network help stratified by member relationship adjusted for age, race, gender, education, participant BMI, the body size of network members in the home, network size, study site and randomization group. Results: There were 246 participants included in the analysis (mean age 51 years, 89% female, 52% Black, 48% Hispanic, mean baseline BMI 33.5 kg/m^2). There were 2,559 social network members identified (average network size 10). Mean weight loss was -4.8 (±11.4) lbs. among participants with network help with eating goals and no undermining vs. a mean weight gain of +3.4 (±7.8) lbs. among those with only network undermining (p=0.01). In a fully adjusted regression model, greater weight loss was associated with having at least 1 child helpful with eating and physical goals (p=0.002) and at least one coworker helpful with physical activity goals (p=0.02). Weight gain was associated with at least 1 obese network member living in the home (p=0.03) and increased network size (p=0.002). Conclusions: Network member help with eating and physical activity goals, specifically the help of children and coworkers, was associated with weight loss. Network undermining of goals and having obese network members in the home was associated with weight gain. These findings support the development of weight loss interventions that incorporate help from children and co-workers and mitigate network behaviors that undermine weight loss goals. In addition, the body size of network members in the home should be considered when designing weight loss interventions.

CORRESPONDING AUTHOR: Ginger Winston, MD MPH, George Washington University, Washington, DC, 20037; gingerw245@gmail.com

Paper Session 32 3:51 PM-4:09 PM

WEIGHT LOSS: IS THERE REALLY "AN APP FOR THAT?"

Tricia M. Leahey, PhD[1], Andrew Seiden, BA[2], Jamie Rosen, Kathryn Middleton

[1]University of Connecticut, Storrs, CT; [2]Johns Hopkins Bloomberg School of Public Health, Port Washington, NY

Mobile applications (apps) for weight loss are widely used and inexpensive, thereby having great potential to impact public health. However, before health care professionals promote the use of weight loss apps, effectiveness data are needed. This is the first study to examine (a) whether weight loss apps actually impact weight loss and (b) which apps are most effective. Participants (N=3,951; 88% female; 36.7±10.7years; BMI=30.5±7.2 kg/m^2) who enrolled in a Web-based commercial weight loss program (www.dietbetter.com, which does not specifically recommend apps/self-monitoring) were asked whether they used an app during the program (Yes/No) and, if so, which app(s). Weight was measured with a scale and using either photo-based or Webcam weigh-in verification procedures. The majority of participants (67%) reported using an app to help with weight loss. Younger individuals and women were more likely to use apps (p's < .001). While MyFitnessPal was the most popular app (55% of participants), all apps produced similar weight losses (e.g., MyFitnessPal: 4.2±1.8%; Lose It!: 4.0±1.5%; MapMyRun: 4.3±2.1%) with no significant differences between apps (p's≥.32). Perhaps most importantly, after controlling for relevant covariates, weight loss outcomes between app users and non-app users did not differ (4.2±1.8 vs. 4.2±1.7, p=.51). This is the first study to examine the effectiveness of apps for weight loss. Consistent with previous studies showing that weight loss apps lack evidence-based strategies, results from this study suggest that currently available apps may not improve weight loss outcomes. Further evaluation of the impact of apps on weight loss is warranted and the development of more effective apps may be necessary before they can be recommended for weight management.

CORRESPONDING AUTHOR: Tricia M. Leahey, PhD, University of Connecticut, Storrs, CT, 06269; tricia.leahey@uconn.edu

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EARLY DIETARY LAPSE FREQUENCY PREDICTS 12-MONTH SUCCESS IN A BEHAVIORAL WEIGHT LOSS PROGRAM

Evan Forman, PhD, Leah Schumacher, B.S., Stephanie Manasse, B.A., Meghan L. Butryn, PhD

Drexel University, Philadelphia, PA

Cognitive-behavioral weight loss interventions are considered the gold standard and typically result in clinically significant weight loss over a 12-month period. However, degree of success is variable with as many as 60% of individuals failing to lose clinically significant weight, or failing to maintain lost weight. As such, we are desperately in need of methods to identify who will and who will not succeed in behavioral weight loss programs, so that alternatives interventions can be applied. Moreover, it is vital to identify markers of nonresponse as early as possible, given that demoralization and dropout are associated with nonresponse.Several previous studies have identified early weight loss as a predictor of program response. The current study aims to replicate this finding. However, we also aim to identify a very early potential indicator of intervention response, i.e., how often someone lapses from a prescribed diet in the first days of the intervention. In the largest study of its kind to date, 190 participants (134 of whom have reached the end of the program at this date) enrolled in a 12-month behavioral weight loss intervention completed ecological momentary assessments (EMA) for 7 days at the beginning of treatment. Specifically, participants were prompted 6 semi-random times per day to indicate whether they had experienced a dietary lapses (i.e., eating/drinking episodes that put weight control efforts in jeopardy). Participants were also instructed to enter a lapse as soon as one occurred.As expected, weight loss at 3 weeks strongly predicted weight loss at 12 months (F=6.53, p=.01). Lapses were reported by 81% of individuals; mean number of lapses = 3.6. As hypothesized, lapse frequency over the 7 days strongly predicted success in the program (r=.47, p < .01). In fact, those who lapsed at low frequencies lost nearly twice the weight at 12 months, compared to those who reported lapsing frequently. Thus, immediate dietary lapse frequency is a useful predictor of behavioral weight loss intervention response.

CORRESPONDING AUTHOR: Evan Forman, PhD, Drexel University, Philadelphia, PA, 19104; evan.forman@drexel.edu

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ENGAGED: RCT OF A THEORY-GUIDED, TECHNOLOGY-SUPPORTED, ABBREVIATED BEHAVIORAL WEIGHT LOSS PROGRAM

Bonnie Spring, PhD, ABPP[1], Christine Pellegrini, PhD[1], H. Gene McFadden, B.A.[2], Sherry L. Pagoto, PhD[3], Juned Siddique, PhD[2]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]Northwestern University, Chicago, IL; [3]University of Massachusetts Medical School, Worcester, MA

Intensive weight loss programs such as the 16-session Diabetes Prevention Program (DPP) achieve excellent weight loss but have limited reach because their demands limit scalability. However, attempts to reduce treatment sessions have compromised weight loss. The ENGAGED trial tested whether intensity could be reduced by half but weight loss preserved by using connected health tools based on Carver and Scheier's Control Systems Theory to reconfigure treatment components. Obese adults (N=96; BMI =34.6 (3.0); 84% female, 31% black) were randomized to 3 adapted versions of the DPP. Self-guided controls (SELF) received 1 in-person session plus DVDs depicting DPP treatment. Technology-supported (TECH) and Standard (STND) received 8 group in-person sessions plus brief phone coaching. STND and SELF self-monitored using paper and pencil. TECH self-monitored via a smartphone application that visualized the participant's calorie, fat, and accelerometer-transmitted physical activity and conveyed these data to a coach. All groups competed in an incentivized weight loss competition. TECH participants visualized each other's self-monitoring adherence and communicated in a private chat group on the smartphone. Loss to 12-month follow-up was 3% in TECH, 13% in STND, 19% in SELF. Linear mixed modeling with Helmert contrasts showed greater self-monitoring in TECH and STND vs. SELF (p < .001) and TECH than STND (p < .05). At 6 months, weight loss (mean in kg.± 95% CI) was greater in TECH (-4.7+2.2) and STND (-6.6+2.2) than SELF (-2.7+2.3) (p < .05) with no difference between TECH and STND. Differences between groups were no longer significant at 12 months. ENGAGED's 8 session group version of the DPP obtained clinically significant weight loss comparable to what DPP/Look AHEAD obtained with 16-36 sessions. Although the technology-supported version of the program achieved greater adherence, weight loss was comparable to standard treatment, perhaps because of challenges with the wireless accelerometer and because access to technology was discontinued during maintenance.

CORRESPONDING AUTHOR: Bonnie Spring, PhD, ABPP, Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; bspring@northwestern.edu

Paper Session 33 3:15 PM-3:33 PM

THE REACH AND EFFECTIVENESS OF AN INCENTIVE-BASED WORKSITE WEIGHT LOSS PROGRAM

Paul Estabrooks, PhD[1], Wen You, PhD[2], Fabio Almeida, PhD[3], Jennie Hill, PhD[2], Brenda M. Davy, PhD, RD[2], Samantha Harden, PhD[2], Glasgow Russell, PhD[4], Linnan Laura, ScD[5]

[1]Virginia Tech / Carilion Clinic / Virginia Tech Carilion School of Medicine, Blacksburg, VA; [2]Virginia Tech, Blacksburg, VA; [3]Virginia Tech, Roanoke, VA; [4]University of Colorado School of Medicine, Denver, CO; [5]University of North Carolina Chapel Hill, Chapel Hill, NC

Financial incentives are used regularly to engage employees in, and support, weight loss. The promise of these approaches lies in the potential to reach a broad cross section of the employee population and facilitate clinically meaningful weight loss. However, no trials currently exist that have examined the reach and effectiveness of different worksite weight loss strategies. The purpose of this study was to determine the reach and effectiveness of two minimal worksite weight loss programs: One with financial incentives (IncentaHealth) and one without (Livin' My Weigh). Worksites (n=28, average 290 employees) were randomly assigned to one of the two interventions and employees were blinded to the existence of a second weight loss program. Weight was assessed objectively with calibrated weigh scales located at each worksite. Eligible employees (BM≥25) at IncentaHealth worksites, were significantly more likely to enroll (42%; n=1001) when compared to employees at Livin' My Weigh worksites (28%, n=789, p < .01). Attrition was also not different between conditions with 70 and 60% completing 12 and 24-month assessments, respectively. Intention to treat analyses, accounting for the clustering of employees within worksites, showed that both programs led to significant, yet modest reductions in weight (-2.13±0.3 lbs, p < .01) at program completion (i.e., 12 months) and sustained that loss at 24 months post baseline (-2.0±0.4 lbs). Fourteen percent of participants lost a clinically meaningful (>5%) amount of weight at the completion of the 12-month program. To examine reach by effectiveness, we computed the proportion of the overall employee population that achieved a 5% weight loss over the course of the 12-month program. IncentaHealth worksites had a significantly higher proportion of the employee population achieve a clinically meaningful weight loss (6.1% vs 3.6%). When taken together, IncentaHealth had a larger impact than Livin' My Weigh, despite the equitable average weight loss among participants. These findings underscore the importance of considering both reach and effectiveness when evaluating worksite weight loss programs and that financial incentives can improve program reach. Future work should examine the role of intervention delivery costs within the reach by effectiveness analysis.

CORRESPONDING AUTHOR: Paul Estabrooks, PhD, Virginia Tech / Carilion Clinic / Virginia Tech Carilion School of Medicine, Blacksburg, VA, 24061; estabrkp@vt.edu

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EFFECTIVENESS OF INTEGRATING BEHAVIORAL STRATEGIES INTO THE FIT RX 90 WEIGHT LOSS PROGRAM

Sallie Beth Johnson, MPH, MCHES[1], Mark Greenawald, MD[2], Wayne Grey, MS[3], Jenna Bartlett, MS[3], Don Mankie, RD[4], Liz Kane, MS[5], Jason Bunn, MS[6], Paul Estabrooks, PhD[7]

[1]Virginia Tech / Carilion Clinic, Roanoke, VA; [2]Virginia Tech Carilion School of Medicine / Carilion Clinic, Roanoke, VA; [3]Carilion Clinic / Roanoke and Botetourt Athletic Clubs, Roanoke, VA; [4]Carilion Clinic, Roanoke, VA; [5]Carilion Clinic / Roanoke Athletic Club, Roanoke, VA; [6]Carilion Clinic / Botetourt Athletic Club, Roanoke, VA; [7]Virginia Tech / Carilion Clinic / Virginia Tech Carilion School of Medicine, Blacksburg, VA

Although evidence-based behavioral strategies exist to support clinically meaningful weight loss (3-5% initial body weight), little is known on the effectiveness of integrating these behavioral strategies into weight loss programs delivered in real-world settings. FIT Rx 90 is a 90-day medically supervised and fitness-based weight loss program developed by practitioners for worksite wellness. The program included a fitness assessment, 6 one-to-one personal training sessions, 5 group nutrition sessions, and a deposit contract for a 3-month fitness membership. Employees were eligible if they had a BMI≥30+HTN/DM diagnosis; or a BMI ≥35, and a physician referral. This presentation's purpose is to report on an integrated research-practice partnership that was formed at the completion of the initial FIT Rx 90 program to improve the program by adding evidence-based behavioral strategies tested in the Diabetes Prevention Program. During the initial FIT Rx 90 delivery, employees (90% female; mean age=46.4 ±9.8; mean BMI=38.4±4.7; n=50) lost, on average, 2.9±3.3% of initial body weight (retention=81%). Subsequently, evidence-based behavioral strategies were integrated into FIT Rx 90 and tested within a quasi-experimental design where participants received the standard FIT Rx 90 (n=24) or FIT Rx 90 plus (n=44)-based upon the training of program delivery staff. Practitioners, including personal trainers (n=9) and a RD, delivered all intervention components. Participants in FIT Rx 90 plus lost a significantly higher percentage of initial body weight (4.6 ±3.6%) when compared to FIT Rx 90 participants (2.6±3.5%, p< 10). However, program retention varied, but not significantly, between FIT Rx 90 plus (75%) and FIT Rx 90 (88%). Implementing behavioral strategies added approximately one additional hour of staff time per participant across the 90-day program. This study provides much needed practice-based evidence for the effectiveness of integrating behavioral weight loss strategies, and demonstrates the value of research-practice partnerships for quality improvement initiatives. Future efforts will focus on improving engagement, incorporating technologies to reduce staff hours, and designing a scalable model to reach more employees with evidence-based weight loss support.

CORRESPONDING AUTHOR: Sallie Beth Johnson, MPH, MCHES, Virginia Tech / Carilion Clinic, Roanoke, VA, 24061; sbjohnson@vt.edu

Paper Session 33 3:51 PM-4:09 PM

TRAJECTORIES AND SOCIO-DEMOGRAPHIC PREDICTORS OF STEPS IN A WORKSITE INTERVENTION: ASUKI-STEP

Cheryl Der Ananian, PhD[1], Ali Soroush[2], Barbara E. Ainsworth, PhD[1], Michael Belyea, PhD[1], Pamela Swan, PhD[3], Jenelle Walker, PhD[1], Eric Poortvliet[4], Agneta Yngve[5]

[1]Arizona State University, Phoenix, AZ; [2]Imam Reza Hospital, Kermanshah University of Medical Sciences, Kermanshah, , Iran; [3]Exericse Science and Health Promotion, Phoenix, AZ; [4]Karolinska Institute, Huddinge, , Sweden; [5]Örebro University, Stockholm, , Sweden

Promoting physical activity (PA) through worksite wellness programs may help decrease physical inactivity in adults. Purpose: This study examined the effects of a pedometer-based intervention (ASUKI-Step) on (1) trajectories of step counts over time; (2) the proportion of individuals who accumulated at least 10,000 steps per day for a minimum of 100 days; and (3) trajectories of accelerometer-determined PA over time in a sub-set of individuals. We also examined the sociodemographic characteristics associated with each outcome. Methods: ASUKI-Step was a 6-month, pedometer-based intervention offered to employees at Arizona State University (n=712) and the Karolinska Institutet (n=1390). The intervention was grounded in the theory of social support and participants enrolled in teams of 3-4 individuals to promote social support. Trajectories of change in PA were evaluated using a single-group, pre-post quasi-experimental design. Linear growth models were used to assess trajectories of change in and predictors of pedometer-based and accelerometer-determined PA. Logistic regression analyses were used to examine the proportion of individuals who met 10,000 steps per day for at least 100 days. Results: There was a significant linear (t = -20.76, p = .001) and curvilinear change in steps over time (t = 7.65, p = 0.001). Steps declined over the six months and there was significant individual variation in the trajectory of change. Men had a greater decline in steps over time while increased age was associated with a slower decline in steps over time (p < 0.05). Overall, 52.9% (n = 1105) of the participants accumulated 10,000 steps on at least 100 days of the study. Older age, being married, working in a non-managerial position, having a normal body weight, and higher initial PA level were positively associated with meeting the step goal (p < 0.05). Finally, in the subset of individuals for whom we had accelerometer-derived PA levels (n=226), there were no changes over time in minutes of physical inactivity, light activity, moderate lifestyle or moderate activity. Conclusions: Findings suggest that a low-intensity, pedometer-based intervention can work with some segments of the typical office population but a more intensive intervention may be needed for individuals who are sedentary or overweight.

CORRESPONDING AUTHOR: Cheryl Der Ananian, PhD, Arizona State University, Phoenix, AZ, 85004; cheryld@asu.edu

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EFFICACY OF ACTIVE SITTING DESKS FOR REDUCING OCCUPATIONAL SEDENTARY TIME AND IMPROVING HEALTH

Lucas Carr, PhD[1], Roberto Benzo, B.S.[1], Christoph Leonhard, Ph.D.[2], Alex Ferrer[3], Sanjana Ramesh[3]

[1]University of Iowa, Iowa City, IA; [2]The Chicago School of Professional Pyschology, New Orleans, LA; [3]University of Iowa, IA

Background: Adults working in sedentary desk jobs are at increased risk for sedentary related chronic diseases. There is a need for worksite interventions that can sustainably reduce occupational sedentary behaviors and improve the health of the growing number of sedentary employees. Providing sedentary employees access to active sitting desks that allow for light-intensity physical activity during sedentary desk work, may represent a sustainable approach for improving the health of sedentary employees. Objective. To test the efficacy of an intervention aimed at reducing occupational sedentary time and improving cardiometabolic health outcomes amongst full-time employees working in sedentary desk jobs.Methods: We recruited 54 full-time, overweight/obese adults working in sedentary desk jobs (45.0+10.6 years; 70% female, BMI = 34.1+7.1 kg/m^2). All participants received an in-person ergonomic assessment of their personal office space and three motivational emails/week promoting periodic movement and proper posture while at work. Half of all participants randomly received access to an active sitting desk (activLife Trainer) at their desk (Treatment; N=27) while half of participants did not (Control; N= 27). Objectively measured (GENEActiv) occupational sedentary and physical activity behaviors and cardiometabolic health outcomes (adiposity, blood pressure, heart rate, fitness) were assessed at baseline and post-intervention (16 weeks). Two-way repeated measures analysis of covariance tests evaluated within and between group differences at baseline and post-intervention. Results: The intervention group significantly increased both total physical activity (P=0.01) and occupational physical activity (P=0.03) from baseline to 16 weeks although a group x time effect was not observed. Significant group x time effects were observed for work time spent in light intensity physical activity (P=0.04). The intervention group used the active workstations an average of 50.0 minutes/day over 16 weeks. Dose-response relations were observed between time spent using the active workstation and health outcomes including weight (r=-0.41; P=0.04), total fat mass (r=-0.48; P=0.02) and percent body fat (r=-0.45; P=0.02).Conclusions: These findings suggest providing sedentary employees access to an active workstation can increase daily and occupational physical activity, and if used regularly, can result in improved health outcomes. Further efforts aimed at promoting increased and sustained adherence to the intervention are warranted.

CORRESPONDING AUTHOR: Lucas Carr, PhD, University of Iowa, Iowa City, IA, 52242; lucas-carr@uiowa.edu

Paper Session 33 4:27 PM-4:45 PM

PREDICTORS OF SUCCESS IN A WORKSITE WEIGHT MANAGEMENT STUDY

Heather M. Padilla, MS, RD, LD, Mark Wilson, HSD, David DeJoy, PhD, Robert Vandenberg, PhD, Alexander LoPilato, Heather Zuercher, MPH

University of Georgia, Athens, GA

Introduction: U.S. businesses are faced with rising health care costs, lost productivity, and increased absenteeism due to high rates of obesity among employees. In response, many worksites offer weight management programs to employees. Programs are typically offered to high-risk employees or all interested employees. The likelihood of success in a weight loss program is rarely considered criteria for participation. The purpose of this study was to predict weight loss success based on baseline biometric and psychosocial variables and participant performance in a worksite weight management program.Methods: The sample was 298 municipal employees in three city-county governments who enrolled in a 6-month weight management program called *FUEL Your Life*, a worksite translation of the Diabetes Prevention Program. The sample was 61% female, 53% White, and 43% Black. Participants completed a baseline survey and participated in biometric measurements of height, weight, and BMI pre- and post-intervention. To estimate performance in the intervention, an intervention dose score was calculated including the number of lessons completed and the frequency of interaction with intervention elements. We used linear regression to determine if participants who successfully lost weight differed from those who did not on baseline variables and performance in the intervention.Results: The average weight loss among participants was 2 pounds and 42% of participants lost weight (range of 0.5 to 59 pounds). Participants who lost weight had significantly higher intervention dose scores (R^2=0.02, p < 0.01) and had better general health at baseline (R^2=0.02, p < 0.05). There were no significant differences between those who lost weight and those who gained weight for baseline weight, BMI, self-efficacy for physical activity and healthy eating, and social support.Discussion/Conclusions: These results suggest that performance in the intervention is a better predictor of success than baseline biometric and psychosocial behavioral factors. Weight management programs offered in the worksite need to include strategies for increasing participant retention, adherence to the intervention, and overall performance. Strategies including the use of incentives for performance will be discussed.

CORRESPONDING AUTHOR: Heather M. Padilla, MS, RD, LD, University of Georgia, Athens, GA, 30602; hmbowen@uga.edu

Paper Session 34 3:15 PM-3:33 PM

EFFECTS ON COGNITIVE FUNCTION FROM 20 HOURS OF TRAINING: SECONDARY OUTCOMES FROM THE CORTEX TRIAL

Tiffany Bullard, B.S.[1], Sarah E. Banducci, BS[2], Jason Cohen, B.S.[2], Daniel Palac, B.S., M.A.[1], Kirk Erickson, PhD[3], Louis Bherer, PhD[4], Arthur F. Kramer, PhD[5], Edward McAuley, PhD[6], Sean P. Mullen, PhD[1]

[1]University of Illinois at Urbana-Champaign, Urbana, IL; [2]University of Illinois at Urbana-Champaign, Champaign, IL; [3]University of Pittsburgh, Pittsburgh, PA; [4]Concordia University, Montreal, PQ, Canada; [5]University of Illinois at Urbana Champaign, Champaign, IL; [6]University of Illinois Urbana Champaign, Urbana, IL

The scientific knowledgebase regarding positive effects of aerobic and resistance training on cognitive functioning is extensive. However, to date, no intervention has been conducted to test the "opposite direction," i.e., effects of cognitive training (CT) on exercise involvement. The primary aim of the CORTEX trial was to test a novel, 20-hour multi-modal CT program on subsequent physical activity self-regulation. Here, we report an analysis of the trial's pre-post training transfer effects on cognitive outcomes, as a result of traditional (computerized, stationary) and non-traditional (exergaming) delivery of dual task and inhibitory control CT paradigms. Middle-aged adults (45-64; M = 53.82; 79% female; 78.2% White (vs. 15.1% Black/African-American, 3.4% Asian, 3.3% other; 68.1% with a college degree; 6.7% non-native English speaking; 63.9% married) were recruited from Central Illinois to participate in a 5-month study. A large battery of neuropsychological assessments was administered at baseline (accompanying a battery of physical and psychosocial measures). Participants were randomized to either pre-exercise CT via a Gaming group (n=59), or an attention-control Video group (n=60), after which they were post-tested, given a fitness club membership and 4-month program, and 5-month follow-up testing. To examine transfer effects, 7 reaction time [RT] measures (representing *multi-tasking* [dual-task, task-switching global & local RT cost], *inhibition* [stroop, flanker RT cost], and *working memory* [Sternberg, n-back RT]) were analyzed in a 2 (group) x 2 (time) x 7 (cost) repeated-measures MANOVA showing a significant overall interaction (Wilk's Lambda .853, F=2.61, p < .05, η^2 = .15). Improvements favoring the Gaming group were found in six measures, but not the untrained dual task measure. Overall, the findings provide evidence of transfer, possibly responsible for the observed group effects on exercise behavior (higher class attendance, visits, and lower dropout rate, p < .05, in *Gaming*). Our findings support the efficacy of multi-modal, stationary and kinetic-delivered CT among middle-aged adutls. Future directions and implications for CT interventions in the context of exercise programs will be discussed.

CORRESPONDING AUTHOR: Tiffany Bullard, B.S., University of Illinois at Urbana-Champaign, Urbana, IL, 61801; tiffanybullard88@gmail.com

CITATION PAPER

Paper Session 34 3:51 PM-4:09 PM

LATENT PROFILE ANALYSIS OF GIS-MEASURED ENVIRONMENTS FOR PHYSICAL ACTIVITY IN OLDER ADULTS

Michael Todd, PhD[1], Marc A. Adams, PhD[1], Jonathan Kurka, MS[1], Terry Conway, PhD[2], Kelli Cain, MA[3], Lawrence Frank, PhD[4], James Sallis, PhD[3], Abby King, PhD[5]

[1]Arizona State University, Phoenix, AZ; [2]University of California, San Diego, La Jolla, CA; [3]University of California, San Diego, San Diego, CA; [4]University of British Columbia, Vancouver, BC, Canada; [5]Stanford University School of Medicine, Stanford, CA

Neighborhood correlates of physical activity (PA) are complex and interrelated. This study explored whether patterns of neighborhood features could be derived from GIS-measured walkability, transit, park, and private recreation factors via latent profile analysis (LPA) and how these patterns might relate to older adults' PA. Participants in the Senior Neighborhood Quality of Life Study (N=728, 66-97 years, 53.1% female, 29.3% ethnic minority) were sampled from the Seattle/King County, WA and Baltimore, MD/Washington, DC regions and geocoded to compute walkability (net residential density, land use mix, retail floor area ratio, intersection density), transit (combined bus and rail stop density), and recreation access (park and private facility density) variables using 1-km street network buffers around participants' homes. Multilevel regression models compared derived profiles on accelerometer-measured moderate-to-vigorous PA (MVPA); self-reported walking for errands and walking for leisure (CHAMPS); and BMI, adjusting for nesting and sociodemographics. The LPA yielded a 3-profile solution: low walkable/transit/recreation (LLL); moderately-high walkable/transit/recreation (MMM); and high walkable, high transit/high private recreation (HHH). All 3 PA variables were higher in the HHH profile than the LLL profile (4.6 min/d MVPA difference; 76 min/wk walking for errands difference; 36 min/wk leisure walking difference; ps < .05). BMI was marginally lower for HHH than for LLL (25.4 vs. 26.9, p=.07). Significant between-profile differences in PA in the current analysis compared favorably to those seen in parallel analyses based on walkability features only, and overall, the patterns of differences were consistent with our hypotheses. Combined impacts of walkability, transit, and recreation environments may explain greater differences in PA for older adults than walkability alone. Patterns of environmental attributes can suggest tailored intervention strategies.

CORRESPONDING AUTHOR: Michael Todd, PhD, Arizona State University, Phoenix, AZ, 85004; mike.todd@asu.edu

Paper Session 34 3:33 PM-3:51 PM

PARENTHOOD STATUS DIFFERENTIALLY RELATES TO LEVELS OF PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOR

Rick LaCaille, PhD[1], Lara J. LaCaille, Ph.D.[1], Alyssa Schultz, B.A.S.[2]

[1]University of Minnesota Duluth, Duluth, MN; [2]University of Minnesota Twin Cities, Minneapolis, MN

Physical activity is an important behavior for maintaining quality of life and health, whereas sedentary behavior is a risk factor for increased levels of morbidity and mortality. Parenthood represents a significant life-transition for many adults and may be a critical correlate of inactivity. However, the effects of parenthood may differentially impact males and females. The present study examined physical (in)activity and health-related quality of life (HRQL) with mothers and fathers (n = 66; Mean age = 36.1+5.0 yrs) who either had a child in the home under the age of 6 years or individuals who had never been a parent (n = 48; Mean age = 34.01+6.9 yrs). Physical activity and sedentary behavior were measured using the International Physical Activity Questionnaire, which is a self-report measure that inquires about levels of mild, moderate, strenuous physical activity, and sitting behavior over the past 7 days. Although parents and non-parents were not found to be different in terms of HRQL or BMI, mothers perceived themselves to have better overall health than fathers ($p = .02$, $d = 0.60$) with no such difference observed with male and female non-parents. Parent status and sex significantly ($p = .04$, $\eta^2 = .04$) interacted such that mothers reported lower levels of physical activity compared to female non-parents ($p < .001$, $d = 1.01$) and marginally significantly ($p = .08$, $d = 0.45$) lower levels relative to fathers. No significant differences in physical activity were observed between fathers and male non-parents ($p = .47$, $d = 0.22$) nor between female and male non-parents ($p = .26$, $d = 0.35$). In terms of sedentary behavior, parents engaged in significantly ($p = .002$, $\eta^2 = .09$) less sedentary behavior than non-parents with no significant ($p = .53$, $\eta^2 = .004$) interaction observed between parent status and sex. Taken together, the results suggest that parenthood necessitates changes in lifestyle that result in lower sedentary behavior (i.e., less time sitting), but also for mothers, less time for exercise.

CORRESPONDING AUTHOR: Rick LaCaille, PhD, University of Minnesota Duluth, Duluth, MN, 55812; rlacaill@d.umn.edu

Paper Session 34 4:09 PM-4:27 PM

A META-ANALYTIC REVIEW OF THE EFFECTS OF GOAL SETTING ON PHYSICAL ACTIVITY BEHAVIOR

McEwan Desmond, MSc[1], Samantha Harden, PhD[2], Bruno D. Zumbo, PhD[1], Benjamin D. Sylvester, MA[1], Megan Kaulius, BA[1], Geralyn Ruissen, BSc[1], A. Justine Dowd, PhD[3], Mark Beauchamp, PhD[1]

[1]University of British Columbia, Vancouver, BC, Canada; [2]Virginia Tech, Blacksburg, VA; [3]University of British Columbia Okanagan, Vancouver, BC, Canada

The majority of people across a wide range of populations are insufficiently active to derive health benefits. As such, there is a need to identify effective physical activity (PA) interventions in order to improve public health. Although goal setting is often promoted as a useful strategy for fostering PA, a quantitative synthesis has yet to be conducted.As such, the purpose of our study was to conduct a meta-analysis examining the overall effect of goal setting interventions in relation to PA behavior, and the boundary conditions (via moderator analyses) of this effect with respect to methodological, sample, and intervention characteristics. A literature search was conducted using eight key databases which yielded 19,229 potential articles. The meta-analysis was ultimately conducted across 44 studies that met the eligibility criteria (total k = 60, 191 effect sizes, $n = 4923$). Data were analyzed using a random-effects model. Overall, a medium-to-large effect (Cohen's d(SE) = .605(.07), 95% CI = .47–.74, Z-value = 8.69, $p < .001$) of goal setting on PA behavior was found. Moderator analyses on 24 variables revealed several noteworthy differential effects. The results revealed that the effects of goal setting on PA were evident across a diverse range of settings, populations, and intervention durations, which speaks to its pervasive utility as a behavioral health strategy. Furthermore, the most effective PA goals appear to be daily, absolute goals (e.g., exercising for *x* number of minutes per day) that can be modified on a weekly basis if necessary, are self-monitored (in terms of goal progress/achievement), and incorporate social support. In conclusion, the results of this meta-analysis provide support for the utility of a series of evidence-based goal setting strategies in order to increase PA among diverse populations and in different settings.

CORRESPONDING AUTHOR: McEwan Desmond, MSc, University of British Columbia, Vancouver, BC, V6T1Z1; desi.mcewan@gmail.com

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HOW MORNING COGNITIVE AND FEELING STATES PREDICT DAILY PHYSICAL ACTIVITY LEVELS AMONG ADULTS

Yue Liao, MPH, Genevieve F. Dunton, PhD, MPH

University of Southern California, Los Angeles, CA

Background: Cognitive factors and feeling states are recognized as important determinants for physical activity (PA) levels. This study aims to examine whether one's morning mood and cognitive thinking influence his/her daily PA in free-living environments. Methods: Participants included 110 adults (72% female and 62% overweight/obese) who received an electronic mobile phone survey between 6:30-6:45 am each day for 12 days. The electronic survey assessed participants' current positive and negative affect, tiredness, energy level, as well as their intention, self-efficacy, and outcome expectancy for doing PA in the next few hours. PA level was measured by accelerometer and converted to total moderate-to-vigorous physical activity (MVPA) minutes each day. Multilevel models were fit to assess the within-person and between-person effects of morning cognitive and feeling states on totally daily MVPA minutes controlling for gender and weight status. Results: Higher outcome expectancy in the morning relative to one's usual/average level predicted greater total MVPA minuets for that day (β= 4.90, p=.015). Also, individuals who had a higher self-efficacy in the morning across the monitoring days engaged in more daily MVPA minutes (β= 4.83, p=.04). Morning positive and negative affect, tiredness, energy level and intention were not associated with daily MVPA minutes. Conclusion: How a person feels (e.g., happy, energetic, or tired) in the morning might not influence his/her total PA levels for that day. However, how one "thinks" in the morning (e.g., confidence in doing PA, perceived benefits from engaging in PA) may be more relevant predictors for a more physically active day.

CORRESPONDING AUTHOR: Yue Liao, MPH, University of Southern California, Los Angeles, CA, 90032; yueliao@usc.edu

Paper Session 35 3:15 PM-3:33 PM

COPING STYLE, QUALITY OF LIFE, AND CANCER SPECIFIC DISTRESS IN MEN WITH ADVANCED PROSTATE CANCER

Heather L. McGinty, PhD[1], Sarah C. Flury, M.D.[2], Betina Yanez, PhD[1], Molly S. Hermiller, M.P.P.A.[3], Max F. Kelsten, B.S.[3], Frank J. Penedo, PhD[3]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]Northwestern University, Feinberg School of Medicine, Chicago, IL; [3]Northwestern University, Chicago, IL

Men with advanced prostate cancer (APC) report poorer health-related quality of life (HRQoL) as a result of both disease processes and cancer treatments. Few studies have examined the strategies men utilize to cope with these declines and what impact selected coping strategies have on cancer-related distress. The purpose of this study was to evaluate HRQoL, coping strategies, and cancer-related distress in men with APC undergoing hormone therapy. We hypothesized that both poorer HRQoL and maladaptive coping would predict greater cancer-related distress. We also examined whether coping mediated the relationship between HRQoL and cancer-specific distress.

Participants were 82 men with APC undergoing hormone therapy. Men completed the following self-report measures as part of a larger study: Functional Assessment of Cancer Therapy-Prostate (FACT-P), Brief COPE, Memorial Anxiety Scale for PC (MAX-PC), and Impact of Events Scale-Revised (IES-R). Statistical analyses included linear regressions examining the relationships between HRQoL and coping strategy use, HRQoL and cancer-related distress, and coping strategy use and cancer-related distress. Mediation was examined via the Sobel test.

Poorer FACT-P scores and maladaptive coping (self-distraction and denial) had statistically significant independent associations with greater cancer-related distress as measured by both the MAX-PC (*ps* < .001) and IES-R (*ps* < .001). Poorer FACT-P scores also were significantly associated with greater use of self-distraction coping (*p* < .001) and denial coping (*p* < .001). No other coping strategies had significant relationships to either HRQoL or distress measures. Greater use of self-distraction as a coping strategy mediated the relationship between poorer HRQoL and greater cancer related distress (MAX-PC Sobel test = -2.68, *p* < .01; IES-R Sobel test = -2.74, *p* < .01). Also, greater use of denial to cope mediated the relationship between poorer HRQoL and greater cancer related distress (MAX-PC Sobel test = -2.10, *p* < .05; IES-R Sobel test = -2.37, *p* < .05).

Study findings demonstrate that maladaptive coping (self-distraction and denial) impacts how distressing decrements in HRQoL are perceived in men with APC. Future research should evaluate ways to promote adaptive coping strategies in this population to help reduce the psychological impact of the physical and functional changes associated with APC.

CORRESPONDING AUTHOR: Heather L. McGinty, PhD, Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; heather.mcginty@northwestern.edu

Paper Session 35 3:33 PM-3:51 PM

THE ICK FACTOR MATTERS: DISGUST PROSPECTIVELY PREDICTS AVOIDANCE IN CHEMOTHERAPY PATIENTS

Lisa Reynolds, MSc[1], Ian P. Bissett, MBChB, FRACS, MD[1], David Porter, MBChB, FRACP, MD[2], Nathan S. Consedine, PhD[1]

[1]The University of Auckland, Auckland, New Zealand; [2]Auckland Regional Cancer and Blood Service, Auckland, , New Zealand

Background: Unpleasant cancer symptoms and chemotherapy side effects generate emotional responses that increase avoidance. Withdrawal, avoidance and delays in cancer patients is common and can negatively impact social relationships, personal coping and treatment efficacy. Despite its established purpose promoting health through avoidance of risk, disgust's likely links to avoidance in chemotherapy patients have yet to be studied. Method: This study reports on secondary analyses of an RCT where 68 cancer patients undergoing chemotherapy were randomised to mindfulness or relaxation groups. The current work prospectively assessed whether disgust sensitivity at enrolment (Time 1), predicted avoidance immediately after the groups (Time 2), and three months later (Time 3). Measures assessed disgust sensitivity (DS-R), distress (Distress Thermometer), symptoms (MSAS-SF), embarrassment (SES-SF), social avoidance, cognitive and emotional avoidance (IES Avoidance), and information seeking and treatment adherence. Repeated measures ANOVAs assessed changes over time and step-wise regression models assessed predictors of avoidance. Results: Whilst disgust sensitivity did not change over time or change differently per group over time, it was a robust predictor of avoidance. Regressions showed that Time 1 disgust prospectively predicted greater social (T2 β=.36, *p* < .01; T3 β=.37, *p* < .01) and cognitive/emotional avoidance (T2 β=.43, *p* < .001; T3 β=.37, *p* < .01) and was a better predictor than symptoms, baseline embarrassment, or cancer distress. Additionally, while disgust did not predict medication adherence at any time (or information seeking at Time 2), it predicted greater information seeking at Time 3 (T3 *OR* =4.04, *p* < .01, *CI* 1.49–11.02). Results only changed slightly when covarying depression. Conclusions: This report represents the first prospective investigation of disgust's ability to predict social, emotional, and cognitive avoidance in people undergoing chemotherapy. It thus highlights disgust's role as an early indicator of likely avoidance in the cancer treatment trajectory. Early identification of cancer patients at risk of deleterious avoidance enables timely intervention and has important clinical and health implications.

CORRESPONDING AUTHOR: Lisa Reynolds, MSc, PGDipHlthPsych, The University of Auckland, Auckland, 1142; lisa.reynolds22@gmail.com

Paper Session 35 3:51 PM-4:09 PM

SOCIAL CONSTRAINT DOES NOT ALWAYS HURT: MODERATING EFFECT OF ACCULTURATION AMONG CANCER SURVIVORS

Celia Ching Yee Wong, MPhil, Qian Lu, MD, PhD

University of Houston, Houston, TX

Objective: Previous research showed social constraint behaviors of significant others such as criticism and avoidance have a negative association with psychological adjustment in cancer patients but little research was conducted to examine how such association may vary across culture. Chinese people, as members of a collectivistic culture, are generally considered to rely heavily on social support in coping with difficulties. However, recent research found the opposite pattern – with the concern that bothering others with personal problems may disrupt interpersonal harmony; people from collectivistic cultures are less likely to seek help from their social groups in times of stress, compared with people from individualistic cultures. Therefore, the impact of social constraint on well-being may differ in individualistic and collectivistic cultures, and among people with different degree of acculturation. The present study examined the association between social constraint and physical symptoms, as well as the moderating role of acculturation on the association between social constraint and physical symptoms among breast cancer survivors. *Method:* Ninety-six Chinese breast cancer survivors aged between 37 and 77 (*M* = 54.54, *SD* = 7.91) were recruited from Chinese community organizations in Southern California. Interested and eligible individuals were invited to complete a questionnaire package assessing their levels of acculturation, social constraints and physical symptoms. *Result:* Significant interaction effect between social constraint and acculturation on physical symptoms was found. Simple slope tests revealed significant positive association between social constraint and physical symptoms among highly acculturated breast cancer survivors but not among counterparts with low level of acculturation. *Discussion:* Extending beyond previous research findings that social constraint had a negative impact on individuals' physical well-being, we found such association would vary according to individuals' level of acculturation. Theoretical and practical implication on the development of culturally sensitive intervention among breast cancer survivors will be discussed.

CORRESPONDING AUTHOR: Celia Ching Yee Wong, MPhil, University of Houston, Houston, TX, 77027; celia.cyw@gmail.com

Paper Session 35 4:09 PM-4:27 PM

ADDING INSULT TO ILLNESS: NEGATIVE LIFE EVENTS (NLES), COPING WITH CANCER, AND QUALITY OF LIFE (QOL)

Thomas V. Merluzzi, Ph. D.[1], Andrea Chirico, Psy D[2], Samantha Serpentini, Psy D[3], Errol J. Philip, PhD[4], Miao Yang, M.A[5]

[1]University of Notre Dame, Notre Dame, IN; [2]University of Rome (La Sapienza), Naples, , Italy; [3]Institute of Oncology (Veneto), Padua, , Italy; [4]Private Practice, Diamond Bar, CA; [5]University of Notre Dame,

Introduction: There is controversy over the causal impact of negative life events (NLEs) on the etiology and progression of cancer (Butow et al, 2000; Chida et al, 2008); more consistent evidence has supported the relationship between NLEs and QOL (Golden-Kreutz et al, 2005; Costanzo et al, 2012). However, most studies of the relationship between NLEs and QOL do not include coping models and do not control for physical debilitation, which is highly correlated with QOL. The current study investigated the mediation of the relationship between NLEs and Physical/Functional QOL (P/FQOL) by three types of coping: Action/Planning (AP), Support/Advise-Seeking (SAS), and Disengagement/Denial (DD).Hypotheses: Coping will mediate the relationship between NLEs and P/FQOL. Furthermore, AP and SAS coping will be positively related with QOL, whereas DD will be negatively associated with P/FQOL.Method: 664 persons with cancer completed a Negative Life Events Checklist ("events in the last year"), the Ambulation, Mobility, and Body Care and Movement scales of the Sickness Impact Profile (SIP), the COPE scale, and the Physical and Functional Scales of the FACT. Factor analysis of the COPE revealed three distinct coping styles (Action/Planning, Support/Advise-Seeking, & Disengagement/Denial). Regression analyses were used to test mediation hypotheses. Result: Controlling for physical debilitation (SIP), age, education and income, NLEs were positively associated with AP (*B*=.089; *p*=.02) and DD (*B*=.289; *p*=.001) but not SAS; however, contrary to the hypotheses, only DD was related to P/FQOL (*B*= -.289; *p*=.001). Thus, only DD mediated the relationship between NLEs and P/FQOLConclusions: The results indicate that NLEs represent a class of events for which there may be only one dominant coping response – disengagement – that is then negatively related to QOL. This may be the case based on the nature of the events, which many times are not controllable or predictable, but also on the reduced capacity for active coping based on having to simultaneously deal with major NLEs as well as serious illness. Thus, NLEs may represent a risk factor that exacerbates the challenges already present in coping with cancer. NLEs may be detected at any point in the cancer trajectory so that supportive services might be provided.

CORRESPONDING AUTHOR: Thomas V. Merluzzi, Ph. D., University of Notre Dame, Notre Dame, IN, 46556; tmerluzz@nd.edu

Paper Session 35 4:27 PM-4:45 PM

SOCIAL RELATIONSHIP COPING EFFICACY MITIGATES LOSS OF SOCIAL SUPPORT IN PERSONS WITH CANCER

Thomas V. Merluzzi, Ph. D.[1], Samantha Serpentini, Psy D[2], Miao Yang, M.S.[1], Errol J. Philip, PhD[3]

[1]University of Notre Dame, Notre Dame, IN; [2]Institute of Oncology (Veneto), Padua, , Italy; [3]Private Practice, Diamond Bar, CA

Introduction: Reviews of research generally find that social support is critical for well-being and quality of life (Kornblith et al, 2001; Epplein et al., 2011) in the context of serious illness. Alternatively, lack of social support can have negative effects (Nausheen et al., 2009). In the course of serious illness, loss of some portion of a social support network may occur due to physical limitations that accompany the illness. This process may also reduce emotional and instrumental support, which can have negative consequences on quality of life.

Social relationship coping efficacy (SRCE) is the confidence to engage in behaviors that could maintain or enhance positive social relationships in the context of illness. A pilot study showed that SRCE, as a mediator between physical debilitation and social support, did mitigate loss of social support (Serpentini, Merluzzi, & Philip, 2014). This study extends the initial findings by 1) using more sophisticated models and 2) including models that test emotional and instrumental support, separately. Method: Mixed diagnosis (N=150) cancer patients and survivors completed measures of the physical impact of illness (SIP), received emotional and instrumental support (ISSB), and SRCE (alpha = .96). When investigating the mediation effect of SRCE on the relationship between physical debilitation (SIP) and the emotional/instrumental support dimensions of the ISSB, we controlled for age, income, and education. Results: There was a significant mediation effect of SRCE (p=0.005) while the direct effect from SIP to instrumental support (ISSB) was insignificant (p=0.973). The same results were obtained for emotional support; that is, there was a significant mediation effect of SRCE ($p < 0.001$) while the direct effect from SIP to emotional support (ISSB) was insignificant (p=0.492).Thus, for both instrumental and emotional support, the relationship between physical debilitation and support was fully mediated by SRCE. Discussion: The results confirm that SRCE can lessen the loss of social support that results from physical debilitation. The results also indicate that working on increasing SRCE with those at risk for social support loss may be helpful. Future research can extend the models to include distress and quality of life outcomes.

CORRESPONDING AUTHOR: Thomas V. Merluzzi, Ph. D., University of Notre Dame, Notre Dame, IN, 46556; tmerluzz@nd.edu

Paper Session 36 3:15 PM-3:33 PM

USE OF A HOME-BASED STRENGTH TRAINING PROGRAM AMONG POST-OPERATIVE BREAST CANCER PATIENTS

Ashley Falcon, PhD, MPH[1], Noella Dietz, PhD[1], Kris Arheart, EdD[1], David Lee, PhD[1], Kathryn Schmitz, PhD, MPH[2], Mark Stoutenberg, PhD, MSPH[3]

[1]University of Miami, Miami, FL; [2]University of Pennsylvania Perelman SOM, Philadelphia, PA; [3]University of Miami, Miami Beach, FL

Objective: To evaluate the effects of a 12-week home-based strength training program on the upper body strength of post-operative breast cancer (BCa) patients.

Background: BCa is the most common type of cancer diagnosed among women in the United States. Advances in cancer detection and treatment have led to improved survival, and focus has shifted towards addressing the adverse physiological and psychological effects associated with BCa and its treatments. Evidence supports regular physical activity (PA) as an effective means of managing the negative side effects of BCa treatments and improving health-related quality of life (QOL). Strength training is of particular importance for BCa survivors who experience treatment-related muscle wasting and functional limitations.

Methods: A randomized pilot trial was conducted among 23 BCa patients who were 4 weeks to 2 years post-surgery. Women were randomly assigned to one of two 12-week interventions: 1) twice-weekly DVD-based strength training (ST), or 2) weekly health education (HE) DVD viewing. The primary outcome was upper body strength as measured by a one-repetition maximum (1-RM) chest press. Measures of safety and quality of life (SF-36, FACT-B, pain, and fatigue) were also taken at baseline and post-intervention

Results: Twenty participants completed a post assessment. Mean adherence for study completers was 72.7% for ST and 75.0% for HE participants. A repeated measures ANCOVA, controlling for baseline measurements, adherence, and current treatment status, revealed a significant increase in upper body strength among ST participants (13.8 vs. 2.1 lbs., p=0.013), as well as significant improvements in shoulder flexion (right arm: $p < 0.001$; left arm: p=0.009) and abduction (right arm: p=0.012; left arm: $p < 0.001$). HE participants showed greater QOL improvements in fatigue-related disruption (p=0.013), general QOL (p=0.011), and physical and emotional functioning role limitations ($p < 0.001$ and p=0.003, respectively).

Conclusion: Post-operative BCa patients can safely use a home-based strength training program to improve upper body strength and range of motion. An easy-to-follow, DVD-based strength training program that can be used in an unsupervised setting can help BCa patients regain strength and function after BCa surgery.

CORRESPONDING AUTHOR: Ashley Falcon, PhD, MPH, University of Miami, Miami, FL, 33176; afalcon1@miami.edu

Paper Session 36 3:33 PM-3:51 PM

PEER MENTORS DELIVERING A PHYSICAL ACTIVITY INTERVENTION FOR CANCER SURVIVORS: RESULTS AMONG MENTORS

Bernardine M. Pinto, PhD[1], Kevin Stein, PhD[2], Shira I. Dunsiger, PhD[3]

[1]University of South Carolina, Columbia, SC; [2]American Cancer Society, Atlanta, GA; [3]The Miriam Hospital, Providence, RI

Physical activity (PA) adoption can reduce some treatment-related sequelae of breast cancer. Peer mentoring to increase PA is a relatively new approach in cancer survivorship with little known about the effects at the mentor-level. We partnered with the American Cancer Society's Reach to Recovery program (RTR) whose volunteers (breast cancer survivors) provide information and emotional support to breast cancer survivors. This randomized controlled trial compared the effects of a 12-week PA telephone counseling program delivered by RTR volunteers (Reach Plus) vs. a contact control condition (Reach Standard). RTR volunteers/mentors (n=18; mean age=54.9 years, mean years since diagnosis=7.0, mean years volunteering with RTR=4.5) received 8 hours of training in intervention delivery and were supervised by phone. 76 breast survivors (mean 4.2 participants per coach) were randomized to Reach Plus or Reach Standard and completed measures of PA at baseline, 12 and 24 weeks. Coaches completed pre- and post-study measures of PA (7 Day Physical Activity Recall interview), health status (SF-36), fatigue (FACTIF) and QOL (FACT-B). They delivered 92.98% of expected calls (audio-taped) and achieved fidelity in intervention implementation (process and content). Reach Plus participants significantly increased their PA at 12 and 24 weeks vs. Reach Standard participants (data previously presented). At study end, coaches evaluated the training and delivery of the intervention using rating scales (1-5 with 1=low and 5=high). They rated the training (mean= 4.7, SD=0.6) and supervision as very useful (mean=4.1, SD=0.9). They identified few barriers to intervention delivery, and the coaches found it easy to fit supervision into their schedules (mean rating=4.6, SD=0.8). The coaches recommended the study with a mean rating of 4.8 (SD=0.4) on a scale of 1-5 (1= not at all, 5=definitely yes). Paired t-tests revealed no significant changes in coaches' pre and post-study PA, health status, fatigue and QOL (ps>.05). The results indicate that peer mentors can successfully deliver a PA intervention to cancer survivors with no detrimental effects to their own PA and psychosocial outcomes. Hence, peer mentoring can be a viable approach to increasing PA among cancer survivors. Supported by the National Cancer Institute.

CORRESPONDING AUTHOR: Bernardine M. Pinto, PhD, University of South Carolina, Columbia, SC, 29208; PINTOB@mailbox.sc.edu

Paper Session 36 3:51 PM-4:09 PM

PHYSICAL ACTIVITY AMONG CANCER SURVIVORS REFERRED FOR EXERCISE TRAINING—A LONGITUDINAL EVALUATION

Cassidy A. Cisneros, BA[1], Heidi A. Hamann, PhD[1], Paula Anderson, RN, MN[2], Bonnie Rose, RN, BSN, OCN[3], Rachel Funk, PhD[4], Joanne Sanders, MS[5], Emily A. Berry, MSPH[6], Keith Argenbright, MD[7]

[1]UT Southwestern Medical Center, Dallas, TX; [2]UTSW/Moncrief Cancer Institute, Fort Worth, TX; [3]Moncrief Cancer Institute, Fort Worth, TX; [4]University of Oklahoma Health Sciences Center, Oklahoma City, OK; [5]Department of Clinical Sciences, Harold C. Simmons Cancer Center, UT Southwestern Medical Center, Dallas, TX, Dallas, TX; [6]UT Southwestern Moncrief Cancer Institute, Fort Worth, TX; [7]UTSW Moncrief Cancer Institute, Fort Worth, TX

IntroductionPhysical activity (PA) is a crucial component of cancer survivorship care, but most (68-80%) cancer survivors do not meet National Comprehensive Cancer Network (NCCN) guidelines for weekly activity levels. Supervised exercise training is a growing component of clinical survivorship programs, but little is known about their long-term effects. The goal of the current analysis was to assess longitudinal changes in self-reported PA among cancer survivors referred for supervised exercise training as part of a community survivorship program.

MethodsParticipants included 181 cancer survivors (90% female) offered supervised exercise training (12 sessions free of charge) during an initial consult in the survivorship clinic. Among participants, 69% identified as Non-Hispanic (NH) White, 14% NH Black, and 14% Hispanic. Mean age was 57 years old; 55% were married and 40% were college graduates. Self-reported PA was measured by the International Physical Activity Questionnaire (IPAQ), with data gathered at baseline and 3, 6, and 12 months post-referral.

ResultsAmong the 181 survivors, 4% attended no training sessions, 26% attended 1-5 sessions, 28% attended 6-11 sessions, and 42% attended 12 or more sessions. Adherence to the NCCN PA guidelines for cancer survivors improved for participants between baseline and follow-up periods with the greatest increase from baseline to 3-months (37% adherent at baseline; 57%, 50%, 50% at 3-, 6-, 12- months, respectively). Survivors who attended 12 or more sessions were more likely to report adherence to NCCN PA guidelines at 6 months post-referral compared to those who attended 1-5 sessions (p=.008).

Conclusions/ImplicationThese data indicate significant improvements in self-reported adherence to NCCN PA guidelines for cancer survivors during their first year of enrollment in a community-based cancer survivorship program, with an association between exercise training session attendance and maintenance of gains over time. Results suggest that exercise interventions implemented at the community-level offer meaningful and measureable benefits to cancer survivors.This study is supported by a Cancer Prevention and Research Institute of Texas (CPRIT) prevention grant (PP110097).

CORRESPONDING AUTHOR: Cassidy A. Cisneros, BA, UT Southwestern Medical Center, Dallas, TX, 75390; cassidy.cisneros@utsouthwestern.edu

Paper Session 36 4:09 PM-4:27 PM

CARDIORESPIRATORY FITNESS, PHYSICAL ACTIVITY, AND WORKING MEMORY IN BREAST CANCER SURVIVORS

Michael J. Mackenzie, PhD[1], Krystle E. Zuniga, PhD, RD[2], Lauren B. Raine, BSc[3], Elizabeth A. Awick, MS[4], Charles Hillman, PhD[5], Arthur F. Kramer, PhD[6], Edward McAuley, PhD[4]

[1]University of Delaware, Newark, DE; [2]Texas State University, San Marcos, TX; [3]University of Illinois At Urbana-Champaign, Urbana, IL; [4]University of Illinois Urbana Champaign, Urbana, IL; [5]University of Illinois at Urbana-Champaign, urbana, IL; [6]University of Illinois at Urbana Champaign, Champaign, IL

Objective: This study examined the effects of cardiorespiratory fitness, heart rate recovery, and physical activity on working memory in breast cancer survivors and age-matched controls.*Methods:* Using a cross-sectional design, 32 women who had received a breast cancer diagnosis and completed primary treatment within the past 36-months and 30 age-matched women with no previous cancer diagnosis completed an *n*-back working memory task. In addition, cardiorespiratory fitness and heart rate recovery were measured during a submaximal graded exercise test and physical activity was measured using 7-days of accelerometer monitoring.*Results:* Multilevel modeling revealed breast cancer survivors had significantly longer reaction times across trials for the 1-back condition and were more likely to misidentify 1-back target and non-target trials. Participants in the age-matched control group who displayed greater heart rate recovery had shorter 1-back target trial reaction times. All participants with greater cardiorespiratory fitness were more accurate on 1-back target trials and better able to distinguish 1-back target and non-target trials independent of disease status. Breast cancer survivors who engaged in more total physical activity had shorter reaction times for 2-back target trials. All participants who exhibited greater heart rate recovery demonstrated shorter reaction times across 2-back trials, greater accuracy for 2-back target trials, and a greater ability to distinguish between 2-back target and non-target trials regardless of disease status.*Conclusions:* These findings support differences in working memory between breast cancer survivors and age-matched controls. Greater cardiorespiratory fitness, heart rate recovery, and physical activity were positively associated with better working memory performance.

CORRESPONDING AUTHOR: Michael J. Mackenzie, PhD, University of Delaware, Newark, DE, 19716; mmackenz@udel.edu

CITATION PAPER

Paper Session 36 4:27 PM-4:45 PM

BEAT CANCER INTERVENTION EFFECTS ON PHYSICAL ACTIVITY AND QUALITY OF LIFE IN BREAST CANCER SURVIVORS

Laura Q. Rogers, MD, MPH[1], Kerry S. Courneya, PhD[2], Philip M. Anton, PhD[3], Patricia Hopkins-Price, PhD[4], Steven Verhulst, PhD[4], Sandra Vicari, PhD[4], Randall Robbs, MBA[4], Karen Hoelzer, MD[5], Robert Mocharnuk, MD[4], Edward McAuley, PhD[6]

[1]University of Alabama at Birmingham, Birmingham, AL; [2]University of Alberta, Edmonton, AB, Canada; [3]Southern Illinois University, Carbondale, IL; [4]Southern Illinois University School of Medicine, Springfield, IL; [5]Springfield Clinic, Springfield, IL; [6]University of Illinois Urbana Champaign, Urbana, IL

Physical activity can improve health, quality of life (QoL), and breast cancer outcomes, yet most breast cancer survivors do not participate in the recommended amount of physical activity. Therefore, our primary study aim was to determine the effects of the Better Exercise Adherence after Treatment for Cancer (BEAT Cancer) behavior change intervention to usual care (UC) on physical activity in breast cancer survivors. Secondary outcomes included aerobic fitness and QoL. This multicenter trial randomized 222 post-treatment breast cancer survivors to BEAT Cancer or UC. BEAT Cancer is a 3-month social cognitive theory-based intervention combining supervised exercise, individual counseling, and group discussion sessions with a transition to home-based exercise. Baseline, month 3 (M3), and month 6 (M6) assessments included accelerometer, self-report physical activity, submaximal treadmill test, and Functional Assessment of Cancer Therapy (FACT)-Breast QoL scale. Retention was 96%. Adherence was 98% for supervised exercise, 96% for individual counseling, and 91% for discussion groups. Adjusted linear mixed-model analyses demonstrated significant effects of BEAT Cancer compared to UC on weekly minutes of ≥ moderate intensity physical activity at M3 by accelerometer [Mean between group difference (M) = +41; 95% confidence interval (CI) = 10 - 73; $p = .010$] and self-report (M = +93; CI = 62 - 123; $p < .001$). Statistical significance remained at M6 for self-reported physical activity (M = +74; CI = 43 - 105; $p < .001$). BEAT Cancer participants were significantly more likely to meet physical activity recommendations at M3 [accelerometer odds ratio (OR) = 2.2; CI = 1.0 - 4.8 and self-report OR = 5.2; CI = 2.6 - 10.4]. Odds of meeting recommendations remained statistically significant at M6 (accelerometer OR = 2.4; CI = 1.1 - 5.3 and self-report OR = 4.8; CI = 2.3 - 10.0). BEAT Cancer significantly improved fitness at M6 (M = +1.8 ml/kg/min; CI = 0.8 - 2.8; $p = .001$) and FACT-Breast at M3 and M6 (M = +6.4; CI = 3.1 - 9.7; $p < .001$ and M = +3.8; CI = .5 - 7.2; $p = .025$, respectively). BEAT Cancer is an efficacious program for increasing physical activity, aerobic fitness, and QoL in breast cancer survivors. Important benefits continued 3 months after intervention completion. Funding: NCI R01CA136859; Registration: NCT00929617

CORRESPONDING AUTHOR: Laura Q. Rogers, MD, MPH, University of Alabama at Birmingham, Birmingham, AL, 35294-3360; rogersl@uab.edu

Friday
April 24, 2015
6:00 PM-7:00 PM

6:00 PM-7:00 PM C001

ILLNESS UNDERSTANDING EXPLAINS BLACK-WHITE DISPARITIES IN END-OF-LIFE CARE PREFERENCES AND PLANNING

Megan Johnson. Shen, PhD[1], Paul K. Maciejewski, PhD[2], Kelly M. Trevino, PhD[2], Andrew S. Epstein, MD[1], Wendy G. Lichtenthal, PhD[1], Alfred Neugut, MD, PhD[3], Carla Boutin-Foster, MD, MPH[2], M. Elizabeth. Paulk, MD[4], Holly G. Prigerson, PhD[2]

[1]Memorial Sloan Kettering Cancer Center, New York, NY; [2]Weill Cornell Medical College, New York, NY; [3]Columbia University Medical Center, New York, NY; [4]University of Texas Southwestern Medical Center at Dallas, Dallas, TX

Background: Black patients are less likely than White patients to complete advance directives, such as Do Not Resuscitate (DNR) orders, and more likely to want aggressive care at the end of life. Understanding what accounts for these racial disparities could identify targets for intervention, potentially leading to improvements in Black patients' end of life care. The degree to which cancer patients nearing the end of life understand the severity of their illness may influence their end-of-life care preferences and planning. The focus of the present analyses was to examine the role of illness understanding in explaining the relationship between race and end of life care preferences and planning.Methods: Coping with Cancer II is a multi-site, prospective study of terminally ill cancer patients followed through death. The data (n=201) collected from this ongoing project were obtained from structured interviews conducted following a diagnostic scan. Patients reported their understanding of the severity of their current illness, treatment preferences for end-of-life care, and whether they had completed a DNR order.
Results: In rating how healthy or seriously ill patients understood themselves to be (i.e., 1 = relatively healthy; 4 = seriously ill and terminally ill),Black patients rated their illness as significantly more serious (M = 2.30, SD = .88) than White patients (White = 1.85, SD = .22) ($t_{187} = -2.73$, p = .007). Being Black was significantly associated with higher odds of preferring extending life as much as possible (OR = 2.61; p=.03) and lower odds of having completed a DNR order (OR = .214; p=.003). Illness understanding fully mediated the relationship between race and end of life care preferences and race and DNR order completion.Conclusions: Black patients are more likely to report being seriously ill than White patients, yet they report higher odds of preferring aggressive care at the end of life and lower odds of completing a DNR order. Once controlling for illness understanding, the effect of race on end of life care planning and preferences is no longer significant. This finding is indicative of avoidance-based or fear-based behaviors in which perceiving one's self as more ill may lead to less planning and more aggressive care. Future research should determine which component of illness understanding drives this effect and explore these possible links to develop interventions that may target potential anxieties.

CORRESPONDING AUTHOR: Megan Johnson. Shen, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, 10022; shenm@mskcc.org

6:00 PM-7:00 PM C002

INNOVATIVE APPROACHES TO DELIVERY OF PATIENT-CENTERED CANCER CARE: RESULTS OF A LIVESTRONG SYMPOSIUM

Ellen Beckjord, PhD, MPH[1], Rebekkah Schear, MIA[2], Devon McGoldrick, MPH[2], Stephanie Nutt, MA, MPA[2], Sarah R. Arvey, PhD[3], Ruth Rechis, PhD[2]

[1]University of Pittsburgh Cancer Institute, Pittsburgh, PA; [2]LIVESTRONG Foundation, Austin, TX; [3]LIVESTRONG Foundaion, Austin, TX

The field of patient-centered care has a 50 year history, but data on cancer-specificpatient-centered care research and implementation are somewhat limited. Nonetheless, the 2013 Institute of Medicine report, “Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis,” recommends PCCC as a way to address challenges facing the cancer care system today. In June 2014, the LIVESTRONG Foundation convened a symposium with 83 stakeholders to discuss current trends in cancer care; explore solutions to challenges of delivering PCCC; and through a simulation activity, rapidly construct models of PCCC. Symposium participants were equipped with 23 elements of PCCC created by LIVESTRONG based on a thorough literature review. Additionally, presentations, surveys, real-time qualitative data analysis, and human-centered design activities were used to gather input directly from participants about approaches to delivering PCCC. In this presentation, we will detail the execution of the Symposium and what was learned from participants. Results of the Symposium suggested that “accessible, timely, clear, and effective communication between all parties engaged in the care of the patient” is one of the most essential and challenging elements of PCCC. The use of patient navigators, health information technology to enable a “learning health care system,” patient-provider communication; incorporation of PCCC into medical education; and psychosocial support were also frequently noted as key to the delivery of PCCC. Ultimately, two models of PCCC were proposed by participants and in both cases there were clear parallels to the structure of the patient-centered medical home. Bringing these models to life will require policy and incentive structures to align with cancer care that leverages multiple components of the healthcare system in the service of people affected by cancer.

CORRESPONDING AUTHOR: Ellen Beckjord, PhD, MPH, University of Pittsburgh Cancer Institute, Pittsburgh, PA, 15232; beckjorde@upmc.edu

6:00 PM-7:00 PM C003

LAY THEORIES OF BREAST CANCER’S CAUSE AMONG BREAST CANCER PATIENTS WHO DO AND DO NOT SEEK IO CARE

M. Robyn Andersen, PhD, MPH[1], Erin S. Sweet, ND, MPH[2], Leanna Standish, PhD, ND[3]

[1]Fred Hutchinson Cancer Research Center, Seattle, WA; [2]Bastyr University, Kenmore, WA; [3]Bastyr University, Seattle, WA

Background: Survivors of cancer frequently develop lay theories about the cause of their cancer. As lay theories of illness often link causes of illness with treatments we sought to examine differences in the frequency of various lay theories of cancer’s cause among women who do and do not use oncology specific Complementary and Alternative Medicine (CAM). Methods: The responses provided by 554 breast cancer survivors 245 of whom sought cancer treatment from Integrative Oncology CAM (IO) clinics and 309 did not seek IO care to an open-ended question about their theories regarding the “cause” of the cancer were coded and examined. Participating breast cancer survivors completed questionnaires between 2010 and 2014. Results: We found women in this sample frequently described multiple cause or multi-factorial theories for their cancer’s cause (38% of women), and that factors mentioned frequently included genetics (mentioned by 32% of women), stress (mentioned by 29% of women), and exposure theories (mentioned by 27% of women). Exposure theories described including exposure to hormones including HRT, and chemicals in food, chemicals in other products, and/or as environmental pollution. In their theories of cancer’s cause, 27% of patients included some element of randomness. The question about “causes” of cancer also inspired women to report (17% of the time) on spiritual issues they felt were relevant and/or about an ongoing purpose for their cancer or the benefit they feel they have or expect to derive from the experience.Self-reports of cancer’s causes differed among women based on their use of IO as a recruitment source. Differences found were modest with IO users somewhat more likely to describe stress, and poor coping as a cause of their cancer, and less likely to include random chance ($p < 0.05$), no differences were found in the frequency with which women reported genetic causes, spiritual issues, benefits, or exposure theories of cancer’s causes.

CORRESPONDING AUTHOR: M. Robyn Andersen, PhD, MPH, Fred Hutchinson Cancer Research Center, Seattle, WA, 98109-1024; rander@FredHutch.org

6:00 PM-7:00 PM C004

LET’S TALK ABOUT CERVICAL CANCER: A QUALITATIVE STUDY WITH SE ASIAN WOMEN

Jennifer Kue, PhD, Szalacha Laura A., Ed.D., Mary Beth Happ, PhD, RN, FAAN, Usha Menon, PhD, RN, FAAN

The Ohio State University, Columbus, OH

Purpose: SE Asian women have disparate cancer incidence, screening, and treatment outcomes. Cultural mores may contribute to these disparities. The purpose of our qualitative study was to understand the intergenerational communication patterns between Lao and Cambodian mothers and daughters in the U.S., who are eligible for cervical cancer (CC) screening.Methods: Seven focus groups were conducted in English, Lao, and Khmer with 44 women (aged 19 - 67 years). Data were transcribed verbatim and then translated to English, if needed. Four members of the research team coded the transcripts and came to consensus on the emic and etic themes from the data. Results: Overall, participants equated cancer with death, pain, and fear. Preliminary themes included: barriers to CC screening and HPV vaccination; mother-daughter communication around health and CC screening, and the influence of the refugee experience on health behaviors. The barriers to CC screening mentioned were similar to those identified for other minority groups. These include: language, lack of knowledge about the disease and/or screening procedures, embarrassment, shyness, and cost. HPV vaccine barriers mentioned were mainly lack of knowledge and recommendation from a health care provider. The older generation, the mothers, was perceived as closed to discussing health-related issues with their children, particularly gynecological care. Several participants reported not seeking health care until "sick" or when symptoms become "serious". This practice was juxtaposed to the acknowledgment that some cancers can be cured if detected early. Powerful emotional statements around the refugee experience hinted at the trauma of life in refugee camps and beginning a new life in a strange country, often when separated from family, and how this may influence health care seeking behaviors and attitudes towards preventative health in general. Next steps will involve interviews with mother–daughter dyads in which the acceptability of draft intervention messages will also be assessed.

CORRESPONDING AUTHOR: Jennifer Kue, PhD, The Ohio State University, Columbus, OH, 43210; kue.2@osu.edu

6:00 PM-7:00 PM C005

LIVING ARRANGEMENT AND ADHERENCE IN A MULTIETHNIC SAMPLE OF CANCER PATIENTS

Migda Hunter-Hernandez, BA[1], Rosario Costas-Muñiz, PhD[1], Francesca Gany, MD, M.S.[2]

[1]Memorial Sloan-Kettering Cancer Center, New York, NY; [2]Memorial Sloan Kettering Cancer Center, New York, NY

Introduction: Social support is an important contributor to adherence to medical treatments. Specifically, practical support has the highest association with medical adherence; marital status and living with another person also are important correlates of adherence. The purpose of this study is to determine the association between marital status and living arrangement with self-reported adherence to chemotherapy and/or radiation appointments in a multiethnic sample.Methods: Participants (N=963) completed a demographic cancer-related and treatment-related questionnaire as part of a larger study of underserved ethnic minority cancer patients.Results: The majority of participants were female (65%), one third were married or partnered (36%), and 39% were diagnosed with breast cancer. Average age was 55.6 years old. 81% reported below-poverty level incomes. The rate of self-reported missed appointments for chemotherapy or radiation was 12%. 20% of the sample reported living alone, 31% with an additional person, and 41% with 3 to 5 people. One third (34%) of the patients reported living with a partner, 16% with underage children, and 23% with adult children. Single and widowed patients were about two times more likely to miss appointments than married patients. In multivariate analysis, patients living alone and those living with underage child(ren) were two times more likely to miss their appointments than those with other living arrangements.Discussion: This research suggests that in the cancer setting, it is important to assess the structural support and living arrangement of patients, because these might be important contributors to treatment adherence. While living alone might put a patient at increased risk for nonadherence, living in a family with underage children may also considerably increase the risk of nonadherence. Future research should focus on the influence of type and quality of patients’ relationships on their adherence to cancer treatment and on family-focused interventions to improve adherence.

CORRESPONDING AUTHOR: Migda Hunter-Hernandez, BA, Memorial Sloan-Kettering Cancer Center, New York, NY, 10022; hunterhm@mskcc.org

6:00 PM-7:00 PM C006

MAPPING THE SUPPORTIVE CARE NEEDS AND HRQOL AMONG CHINESE AMERICAN BCA SURVIVORS

Kuang-Yi Wen, PhD[1], Carolyn Y. Fang, PhD[2], Grace Ma, Wanzi Yang

[1]Cancer Prevention and Control/Fox Chase Cancer Center, Philadelphia, PA; [2]Fox Chase Cancer Center, Philadelphia, PA

Understanding the association between unmet supportive care needs and HRQol of Chinese American breast cancer survivors (CABCS) is critical for developing and refining programs to address the identified gaps in cancer care. A total of 75 CABCS were recruited through community-based organizations and cancer registries in the northeast region to complete a structured questionnaire survey, and 20 women completed in-depth interviews. In the quantitative findings, the three most commonly reported unmet needs were: 1) being informed about the latest developments in the treatment and prevention of breast cancer (67% in the information domain); 2) dealing with fears about cancer spreading or returning (63% in the psychological domain); and 3) receiving information and advice about your diet (62% in the information domain). Stepwise multivariable regression suggested that lower household income, unemployment status, and higher unmet psychological needs were associated with lower HRQoL among these women. In-depth interviews revealed that there is the constant fear of recurrence intertwined with feeling disempowered associated with the lack of access to culturally relevant and linguistically appropriate survivorship information. Obtaining diet and evidence-based Traditional Chinese Medicine information relevant to these women's cultural norm is clearly valued and requested by the participants. Additional research, education, and supportive care services aimed at meeting the information and psychosocial needs of CABCS are warranted. Health communication interventions, such as Survivorship Care Plans, that incorporate Chinese-language resources and address the unique cultural needs of this population, have great potential to address CABCS's needs while improving their HRQoL.

CORRESPONDING AUTHOR: Kuang-Yi Wen, PhD, Cancer Prevention and Control/Fox Chase Cancer Center, Philadelphia, PA, 19446; kuang-yi.wen@fccc.edu

6:00 PM-7:00 PM C007

MATERNAL FACTORS ASSOCIATED WITH SPERM BANKING AMONG ADOLESCENT MALES NEWLY DIAGNOSED WITH CANCER

Preeti Rao, M.S.[1], Lu Huang, M.S.[2], Hui Zhang, PhD[3], Kathryn M. Russell, PhD[3], Jessica L. Simmons, MS[3], James Klosky, PhD[3]

[1]St. Jude Children's Research Hospital, Memphis, TN; [2]St Jude Children's Research Hospital, Memphis, TN; [3]St. Jude Children's Research Hospital, Memphis, TN

Sperm cryopreservation is a widely available method of fertility preservation; however, a minority of males bank sperm prior to the initiation of potentially sterilizing cancer therapy. The purpose of the present study was to examine maternal factors associated with sperm banking outcomes among adolescent males newly diagnosed with cancer. Specifically, we aimed to investigate maternal sociodemographic, communication, and psychological factors which associate with adolescent attempts to bank sperm and the completion of sperm banking. A sample of 95 mothers (M_{age}=43.8 years, SD=5.9 years, 68.4% Caucasian; 38.9% Bachelor's degree or higher) with sons newly diagnosed and at increased risk for infertility secondary to planned cancer therapy (M_{age}=16.2 years, SD=1.9 years), participated as part of a large multi-site NIH funded trial examining sperm banking practices among adolescent males with cancer. Logistic regression was used to determine the contribution of maternal factors on adolescent sperm banking outcomes. Results are reported as odds ratios (OR) with 95% confidence intervals (CI). Results indicate that maternal report of parental recommendation to bank (*OR*= 12.34 , 95% CI: 1.07-142.9, $p< .05$) and lower anxiety (*OR*= 0.87 , 95% CI: 0.09-0.93, $p< .05$) associated with an adolescent banking attempt, whereas higher household income (*OR*= 3.24, 95% CI: 1.05-10.02, $p< .05$) associated with completed sperm banking. Implications of findings with regard to the development of fertility preservation interventions will be discussed.

CORRESPONDING AUTHOR: Preeti Rao, M.S., St. Jude Children's Research Hospital, Memphis, TN, 38120; preeti.rao@stjude.org

6:00 PM-7:00 PM C008

MEMORY PARTIALLY MEDIATES THE RELATIONSHIP BETWEEN SLEEP AND FUNCTIONAL STATUS IN CANCER SURVIVORS

Molly Geraghty[1], Shanice Cox[1], Eileen Giglia[1], Ashley Jean-Pierre[2], Sheila Garland, PhD[3], Michael Grandner, PhD[3], Thomas Burish, PhD[1], Pascal Jean-Pierre, PhD, MPH[1]

[1]University of Notre Dame - Cancer Neurocognitive Translational Research Laboratory, Notre Dame, IN; [2]Saint Mary's College, Notre Dame, IN; [3]University of Pennsylvania, Philadelphia, PA

Introduction: Cognitive function is important to functional status, and can be impacted by sleep problems. However, studies on the relationships among sleep problems, functional status and cognitive dysfunction in cancer survivors are lacking.Methods: We examined data from cancer survivors, 41-64 years old, who completed the 2007-2008 NHANES. Sample size ranged from 265 to 504, based on responses addressing functional status limitation in 23 activities of daily functioning. Sleep duration was categorized as "Very Short" (<5 hours), "Short" (5-6 hours), "Normal" (7-8 hours), or "Long" (≥9 hours). Cognitive dysfunction was operationalized as reports of experiencing confusion/memory problems. Weighted logistic regression (LR) analyses predicted likelihood of reporting limitations according to sleep duration (reference=Normal). Effects of cognitive dysfunction were assessed in a separate LR model. We adjusted for age, sex, race/ethnicity, education level, BMI, overall health status, and depressed mood.Results: Very Short sleep was associated with greater likelihood of limitations in 8 out of 23 functional status variables ($p < 0.001$-0.02). Long sleep was associated with difficulties standing up ($p < 0.001$). Cognitive dysfunction mediated the relationships between Very Short sleep and chores/standing for a long time. The proportion of mediation was >20% for relationships with chores/walking, and 10-19% for relationships with walking up 10 steps, getting in/out of bed, standing/sitting for a long time, going out.Discussion: Sleep is statistically significantly associated with functional and work limitations. Cognitive dysfunction mediated the relationship between sleep and functional status in cancer survivors. These results may indicate a negative effect of cognitive problems on functional status in cancer survivors. Future studies are needed to systematically describe these findings.

CORRESPONDING AUTHOR: Pascal Jean-Pierre, PhD, MPH, University of Notre Dame - Cancer Neurocognitive Translational Research Laboratory, Notre Dame, IN, 46556; pjeanpierre@nd.edu

6:00 PM-7:00 PM C009

MORE THAN JUST SKIN-DEEP: IMPACTS OF LIFETIME DISCRIMINATION ON BMI, PHYSICAL ACTIVITY AND CRP LEVEL

Antione Taylor[1], Tanya Agurs-Collins[2], Alexander Persoskie, PhD[3], Frank Perna, EdD, PhD[2]

[1]University of Maryland Baltimore County, Windsor Mill, MD; [2]National Cancer Institute, Bethesda, MD; [3]National Institutes of Health – National Cancer Institute, Bethesda, MD

There has been extensive research on the effects of perceived discrimination on health outcomes such as stress, cardiovascular disease, diabetes, and cancer. However, there has been very little research investigating the underlying behaviors or physiological processes through which perceived discrimination might impact chronic health outcomes, such as body mass index (BMI), amount of physical activity (PA), and C-reactive protein (CRP), an inflammatory marker. In this study, regression analyses tested the relationship of lifetime discrimination, a form of perceived discrimination that involves mistreatment in public and institutional settings, with BMI, MET hours per week (MHW) of PA, and CRP levels. The sample was drawn from the biomarker data of the National Survey of Midlife Development in the U.S. (MIDUS, *N* of analytic sample = 1255). There were racial differences between Whites and African-Americans such that African-Americans were younger, had significantly lower incomes, more likely to smoke, had significantly higher levels of lifetime discrimination ($p < .001$), BMIs ($p < .001$), and CRP levels ($p < .001$). Higher levels of lifetime discrimination were associated with higher BMI ($p < .001$). Lifetime discrimination was also associated with less frequent vigorous PA ($p < .05$), but not with total PA ($p = .81$) or moderate PA ($p = .37$). These findings suggest the possibility that experiencing discrimination can influence chronic health outcomes through its effects on BMI and vigorous PA levels. These findings may also contribute to understanding the stark racial health disparities. There may be differences in psychosocial stress exposure, including exposure to lifetime discrimination, as African-Americans have experienced a long history of societal and interpersonal discrimination in the U.S. Further research is needed to understand how perceived discrimination negatively influences BMI and PA levels in order to identify the psychological and physiological pathways/mechanisms that may increase risk for chronic diseases and cancer.

CORRESPONDING AUTHOR: Antione Taylor, University of Maryland Baltimore County, Windsor Mill, MD, 21244; antione1@umbc.edu

6:00 PM-7:00 PM C010

MULTIVARIABLE ANALYSIS OF HPV VACCINE INITIATION AMONG FEMALES IN THE INTERMOUNTAIN WEST

Djin Lai, BSN, RN[1], Qian Ding, Mstat[2], Echo L. Warner, MPH[3], Julia Bodson[3], Deanna Kepka, PhD, MPH[1]

[1]Huntsman Cancer Institute, University of Utah College of Nursing, Salt Lake City, UT; [2]University of Utah, Salt Lake City, UT; [3]Huntsman Cancer Institute, Salt Lake City, UT

Background: Human papillomavirus (HPV) infects approximately 1 in 4 sexually active adults and is linked to over 26,000 cancers in the US annually. Since the HPV vaccine was approved in 2006, uptake of the vaccine continues to be low in some states, particularly those in the Intermountain West region (Utah, Idaho, Wyoming, and Montana).Objectives: To identify factors predicting lower rates of HPV initiation among females 13 to 17 years of age in the Intermountain West.Methods: Data from the 2012 National Immunization Survey-Teen were analyzed in Stata 13.1 using survey weighted Pearson chi-square tests. Multivariable weighted Poisson regression was fitted to assess the impact of selected sociodemographic predictors and reported as an adjusted prevalence ratio (PR) with a 95% confidence interval (CI). Results: Females whose mothers were between 35 and 45 years (PR=0.68, 95% CI=0.57-0.83, $p < 0.001$) and whose mothers were over the age of 45 (PR=0.71, 95% CI=0.58-0.87, $p=0.001$) had lower prevalence of initiating the HPV vaccine compared to females with mothers aged younger than 35 years. Females in 9th to 12th grade were 1.5 times more likely than those in 6th to 8th grade (PR=1.51, 95% CI=1.25-1.83, $p < 0.001$) to initiate the vaccine. In addition, female high school graduates were 2 times more likely than 6th to 8th graders (PR=2.03, 95% CI=1.18-3.49, $p=0.011$) to initiate the vaccine. Our findings also showed that receipt of influenza (PR=1.51, 95% CI=1.29-1.77, $p < 0.001$) and meningococcal (PR=1.97, 95% CI=1.53-2.54, p= < 0.001) vaccines also predicted vaccination initiation.Conclusions: Female adolescents are recommended to receive the HPV vaccination at 11 to 12 years of age; however, these findings suggest that females are receiving the vaccine at older ages, which is less optimal. In addition, targeted parental education about the HPV vaccine may be beneficial to improving HPV vaccination rates. Provider recommendation for the HPV vaccine during the administration of other adolescent vaccines may also be helpful.

CORRESPONDING AUTHOR: Djin Lai, BSN, RN, Huntsman Cancer Institute, University of Utah College of Nursing, Salt Lake City, UT, 84112; djin.lai@hci.utah.edu

6:00 PM-7:00 PM C011

OBJECTIVE VS PERCEIVED COGNITIVE FUNCTIONING IN ADULT HEMATOPOIETIC CELL TRANSPLANT (HCT) RECIPIENTS

Rachel Kentor, B.A.[1], Hoodin Flora, PhD[2], Arshdeep Kaur, M.S.[2], Carrie Kitko, MD[3], Mousumi Banerjee, PhD[3], Daniel Couriel, MD[3], Kristen Votruba, PhD[3]

[1]Eastern Michigan University, Ann Arbor, MI; [2]Eastern Michigan University, Ypsilanti, MI; [3]University of Michigan, Ann Arbor, MI

Mild to moderate objectively-assessed cognitive impairment is noted in up to 60% of HCT recipients for up to 7 years post-HCT. Prior studies indicate subjective endorsement of cognitive complaints on the Functional Assessment of Cancer Therapy Cognitive Scale (FACT-Cog) is largely unrelated to objective cognitive functioning (OCF), but strongly correlated with psychosocial variables. The present analysis sought to elucidate the relationships between OCF as measured by the computerized CogState neuropsychological assessment, perceived cognitive functioning (PCF), and psychosocial well-being.Participants were 30 adult HCT recipients assessed pre-HCT (T1) and at 30- (T2) and 100-days post-HCT (T3). Participants were predominantly male (63%) and well-educated (47% had a college degree). Age was bimodally distributed: one-third of participants were under the age of 26, while one-third were over 58 years old.Participants' PCF aligned most closely with their OCF (speed and accuracy; $r = .43$-.61, $p < .05$) at T2, a point during the transplant trajectory at which the greatest cognitive decrements were evident. PCF was unrelated to OCF at T1 and T3. Further, though mean OCF was within normal limits at T1 and T3 and was unrelated to depression, patients' PCF was significantly associated with depressive symptoms across all time points ($r = .48$-.73, $p < .01$,). Conversely, while sleep was unrelated to PCF, it was correlated with OCF (specifically, tasks of learning, memory, and processing speed; $r = .42$-.50, $p < .05$,) at T1 and T2. Taken together, this suggests patients demonstrate a relative lack of awareness about the quality of, and factors influencing, their OCF. Our findings highlight the need for further exploration into which aspect of cognitive functioning – objective or perceived – has greater functional impact on patients' lives, thereby suggesting avenues for timely preventive interventions that have potential to improve quality of life.

CORRESPONDING AUTHOR: Rachel Kentor, B.A., Eastern Michigan University, Ann Arbor, MI, 48197; rkentor@emich.edu

6:00 PM-7:00 PM C012

OVERLAPPING GEOGRAPHIC DISPARITIES IN HPV-RELATED CANCER PREVENTION AND BURDEN

Jennifer Moss, MSPH[1], Paul Reiter, PhD[2], Noel Brewer, PhD[3]

[1]University of North Carolina, Durham, NC; [2]The Ohio State University, Columbus, OH; [3]University of North Carolina at Chapel Hill, Chapel Hill, NC

Background: Human papillomavirus (HPV) vaccine can prevent several types of cancer, including cervical, anal, vaginal, and vulvar. Widespread uptake with HPV vaccine could reduce the incidence and mortality rates of these cancers, but currently, coverage in the U.S. is suboptimal and varies widely across states. We tested the hypothesis that states with higher risks of HPV-related cancers have lower HPV vaccine coverage.Methods: We gathered state-level data on HPV-related cancer rates and HPV vaccine initiation for girls and boys, separately, and HPV vaccine follow-through (i.e., receipt of 3 doses among those initiating the series) for girls only. In addition, we gathered state-level data on demographics and contact with the healthcare system. Data came from high-quality, national sources. We measured the correlations between HPV vaccine coverage levels and other constructs.Results: HPV vaccine initiation levels were highly correlated between boys and girls (r=.47). HPV vaccine initiation among girls was lower in states with higher levels of cervical cancer incidence and mortality (r=-.29 and -.46, respectively). Girls' initiation levels were also higher in states with lower proportions of non-Hispanic black residents (r=-.28) and in states with higher median incomes (r=.32). Follow-through among girls was lower in states with higher levels of cervical cancer mortality (r=-.30) and lower levels of adolescents' contact with the healthcare system. Other measures of cancer burden were associated with HPV vaccination among girls, but not among boys.Conclusions: States' HPV vaccine coverage demonstrated consistent associations with HPV-related cancer rates, as well as demographics and contact with the healthcare system. One consequence of these relationships is that cost-effectiveness analyses may overestimate the benefits of current vaccination coverage levels and underestimate the benefits of increasing coverage. As boys' and girls' initiation rates were correlated, the current geographic disparities in vaccination among girls could also develop among boys as vaccination in this group becomes more common. Geographically-tailored interventions could promote local HPV vaccination efforts in order to reduce current disparities.

CORRESPONDING AUTHOR: Jennifer Moss, MSPH, University of North Carolina, Durham, NC, 27707; jlmoss@email.unc.edu

6:00 PM-7:00 PM C013

PATHWAYS TO A LUNG CANCER DIAGNOSIS: A BEGINNING TYPOLOGY

Lisa Carter-Harris, PhD, RN, ANP-C[1], Carla P. Hermann, PhD, RN[2], Claire B. Draucker, PhD, RN, FAAN[1]

[1]Indiana University School of Nursing, Indianapolis, IN; [2]University of Louisville, Louisville, KY

Aims: Lung cancer is the deadliest cancer worldwide; most individuals are diagnosed at an advanced stage. Although lung cancer is often thought asymptomatic, many individuals do have symptoms prior to their diagnosis. Prompt diagnosis is critical and understanding the pathways taken as the disease unfolds and culminates in a diagnosis in lung cancer from the individual's perspective is crucial. The purpose of this study was to identify and describe pathways to a lung cancer diagnosis based on narratives of persons diagnosed with lung cancer.Methods: This was a qualitative descriptive study using a convenience sample of 11 adults with all four stages of lung cancer. Participants were recruited from a thoracic oncology clinic in a large city in the southeastern United States. Moderately structured interviews were conducted to obtain participant narratives. Qualitative content analysis was used to produce a comprehensive summary of participants' experiences to develop a beginning typology of pathways to a lung cancer diagnosis from the individual's perspective.Results: Findings revealed four distinct categories representing pathways to a lung cancer diagnosis: *missing opportunities, waiting and seeing, being alarmed,* and *being blindsided.*Conclusions: As a beginning typology, the *Pathways to a Lung Cancer Diagnosis Typology* has important implications for clinical practice and can be used to inform healthcare providers of the varied pathways individuals experience prior to a lung cancer diagnosis. This work resonates with other research that has focused on mapping patients' experiences from initial change in health to a cancer diagnosis. However, our findings extend this work by identifying a beginning typology specific to a lung cancer diagnosis from the individual's perspective and moves beyond an examination of delay to describe the varied pathways that can occur.

CORRESPONDING AUTHOR: Lisa Carter-Harris, PhD, RN, ANP-C, Indiana University School of Nursing, Indianapolis, IN, 46202; lcharris@iu.edu

6:00 PM-7:00 PM C014

PATIENTS' COGNITIVE AND EMOTIONAL RESPONSE TO HPV-RELATED OROPHARYNGEAL CANCER

Lora Thompson, PhD, Kristine A. Donovan, PhD, Gwendolyn P. Quinn, PhD, Anna Giuliano, PhD

Moffitt Cancer Center, Tampa, FL

The majority of oropharyngeal squamous cell cancers (OC) are attributable to the human papillomavirus (HPV), a sexually transmitted disease (STD). Epidemiologic studies have identified distinct demographic and behavioral characteristics of HPV-related OC patients. The current study explored patients' cognitive and emotional response to a diagnosis of HPV-related OC. Participants were part of a larger quality of life study. Following HPV testing and baseline quantitative assessment, participants completed a semi-structured interview exploring causal attributions about cancer, emotional response to HPV-related diagnosis, lifestyle changes, and information and support needs. Cognitive debriefing techniques were employed to insure interview questions were understood and acceptable. Data were analyzed by a content analytic approach using the interview guide to code for a priori themes.Participants were 15 patients (HPV+ = 67%) with HPV-related OC who had completed treatment. Patients reported shock, sadness and other negative emotions in response to their diagnosis. The majority of HPV+ patients knew HPV was a STD; they did not know, prior to their diagnosis, that HPV was associated with OC. Several male HPV+ patients expressed a belief that HPV is a "female disease." Despite their HPV+ status, most believed the cancer was due to smoking, drinking and/or stress. Some questioned how they contracted HPV. The majority disclosed their HPV status to a partner or family member; two partners later sought HPV testing. Many were willing to share their HPV+ status with extended family and friends to encourage HPV vaccination in their children. Others felt their status was too personal to share. While most did not intend to make lifestyle changes, some reported changes in their sexual relationship. Few participants desired counseling or additional support. Results suggest patients know relatively little about HPV-related OC. A subset are willing to share what they know to inform their partner and to encourage HPV vaccination in children. Further study is needed to validate these findings and to guide development of psychoeducational interventions for patients and partners.

CORRESPONDING AUTHOR: Lora Thompson, PhD, Moffitt Cancer Center, Tampa, FL, 33510; lora.thompson@moffitt.org

6:00 PM-7:00 PM C015

PERCEIVED KNOWLEDGE OF PSA AND MENTAL AND PHYSICAL HEALTH IN PROSTATE CANCER PATIENTS AND PARTNERS

Jennalee Wooldridge, MA[1], Sarah Lynch, MPH[2], Krista W. Ranby, PhD[3], Cary Robertson, MD[4], Isaac Lipkus, PhD[4]

[1]University of Colorado Denver, Denver, CO; [2]University of Colorado Denver, Highlands Ranch, CO; [3]University of Colorado Denver, Denver, Colorado 80214, CO; [4]Duke University, Raleigh, NC

Lower health literacy is associated with poorer mental and physical health among patients with prostate cancer (PC). We examined whether this relationship existed specifically between patient's knowledge about prostate specific antigen (PSA) and their health. Partner's knowledge may relate to their ability to provide appropriate support and caregiving. Therefore, we also examined the relationships between partner's knowledge of PSA with their own and the patient's health one month after treatment. Early stage PC patients and their partners were recruited from the Duke University Medical Center's Urology Department. At one month after treatment, both patients and partners (N=123 couples) completed the Physical (PH) and Mental Health composite scales (MH) from the MOS 36-item Health Survey; the PH scale assessed bodily pain, physical functioning, role limitations because of physical health problems, and general health; the MH scale assessed role limitations because of emotional problems, energy/fatigue, emotional well-being, and social functioning. Both reported their own perceived knowledge related to PSA on a scale of 1-5. Within couples, perceived knowledge of PSA was moderately correlated between partners (r=.32, $p < .001$). We found that patients' perceived knowledge related to their own PH (r = .24, $p < .01$) and approached a significant relationship with their own MH (r=.16, p=.08). Partners' perceived knowledge related to their own MH (r = .22, $p < .05$) and to the patients' MH (r = .19, $p < .05$). These results are consistent with previous research indicating that PSA related knowledge is related to better health outcomes. The current study extends this finding to partners providing evidence that the partner's knowledge impacts both their own and the patient's health. The moderate correlation of perceived knowledge of PSA within couples requires further understanding of the dynamics within relationships when only one partner perceives a good understanding about the medical aspects of PC. Interventions focusing on PSA knowledge of partner's may benefit both patients and partners, particularly mental health immediately following prostate cancer treatment.

CORRESPONDING AUTHOR: Jennalee Wooldridge, MA, University of Colorado Denver, Denver, CO, 80203; jennalee.wooldridge@ucdenver.edu

6:00 PM-7:00 PM C016

PERCEIVED PREVENTION AND PERCEIVED CONTROL OF CANCER RECURRENCE IN WOMEN WITH BREAST CANCER

Monira Alwhaibi, MS, Kimberly Kelly, PhD, Christa Lilly, PhD

West Virginia University, Morgantown, WV

Purpose: Breast cancer is among the top ten causes of death of older women globally. It accounts for 23% of the total cancer cases and 14% of cancer deaths. Breast cancer survivors have a higher risk of developing a new cancer than individuals who have no prior cancer history. Perceived prevention of cancer recurrence and perceived control of progression following recurrence may differ. This study sought to assess lay models of perceived prevention of cancer recurrence and perceived control of progression following recurrence guided by the Self-regulation Model (SRM). Methods: Women with a history of breast cancer (n=141) were surveyed in a clinic-based study, and data were analyzed using concurrent mixed methods. Binary logistic regression models examined predictors of perceived prevention of cancer recurrence and perceived control of progression following recurrence.Result: The majority of our sample were white and have less than high school education level. The mean age was 58.5 years and 23.5% residue in the Appalachian region. Most women perceived they could control progression following recurrence (89%); few (30%) perceived that they could prevent cancer recurrence. Women's qualitative responses were categorized according to SRM attributes: timeline (e.g. early diagnosis), identity (e.g. cancer in body), causes (e.g. hereditary), consequences (e.g. witness success), and cure/control (e.g. exercise) or lack of cure/control (e.g. fatalism). Women who reported causes were less likely to perceive prevention of cancer recurrence (OR=0.1, 95% CI=0.01-0.80) and to perceive control of progression following recurrence (OR=0.14, 95%CI=0.02-0.98). Women who reported lack of control were less likely to perceive control of progression following recurrence (OR=0.12, 95%CI=0.02-0.72).Conclusion: Women's perception about the prevention of cancer recurrence and control of progression following recurrence are important factors in how women may deal with potential breast cancer recurrence. Causes, a key component of the SRM, and lack of control were significant factors in perceived prevention of cancer recurrence and control of progression following recurrence and may limit future engagement in health behaviors.

CORRESPONDING AUTHOR: Monira Alwhaibi, MS, West Virginia University, Morgantown, WV, 26505; mmalwhaibi@mix.wvu.edu

6:00 PM-7:00 PM C017

PHYSICAL ACTIVITY, PHYSICAL PERFORMANCE, AND QUALITY OF LIFE IN ADVANCED COLORECTAL CANCER SURVIVORS

Karen Basen-Engquist, PhD, MPH[1], Patricia Parker, PhD[2], Cathy Eng, MD[1], Cindy Carmack, PhD[3], Yisheng Li, PhD[1], Stacie Scruggs, MPH[1], Liliana Vallejo, BS[1], Michael Fisch, MD[1]

[1]The University of Texas MD Anderson Cancer Center, Houston, TX; [2]University of Texas MD Anderson Cancer Center, Houston, TX; [3]MD Anderson Cancer Center, Houston, TX

Background: Considerable evidence has accrued on the benefits of exercise and physical activity for cancer survivors. However, little of this research has focused on cancer survivors living with advanced disease. We investigated the relationship of physical activity and objectively measured physical performance to quality of life in survivors with advanced colorectal cancer who were recruited for a trial of a home-based physical activity intervention.Methods: Baseline data were collected from 150 survivors who were recruited through Community Clinical Oncology Program (CCOP) sites associated with the MD Anderson CCOP research base. They completed questionnaires measuring quality of life (QOL; FACT-C), physical functioning (SF-36 subscale), and physical activity (Godin Leisure Time Exercise Questionnaire) at their oncologist's office. They also completed 4 tasks from the Rikli Senior fitness test battery (2 minute step test, 8 foot up and go, sit to stand, and arm curl test). We ran multiple regression models to determine whether minutes of moderate-to-vigorous physical activity (MVPA) and physical performance tests predicted self-reported physical functioning and QOL, controlling for age and gender. Results: Sixty-two men and 92 women from 13 sites in the US completed baseline questionnaires. Their mean age was 58.1 (SD= 11.7); the sample was 75% white, non-Hispanic; 16% African-American; 7% Hispanic, and 2% Asian. Participants reported low levels of MVPA (Mean=11.3 minutes/week, SD=31.5); 82% of participants reported no MVPA. The predictor variables accounted for 19% of the variance in self-reported physical functioning ($p < .0001$); more MVPA and a higher score on the sit to stand task significantly predicted better functioning. The model predicted 12% of the variance in the FACT Trial Outcome Index (p=.018), with age and MVPA as significant predictors. 12% of the variance was accounted for in the total FACT-C score (p=.03), with women and those with less MVPA having poorer QOL. Models predicting the FACT subscales were not significant.Conclusion: Results indicate a physical activity intervention could potentially help advanced colorectal cancer survivors improve their quality of life. Randomized trials to test physical activity interventions in this population should be conducted.

CORRESPONDING AUTHOR: Karen Basen-Engquist, PhD, MPH, The University of Texas MD Anderson Cancer Center, Houston, TX, 77230-1439; kbasenen@mdanderson.org

6:00 PM-7:00 PM C018

PHYSICAL, MENTAL, AND SOCIAL HEALTH AMONG MULTIPLE MYELOMA PATIENTS AND PERCEIVED CONTROL OVER THE COURSE OF CANCER

Joanne Buzaglo, PhD, Melissa F. Miller, PhD, MPH, Victoria Kennedy, MSW, LCSW, Anne Morris, MPH, Mitch Golant, PhD

Cancer Support Community, Philadelphia, PA

Background: The US prevalence of multiple myeloma (MM) is estimated at 83,118 as of January 1, 2011, and about 24,050 new MM cases will be diagnosed in 2014. With advances in treatment, MM patients are living longer, and the psychosocial impact of this now chronic disease is not well characterized. The present objective was to examine the relationship between perceived control over the course of MM and physical, mental, and social health. Methods: From July 2013 to July 2014, the Cancer Support Community (CSC) registered 495 people living with MM to the Cancer Experience Registry: MM, an online initiative designed to investigate and raise awareness about the psychosocial impact of MM. Registrants were recruited through an outreach program that included the CSC and other advocacy organizations and completed an online survey. The PROMIS Profile 29-item short form (v 2.0) was used to measure physical, mental, and social health. Each PROMIS domain (physical function, anxiety, depression, fatigue, sleep disturbance, satisfaction with participation in social roles, pain interference) produces a T-score. Results: 387 (78%) registrants responded to the survey. The analysis was limited to 365 US based registrants (median age 64 y; 54% female; 87% Caucasian, 9.5% African American; 35% income < 40K, 30% ≥80K). Median time since MM diagnosis was 4.5 y; 48% Stage III; 40% experienced a relapse. Compared to US general population (mean=50, SD=10), PROMIS scores were significantly different for MM survivors (mean±SD) in physical function (43.4±8.5), fatigue (54.1±10.7), sleep disturbance (51.3±5.1), and satisfaction with social roles (46.4±9.3); they did not differ in levels of anxiety (51.1±9.5), depression (49.7±9.0), and pain interference (49.7±12.4). Half (49.6%) of MM survivors felt they had 'no control at all' over the course of their MM (that is, whether their MM will come back, get worse, or they will develop a different type of cancer). Those who reported no perceived control had significantly higher levels of anxiety, depression, and fatigue and lower levels of physical function and satisfaction with participation in social roles. Conclusion: Future research should examine whether enhancing perceived sense of control through support, education, and lifestyle management can improve quality of life and health outcomes.

CORRESPONDING AUTHOR: Joanne Buzaglo, PhD, Cancer Support Community, Philadelphia, PA, 19131; joanne@cancersupportcommunity.org

6:00 PM-7:00 PM C020

POSTTRAUMATIC GROWTH, SOCIAL SUPPORT, AND MOTIVATION TO QUIT AMONG TOBACCO-USING CANCER SURVIVORS

Caitlyn O. Hood, BS[1], Jessica L. Burris, PhD[2], Amanda R. Mathew, PhD[1], Katherine R. Sterba, PhD, MPH[1], Matthew Carpenter, PhD[1]

[1]Medical University of South Carolina, Charleston, SC; [2]University of Kentucky, Lexington, KY

Continued tobacco use after cancer diagnosis is associated with an increased risk of developing a secondary cancer, reduced survival rates, and decreased effectiveness of cancer treatment. While previous research has explored sociodemographic and clinical risk factors for continued tobacco use among cancer survivors, limited research has examined protective factors that may foster motivation to quit smoking. In the current cross-sectional phone-based survey, we hypothesized that posttraumatic growth and cessation-related social support would be positively related to motivation and confidence to quit smoking. Participants consisted of 65 adult cancer survivors (54% female; M age=59.1, SD=10.4 years) drawn from a cancer registry, who were diagnosed with cancer 1-5 years (M = 3 years 9 months) before study participation. The most common diagnoses were breast (17%), prostate (17%), and head and neck (11%) cancer. All participants were current smokers (M = 13.1, SD = 9.2 cigarettes per day). Posttraumatic growth was assessed using the Posttraumatic Growth Inventory; cessation-related social support was assessed with the positive support subscale of the Partner Interaction Questionnaire – Brief. All models were run covarying for age, race/ethnicity, and cigarettes per day. Overall posttraumatic growth ($\beta = .28, p = .04$) as well as the spiritual change ($\beta = .26, p = .05$) and personal strength ($\beta = .27, p = .05$) subscales were positively associated with motivation to quit smoking in the next month. Greater overall posttraumatic growth ($\beta = .33, p = .02$), more life appreciation ($\beta = .30, p = .02$), and new possibilities growth ($\beta = .36, p = .01$) were also positively associated with confidence to quit smoking in the next month. After adjusting for covariates, social support was unassociated with motivation and confidence to quit in the next month. Our findings are contradictory of some prior research, which suggests a positive relationship between social support and positive health behaviors. In summary, posttraumatic growth appears to be a robust predictor of post-treatment cancer survivors' motivation and confidence to quit smoking. Future research should establish how this factor might be addressed among cancer survivors to foster positive health behavior change.

CORRESPONDING AUTHOR: Caitlyn O. Hood, BS, Medical University of South Carolina, Charleston, SC, 29425; hooca@musc.edu

6:00 PM-7:00 PM C021

PRE-TREATMENT PSYCHOSOCIAL CONCERNS PREDICT POST-TREATMENT QUALITY OF LIFE IN PROSTATE CANCER

Heather L. McGinty, PhD[1], Lara Traeger, PhD[2], Betina Yanez, PhD[1], Nicholas Wang[1], Michael H. Antoni, PhD[3], Bruce R. Kava, MD[4], Frank J. Penedo, PhD[5]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]Massachusetts General Hospital/Harvard Medical School, Boston, MA; [3]University of Miami, Miami, FL; [4]Sylvester Cancer Center of the University of Miami, Miami, FL; [5]Northwestern University, Chicago, IL

Longitudinal comparisons of men with early-stage prostate cancer (PC) have consistently shown that patients undergoing active treatment (AT) report poorer quality of life compared to patients on active surveillance (AS). However, few studies have examined whether psychosocial concerns predict poor outcomes in both AT and AS. The purpose of this study was to evaluate pre-treatment psychosocial concerns of men with PC to determine whether psychosocial concerns prior to treatment predicted post-treatment quality of life.Participants were 155 men with early-stage PC (AT: n=89, AS: n=66). Men completed the Functional Assessment of Cancer Therapy-Prostate (FACT-P) and Psychosocial Concerns about PC (PCPC) self-report measures at pre-treatment baseline (T1) and 1 month post-treatment (T2). The AT group received surgery, radiation, and/or hormone therapy. The AS group completed measures at similar time intervals post-diagnosis. Hierarchical regression analyses evaluated whether T2 FACT-P scores were predicted by T1 psychosocial concerns and relevant covariates (i.e., age, education, and time since diagnosis) controlling for T1 FACT-P scores. AT vs. AS was also evaluated as a moderator for the relationship between psychosocial concerns and later quality of life.There were no significant differences in psychosocial concerns in AS vs. AT. Having received AT and reporting greater psychosocial concerns at T1 predicted T2 FACT-P (all p's for all β's < .05) while controlling for relevant covariates. Treatment group (AS vs. AT) was also a significant moderator for the effect of psychosocial concerns on quality of life. Specifically, AT men with greater psychosocial concerns at T1 reported greater declines in FACT-P scores at T2 after controlling for T1 FACT-P. This association was not observed in the AS participants.

Study findings demonstrate that above and beyond baseline levels of quality of life, psychosocial concerns negatively predict quality of life among men receiving AT. In contrast, among men receiving AS, there was no longitudinal association between psychosocial concerns and quality of life. This lack of a relationship is likely a consequence of no active treatment-related compromises in quality of life in AS.

CORRESPONDING AUTHOR: Heather L. McGinty, PhD, Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; heather.mcginty@northwestern.edu

6:00 PM-7:00 PM C022

PRIMARY PREVENTION OF BLADDER CANCER: DOES THE PUBLIC KNOW THE RISK FACTORS?

Erika Wood, MPH, Vishnukamal Golla, MPH, Rohit Goswamy, Bryan Fellman, Jay Shah, MD

MD Anderson Cancer Center, Houston, TX

Introduction

Smoking is the single most significant modifiable risk factor for bladder cancer, yet this is not well known outside of the medical community. Previous studies from tertiary referral centers found 36-58% of urology patients can identify smoking as a risk factor for bladder cancer. Since those patients represent a highly select group that may not be representative of the general population, we studied the knowledge base of bladder cancer risk factors among people encountered in the general waiting room of an urban county hospital.Methods

215 participants over 18 years of age were recruited from the waiting room of an urban county hospital to participate in a brief survey on risk factors for various cancers. Fisher's exact and McNemar's tests were used to detect differences in knowledge between bladder and other cancers.Results

The survey participant population was mostly female (65.6%), Hispanic (54%) and middle-aged (68% age 35-64). Most (54.8%) had an annual household income of less than $20,000, had either a high school education (49.1%) or did not finish high school (24.1%), and 40.3% were current or former smokers. An overwhelming majority of participants identified smoking as a risk factor for lung cancer (92.2%) with 80.7% choosing smoking as the primary risk factor for lung cancer. In contrast, 31.2% of participants identified smoking as a risk factor for bladder cancer and 7.4% identified it as the primary risk factor for bladder cancer. Knowledge of smoking as a risk factor for bladder cancer was not impacted by education, language (Spanish vs. English), income, smoking status or personal/family history of cancer. A minority of patients identified male gender and exposure to industrial chemicals as risk factors for bladder cancer (19.3% and 28.0%, respectively). Almost half of all participants surveyed (49.1%) incorrectly identified alcohol use as a risk factor for bladder cancer.Conclusion

Among participants of low socioeconomic status presenting to an urban county hospital, there is a concerning lack of knowledge about the major risk factors for bladder cancer. Given that smoking is a modifiable risk factor, future initiatives to prevent bladder cancer by increasing public education should focus on populations with low socioeconomic status as high-yield targets to affect change.

CORRESPONDING AUTHOR: Erika Wood, MPH, MD Anderson Cancer Center, Houston, TX, 77030; ewood1@mdanderson.org

6:00 PM-7:00 PM C023

PROBLEMS EXPERIENCED BY AFRICAN AMERICAN BREAST CANCER SURVIVORS

Andrea M. Barsevick, PhD[1], Patricia K. Bradley, PhD, FAAN[2], Amy Leader, PhD[1], Sharon Owens-Davis, B.A.[1]

[1]Thomas Jefferson University, Philadelphia, PA; [2]Villanova University, Villanova, PA

Research on breast cancer survivors has focused primarily on Caucasian women. Less is known about African Americans despite the potential for more advanced disease at diagnosis and poorer overall prognosis. This abstract focuses on post-treatment problems of African American breast cancer survivors (AABCS) described in a population-based survey conducted in Pennsylvania. 297 AABCS within 5 years after diagnosis completed the Cancer Problems in Living Scale adapted from an American Cancer Society survey. Factor analysis revealed four classes of problems: emotional, physical, economic, and sexual. In multivariate analyses, more emotional problems were reported by younger women ($p < .001$). Also, lower income ($p = .08$), less treatment ($p = .09$), and more comorbidities ($p = .09$) were marginally associated with more emotional problems. Reporting more physical problems was associated with younger age ($p = .01$), not having a job ($p = .002$), having more comorbid conditions ($p < .001$), and receiving more types of treatments ($p = .0002$). More economic problems were reported by unmarried ($p = .005$) and non-working ($p = .0015$) women. More sexual problems were reported by younger ($p = .0011$) and married ($p = .002$) women. The survey highlighted several things. First, the number of chronic health conditions reported by AABCS was startling. Almost all (95%) reported at least one health condition such as hypertension (70%) or diabetes (25%); 25% reported five or more conditions. More co-morbid conditions were related to more physical problems. This is significant because chronic illness increases the risk for recurrence and shorter survival after breast cancer. Another important finding was economic: having low income or not having a job was associated with more physical and emotional problems. This finding emphasizes the broad financial impact of breast cancer on AABCS. The results provide the basis for planning education programs and resources to address problems of AABCS.

CORRESPONDING AUTHOR: Andrea M. Barsevick, PhD, Thomas Jefferson University, Philadelphia, PA, 19107; andrea.barsevick@jefferson.edu

6:00 PM-7:00 PM C024

PROCESS EVALUATION OF LAY HEALTH WORKER TRAINING FOR LIVER CANCER PREVENTION IN ASIAN AMERICANS

Carol Strong[1], EunMi Park, Ed.D.[2], Frederic Kim[3], Jane Ai-Chen. Ho, B.Pharm, MSPH, CHES[4], Hee-Soon Juon[3]

[1]National Cheng Kung University, Tainan, Taiwan; [2]The Johns Hopins University School of Medicine, Baltimore, MD; [3]Thomas Jefferson University, Philadelphia, PA; [4]Johns Hopkins University, Davie, FL

In response to the high prevalence of hepatitis B virus (HBV) infection among Asian Americans (AAs), we developed a lay health worker (LHW) training program to promote HBV screening and vaccination for AAs. The purpose of this paper was to report the process evaluation of the LHW training program in three components: (1) LHW knowledge acquisition regarding HBV infection, screening, and vaccination; (2) LHW competency and practice methods monitored at 3-5 months post training; and, (3) evaluations obtained from AA community participants who interacted with LHWs (data collection in process and will be reported in April 2015).LHW program participants were recruited through referrals from community-based organizations. Among 89 AAs who came initially, 82 (92%) completed the one-day training and were certified as LHWs between December 2012 and December 2013. These 82 LHWs were mostly born in Vietnam (32%), U.S. (27%), China (21%), or Korea (16%). The training included didactic knowledge training sessions that employed modalities of PowerPoint presentations, viewing role-playing videos, photonovel brochures, and group discussions in native languages. All 82 LHWs completed pretest and posttest knowledge assessments of the training. In 3-5 months after the training, we sent out a process evaluation survey to the LHWs via e-mail or mail to assess their perceived self-efficacy and practices educating and recommending HBV screening and vaccination in the AA community. One fourth of LHWs (n=19) have actively engaged in the telephone reminder intervention for the HBV unprotected AAs for the required vaccination series.Among the 82 LHWs, knowledge of HBV infection was significantly increased after the training ($p < 0.05$). About 59% (n = 48) responded to the survey at 3-5 months post-training. LHWs reported a high level of self-efficacy in educating the community about HBV screening and vaccination. Regarding post-training practice, 75-81% had talked to others about getting HBV screening or vaccination, and 42% had provided community education.Findings suggest that LHW training opportunities can increase their HBV knowledge, self-efficacy, and actual practice of educating the AA community about the importance of getting screening and vaccination.

CORRESPONDING AUTHOR: Carol Strong, National Cheng Kung University, Tainan, 701; carol.chiajung@gmail.com

6:00 PM-7:00 PM C025

PSYCHOLOGICAL & SOCIO-DEMOGRAPHIC CORRELATES OF SELF-PERCEPTION IN HEAD AND NECK CANCER PATIENTS

Pascal Jean-Pierre, PhD, MPH[1], Christopher Fundakowski, MD[2], Ashley Jean-Pierre[3], Lisa Carter-Harris, PhD, RN, ANP-C[4], Zoukaa Sargi, MD, MPH[5]

[1]University of Notre Dame - Cancer Neurocognitive Translational Research Laboratory, Notre Dame, IN; [2]Fox Chase Cancer Center, Philadelphia, PA; [3]Saint Mary's College, Notre Dame, IN; [4]Indiana University School of Nursing, Indianapolis, IN; [5]University of Miami School of Medicine, Miami, FL

Background: Individuals with head and neck squamous cell carcinomas (HNC) often struggled with disease and treatment-related psychological distress (e.g., anxiety, depression, and problem with self-concept) that can impact their psychosocial functioning and quality of life. Identifying factors that contribute to psychological distress is an essential step to facilitate the development and testing of interventions to help HNC patients improve their quality of life. In the present study, we investigate the relationships among psychological distress and socio-demographic characteristics in a multicultural sample of head and neck cancer patients.

Methods: A sample of 150 English-fluent HNC patients between the age of 20 and 88 years (Mean age = 64, SD = 14) completed questionnaires that assessed their socio-demographic backgrounds and psychological states (e.g., Hospital Anxiety and Depression Scale (HADS) and Measure of Body Apperception (MBA)). We conducted a standard regression analysis, using scores on the HADS anxiety and depression subscales, age, sex, race, education, income, and employment status to predict self-perception based on their aggregated scores on the MBA.

Results: Our analysis revealed a statistically significant model ($R^2 = 0.264$, $F = 6.311$, $p < .001$). Education (Standardized Coefficient Beta (*SCB*) = -0.20, $t = -2.39$, $p = 0.02$), race ($SCB = 0.156$, $t = 2.084$, $p = .04$), and anxiety ($SCB = .199$, $t = 2.078$, $p = .04$) statistically significantly predicted negative self-perception. Age, sex, employment status, income and depression did not make a statistically significant contribution to the prediction of self-perception (all *p*s > .05).

Conclusion: Race, education, and anxiety can negatively influence self-perception. Our findings suggest that interventions to enhance psychosocial functioning and improve quality of life for HNC patients should consider their socio-demographic backgrounds and psychological states.

CORRESPONDING AUTHOR: Pascal Jean-Pierre, PhD, MPH, University of Notre Dame - Cancer Neurocognitive Translational Research Laboratory, Notre Dame, IN, 46556; pjeanpierre@nd.edu

CITATION POSTER

6:00 PM-7:00 PM C026

HOSTILITY IS ASSOCIATED WITH GREATER INFLAMMATORY ACTIVITY OVER A 3-YEAR PERIOD

Catherine Soucy, BSc.[1], Jany Peters[1], Bianca D'Antono, PhD[2]

[1]Montreal Heart Institute, Montreal, PQ, Canada; [2]Montreal Heart Institute, Montréal, PQ, Canada

Hostility has been associated with various inflammatory markers (particularly, TNF-α, IL-6, or CRP). Most research has been cross-sectional, and has ignored potential sex and/or age differences in relations observed.Objectives: To evaluate the main and interactive effects of hostility with sex and/or age on inflammatory activity in healthy adults over a 3-year period, independently of risk factors and baseline inflammatory activity.Methods: 136 originally healthy men and women ($M_{age} = 42+11$) completed the Cook-Medley Hostility Inventory and provided blood, on two separate occasions, three years apart. Levels of inflammation (CRP, IL-6, TNF-α) and lipid oxidation (Myeloperoxidase; MPO) were obtained.Results: For IL-6, a significant interaction emerged between Hostility*Age (Beta = .148, $p = .041$) and Hostility*Sex (Beta= -.149, $p = .040$). Cynical hostility predicted increased levels of IL-6 over follow-up among older individuals (b=.017, $p < .001$) but not younger individuals, as well as in men (b=.012, $p < .01$) but not women. A significant Hostility*Sex interaction also emerged for MPO (Beta = -.045, $p < .05$). Specifically, hostility predicted increased levels of MPO in men (b=.453, $p = .06$), but not women.Conclusion: Cynical hostility predicts future elevations in certain markers of inflammation, though this effect was specifically observed among men and older individuals. The inflammatory effects of hostility may place these individuals at greater risk for heart disease.

CORRESPONDING AUTHOR: Bianca D'Antono, PhD, Montreal Heart Institute, Montréal, PQ, H1T 1C8; bianca.d.antono@umontreal.ca

6:00 PM-7:00 PM C027

INFORMATION SHARING: A PROMISING INTERVENTION FOR THE FUTURE

Lenette Jones, PhD, RN, ACNS-BC[1], Susan J. Pressler, PhD[2], Julia Seng, PhD, CNM, FAAN[2], Patricia Coleman-Burns, PhD[3], Tiffany Veinot, MLS, PhD[2]

[1]Case Western Reserve University, Cleveland, OH; [2]University of Michigan, Ann Arbor, MI; [3]University of Michigan, School of Nursing, Ann Arbor, MI

Background/Significance: African American women (AAW) have the highest prevalence of hypertension of any group in the world, with 44% affected and another 46-71% at risk due to having marginally elevated blood pressure, being obese, or being physically inactive. To lower and maintain blood pressure, information must be used to participate in recommended lifestyle changes. Little is known about how AAW use information to self-manage their blood pressure.Purpose: To explore self-reported use of information to actively self–manage blood pressure in a sample of at-risk and hypertensive AAW.Methods: A descriptive, correlational design was used. A convenience sample of AAW attending a Midwestern church conference completed a questionnaire (n = 156). The mean age was 55 and over 75% had earned at least a 4-year college degree. Forty-four percent of the women were married or partnered, about half (51%) had an income of 60,000 or less. Logistic regression analyses were conducted on information use, regressing multiple variables on it (including information seeking and information sharing).Results: Although less than half of the sample reported seeking information about blood pressure, 83% reported sharing blood pressure information with others. The women were most likely to share their knowledge and give advice about self-managing blood pressure. There was a moderate, positive correlation between information seeking and information use, r = .38 (p < .01). There was a strong, positive correlation between information sharing and information use, r = .60 (p < .01). Information seeking had a statistically significant effect on information use when considered in isolation. However, when information sharing was added to the regression model, information seeking was no longer significant. Information sharing was the only significant independent variable, with an odds ratio of 2.11 (p < .00, 95% CI 1.28, 3.17).Conclusions: Women who shared information about managing blood pressure were twice as likely to use information to self-manage their own blood pressure than women who did not share information. These findings can help guide future studies intended to determine specific information needs and appropriate intervention delivery strategies for AAW, both diagnosed with and at risk for hypertension.

CORRESPONDING AUTHOR: Lenette Jones, PhD, RN, ACNS-BC, Case Western Reserve University, Cleveland, OH, 44106; lmj55@case.edu

MERITORIOUS POSTER

6:00 PM-7:00 PM C028

IS REACTIVITY TO ONE'S OWN QUARRELSOME BEHAVIOUR INFLUENCED BY ONE'S SEX, AGE, OR TRAIT HOSTILITY?

Cassandre Julien[1], Bianca D'Antono, PhD[2]

[1]Montreal Heart Institute, Verdun, PQ, Canada; [2]Montreal Heart Institute, Montréal, PQ, Canada

Introduction: Hostile individuals have been shown to be more physiologically reactive to stress. This may be particularly true in situations where they are harassed. Little attention has been drawn to the physiological effects of one's own hostile vs. agreeable behaviour, nor to potential differences across individuals.Aim: To evaluate the differential impact of behaving in an agreeable vs. quarrelsome manner on reactivity, and to assess whether trait hostility, sex, and/or age moderate these effects.Methods: 199 healthy men and women (Mean = 41± 11 yrs) completed the Cook-Medley Hostility scale and underwent laboratory stress testing. Two of the tasks involved role-playing with a confederate from a script that manipulated agreeable vs. quarrelsome behaviour. Systolic and diastolic blood pressure (SBP, DBP), heart rate (HR) and heart rate variability (HRV) were measured throughout the protocol. Repeated measures ANOVAs examined differences between the two conditions. Hierarchical linear regressions examined whether differences were moderated by hostile trait, sex, and/or age.Results: Engaging in quarrelsome vs. more agreeable behaviour produced significant increases in SBP, HR, LF/HF-HRV and anger, while it decreased positive affect (p=.000). A three-way Sex X Age X Trait Hostility interaction emerged for the HR difference score (Quarrelsome-Agreeable) (b=-.190 p= .02). Among younger participants, more hostile women showed heightened HR reactivity while behaving in a quarrelsome manner (p=.02). Among younger men, it was the less hostile men who tended to show increased physiological arousal while behaving quarrelsomely. No significant interactions were found for the other physiological measures of reactivity.Conclusions: Consistent with data showing associations between hostility and increased stress reactivity, results indicated that behaving in a quarrelsome as opposed to agreeable manner is more physiologically and emotionally arousing. (In)Congruence between the hostile behaviour and the hostile trait of the individuals appeared important for the measure of HR. However, these effects were moderated by sex and age.Descriptors: hostility; anger; quarrelsomeness; interpersonal stress; reactivity; sex; age

CORRESPONDING AUTHOR: Cassandre Julien, Montreal Heart Institute, Verdun, PQ, H3E1T3; cassandrejul@gmail.com

6:00 PM-7:00 PM C029

MEDICATION REGIMEN COMPLEXITY MODERATES DEPRESSION PREDICTING MEDICATION ADHERENCE IN HEART FAILURE

Carly M. Goldstein, MA[1], Emily C. Gathright, M.A.[2], Misty A.W. Hawkins, PhD[3], John Gunstad, PhD[3], Mary A. Dolansky, RN, PhD[4], Richard Josephson, MS, MD[5], Joseph Redle, MD[6], Shirley Moore, RN, PhD[4], Joel W. Hughes, PhD, FAACVPR[3]

[1]Warren Alpert Medical School of Brown University, Providence, RI; [2]Kent State University, Stow, OH; [3]Kent State University, Kent, OH; [4]Case Western Reserve University, Cleveland, OH; [5]Case Western Reserve University School of Medicine, Cleveland, OH; [6]Summa Health System, Akron, OH

Introduction: Many individuals with heart failure (HF) experience depression, which is associated with poorer outcomes. Medication nonadherence may help explain outcomes, and more complex regimens may be more challenging to manage, especially for depressed patients.Purpose: The aim is to assess whether the complexity of the medical regimen moderates the relationship between depressive symptoms and medication adherence.Method: This is part of a larger observational study of 305 HF patients recruited from two hospitals in Ohio. Depression was assessed with the PHQ-9 (a brief depression screener), medication adherence was assessed over 21 days using an electronic pillbox, and regimens were rated using the Medication Regimen Complexity Index. The majority of participants were male (60.7%), Caucasian (*n* = 73.1%), 68.36 years of age (SD = 9.59), and married (60.3%). The mean PHQ-9 score was 4.15 (SD = 4.46), and 29.9% of the sample reported experiencing at least mild symptoms (PHQ-9 ≥ 5). Medication adherence scores ranged from 10.30-100%, and the mean was 81.03 (*SD* = 20.46).Results: Depressive symptoms predicted medication adherence ($\Delta R^2 = .03$, $F\ (1, 303) = 9.04$, ß = -.170, $p = .003$; $f^2 = .03$, corresponding to a small effect size). The complexity of the participant's medication regimen moderated the relationship between depressive symptoms and medication adherence ($t\ (285) = -2.713$, ß = -.161 $p = .01$; $f^2 = .03$, corresponding to a small effect size). For more depressed individuals, having a more complex medication regimen lowered medication adherence by 5.90%. Adding the moderator to the model accounted for 2.4% of the additional variance ($\Delta R^2 = .02$, $F\ (1,2) = 7.358$, p = .007; $f^2 = .03$, corresponding to a small effect size)Discussion: Healthcare providers should aim to simplify medication regimen complexity whenever possible, particularly for HF patients demonstrating depressive symptoms with complex regimens because they may be especially susceptible to poor adherence.

CORRESPONDING AUTHOR: Carly M. Goldstein, MA, Warren Alpert Medical School of Brown University, Providence, RI, 02906; carly_goldstein@brown.edu

6:00 PM-7:00 PM C030

MOTIVATORS AND BARRIERS TO BLOOD DONATION AND OBTAINING HEALTH INFORMATION IN ADOLESCENTS

Heather Kitzman-Ulrich, PhD[1], Kimberly Fulda, PhD[1], Stephen Eason, MBA[2], Michelle Lee, MPH[1]

[1]University of North Texas Health Science Center, Fort Worth, TX; [2]Carter BloodCare, Bedford, TX

There is a significant number of adolescents with increased risk of future cardiovascular disease. Risk factors include elevated blood pressure, cholesterol and obesity compounded by health disparities. Health screening associated with volunteer blood donation provides an opportunity for early detection of risk factors in adolescent blood donors. This qualitative study evaluated barriers and solutions from an ecological perspective to blood donation and obtaining post donation test results in 37 adolescents (mean age = 17.4+0.7; 70% female; 76% Hispanic, 10% Caucasian, and 8% African American). Focus group data were transcribed, and coded using classic content analysis methods with adequate inter-rater reliability (kappa alpha = 0.65). Prominent themes included Barriers to Donation (199 references), Solutions for Blood Donation (543 references), General Information on Obtaining Biomarkers (128 references), Barriers to Obtaining Biomarkers (97 references), and Solutions for Obtaining Biomarkers (344). Prominent sub-themes included the use of small incentives as motivation to donate and retrieve subsequently available biomarkers online (104 and 83 references, respectively). The main barrier to blood donation was fear of donating (124 references). The use of influential others such as respected peers, school faculty and other prominent figures to encourage donation and reduce fear was discussed frequently (118 references). The main barriers to retrieving available biomarkers after donation included lack of knowledge (24 references), access (26 references), and motivation (23 references). The most referenced solutions to retrieving biomarkers were electronic communication such as reminders, and parental involvement (90 and 80 references, respectively). These findings provide information on adolescents' perspectives related to donation and retrieving potentially critical health information that can guide future intervention development and research.

CORRESPONDING AUTHOR: Heather Kitzman-Ulrich, PhD, University of North Texas Health Science Center, Fort Worth, TX, 76107; heather.kitzman-ulrich@unthsc.edu

6:00 PM-7:00 PM C031

MATERNAL SHIFT AND PERSIST COPING, LOW SES, AND ADOLESCENT TYPE 1 DIABETES MANAGEMENT

Daniel Mello, BA[1], Deborah Wiebe, PhD[1], Cynthia Berg, PhD[2]

[1]University of California, Merced, Merced, CA; [2]University of Utah, Salt Lake City, UT

Adolescence is a time of risk for type 1 diabetes management (Helgeson, Siminerio, Escobar, & Becker, 2009; King et al, 2014). Lower socioeconomic status (SES) is associated with poorer adolescent diabetes management, partially because it undermines parental resources to be an effective caregiver (Drew et al., 2011). The "Shift and Persist" model argues that the adversity of low SES can be buffered when individuals cognitively shift their perspective to find benefits in adversity while maintaining optimism to persist despite setbacks (Chen & Miller, 2012). The current study examined if the relationship between SES and poorer outcomes in adolescents with type 1 diabetes was moderated by mothers' Shift and Persist coping. Adolescents ($N = 154$, ages 12-17 years; 53% female) with type 1 diabetes completed measures of adherence and depression; metabolic control was indexed from medical records. Shift and Persist coping was examined as the combination of mother reports of high diabetes benefit finding (Shift) and high trait optimism (Persist) (consistent with Chen et al., 2012. Lower mother-reported household income was related to adolescents' poorer adherence ($r(175) = .233$, $p = .002$) and metabolic control ($r(168) = -.319$, $p < .001$), and higher depressive symptoms ($r(175) = -.302$, $p < .05$). Although the predicted three-way interaction between benefit finding, optimism, and SES was non-significant, optimism moderated the relationship between income and metabolic control ($t(143) = 2.318$, $p < .05$), such that low SES was less associated with poor metabolic control when mothers had higher optimism. The relationship between income and depressive symptoms was moderated by benefit-finding ($t(149) = 1.981$, $p = .05$), such that low SES was less associated with adolescents' depressive symptoms when mothers reported higher benefit-finding. In partial support of the "Shift and Persist" model, these findings identify maternal optimism and benefit-finding as important resilience resources for low income families managing type 1 diabetes during adolescence.

CORRESPONDING AUTHOR: Daniel Mello, BachelorofArts, University of California, Merced, Merced, CA, 95343; dmello2@ucmerced.edu

6:00 PM-7:00 PM C032

MEDIATION EFFECTS OF HEALTH-RELATED COPING AND BLOOD GLUCOSE CONTROL IN ADULTS WITH TYPE 1 DIABETES

Holly Knight, M.A.[1], Stephanie R. McDonough, B.S.[1], Jennifer Ward, PhD[2], Barbara Stetson, PhD[1], Sri Prakash Mokshagundam, MD[1]

[1]University of Louisville, Louisville, KY; [2]University of Louisville, Prospect, KY

Background: Consistent blood glucose (BG) control is imperative for the prevention of negative health outcomes in adults with type 1 (T1) diabetes (DM). Psychological factors influencing adequate BG control have been well-studied in populations with type 2 DM, while limited literature has focused on these factors in adults with T1DM. Within healthcare and research settings, broad measures of health behavior coping are frequently used as predictors of BG control. However, perceptions regarding BG control in T1DM populations have yet to be addressed as factors in overall health-related coping.Aim: This study explores how perceived BG control mediates the relationship between health-related coping and self-reported BG highs (BGH) and lows (BGL) in a T1DM population.Method: Ss were 154 adults with T1DM (97.4% white, 57.2% female, M age = 39.7) attending a DM clinic. Ss completed validated self-report measures assessing DM/medical hx, frequency of BGH/BGL, perceived BG control and coping with DM health changes.Results: Linear regression analyses were conducted. Individual relationships emerged between BGH and the predictors: health-related coping (β=-.22, p=.001), perceived BG control (R^2=.36, β=-.485, $p < .001$) and between BGL and the predictors: coping (β=-.175, p=.02), perceived BG control (β=-.189, p=.01). Combined regression models (perceived BG control, coping) accounted for 35.6% of the variance in BGH and 5.3% of the variance in BGL ($p < .01$). Perceived BG control was maintained as a significant predictor in both regression models ($p < .01$). However, coping was not maintained, suggesting potential mediation effects for perceived BG control.Conclusions: Increased health-related coping has been shown to promote BG consistency. Our data suggest that perceived BG control may mediate the relationship between health-related coping and BGH/BGL in adults with T1DM. Clinicians should be cognizant that greater health coping may not predict BG consistency if patients lack perceived control over their BG. Measures targeting specific BG concerns (i.e. perceived BG control) may predict BG control more accurately than broad coping assessments in clinical settings. Further, perceived BG control may play a significant predictive role in BGH, accounting for 36% of variance in BGH.

CORRESPONDING AUTHOR: Holly Knight, M.A., University of Louisville, Louisville, KY, 40217; holly.knight@louisville.edu

6:00 PM-7:00 PM C033

MEDICATION-RELATED BELIEFS IN RURAL AFRICAN AMERICANS WITH DIABETES

Lynn J. Andreae, MPH, Susan J. Andreae, MPH, Monika M. Safford, MD

University of Alabama at Birmingham, Birmingham, AL

Understanding patient perceptions about medications may be critical for improving adherence, especially among minorities living with diabetes in underserved regions, as their experiences may produce unique perspectives. The goal of this study was to understand the lived experience of diabetes in people residing in rural, underserved communities in Alabama to inform the development of an intervention to improve medication adherence. Three focus groups (n=16) were held in 2014 in two Alabama Black Belt counties with volunteers who were taking diabetes medications. Of the 16 participants, 15 were women, 15 were African American, 12 were over the age of 50, 15 had graduated from high school or college, and 10 worked full or part-time. All participants had seen their primary care provider in the past 6 months. Participants responded to three main questions that queried: 1) their knowledge of diabetes and its complications; 2) the impact of diabetes on their lives; and 3) ways in which they could live as well as they can and as long as they can with diabetes. Focus group data were analyzed using grounded theory. Along with themes previously described in other populations (e.g., cost as a barrier to diabetes self-care; emotional responses to learning how serious diabetes can be; importance of seeing others' experience with diabetes complication as a motivator for adherence), three unique themes emerged: 1) The perception of personal failure if diabetes medications continue to be needed (i.e., medications are regarded as secondary to diet and exercise and if they are needed it is only because one's efforts to modify diet and exercise are not "good enough"); 2) Lack of understanding of how medications work (e.g., many did not understand that medications lower risks of diabetes complications); 3) The belief that the need for medication was temporary (e.g., they would at some point in the future no longer need them) and episodic (e.g., many believed that diabetes medications are not needed on days when the morning glucose reading is in the target range). In order to be effective, interventions to improve medication adherence in culturally distinct settings need to be informed by the target population's beliefs and perceptions.

CORRESPONDING AUTHOR: Lynn J. Andreae, MPH, University of Alabama at Birmingham, Birmingham, AL, 35205; landreae@uabmc.edu

6:00 PM-7:00 PM C034

PARENT VARIABLES PREDICTING SELF-MANAGEMENT AND HBA1C OVER 3 YEARS IN PEDIATRIC TYPE1 DIABETES

Bret Boyer, PhD[1], Kate G. Deatrich, MA, BCB[2], Tamara Miller, Psy.D.[2]

[1]Widener University, Philadelphia, PA; [2]Widener University, Chester, PA

Few longitudinal studies have compared the strength and direction of influence of family variables to predict the development of independence self-management (SM) in children with Type 1 Diabetes (T1D). This study compared the relationship between mothers' and fathers' report of Parent-Child Conflict over T1D-management, DM-related Illness Intrusiveness, level of Independence in T1D-management, SM activity, and glycemic control (HbA1c) for 123 families. The Diabetes Independence and Conflict Scale, Revised Illness Intrusiveness Scale-Parent Diabetes, and Self-Care Inventory (SCI) were collected across 3 years (Y1, Y2, Y3). Parent-child conflict was found to be the most significant predictor of the child's SC and HbA1c in subsequent years, other than previous SCI. Mothers' report of conflict at Y1 (r=.248, $p < .05$) and fathers' report of conflict at Y1 (r=.39, $p < .001$) predicted HbA1c at Y2 in hierarchical multiple regressions. In multiple regression equations to predict SCI, mothers' report of conflict predicted SCI from Y2-Y3 (r=-.28, $p < .05$). When both parents variables were entered together into regressions, fathers' SCI scores at Y1 predicted both mothers' SCI (r=.37) and fathers' SCI scores (r=.67) at Y2. Fathers' Y2 SCI scores predicted mothers' Y3-SCI (r=.49) and fathers' Y3-SCI (r=.68), with mothers' Y2-SCI scores contributing to prediction of fathers' Y3-SCI, but inversely (r=-.42). Mothers' Y3-SCI scores were predicted by mothers' Y1-SCI (r=.30) and fathers' Y1-conflict scores (-.35), while the only Y1 predictor of fathers' Y3-SCI was fathers' Y1-SCI (r=.71). Mothers' Y1-SCI predicted Y2-HbA1c, but this variables' contribution became nonsignificant once fathers' Y1-conflict entered the equation (r=.38). Mothers' SCI score was the only Y1 variable to predict Y3-HbA1c (r=-.37). Fathers' Y2-SCI was the only Y2 variable to predict Y3-HbA1c (r=-.397). This complex pattern of fathers' and mothers' observation of their child's SM activities, as well as the accuracy regarding prediction of later HbA1c and the development of these observations over time, are discussed. Conflict appears to be the only variable other than observed SM to predict SM and glycemic control when subjected to multiple regression.

CORRESPONDING AUTHOR: Bret Boyer, PhD, Widener University, Philadelphia, PA, 19119; baboyer@mail.widener.edu

6:00 PM-7:00 PM C035

PATIENT PERSPECTIVES ON CAUSAL MODELS FOR EMOTIONAL DISTRESS AND TYPE 2 DIABETES

Molly L. Tanenbaum, MA[1], Jeffrey S. Gonzalez, PhD[2]

[1]Yeshiva University, Providence, RI; [2]Albert Einstein College of Medicine, Bronx, NY

Emotional distress and depression have been linked to poorer self-management and worse health outcomes in individuals with diabetes. However, the nature of the relationship between distress and diabetes remains poorly understood. The aim of this study was to explore patient models for the relationship between distress and diabetes. We conducted 6 focus groups with a predominately low-income, ethnic minority sample of adults with treated type 2 diabetes in an urban setting (*N*=32; *M* age 55; 69% Hispanic; 63% Black); participants were recruited from a larger empirical study on emotional distress and diabetes and separated by diabetes treatment regimen (insulin vs. oral medications only) Interviews were audio-recorded, transcribed, and analyzed by a group of coders using a grounded theory approach. Participants described two bidirectional explanatory models for the relationship between diabetes and emotional distress: Physiological and Behavioral. Some participants expressed beliefs about physiological processes directly linking mood and blood glucose levels, without a behavioral link (i.e., negative moods causing blood glucose elevations; blood glucose levels causing "mood swings"). Others described a behavioral link between diabetes and distress (e.g., Negative moods leading to worse self-management, which then impacts diabetes control; negative emotional reactions to results from self-monitoring of blood glucose or self-injecting insulin). Explanatory models did not appear to differ by medication regimen. However, participants on insulin expressed a more profound sense of emotional distress caused by the general burden of diabetes; they used psychiatric terms like “depression” and “anxiety attacks” and described “not feeling like a normal person.” Findings illustrate competing explanatory models for the relationships between diabetes and distress among treated type 2 patients in a disadvantaged urban setting. Attending to these explanatory models in empirical research and practice may help investigators and clinicians identify appropriate and acceptable interventions.

CORRESPONDING AUTHOR: Molly L. Tanenbaum, MA, Yeshiva University, Providence, RI, 02906; mollyt@gmail.com

6:00 PM-7:00 PM C036

PATIENTS’ SATISFACTION WITH A MEDICATION ADHERENCE SUPPORT WEBSITE: DIABETES MAP

Sujata Ghosh, MPH[1], Magaela C. Bethune, MA, MPA[2], Chandra Y. Osborn, PhD, MPH[2]

[1]Texas A&M Health Science Center, Temple, TX; [2]Vanderbilt University, Nashville, TN

Among adults with type 2 diabetes mellitus (T2DM), medication nonadherence is common and associated with worse glycemic control. Effective medication adherence promotion interventions are resource intensive and often not sustainable. Internet-delivered interventions are a feasible alternative, but effectiveness depends on patient use, which is determined by many factors, such as user satisfaction. We conducted a mixed methods study to understand patients’ satisfaction with Diabetes MAP, an Internet-delivered medication adherence promotion intervention. We recruited T2DM adults prescribed diabetes medications (N=32) from an academic medical center. Participants completed an enrollment survey and independently used Diabetes MAP for two weeks at which point they completed a follow-up survey (n=29), and/or partook in a focus group (FG) session (n=27) to provide feedback. Audio recordings were transcribed verbatim and coded for comments illustrating user satisfaction. Survey data were analyzed descriptively and linked to qualitative comments.

The sample was on average 51.7 ± 12 years old, 66% female, 60% non-Hispanic White, 38% insulin users, and average time since T2DM diagnosis was 7.8 ± 6 years and average A1c was 7.4 ± 2. Most survey respondents (69%) were satisfied with the Diabetes MAP experience. Of the 66% satisfied FG participants, 35% liked tailored videos addressing patient-specific barriers to medication adherence. FG participants satisfied with the medication text message reminder (TM) feature were younger (45.3 ± 8 vs. 54.2 ± 22 years), whereas participants satisfied with reading material about their medications were older (56.0 ± 8 vs. 49.9 ± 24 years). FG participants newer to diabetes (4.4 ± 10 years) were more satisfied with the TM feature than those who did not comment (9.4 ± 22 years).

Patients were satisfied with Diabetes MAP overall, and satisfaction with specific features varied by age and diabetes duration. These findings are limited by our mixed methods approach, specific population, sample size, and single website. Satisfaction with an Internet-delivered intervention is audience dependent, and user age and length of diagnosis may be important predictors of satisfaction among adults with diabetes.

CORRESPONDING AUTHOR: Sujata Ghosh, MPH, Texas A&M Health Science Center, Temple, TX, 76504; sghosh1@medicine.tamhsc.edu

6:00 PM-7:00 PM C037

PEER SUPPORT REDUCES HOSPITALIZATIONS AND EMERGENT SERVICES FOR INDIVIDUALS WITH DIABETES AND DEPRESSIVE SYMPTOMS

Andrea Cherrington, MD, MPH[1], Yulia Khodneva, MD, PhD[2], Joshua S. Richman, MD, PhD[2], Susan J. Andreae, MPH[3], Christopher Gamboa, MPH[2], Monika M. Safford, MD[3]

[1]University of Alabama Birmingham, Birmingham, AL; [2]UAB, Birmingham, AL; [3]University of Alabama at Birmingham, Birmingham, AL

Background: Comorbid depression is associated with increased health care utilization and cost in individuals with diabetes (DM). We examined the effects of a peer support intervention on emergency services (ES) and hospital utilization in a sample of diabetic individuals with and without depressive symptoms.Methods: The 1-year ENCOURAGE trial included 424 persons with DM living in rural Alabama. Intervention (INT) participants worked with community volunteers who provided peer support and coaching; control (C) arm participants received usual care. Depressive symptoms were assessed with the Patient Health Questionnaire (PHQ-8, range 0-24; 5 indicates mild and 10 indicates moderate depressive symptoms). ES and hospital utilization were measured by participant self-report. Poisson regression using Generalized Estimating Equations examined differences in utilization per year attributable to the INT for those with PHQ-8 ≥5 and PHQ-8 >10 and < 10), controlling for characteristics with imbalance across treatment arms (income and education).Results: The 168 INT and 187 C participants with follow-up data were aged 60.2 ±12.1 years, 87% African American, 75% female, and 39% insulin-treated. At baseline, half had PHQ >5 (52% of INT and 48% of C participants, p=0.37) and 1/4 had PHQ>10 (25% of INT and 26% of C participants, p=1.0). Among those with PHQ-8>5, baseline mean ES visits were 0.67 for INT vs. 0.70 for C, p=0.49, and mean hospitalizations were 0.19 for INT vs. 0.46 for C, p=0.74. Among those with PHQ < 5, baseline mean ES visits were 0.23 for INT vs. 0.37 for C, p=0.26, and mean hospitalizations were 0.32 for INT vs. 0.19 for C, p=0.34. In adjusted models, among those with PHQ-8>5, the intervention resulted in fewer ES visits (incidence rate ratio [IRR] 0.46 [95% CI 0.26-0.81]) and hospitalizations (IRR 0.27 [0.13-0.54]), a difference not seen among those with PHQ-8 >10.Conclusion: Peer support substantially lowered ES visits and hospitalizations for those with depressive symptoms, but not for those without depressive symptoms; these findings can guide resource allocation for population health management.

CORRESPONDING AUTHOR: Andrea Cherrington, MDMPH, University of Alabama Birmingham, Birmingham, AL, 35294; delete@delete.com

6:00 PM-7:00 PM C038

PHOTOVOICE STORIES OF FAITH AND HOPE: HISPANIC/LATINOS AND AFRICAN AMERICANS LIVING WITH DIABETES

Ninfa Nena-Purcell, PhD, MCHES

Texas A&M Agrilife Extension, College Station, TX

Background
For Hispanic/Latinos and African Americans who share a higher burden of type 2 diabetes than whites, poor health outcomes are a concern. Given the role culture plays in shaping a person’s perspective about health and illness, elucidating what factors impact diabetes self-management can help identify strategies to remediate this problem.

Purpose
The purpose of this photovoice study was to gain an understanding of Hispanic/Latinos and African Americans’ experiences living with diabetes.

Methods
A purposive convenience sampling method was used to recruit 10 African Americans and 9 Hispanic/Latinos with type 2 diabetes over the age of 18. Two groups were formed from each population. Participants were drawn from two health clinics, a church, and the community at-large. An information session was conducted to recruit participants, obtain consent, distribute disposable cameras, and provide instructions. Within two weeks, cameras were returned, and a focus group was held to discuss findings and share photos. The research was guided by two research questions: (1) What are your day-to-day experiences living with diabetes? and (2) What is the impact of your environment and community on your ability to care for your diabetes? Data were analyzed to identify central themes. IRB approval was obtained.

Results
Four overarching categories emerged from the photos and focus group discussions: challenges in taking care of their diabetes; psychosocial supports; taking care of you; and the importance of faith, hope, and love.

Conclusions
Using photos to document participants’ daily experiences living with diabetes revealed that managing their disease was influenced by individual, social, and community-level factors. Common challenges across ethnic groups included temptations to eat unhealthy foods, taking medications, and monitoring blood glucose levels. Support from family, friends, and church were cited as valued and needed. “You’ve got to love yourself…” was a comment capturing most participants’ belief to care for their health to control their diabetes. A final theme shared by both groups was the importance of faith and hope to cope with diabetes. One participant’s sentiments captured this message: “…you need to have faith and you need to have hope that one day, one of these days, I’m going to beat this.”

CORRESPONDING AUTHOR: Ninfa Nena-Purcell, PhD, MCHES, Texas A&M Agrilife Extension, College Station, TX, 77843-2251; ncpurcell@ag.tamu.edu

6:00 PM-7:00 PM C039

PREDICTORS OF RETENTION IN A LONGITUDINAL STUDY OF LATINO MSM LIVING WITH HIV

Miriam Pando, B.S.[1], Hector A. Rodriguez[1], Olga Khonyakina, B.A.[2], John Wiebe, PhD[1]

[1]University of Texas at El Paso, El Paso, TX; [2]University of Central Florida, Orlando, FL

Research has shown that attrition in longitudinal HIV/AIDS studies can not only diminish statistical power, but can also affect the generalizability and external validity of the findings. Racial/ethnic and sexual minorities are more often lost to follow up. The present study assessed potential predictors of retention in a sample of 150 HIV-positive Latino MSM living along the U.S.-Mexico Border. The study plan required data collection at two time points, separated by a 12-month interval. The overall retention rate was 70.1% (N = 106 at Time 2). We found that factors thought to be strong predictors of retention like age, education, annual household income, residential stability, acculturation to the U.S. culture, and sexual orientation were not significant predictors in our sample. Significant predictors of retention were: completing the interview in English ($\chi^2 = 6.82$, $df = 1$, $p < .01$), not living with extended family ($\chi^2 = 3.83$, $df = 1$, $p = .05$), lifetime use of amphetamine ($t = 2.64$, $df = 148$, $p < .01$), and extent of contact information given at Time 1 ($t = 3.75$, $df = 153$, $p < .001$). These predictors were then tested with binary logistic regression. The resulting model included living with extended family, extent of contact information given at Time 1, and lifetime use of amphetamine as potential predictors of retention ($\chi2(9) = 36.54$, $p < .001$), Nagelkerke R2 = .299. Higher odds of retention were associated with not living with extended family (OR = 2.68, $p = .03$), more lifetime use of amphetamine (OR = 1.38, $p = .04$) and obtaining more pieces of contact information (OR = 1.49, $p = .02$). On a methodological note, the contribution of different predictors varied over the course of follow-up, as more challenging cases took longer to bring in for follow-up assessment. For example, though annual household income was a significant predictor of retention early in the follow-up process ($t = -2.72$, $df = 136$, $p < .01$ with 65 participants), with persistent recruitment efforts the sample became more representative and income ceased to be a significant predictor. Indeed, length of time required for successful follow-up was negatively correlated with Time 1 annual household income ($r = -.22$, $p = .03$). This finding may help explain some variability of results in previous studies of retention.

CORRESPONDING AUTHOR: Miriam Pando, B.S., University of Texas at El Paso, El Paso, TX, 79936; mpando3@miners.utep.edu

6:00 PM-7:00 PM C040

ROLE OF SELF FORGIVENESS, HIV STIGMA & SOCIAL SUPPORT: PSYCHOLOGICAL QUALITY OF LIFE IN HIV+ SAMPLE

Sarah Palmer[1], Wiley Stem, IV., B.S.[2], Mark Vosvick, M.ED., MBA, PhD[2]

[1]Center for Psychosocial Health Research- University of North Texas, Denton, TX; [2]University of North Texas, Denton, TX

People living with HIV (PLH) struggle with a variety of psychological stressors which can negatively impact their quality of life (Fisher & Fisher, 2000). Forgiveness of self is correlated with higher levels of physical and mental health (Webb et al., 2013), although the construct has not been widely explored in an HIV+ sample. HIV-related stigma is associated with lower psychological quality of life (PQOL) in PLH (Logie & Gadalla, 2009), while social support is related to higher PQOL (Burgess, et al., 2000). Higher levels of social support could decrease perceptions of HIV-related stigma (Clum, et al., 2009). Using the Multilevel Model of HIV/AIDS Information/Help Network Development (Veinot 2010) as a conceptual framework, we hypothesize that an individual draws from their social support network (Multidimensional Scale of Perceived Social Support, Zimet et al., 1988; α=.93) in order to manage stigma (HIV Stigma Scale, Berger, Ferrens & Lashley, 2001; α=.96) and forgive themselves (Heartland Forgiveness Scale, Thompson et al., 2005; α=.75), which may increase psychological quality of life (Medical Outcomes Study-HIV, Mental Health Subscale, Wu et al., 1987; α=.91-.94). Thus, forgiveness of self and social support are positively associated with PQOL while HIV-related stigma is negatively associated with PQOL. Upon receiving IRB approval we recruited participants from AIDS service organizations in the Dallas/Fort Worth area and obtained informed consent from participants. Our gender-balanced and diverse sample of 277 (53.8% African American, 30.3% European American, 10.8% Latino, 5.1% other) reported a mean age of 41.7 (SD=8.3). A hierarchical regression analysis indicated our model to be significant (F (7,269), p < .01), accounting for 28% of the variance in PQOL. Forgiveness of self (β=.38, t=7.01, p < .001), HIV-related stigma (β=-.25, t=-4.62, p < .001) and social support (β=.11, t=2.09, p=.037) were significantly associated with PQOL. Our findings suggest that behavioral scientists may benefit from knowledge on forgiveness of self, HIV-related stigma and social support for future interventions.

CORRESPONDING AUTHOR: Sarah Palmer, Center for Psychosocial Health Research- University of North Texas, Denton, TX, 76209; sarahpalmer2@my.unt.edu

6:00 PM-7:00 PM C041

SOCIAL RESOURCES, HEALTH PROMOTION BEHAVIOR, AND QUALITY OF LIFE IN ADULTS LIVING WITH HIV DISEASE

Allison R. WEbel, PhD, RN[1], J. Craig Phillips, PhD, LLM, RN, ARNP, PMHCNS-BC, ACRN[2], Abdus Sattar, PhD[3]

[1]Case Western Reserve University, Cleveland, OH; [2]University of Ottowa, Ottowa, ON, Canada; [3]Case Western Reserve University, OH

Background: HIV has transitioned from an acute to a chronic health condition with increased emphasis on health promotion and prevention of co-occurring disease. However, HIV remains a highly stigmatized disease that often affects marginalized peoples who historically have had limited access to social resources. Our purpose was to describe the associations among three social resource variables (social belonging, social support networks, and social capital) and two health promotion behaviors, HIV medication adherence and physical activity, and quality of life among persons living with HIV (PLHIV).Methods: We conducted a cross-sectional analysis in 102 adult PLHIV. Social resource variables and quality of life were assessed using validated and widely-used instruments. Physical activity was assessed using a daily physical activity diary and medication adherence was abstract from the participant's medical record. Spearman correlations and descriptive statistics were used to analyze associations among variables.Results: Fifty-four participants (54%) were male and most were African American (84%), single (69%), and living in poverty (82%). Participants had been living with HIV for an average of 13.6 years (+/-7), had been prescribed HIV antiretroviral medication for an average of 8.8 years (+/- 5.4), and most were living with at least one non-AIDS comorbidity (80%). Social belonging was significantly associated with HIV medication adherence ($\rho = 0.25$, $p = 0.02$), overall functioning quality of life ($\rho = 0.48$, $p < 0.01$), and life satisfaction quality of life ($\rho = 0.50$, $p < 0.01$). Social capital was also associated with HIV medication adherence ($\rho = 0.17$, $p = 0.10$) and life satisfaction quality of life ($\rho = 0.29$, $p < 0.01$). Social support networks were not significantly associated with health outcomes.Conclusion: We found that there are distinctions among various, widely-used social resource constructs. By describing these unique associations and distinctions, our study helps identify which social resources should be targeted in the development of interventions to improve health promotion and prevention behavior of members of this marginalized population.

CORRESPONDING AUTHOR: Allison R. WEbel, PhD, RN, Case Western Reserve University, Cleveland, OH, 44106; allison.webel@case.edu

6:00 PM-7:00 PM C042

MECHANISMS LINKING THE SOCIAL ENVIRONMENT TO HEALTH IN AFRICAN AMERICANS

Scherezade K. Mama, DrPH[1], Karen Basen-Engquist, PhD, MPH[1], Rebecca E. Lee, PhD[2], Deborah Thompson, PhD[3], David W. Wetter, PhD[4], Lorraine R. Reitzel, PhD[5], Lorna H. McNeill, PhD, MPH[6]

[1]The University of Texas MD Anderson Cancer Center, Houston, TX; [2]Arizona State University, Phoenix, AZ; [3]Baylor College of Medicine, Houston, TX; [4]Rice University, Houston, TX; [5]University of Houston, Houston, TX; [6]University of Texas MD Anderson Cancer Center, Houston, TX

The social environment may influence health directly or indirectly through psychosocial factors, such as perceived stress, depressive symptoms and discrimination. This study explored potential psychosocial mediators of the associations between the social environment and physical and mental health in African American adults. Participants (N=1467) completed questionnaires on social support, subjective social status, perceived stress, depressive symptoms, discrimination and physical and mental health. Mediation analyses found that low social support and subjective social status were associated with poor physical and mental health (ps < .01). Perceived stress and depressive symptoms were significant mediators of the relationship between the social environment and health in single and multiple mediator models (ps < .05), and perceived stress, depressive symptoms and discrimination individually and jointly mediated the relationship between the social environment and mental health (ps < .01; R^2=44.6-51.4%). Results suggest that the relationship between the social environment and mental health is influenced by psychosocial factors. Health promotion efforts should address psychosocial factors, such as stress, depression and discrimination, in an effort to improve health-related quality of life in African Americans. Future research is needed to understand exactly how psychosocial factors influence health outcomes over time and contribute to modifiable behavioral cancer risk factors and health disparities among African Americans.

CORRESPONDING AUTHOR: Scherezade K. Mama, DrPH, The University of Texas MD Anderson Cancer Center, Houston, TX, 77030; skmama@mdanderson.org

6:00 PM-7:00 PM C043

MEDICATION ADHERENCE IN PATIENTS WITH BIPOLAR DISORDER AND MEDICAL MORBIDITIES

Jennifer B. Levin, PhD[1], Michelle E. Aebi[2], Curtis Tatsuoka, PhD[3], Edna Fuentes-Casiano, MA, MBA[3], Kristin Cassidy, MA[3], Martha Sajatovic, MD[4]

[1]Case Western Reserve University School of Medicine, Solon, OH; [2]Case Western Reserve University School of Medicine, North Ridgeville, OH; [3]Case Western Reserve University, Cleveland, OH; [4]Professor of Psychiatry and of Neurology, Cleveland, OH

Objective: Non-adherence to psychotropic medication is common in bipolar disorder (BD) treatment and leads to negative outcomes. People with BD also have high rates of chronic medical illness wand premature mortality. This descriptive study assessed the relationship between non-adherence to psychotropic and non-psychotropic medications in 76 BD patients known to be non-adherent to BD treatment.Methods: The data are part of a larger, NIMH-funded randomized controlled trial testing a novel customized adherence enhancement intervention to promote BD medication adherence. Poor adherence was defined as missing at least 20% of prescribed medication based on the self-reported Tablet Routines Questionnaire (TRQ). Our analysis focused on baseline whole group data only. Medical data were collected using the self-report version of the Charlson Comorbidity Index and questions were added to assess cardiovascular (CV) risk factors including hypertension, hyperlipidemia, BMI, and smoking. Adherence to non-psychotropic medications was assessed with TRQ. Pearson correlations coefficients were calculated between adherence to psychotropic and non-psychotropic medications.

Paired t-tests of respective adherence level differences within subjects were then conducted. Results: The mean age of participants was 47 with an average of 12 years of education. The majority was female (72%), African-American (69%), and had Type I BD (78%). Participants showed moderate global psychopathology, depression and mania. With regard to CV risk factors, 47% of the sample had hypertension, 33% hyperlipidemia, and 67 were smokers. The average BMI was 34 and 67% were obese. The average TRQ showed 58% of BD medication doses were missed compared to 38% of non-psychotropics. There was no association between adherence to BD and non-psychotropic medications. Conclusions: There is no relationship between adherence to psychotropic and non-psychotropic medications in a sample of BD patients who are non-adherent to their BD medications. While non-psychotropic adherence is low, psychotropic adherence is even lower. Lastly, this sample appears characteristic of BD patients in general, with high rates of hypertension, hyperlipidemia, smoking, and obesity.

CORRESPONDING AUTHOR: Jennifer B. Levin, PhD, Case Western Reserve University School of Medicine, Solon, OH, 44139; jennifer.levin@uhhospitals.org

CITATION POSTER
6:00 PM-7:00 PM C044

MIXED-METHODS ANALYSES OF AN IMPLEMENTATION STRATEGY OF BRIEF PSYCHOTHERAPY IN PRIMARY CARE

Joseph Mignogna, PhD[1], Lindsey Martin, PhD[2], Juliette Mott, PhD[3], Yumei Cao, M.S.[4], Elyse Thakur, M.A.[4], Michael Kauth, PhD[2], Mark Kunik, MD[2], Aanand Naik, MD[5], Jeffrey Cully, PhD[2]

[1]VISN 17 Center of Excellence for Research on Returning War Veterans, Veterans Health Administration, Waco, TX; [2]Center for Innovations in Quality , Effectiveness and Safety, Michael E. DeBakey VA Medical Center, Houston, TX; [3]National Center for Posttraumatic Stress Disorder-Executive Division, White River Junction, VT; [4]Baylor College of Medicine, Houston, TX; [5]Center for Innovations in Quality, Effectiveness and Safety, Michael E. DeBakey VA Medical Center, Houston, TX

As part of a Veterans Health Administration (VA) patient randomized clinical trial utilizing a hybrid effectiveness-implementation design, mixed-methods analyses were used to describe outcomes of an implementation strategy of a flexible and brief cognitive-behavioral therapy (bCBT) for medically ill patients with clinically elevated symptoms of depression and/or anxiety in integrated primary care clinic at two VA medical centers. Primary Care-Mental Health Integration (PC-MHI) clinicians' (n=19) perspectives on intervention implementation were explored qualitatively using semi-structured exit interviews documenting their experiences using bCBT under real-world conditions. The Promoting Action on Research Implementation in Health Services (PARIHS) and RE-AIM (Reach, Effectiveness, Adoption, Implementation and Maintenance) frameworks guided the interviews and coding of the data. Qualitative findings were combined with descriptive treatment delivery data collected through patient chart review, and statistical tests were used to compare differences in treatment delivery outcomes between study sites. Implementation efforts resulted in 83.9% of patients assigned to the treatment condition completing at least one session, and 63.3% viewed as treatment completers (i.e., 4-6 sessions). Only one statistically significant difference emerged between study sites, specifically, method of delivering sessions 2-6 (i.e., telephone vs. in-person; 68.2% vs. 44.8%; p = .002). Among the elective bCBT skill modules delivered during sessions 3-5 (e.g., behavioral activation, cognitive restructuring, relaxation), the module on physical disease self-management was most commonly selected. Qualitative analysis revealed study clinicians 1) described varying degrees of flexibility adapting the intervention to fit therapeutic style and patient needs, 2) faced challenges balancing clinician-patient rapport with intervention fidelity, 3) held varied perceptions regarding the intervention audit/feedback mechanism, 4) experienced scheduling barriers, 5) had concerns over managing Veterans' other life issues that arose in the context of delivering the manualized bCBT, and 6) reported improved self-awareness regarding the connection between physical and mental health issues.

CORRESPONDING AUTHOR: Joseph Mignogna, PhD, VISN 17 Center of Excellence for Research on Returning War Veterans, Veterans Health Administration, Waco, TX, 76711; mignogna.joe@gmail.com

6:00 PM-7:00 PM C045

OPTIMISM AND HOPE IN DEPRESSION AMONG FEMALES WITH FIBROMYALGIA: TESTING THE DOUBLING-UP HYPOTHESIS

Zunaira Jilani[1], Edward Chang, PhD[2], Erin E. Fowler[2], Tina Yu[2], Jiachen Lin[2], Jameson K. Hirsch, PhD[3]

[1]University of Michigan, Ypsilanti, MI; [2]University of Michigan, Ann Arbor, MI; [3]East Tennessee State University, Johnson City, TN

*Optimism and hope in depression among females with fibromyalgia: Testing the doubling-up hypothesis*Fibromyalgia, defined by the National Institute of Health (NIH) as a disorder that causes muscle pain and fatigue, has affected over 5 million adults in the United States. Specifically, fibromyalgia is more prevalent among women than men, with a 7:1 female to male ratio. Although over 50% of those diagnosed report a traumatic event coinciding with the onset of symptoms, there is no certainty of what causes fibromyalgia, nor has there been a discovery of a cure. The knowledge that there is no cure, coupled with the excruciating pain caused by fibromyalgia may impact individuals' psychological health. Therefore, it may be useful to examine the correlation between psychological variables (viz., optimism/pessimism, hope, & depressive symptoms) in females with fibromyalgia.The current study examined an integrative model involving optimism/pessimism and hope as predictors of depressive symptoms in 298 females diagnosed with fibromyalgia. Survey measures consisted of the Life Orientation Test-Revised (LOT-R), the Hope Scale, and the Depression, Anxiety, and Stress Scale (DASS-21). Beyond the additive influence of the two predictors of depressive symptoms, optimism/pessimism and hope were also hypothesized to interact together to exacerbate depressive symptoms. Results indicated that both optimism/pessimism and hope were robust predictors of depressive symptoms. Optimism/pessimism was found to be a significant and unique predictor of depressive symptoms with a positive correlation. Hope was a significant and additive predictor of depressive symptoms, accounting for an additional 31% variance. These findings showed that most of the participants identified themselves as pessimistic, which was positively associated with depressive symptoms, while hope was found to be negatively correlated with depressive symptoms. However, there was no evidence that the optimism/pessimism × hope interaction was a significant predictor of depressive symptoms, indicating that there may not be any particular advantages or disadvantages in doubling up on optimism/pessimism and hope. On the other hand, it may be beneficial to further examine the possibility of incorporating techniques to generate hope in psychological interventions against depressive symptoms in females with fibromyalgia to improve quality of life.

CORRESPONDING AUTHOR: Zunaira Jilani, University of Michigan, Ypsilanti, MI, 48198; jilanzun@umich.edu

6:00 PM-7:00 PM C046

PARENTAL ATTITUDES TOWARD BEHAVIORAL HEALTH SERVICES DURING DEPLOYMENT

Maria Phillips, Ed.D.[1], Erlanger A. Turner, PhD[2]

[1]Department of Defense School System, Columbus, GA; [2]University of Houston-Downtown, Houston, TX

Since the Global War on Terror began, long and frequent deployment of service members has placed military children at risk for psychosocial problems and these problems have escalated (De Pedro et al., 2012; Park, 2011; Rossen, 2011). Additionally, research has shown that an inconsistent use of behavioral or mental health services occurs during the deployment cycle (Chandra et al., 2011; Sansone et al., 2008). Building on the Theory of Planned Behavior and Social Cognitive Theory, the purpose of this study was to understand if and how military parents' attitudes affect their decisions to use behavioral health services. The study used survey data collected from military parents (N = 74; 55% male) who were or had a spouse within the deployment phase. Analyses of Variance and linear regression were used to analyze the data. Findings showed that participants' responses to the use of child behavioral health services during deployment were influenced by their help-seeking attitudes and their own personal use of services. The reasons for participants' likelihood to use behavioral health services for their child also varied as a result of their own service use. Moreover, those who had previously used behavioral health services for their child were significantly less likely to use behavioral health services for their child in the future compared to those who had not previously used services. Finally, no significant differences in help-seeking were found based on parent's age group, parents' gender, gender of child, military membership, or military rank. Future directions and clinical implications to decrease the risk of social, emotional, and academic problems in children of military families will be discussed.

CORRESPONDING AUTHOR: Maria Phillips, Ed.D., Department of Defense School System, Columbus, GA, 31906; maria260e@yahoo.com

6:00 PM-7:00 PM C047

PATTERNS OF MEDICATION ADHERENCE ATTITUDES AND BEHAVIOR CHANGE IN PATIENTS WITH BIPOLAR DISORDER

Jennifer B. Levin, PhD[1], Curtis Tatsuoka, PhD[2], Kristin Cassidy, MA[2], Michelle E. Aebi[3], Martha Sajatovic, MD[4]

[1]Case Western Reserve University School of Medicine, Solon, OH; [2]Case Western Reserve University, Cleveland, OH; [3]Case Western Reserve University School of Medicine, North Ridgeville, OH; [4]Professor of Psychiatry and of Neurology, Cleveland, OH

Objectives: While medication treatment is necessary for the successful management of bipolar disorder (BD), non-adherence rates are up to 60%. Although medication attitudes are believed to be relevant to adherence behavior, few studies have investigated the mechanisms underlying adherence change. This study evaluated attitudinal correlates of adherence conversion in 86 poorly adherent individuals with BD.Methods: This secondary analysis pooled data from two prospective trials of Customized Adherence Enhancement (CAE), a psychosocial intervention delivered over 4-6 weeks. Poor adherence was defined as missing at least 20% of prescribed BD medication based on the Tablet Routines Questionnaire (TRQ). The sample was dichotomized into Converters who achieved good adherence (N=44) defined as missing fewer than 20% of doses on the TRQ and Non-Converters who remained poorly adherent (N=21) following treatment. Converters and Non-converters were compared on medication adherence, attitudes, and symptoms at baseline, 6-weeks and 3 months. It was hypothesized that Converters would have improved medication attitudes and that these changes would be maintained at the 3-month follow-up. Conversely, it was hypothesized that Non-Converters would not have attitude changes following CAE and both poor attitudes and poor adherence would remain at 3 month follow-up.Results: At baseline, Converters and Non-converters were similar demographically and clinically but Converters were less non-adherent (32% doses missed) than Non-Converters (59% missed). As hypothesized, at six weeks, Converters had better attitudes and less severe symptoms than Non-Converters. At 3 months, Converters maintained improvements, but group differences were less pronounced due to some improvement in Non-Converters. Converters had better adherence at 3 months and trajectories differed for the groups on attitudes and symptoms.Conclusions: Over two-thirds of poorly adherent BD patients who received CAE converted to good adherence. Improved medication attitudes may be a driver of improved adherence behavior and reduced BD symptoms.

CORRESPONDING AUTHOR: Jennifer B. Levin, PhD, Case Western Reserve University School of Medicine, Solon, OH, 44139; jennifer.levin@uhhospitals.org

6:00 PM-7:00 PM C048

PEDIATRICIANS' EXPERIENCES WITH AND PREFERENCES FOR COMMUNICATION WITH MENTAL HEALTH SPECIALISTS

Duncan G. Campbell, PhD[1], Andrew Downs, PhD[2], William J. Meyer, MA[3], Megan McKittrick[2], Nicole Simard[2]

[1]The University of Montana, Missoula, MT; [2]University of Portland, Portland, OR; [3]University of Montana, Missoula, MT

In contrast to systems-level improvements to healthcare for adults, less effort has been directed toward integrating primary care (PC) and mental health (MH) services for children. Regular communication about shared patients between pediatricians and MH specialists is likely to facilitate integration efforts. In order to gauge the extent of minimally integrated care in pediatric practice, we examined the current state of communication between pediatricians and MH specialists. Seventy-nine pediatricians (8% return; 62% female; 82% white) representing 35 states completed a mailed survey of their experiences with and preferences for communication with MH specialists about shared patients. Pediatricians with an average of 19.8 (SD=9.9) years in practice reported seeing an average of 90.3 (SD=43.9) patients weekly. Pediatricians estimated that 23% of their patients had MH concerns. Nearly 36% of respondents reported discomfort treating MH disorders, and 60% indicated that MH specialty care resources are inadequate in their communities. A quarter of pediatricians reported that they *never* communicate with MH specialists about shared patients. Among those who do communicate, *actual* average communication frequency was low (between once every 6 months to annually) and less frequent than *desired* communication frequency (monthly to quarterly). In contrast to the 42% of pediatricians who are satisfied with MH specialist communication, dissatisfied pediatricians reported less frequent contact [X^2(3, N=75), p < .001], were less comfortable overall treating MH problems [t(74)=-2.01, p < .05], and were more likely to report that MH specialists are unwilling communicators [t(73)=3.50, p < .001]. Inconsistent/non-timely responses from MH specialists and a lack of insurance reimbursement for consultation were identified as significant barriers to satisfactory communication by 51% and 43% of respondents, respectively. Providing care for children from a biopsychosocial perspective requires integrating care across providers, and integration necessitates a foundation of regular communication. Maximizing MH outcomes for children requires considerable improvement in pediatricians' and MH specialists' communication about shared patients.

CORRESPONDING AUTHOR: Duncan G. Campbell, PhD, The University of Montana, Missoula, MT, 59812; duncan.campbell@mso.umt.edu

6:00 PM-7:00 PM C049

PHYSICAL ACTIVITY SERVES PROTECTIVE FUNCTIONS FOR BLACK BREAST CANCER SURVIVORS

Allyson Diggins, M.A.[1], Nicole Ennis Whitehead, PhD[1], Debra W. Annane, MA, RYT[2], Charles Carver, PhD[3], Michael H. Antoni, PhD[4], Suzanne C. Lechner, PhD[5]

[1]University of Florida, Gainesville, FL; [2]Sylvester Comprehensive Cancer Center, Miami, FL; [3]University of Miami, Coral Gables, FL; [4]University of Miami, Miami, FL; [5]University of Miami Miller School of Medicine, Miami, FL

Black breast cancer survivors generally experience heightened cancer-specific symptoms, disruptions in physical and mental functioning, variations in life satisfaction, lack of social support and poorer quality of life compared to survivors from other racial/ethnic groups. Physical activity has been suggested as a non-pharmacological intervention that may alleviate challenges related to a diagnosis of breast cancer and throughout treatment and survivorship. The present study sought to determine if baseline physical activity (dichotomized into no physical activity and any physical activity in the last 7 days) predicted mean differences in negative mood and quality of life longitudinally in a sample of Black breast cancer survivors (*N*=114). All participants identified as Black (aged 27- 77; *M* =51.1 years, *SD* =8.98 years). The mean body mass index (BMI) of the sample was 31.39 (*SD*=7.17). Participants took part in either a 10-week cognitive-behavioral stress management intervention or a control condition. A multivariate analysis of covariance (MANCOVA) was conducted to determine if baseline physical activity predicted mean differences in negative mood and quality of life at follow ups while controlling for intervention condition, BMI, tumor stage, time since diagnosis, age and income. A one-way MANCOVA revealed a significant multivariate effect by physical activity group for the combined dependent variables of negative mood and quality of life (FACT-B) at Time 2 (immediately post intervention), Pillai's trace = .129, F (6, 94)= 2.325, p=.039. The second MANCOVA revealed a significant multivariate effect across physical activity groups for the combined dependent variables at Time 3 (6 months post T2), Pillai's trace = .135, F (6, 92)= 2.392, p=.034. Specifically, Black breast cancer survivors who engaged in physical activity experienced significantly lower negative mood and higher social/family well-being at Time 2 and higher spiritual and functional well-being at Time 2 and Time 3. Results show that baseline physical activity served protective functions for breast cancer survivors over time. Based on our findings, developing culturally relevant physical activity interventions for Black breast cancer survivors may prove essential to improve overall well-being in this population.

CORRESPONDING AUTHOR: Allyson Diggins, M.A., University of Florida, Gainesville, FL, 32608; adiggins@phhp.ufl.edu

6:00 PM-7:00 PM C050

PRELIMINARY FINDINGS OF A CULTURALLY ADAPTED INTERVENTION FOR LATINAS WITH BINGE EATING PROBLEMS

Brooke Palmer, B.S., M.A.[1], Virginia Gil-Rivas, PhD[2], Fary M. Cachelin

[1]University of North Carolina, Charlotte, Charlotte, NC; [2]The University of North Carolina at Charlotte, Charlotte, NC

Binge Eating (BE) is a key diagnostic factor in Bulimia Nervosa (BN) and Binge Eating Disorder (BED) and is highly correlated with overweight and obesity (OW/OB; Kessler et al., 2013). Compared to White women, Latinas have a higher prevalence of OW/OB and similar to sometimes greater prevalence rates of BN and BED, but are less likely to seek treatment for their symptoms which can commonly go unattended by health care professionals (CDC, 2013; Shea et al., 2012). This is hazardous due to various psychiatric, psychosocial, and health risks related to BE such as depression, musculoskeletal pain, and obesity (Kessler et al., 2013). Standard treatment for BE related disorders is cognitive behavioral therapy (CBT) and requires clients to see trained providers at a premium price; stipulations that can be barriers to treatment for the Latino population (Keyes et al., 2011). A guided self-help version of CBT (CBT-GSH) provides a more accessible avenue to treatment for BE at a fraction of the cost. CBT-GSH has been found to be efficacious in treating BE symptoms in White female populations (Shea et al., 2012). More research is needed to create culturally-adapted and accessible forms of CBT-GSH in order to address the needs of Latinas with BE to treat current symptoms and prevent future health complications.This study examined the effectiveness of a randomized controlled trial for a culturally adapted CBT-GSH intervention. Data were collected from a community sample of Latinas at two time points by using the Eating Disorder Examination to assess for eating symptomatology (Fairburn & Cooper, 1993). The CBT-GSH intervention lasted 12 weeks and consisted of readings from the book *Overcoming Binge Eating* (Fairburn, 1995) and weekly and biweekly phone calls with trained master's level graduate students. At the pre-intervention assessment, participants (n = 5) reported an average of 48.2 days (*SD* = 26.48) with BE episodes over the previous 12 weeks. At post-intervention, the average number of days with BE episodes decreased to 3.6 (*SD* = 3.51). Participants in the waitlist group (*n*=2) averaged 31.5 days (*SD* = 31.85) of binge eating episodes at baseline and 62.5 days (*SD* = 85.56) at follow up. The preliminary results provide support for the efficacy of this culturally adapted intervention and more data will be included as the study continues.

CORRESPONDING AUTHOR: Brooke Palmer, B.S., M.A., University of North Carolina, Charlotte, Charlotte, NC, 28223; bpalmer9@uncc.edu

6:00 PM-7:00 PM C051

PRIMARY CARE PATIENTS' USE OF AN INTERNET SUPPORT GROUP FOR MOOD AND ANXIETY DISORDERS

Bea Belnap, PhD, Kaleab Abebe, PhD, Patrice Gibbs, MS, Bruce Rollman, MD, MPH

University of Pittsburgh, Pittsburgh, PA

Background: Internet support groups (ISG) that enable patients to conveniently exchange information and emotional support 24/7 are a widely available low-cost, self-help resource, but how best to promote participation remains a critical challenge. We examined patient engagement with a moderated password-protected ISG as part of an ongoing NIMH-funded trial to study within the context of a Collaborative Care program whether smartphone and PC access to an ISG for mood and anxiety disorders linked to patients' usual source of primary care can improve outcomes for these conditions.Methods: PCPs from 26 Pittsburgh-area primary care practices referred patients aged 18-75 to our trial. Consenting, protocol-eligible patients with a PHQ-9 and/or GAD-7 ≥10 and Internet access were randomized to one of three groups, including one with access to our ISG. A study care manager telephoned and sent emails to ISG members over the 6-months intervention period, and we also continued to use automated e-mail prompts and various status indicators on patients' ISG profile pages to encourage patients to log-in. We categorized patients as "Superusers" (top 1% of posters), "Top Contributors" (top 9%), "Contributors" (1+ posts), "Observers", and "Non-ISG Users," and compared their engagement (log-ins or posts) during the initial 6 months of enrollment to afterwards.Results: Between 8/12 and 6/14, 276 patients were randomized to our study ISG and 24% were Non-ISG users. Of those who logged into the ISG, Superusers averaged 80 posts/person, Top Contributors 18, Contributors 3 (34% of members), and Observers 0 (31% of members). Few Observers and Non-ISG Users logged-in 6 months after enrollment (14% and 3%, respectively), while 9% of Contributors became Top Contributors, and 8% of Top Contributors became Superusers. Conclusion: The majority of depressed and anxious primary care patients will engage with an ISG linked with their site of primary care. Initial engagement with the ISG was the best predictor of long-term engagement. We will present updated data after we open our study blind next spring.

CORRESPONDING AUTHOR: Bea Belnap, PhD, University of Pittsburgh, Pittsburgh, PA, 15213; belnapbh@upmc.edu

6:00 PM-7:00 PM C052

PROMOTING ADOLESCENT HEALTH (PATH) THROUGH INTERNET-BASED PRIMARY CARE INTERVENTION

Benjamin Van Voorhees, MD, MPH[1], Tracy Gladstone, PhD[2], Monika Marko Holguin, MSS[1], Jennifer Nidetz, MSW[1], Mary Harris, BA[2], Kali Ludwig, MSW[1], Megan Cummens, MA[1], Megan Bolotin, MSW[1], Amy Kane, MA[2]

[1]University of Illinois at Chicago, Chicago, IL; [2]Wellesley College, Wellesley, MD

Purpose: Internet-based depression prevention programs provide a self-directed and accessible means of support for teens; however, further research is needed to explore their efficacy and the feasibility of implementation. PATH is a randomized controlled trial for 13-18 year olds that aims to compare CATCH-IT, a self-guided, online approach to depression prevention, to a general Health Education (HE) Internet intervention.

Methods: CATCH-IT combines therapeutic modalities (e.g., cognitive behavioral therapy, interpersonal psychotherapy) in an ecological model, using "Synchronization of the Senses" theory (e.g., peer videos, design elements) to create a unified media experience. Three motivational interviews with a physician engage youth with the CATCH-IT program and integrate behavioral health discussion into the primary care environment. The HE intervention is based on the current well-child curriculum used for primary care visits. Both programs include optional Internet-based interventions for parents. Teens are recruited from routine visits and recruitment letters from primary care clinics in urban and suburban settings. Healthcare providers are also recruited to provide implementation feedback.

Results: N=152 adolescents/expected 400 have been enrolled and randomized in the PATH study from 6 major health systems. The mean number of modules started or completed by teens enrolled in HE is greater than those in CATCH-IT: M=3.61 (SD = 4.38); HE: M=6.86 (SD=6.23). The mean number of minutes spent online, however, is higher for the CATCH-IT teens (M=90.13, SD=109.47) than for the HE teens (M=20.59, SD=18.69). Teens have completed 70% (Chicago) and 58% (Boston) of scheduled follow-up interviews and N=9 (N=7, Chicago; N=2, Boston) have completed follow-up through 2 years.

Conclusions: Significantly more time is spent on CATCH-IT than HE, indicating a possible greater level of engagement with the website despite teens completing fewer modules. Of teens enrolled in the study, fewer than anticipated have developed Major Depressive Disorder (N=4). Motivational interviews with a PCP also may enhance intervention use and encourage communication about depression with a trusted provider. Utilization of both websites may be improved through smartphone and tablet platforms in future trials.

CORRESPONDING AUTHOR: Benjamin Van Voorhees, MD, MPH, University of Illinois at Chicago, Chicago, IL, 60614; bvanvoor@uic.edu

6:00 PM-7:00 PM C053

A MANUALIZED HEALTH ENHANCEMENT TREATMENT PROGRAM: DESIGNING AN ACTIVE COMPARISON TREATMENT

Brittain L. Mahaffey, PhD[1], Christopher Ray, BA[2], Adam Gonzalez, PhD[2]

[1]Stony Brook University, Stony Brook, NY; [2]Stony Brook University School of Medicine, Stony Brook, NY

An important consideration in evaluating the efficacy of psychological and behavioral health interventions is the availability of adequate comparison treatments. Randomized controlled trials (RCTs) have often relied on "treatment as usual" or unstructured health education programs as comparative conditions. Such programs are generally superior to wait-list controls in that they account for factors such as attention, social support, education, and placebo effects. Although the use of such approaches may increase ecological validity, it poses serious threats to the design of an RCT. These include inconsistent session lengths, different homework or practice requirements, different educational backgrounds of the group leaders and potentially poor treatment reliability and validity across providers and trials. Moreover, although manualized protocols exist for specific individual behavioral health problems (e.g., diabetes, smoking), these manuals are not adequate comparisons for more complex multi-component packages aimed at treating the underlying cognitive, behavioral, and lifestyle factors which contribute to poor health. As such, it is essential that we develop manualized health behavior enhancement programs to standardized effective comparison treatments. This paper describes the development of a manualized 8-session group Health Enhancement Program designed to target: sleep hygiene, nutrition, exercise, substance use and working with medical providers. Specifically, we (1) review the theoretical rationale for the development of the manual, (2) give an overview of the content of the program, and (3) present data on the acceptability, credibility, and clinical effectiveness of the protocol. Participants included white male responders to the World Trade Center disaster (N=6) with respiratory and PTSD symptoms. Data from this preliminary pilot suggests the program was highly credible and acceptable to participants and resulted in pre to post treatment improvements in health behaviors such as nutrition ($d = 1.21$), physical activity ($d = .76$), and stress management skills ($d = 1.28$). Participants also experienced a reduction in PTSD symptoms ($d = .77$). Future directions and ways to adapt the new intervention for different populations will be discussed.

CORRESPONDING AUTHOR: Brittain L. Mahaffey, PhD, Stony Brook University, Stony Brook, NY, 11794; brittain.mahaffey@stonybrookmedicine.edu

6:00 PM-7:00 PM C054

ADAPTATION OF AN EATING BEHAVIOR QUESTIONNAIRE AMONG CENTRAL NERVOUS SYSTEM TUMOR SURVIVORS

Maria Swartz, PhD, MPH, RD, LD[1], Karen Basen-Engquist, PhD, MPH[2], Christine Markham, PhD[3], Michael Scheurer, PhD, MPH[4], Philip Lupo, PhD, MPH[4], Rachel Hill, RDLD[5], Jeffrey Murray, MD[5], Paul R. Swank, PhD[6]

[1]UT MD Anderson Cancer Center, Missouri City, TX; [2]The University of Texas MD Anderson Cancer Center, Houston, TX; [3]University of Texas Health Science Center at Houston/Center for Health Promotion and Prevention Research/School of Public Health, Houston, TX; [4]Baylor College of Medicine, Houston, TX; [5]Cook Children's Health Care System, Fort Worth, TX; [6]University of Texas - Houston, School of Public Health, Houston, TX

Purpose: Healthy eating, a modifiable behavior, may mitigate the risk of adverse health outcomes experienced by many childhood, adolescent, and young adult (CAYA) central nervous system tumor survivors (CNSTS). Standard eating behavior assessments rely on retrospective recalls, which may not be feasible among CNSTS experiencing neurocognitive sequelae. We examined validity of the Three Factor Eating Questionnaire (TFEQ) and evaluated the factor structure of an adapted TFEQ real-time eating questionnaire potentially useful for ecological momentary assessment (EQ-EMA) in CAYA CNSTS. Methods: We conducted a cross-sectional study among 15-39 years old CAYA CNSTS (n=109). We recruited through cancer hospitals, social media, and pediatric cancer organizations. Participants completed the TFEQ and EQ-EMA online. Only the first two factors are used in the EQ-EMA. Confirmatory factor analyses (CFA) were conducted to evaluate the TFEQ and EQ-EMA factor structures. TFEQ includes: uncontrollable eating (UE)—loss of control over eating, cognitive restraint (CR)—consciously choosing to restrict intake, but not less than what body needs, and emotional eating (EE)—respond to negative emotions by eating. EQ-EMA includes: UE and CR only. Linear regression analyses were conducted to examine the relation of factors to body mass index (BMI) and dietary intake while controlling for gender, race, and age. Results: Participants' mean age was 27 (±7.1) years, mean BMI was 26.1 (±6.3), and were mostly Non-Hispanic White, with 57% female. The TFEQ 3 factor CFA indicated a reasonable model fit (RMSEA=0.058). EQ-EMA factors for UE and CR were similar, but not identical, to the TFEQ-UE and TFEQ-CR factors. A third factor—"hunger"—was indicated for the EQ-EMA. TFEQ- EE (β=0.07, p=0.03) and EMA-UE (β=0.09, p=0.01) were positively associated with BMI among those ≥18 years old. Percent energy from fat was inversely associated to EMA-CR (β=-0.04, p=0.01). Conclusions: CFA suggested evidence of validity for use of TFEQ and EQ-EMA among CNSTS. With significant relationships to BMI, TFEQ-EE and EMA-UE factors may be risk behaviors amenable to intervention. One possible use for TFEQ is to screen for disordered eating behaviors in CNSTS. EQ-EMA may be used to monitor for disordered eating at the time of recent eating episode.

CORRESPONDING AUTHOR: Maria Swartz, PhD, MPH, RD, LD, UT MD Anderson Cancer Center, Missouri City, TX, 77459; maria.c.swartz@gmail.com

6:00 PM-7:00 PM C055

AN EXPLORATORY STUDY OF HEALTH PROVIDER ATTITUDES TOWARD SOCIAL MEDIA USE IN PATIENT SERVICES

Gage J. Stermensky, II., Psy.D., LADC, BCB[1], Peter Jaberg, PhD, LP[2]

[1]Hazelden Foundation/Forest Institute, St. Paul, MN; [2]Forest Institute, Springfield, MO

The use of social media as a method of communication has increased dramatically in the United States in the 21st century. With the ever increasing pressure on recent healthcare policy for population based, patient centered services, inexpensive and large-reach methods of communication are a useful way to enhance shared decision making and health literacy. However, little is known regarding health service provider attitudes towards the use of social media for healthcare related services. This mixed methods, exploratory study ascertained provider attitudes (from multiple disciplines, including nurses, medical doctors, psychologists, social workers, counselors, paraprofessionals, among others) towards the use of social media in the current healthcare system. Analysis of the factor structure of the survey indicated two distinct factors, one for personal, protected information and another for social networking, compliance, outreach, and information dissemination. Providers were more likely to support social media utilization in healthcare services for the second factor. The authors conclude by discussing training implications, future directions for healthcare policy, and the need for regulatory bodies to invest time in developing social media policies. Finally, study limitations and proposed future research recommendations are provided.

CORRESPONDING AUTHOR: Gage J. Stermensky, II., Psy.D., LADC, BCB, Hazelden Foundation/Forest Institute, St. Paul, MN, 55102; gstermensky@hazelden.org

6:00 PM-7:00 PM C056

CLINICAL TRIALS IN THE FACEBOOK AGE: USING SOCIAL MEDIA TO RECRUIT INDIVIDUALS WITH ADDICTION

Harvir Virk, B.A.[1], William Murff, B.S.[1], Caitlin Castle, B.S.[1], Samantha Paniagua, B.A.[1], Kristen D. Rosen, MPH[2], Jennifer S. Potter, PhD, MPH[1]

[1]The University of Texas Health Science Center at San Antonio, San Antonio, TX; [2]The University of Texas Health at San Antonio, San Antonio, TX

Clinical trial recruitment remains a challenge. Advertising remains an important strategy to ensure timely and efficient recruitment. Over the past 10 years, social media has emerged as an important potential recruitment source; however, strategies for leveraging its potential remain elusive. Facebook is an increasingly important platform for health information including a potential advertising vehicle for trial recruitment. Herein, we describe a social media campaign developed to recruit participants to a combined behavioral and pharmacologic clinical trial for the treatment of marijuana use disorder. Strategies for developing a social media campaign, performance metrics, and lessons learned are described.Over a 7-month period, 3 IRB-approved advertisements ran continuously on Facebook's newsfeed via mobile and desktop computers, as well as external ads (mobile devices) and right column ads (desktop). Potential participants who clicked on the ad were directed to a free-standing web page for the study that provided information about eligibility and a phone number and email address for those interested in more information about the study and/or speaking with a research assistant. The campaign cost $915.01 and resulted in 710, 834 impressions (i.e., the number of times the ad appeared). Ads were delivered to males and females between the ages of 18 and 50. No other constraints were placed on to whom the ad was delivered. To date, the campaign has reached 212,104 people. This means the 710,834 impressions were shown to a total of 212,104 people who self-identify as living in San Antonio, TX (an average of 3.35 impressions per person). The ads have resulted in 2,922 clicks which in turn produced 9 participants (<1% of clicks) calling for more information about the study and 1 participant qualifying for a screening visit. No randomizations reported due to Facebook advertising. Lessons learned include: IRB limitations, ad design elements, Facebook advertising rules and unanticipated changes in policy, ad placement (newsfeed versus sidebar), strategies for setting budgets and evaluating campaign success (cost-per-click), and Facebook limitations for advertising.

CORRESPONDING AUTHOR: Harvir Virk, B.A., The University of Texas Health Science Center at San Antonio, San Antonio, TX, 78229; virk@uthscsa.edu

6:00 PM-7:00 PM C057

EFFECTIVELY RECRUITING AFRICAN AMERICAN MEN INTO A CLINICAL TRIAL: THE ARTIIS STUDY

Chelsea Hendrick, BS, CCRP, Emanuel Andrews, III, MS, Melissa N. N. Harris, MPA, Megan Duet, MS, CCRP, Timothy Church, MPH, MS, PhD, MD, Robert L. Newton, Jr., PhD

Pennington Biomedical Research Center, Baton Rouge, LA

African American males represent a population that has traditionally been very difficult to recruit into clinical trials. Identifying which recruitment methods are effective for this population is vital to successful recruitment in trials such as the Aerobic plus Resistance Training and Insulin Sensitivity in African American Men Study (ARTIIS). ARTIIS is a randomized controlled trial recruiting 113 participants into a 5 month exercise training study to assess if exercise can impact insulin resistance in African American men who are at risk for developing diabetes. With ARTIIS, a variety of recruitment methods were utilized of which included both traditional media –based methods, such as TV, radio, flyers, mass mailings, and newspaper, and non-traditional methods, such as email and social media. In addition, a community based recruitment strategy was employed and led by a community liaison that was responsible for all recruitment efforts, including speaking at targeted businesses, churches, minority focused community events and health fairs while securing the support of community leaders and local celebrity endorsers to further promote the study. To date, 691 participants have been phone screened to assess initial eligibility. All 290 men (Age = 52.4 (9.7); BMI = 32.2 (5.6); 69% married; 70.6% employed full time; 58.4% income > $30,000 < $79,999) attending the subsequent orientation session indicated the method they were recruited. A total of 109 participants have been randomized. Traditional recruitment methods resulted in a total of 7.2% of participants recruited with 14 (4.8%) from flyers, 4 (1.4%) from newspaper advertisements, and 3 (1%) from mailings. Non-traditional methods accounted for 37 (12.8%) participants from e-mail. Community based efforts resulted in a total of 54.1% of participants recruited with 103 (35.5%) from churches and 54 (18.6%) from community events. Word of mouth resulted in 61 (21%) participants. No participants have been recruited through TV and social media. Recruitment success for ARTIIS thus far can be attributed to three types of methods with community based efforts being the most effective. The community liaison, with the help of the celebrity endorsers, has been instrumental in organizing and conducting community events.

CORRESPONDING AUTHOR: Chelsea Hendrick, BS, CCRP, Pennington Biomedical Research Center, Baton Rouge, LA, 70808; chelsea.hendrick@pbrc.edu

6:00 PM-7:00 PM C058

IMSTRONG: METHODOLOGIC AND ETHICAL CHALLENGES TO THE DEPLOYMENT OF BIOSENSOR TECHNOLOGY TO DETECT COCAINE USE

Stephanie Carreiro, MD[1], Rachel Mullins[2], Kelley Wittbold, MD[3], David Smelson, PsyD[4], Shicheng Weng, M.S.[5], Hua Fang, MD, PhD[4], Edward Boyer, MD, PhD[4]

[1]University of Massachusetts Medical School, Worcester, ME; [2]University of Massachusetts Medical School, Norwood, MA; [3]University of Massachusetts Medical School, Boston, MA; [4]University of Massachusetts Medical School, Worcester, MA; [5]UMass Medical School, Southborough, MA

Introduction: Currently, the assessment of efficacy of substance abuse treatment programs in limited to self-report data and biological specimen (i.e. blood or urine) testing, both of which suffer from significant limitations. Portable biosensors can provide both improved, real time detection and opportunity for remotely triggered interventions in patients undergoing drug treatment programs. However, numerous challenges are inherent in the deployment and testing of this technology.Methods: Fifteen outpatients with a history of cocaine abuse were recruited to wear a biosensor wristband for thirty days, which can detect multiple physiologic markers of sympathetic nervous system arousal that are expected to change with cocaine use. Urine drug screening and timeline follow-back interviews were performed twice per week to evaluate for drug use, stress and craving.Results: 14/15 participants completed the protocol and returned the device. All had a positive attitude toward the biosensors, and compliance with sensor use and visits with study staff was high. Recruiting challenges included ethical concerns regarding compensation and potential influence on drug use behaviors, and both on the part of administrative and treating clinicians at recruiting sites. Methodological challenges included explaining the study to the participants in a way that did not encourage relapse, and technical malfunction of the sensors.Discussion: Portable biosensors have potential to improve substance abuse treatment, but need to be better studied before they can be widely implemented. Strategies are needed to tailor research protocols to optimize patient compliance and to address ethical concerns that may arise with such protocols.

CORRESPONDING AUTHOR: Stephanie Carreiro, MD, University of Massachusetts Medical School, Worcester, ME, 01655; stephanie.carreiro@gmail.com

6:00 PM-7:00 PM C059

EATING PATTERNS AMONG LOW-INCOME OBESE ADULTS: DOES THE DOCTOR'S ADVICE CARRY ANY WEIGHT?

Cori Lorts, MPH, RD[1], Punam Ohri-Vachaspati, PhD, RD[2]

[1]Arizona State University, Tempe, AZ; [2]Arizona State University, Phoenix, AZ

Background: The high rate of obesity in adults is a public health concern, especially in disadvantaged populations. Effective strategies are needed to help obese individuals adopt healthier lifestyles.Methods: Data were collected using a phone survey from households in five New Jersey cities in 2009-10. Survey respondents were adults who made food shopping decisions for the household. Analyses presented are limited to only obese participants with complete data on variables included in the analysis (n=554). Multivariate logistic regression analysis determined the association of participants' eating patterns with doctor's advice to lose weight and participants efforts to lose weight after controlling for individual and household level factors.Results: Despite being obese, only 48% of the participants in the sample reported getting advice from their doctor to lose weight and 68% stated they were trying to lose weight. Seventy six percent of the participants who had received advice from a doctor and 60% of those who did not receive advice from a doctor reported trying to lose weight. Based on multivariate regression analysis, doctor's advice to lose weight was not associated with healthy or unhealthy eating behaviors among participants, except for salad consumption ($p < .05$). However, participants who were trying to lose weight ate more salads ($p < .05$) and fruits and vegetables as a snack ($p < .01$), drank less soda ($p < .01$), and consumed less sweet snacks ($p < .01$) and salty snacks ($p < .05$). Results did not change when variables addressing participant's efforts to lose weight and doctor's advice to lose weight were included in the model simultaneously. Among those trying to lose weight, no differences were found in consumption behaviors between participants who received doctor's advice vs. those who did not.Conclusion: Obese adult's attempt to lose weight, and not doctor's advice to lose weight, is a predictor for healthy eating patterns. Interventions in medical practices for obese adults should train health care providers on effective strategies for motivating patients to adopt healthier lifestyles.

CORRESPONDING AUTHOR: Cori Lorts, MPH, RD, Arizona State University, Tempe, AZ, 85284; cori.lorts@asu.edu

6:00 PM-7:00 PM C060

EFFECTS OF A HEALTH EDUCATION INTERVENTION ON DIET AND EXERCISE IN A HISPANIC COLLEGE STUDENT SAMPLE

Julie Blow, PhD, Nicole Kimura, B.A., Taylor Adams, Dessaray Gorbett, B.A., Reyna Puentes, B.S., Theodore V. Cooper, PhD

University of Texas at El Paso, El Paso, TX

It has been suggested that intervention efforts should focus on prevention of weight gain and the adoption of healthy eating and physical activity behaviors. There is a dearth of literature as to what theoretically-based interventions would be most amenable and efficacious in a Hispanic college student sample. This study assessed the impact of a pilot intervention based on components derived from Self-Determination Theory (SDT) and the Transtheoretical Model (TTM) that focused on increasing healthy eating and physical activity in Hispanic college students. Measures in the study included demographics, theoretical constructs from SDT and the TTM, eating behavior, and a food and physical activity diary. Participants (N=267) were randomized to either the Fit U intervention group or the self-monitoring only group. Both groups received training on completing food and exercise diaries, while the Fit U group also received a brief health education and motivation based intervention. Both groups returned to check-in after one week and provided follow-up data after two weeks. Inferential analyses used hierarchical regression models to predict total calorie intake, fruit and vegetable intake, eating behavior, physical activity, and perceived competence for diet and exercise. Logistic regression models were used to examine changes in motivation to engage in a healthy diet and physical activity at follow-up. Findings suggest those in the Fit U condition reported lower calorie intake (β = .143, p = .023), improvement in healthy eating behaviors (β = -.157, $p < .001$), increased perceived competence for diet (β = -.145, p = .007) and exercise (β = -.167, p = .003) at follow-up, and progression through the stages of change for exercise (OR = .297, p = .003). These findings suggest the feasibility and relative efficacy of the Fit U intervention and warrant further investigation on a larger scale.

CORRESPONDING AUTHOR: Julie Blow, PhD, University of Texas at El Paso, El Paso, TX, 79968; jablow@miners.utep.edu

CITATION POSTER
6:00 PM-7:00 PM C061

EFFECTS OF A SELF-DIRECTED NUTRITION INTERVENTION IN ADULTS WITH ARTHRITIS

Meghan Baruth, PhD[1], Sara Wilcox, PhD[2], Danielle E. Schoffman, BA[3], Rebecca Schlaff, PhD[4]

[1]Saginaw Valley State University, Saginaw, MI; [2]University of South Carolina, Columbia, SC; [3]University Of South Carolina, Arnold School Of Public Health, Columbia, SC; [4]Saginaw Valley State University, University City, MI

Background: There is evidence suggesting certain dietary practices can reduce arthritis symptoms and reduce related comorbities. However, few studies have tested the effectiveness of dietary interventions in people with arthritis.

Purpose: To examine the effects of a self-directed nutrition intervention on dietary behaviors and to examine whether changes in dietary behaviors are associated with changes in arthritis symptoms.

Methods: Participants were randomized to a 12-week, self-directed, exercise or nutrition intervention. The nutrition intervention focused on improving four dietary behaviors: fruits, vegetables, grains, and meat and beans. Self-reported fruit and vegetable consumption (FV), fat- and fiber-related behaviors, pain, stiffness, and fatigue were obtained at baseline and 12 weeks. Repeated measures ANOVAs examined changes in dietary behaviors over time between intervention groups, controlling for age, gender, and education. Residualized change scores were calculated for all dietary behaviors and arthritis symptoms. Regression models examined whether changes in dietary behaviors were associated with changes in arthritis symptoms (groups were combined in these analyses). All analyses controlled for the same variables, with the addition of group assignment.

Results: Participants (n=400) averaged 56±11 years of age. Most were women (86%), white (64%), and had at least some college education (87%). Participants in the nutrition group had significantly greater increases in FV (p=.001), fat- (p=.001) and fiber-related ($p < .0001$) behaviors than those in the exercise group. Improvements in fat-related behaviors were associated with decreases in pain (p=.02) and stiffness (borderline; p=.05), while improvements in fiber-related behaviors were associated with decreases in pain (p=.04), stiffness (p=.03), and fatigue (p=.05). Changes in FV consumption were not associated with changes in any arthritis symptoms.

Conclusion: A self-directed nutrition program may be a low-cost, effective way to improve dietary behaviors among adults with arthritis. Improvements in dietary behaviors may lead to reductions in arthritis symptoms. This intervention approach has the potential to reach a large number of people, and may result in meaningful public health improvements.

CORRESPONDING AUTHOR: Meghan Baruth, PhD, Saginaw Valley State University, Saginaw, MI, 48603; mbaruth@svsu.edu

6:00 PM-7:00 PM C062

ETHNIC IDENTITY AND LIFESTYLE BEHAVIORS AMONG WOMEN AT HIGH RISK FOR DIABETES

Susan D. Brown, PhD, Samantha Ehrlich, PhD, Ai Kubo, MPH, PhD, Ai-Lin Tsai, MS, Monique Hedderson, PhD, Assiamira Ferrara, MD, PhD

Kaiser Permanente Northern California, Oakland, CA

Racial and ethnic disparities in chronic diseases, and lifestyle behaviors that contribute to disease incidence, are well documented. Yet few studies examine psychosocial constructs that may help explain variations in behavior within and between groups, which could inform the development of culturally tailored interventions. Lifestyle behaviors and ethnic identity, or strength of affiliation with one's ethnic group, have been examined among African Americans but not diverse Latino and Asian subgroups at high risk for diabetes. We hypothesized that high ethnic identity is associated with healthier dietary behaviors among pregnant women with gestational diabetes, a young well-defined population at high risk for chronic diabetes. A highly diverse sample (N=1,463; 65% with pre-pregnancy body mass index [BMI] ≥ 25; 74% non-White; 46% born outside the US) was drawn from Gestational Diabetes' Effects on Moms, a cluster randomized diabetes prevention trial in an integrated health care delivery system. Even after adjusting for acculturative factors (nativity and length of residence in the US), demographic factors (age, education, and race/ethnicity), pre-pregnancy BMI, and total caloric intake where relevant, high vs. low ethnic identity was associated with 5% greater fiber and 9% greater fruit/vegetable intake in the overall sample (p values < .001). Ethnic identity associations were even stronger in Latina and Asian subgroups. Among Latina women with origins other than Mexico, high ethnic identity was associated with 24% greater fiber intake ($p < .05$). Among South Asian women, high ethnic identity was associated with 21% greater fruit/vegetable intake ($p < .01$). Among Filipina women, high ethnic identity was associated with 15% greater fiber intake and 6.2% lower percentage of calories from fat (p values < .01). These novel findings link high ethnic identity to healthier dietary behaviors. Results could inform tailored lifestyle interventions that appeal to cultural heterogeneity (e.g., preferences for traditional diets) within diverse Latina and Asian subgroups.

CORRESPONDING AUTHOR: Susan D. Brown, PhD, Kaiser Permanente Northern California, Oakland, CA, 94612; susan.d.brown@kp.org

6:00 PM-7:00 PM C063

EXAMINATION OF FAMILY FACTORS ON BODY MASS INDEX IN CHILDREN WITH ONCOLOGY AND HEMATOLOGY CONDITIONS

Andrea M. Laikin, B.A., B.S.[1], Taunjah P. Bell, PhD[1], Cynthia Karlson, PhD[2], David Elkin, PhD[2]

[1]Jackson State University, Jackson, MS; [2]University of Mississippi Medical Center, Jackson, MS

Children with oncology/hematology conditions are at increased risk for inadequate nutritional intake. Children with cancer tend to lose weight during the course of treatment. Children with Sickle Cell Disease (SCD) tend to be of short stature and lower weight. Children with medical conditions may experience an imbalance of energy due to their disease and treatment(s). Despite the obvious role of medical illness and treatment, research suggests psychological and family factors may play a role in weight status in these populations. The current study aims to evaluate familial psychological factors as independent predictors of Body Mass Index in children with oncology/hematology conditions. Ninety-seven caregivers of children with oncology/hematology conditions completed a demographics form, the Family Symptom Inventory (author-developed) and Impact on Family Scale during a regular outpatient visit. Caregivers were 87.8% female; 30.6% were married; 74% were black; 60% had an income less than \$20,000; and 41.8% lived in a rural area. Children were on average 9.5 years old; 45.9% were female. Forty-nine children had SCD, 31 had cancer, and 17 had another hematological condition. The relationships between child BMI, family demographics, sibling and caregiver symptoms of depression/anxiety, and impact on the family score were examined using zero-order correlation analyses and multiple linear regression analyses. Results revealed only child age and gender were significantly related to BMI status, accounting for 24% of the variance in BMI (Adj, R^2, $t = 5.57$, $p = .00$). Older children had higher BMI ($r = .50$; $p = .00$) and males tend to have a higher BMI, $t = -1.94$, $p = .06$. Contrary to hypotheses, family demographics, sibling and caregiver depression/anxiety symptoms, nor impact on the family score were related to child BMI in this population (all p's > .05). This exploratory study is a critical first step toward understanding weight status in pediatric oncology/hematology patients. While family factors have been reported to influence weight in other chronic illness populations, more research is needed in pediatric oncology/hematology to understand what variables contribute to weight status in this population. Qualitative and behavioral observations studies may be an important future research direction for this area.

CORRESPONDING AUTHOR: Andrea M. Laikin, B.A.inPsychology&B.S.inHumanDevelopment, Jackson State University, Jackson, MS, 39202; andrea.laikin@gmail.com

6:00 PM-7:00 PM C064

FEAST: UTILIZATION OF A TECHNOLOGY-DRIVEN APPROACH TO EMPOWER CITIZEN SCIENTISTS TO ADVOCATE FOR HEALTHY FOOD ENVIRONMENTS

Jylana Sheats, PhD[1], Sandra J. Winter, PhD, MHA[2], Priscilla Padilla-romero, MPH, MPP[3], Marigold Vu, BS[4], Leah Mamaril, BS[4], Abby King, PhD[1]

[1]Stanford Prevention Research Center, Stanford University School of Medicine, Palo Alto, CA; [2]Stanford University School of Medicine, Palo Alto, CA; [3]Fair Oaks Clinic, Redwood City, CA; [4]Stanford University, Palo Alto, CA

Advocating for neighborhood environments that support health behaviors is becoming increasingly important. The Stanford Health Neighborhood Discovery Tool (Discovery Tool) is a tablet-based mobile application (app) that community residents can use to document neighborhood elements that promote or hinder healthy living. The aim of the FEAST (Food Environment Assessment using the Stanford Tool) study was to train older adults to identify factors (through geo-coded photos and audio narratives) that influence their ability to obtain healthful foods; provide advocacy training and facilitate their identification and prioritization of salient issues; and provide forum for them to share their findings with relevant decision and policy makers. Citizen scientists (CS) (i.e., study participants), were recruited from N. San Mateo County, CA community centers and housing sites; and asked to use the DT to document their experineces while visiting their usual food store. A content analysis of DT photos and audio transcripts was conducted. CS (N=23, aged 61 to 92 years) were ethnically/racially diverse (39% Latino, 26% Asian, 13% White, 9% Black, 9% Hawaiian/Pacific Islander, 4%Native American/Alaskan Native). Over half (52%) experienced food insecurity in the last month. Some of the most frequently captured facilitators and barriers across photos (N=252) and audio narratives (N=356) were: availability of healthy and unhealthy food, price, promotions, food freshness/quality, packaging, ethnic food stores, transportation, and food assistance programs. CS attending the community meeting (n=11) voted on transportation/safety and access to fresh/affordable foods as the most importnat issues to address. At a subsequent meeting, CS shared their findings with the community and relevant public/private sector organizations. A 3-month follow with CS who attended one or both meetings revealed that 84% (n=13) of participants contacted a policy/decision maker, told a peer or family member about resources they learned about through FEAST, and/or applied/utilized new services (e.g., shuttle, food bank, food stamps). FEAST helped initiate a citizen scientists-decision/policy maker dialogue. Among this sample of older adults there was a lack of awareness about local and county food assistance and transportation resources. Results revealed that when provided with information about services, citizen scientists utilzied them.

CORRESPONDING AUTHOR: Jylana Sheats, PhD, Stanford PREVENTION RESEARCH CENTER, STANFORD UNIVERSITY SCHOOL OF MEDICINE, Palo Alto, CA, 94304; sheats@stanford.edu

6:00 PM-7:00 PM C065

HEALTHY DETOURS: A LOCATION-BASED SERVICES APP TO PROMOTE HEALTHY CHOICES AMONG COLLEGE STUDENTS.

Valerie H. Myers, PhD, Lyndsay Fluharty, MA, James H. Shane, BS, Sophia Burris, BA

Klein Buendel, Inc., Golden, CO

Over 35% of undergraduates are overweight, and poor diet and physical inactivity are significant contributors. Smartphone technology is an ideal method for reaching this population since over 75% have smartphones. Location-based services (LBS) are a popular technology that uses geographical positioning to allow individuals to use their smartphones to connect to their surrounding environment. Healthy Detours is a CDC-sponsored Phase I SBIR study that is developing and testing the feasibility of an app for college students to provide real-time, personalized feedback for promoting healthy lifestyle decision-making. The goal of the app is to provide user-specific algorithms for improved healthy behaviors through data collected on users' lifestyle habits when they "check-in" using LBS at various locations (on- and off-campus eateries, exercise venues, etc.). The app analyzes the data in real-time and provides reinforcement for healthy lifestyle decision-making, as well as customized recommendations to healthier options near the user's location. To guide prototype development, a national sample of college students (n=53; mean age 23 +/- 2.7 years; 58% White; 43% female) were surveyed on their use of smartphones for dietary and exercise decision-making. Results revealed that 85% would feel "very much" or "completely" lost without their smartphone; 91% use LBS services >3 times a week; 89% would "very much" or "completely" use an app that provided information about healthy eating options based on their current location; 81% would use their phone to guide where to exercise; and 89% found the app concept highly useful. Focus groups (n=8) and alpha testing (n=4) showed that the app was appealing and could accurately identify user location and return information to the user to facilitate real-time decision making for healthier choices. Real-world usability testing is currently underway. Survey and formative research results as well as the quantitative outcomes from the completed pilot study will be presented.

CORRESPONDING AUTHOR: Valerie H. Myers, PhD, Klein Buendel, Inc., Golden, CO, 80401; vmyers@kleinbuendel.com

6:00 PM-7:00 PM C066

FEASIBILITY OF REDUCING SEDENTARY BEHAVIOR AFTER SUCCESSFUL WEIGHT LOSS IN BREAST CANCER SURVIVORS

Christie Befort, PhD[1], Danielle Christifano, MS[1], Jennifer Klemp, MPH, PhD[2], Kelley Pettee-Gabriel, PhD[3], Debra Sullivan, PhD[1]

[1]University of Kansas Medical Center, Kansas City, KS; [2]University of Kansas Cancer Center, Westwood, KS; [3]University of Texas Health Science Center, School of Public Health, Austin Regional Campus, Austin, TX

Obesity, lack of physical activity, and sedentary behavior (too much sitting) are all independently related to poor breast cancer prognosis. Whereas many interventions have targeted weight loss and planned physical activity, few studies have targeted sedentary behavior in this population. Breast cancer survivors like the general population of older adults spend more than two-thirds of their waking time sitting. By modifying this behavior there is potential to increase energy expenditure and ultimately impact weight control. Replacing sitting time with even light intensity activity could be particularly beneficial for maintaining weight subsequent to successful weight loss. In this study, all participants completed a 4 month weight loss intervention. They were then randomized to receive a 6-month standard weight loss maintenance intervention (WLM), or the same weight loss maintenance intervention plus a sedentary behavior intervention component (WLM + Sed). Participants (n=24) were 53.0 ± 8.3 years old, had a BMI of $33.3 \pm 3.6\ \mathrm{kg/m^2}$,and were 3.9 ± 1.9 years since breast cancer diagnosis. The weight loss intervention incorporated a reduced calorie diet, up to a 225 min/week of moderate-to-vigorous physical activity, and daily self-monitoring. Participants randomized to WLM + Sed also received a Fitbit to monitor sedentary time, and they were instructed to increase their light intensity activity by 30 min/day, limit television viewing to 90 min/day, and limit prolonged bouts of sitting. At 4 months (non-randomized phase), both groups achieved significant percent weight loss from baseline (median = 11.0%). From 4 to 10 months (randomized phase), median weight change was 0.6 kg for the WLM + Sed arm versus -0.8 kg for the WLM arm ($p = .20$). Change in median self-reported weekend sitting time was -0.4 hr/day for the WLM + Sed arm vs. +1.0 hr/day for the WLM arm ($p = .05$). Process interviews among participants in the WLM + Sed arm revealed that sedentary behavior was perceived as less important compared to diet and planned exercise. In conclusion, although both interventions produced successful weight loss at 10 months, adding a sedentary behavior component subsequent to a diet and exercise intervention appears to be insufficient to improve weight loss maintenance among breast cancer survivors.

CORRESPONDING AUTHOR: Christie Befort, PhD, University of Kansas Medical Center, Kansas City, KS, 66160; cbefort@kumc.edu

6:00 PM-7:00 PM C067

FOOD AVAILABILITY, DISTRESS, SLEEP, AND EATING SELF-EFFICACY AMONG OVERWEIGHT/OBESE INDIVIDUALS ATTEMPTING WEIGHT LOSS

KayLoni Olson, M.A.[1], Christina Goodwin, M.A.[2], Steven Schiele[2], Diane Habash, PhD[2], Andrew Bodine, M.A.[2], Charles Emery, PhD[2]

[1]The Ohio State University, COlumbus, OH; [2]The Ohio State University, Columbus, OH

Obesity continues to be a major public health problem, and prior research has demonstrated the influence of psychosocial factors on weight loss. However, no past study has systematically evaluated the home environment of individuals with obesity. Community-residing normal weight (n=36) and overweight (n=69) individuals were recruited to complete a 2-hour in-home assessment of food availability. Participants also completed self-report measures including: Hospital Anxiety and Depression Scale (HADS), Eating Self-Efficacy Scale (ESES), and Pittsburgh Sleep Quality Index (PSQI). Dietary intake was measured with a 24-hour food recall and the Food Frequency Questionnaire (FFQ). It was hypothesized that individuals trying to lose weight would report reduced caloric intake and food availability but only overweight individuals attempting weight loss would report poorer psychosocial functioning. Participants were categorized according to weight ($BMI > 25$, $BMI < 25$) and desire to lose weight (Yes, No), and data were analyzed with analysis of variance. Overweight individuals attempting weight loss were more distressed (HADS, $p=0.002$), reported lower self-efficacy (ESES, $p=.001$), had poorer sleep quality (PSQI, $p=0.03$), and had significantly more types of foods available in the home ($p=0.03$) than all other study participants. No significant group differences emerged in eating patterns or calorie intake during the prior month (FFQ) but overweight individuals (independent of weight loss status) reported a less ‘heart healthy’ diet compared to normal weight individuals ($p < .001$) in the 24-hour food recall. Thus, overweight and obese individuals trying to lose weight exhibit vulnerabilities in several domains, including reduced eating self-efficacy, greater distress, and a home environment that provides greater access to unhealthy foods. Despite increased access to a greater variety of foods and less healthy items, overweight/ obese individuals did not exhibit elevated caloric intake . However, these individuals are less confident in their ability to regulate eating and more distressed than normal weight and overweight/obese individuals not trying to lose weight.

CORRESPONDING AUTHOR: KayLoni Olson, M.A., The Ohio State University, COlumbus, OH, 43210; olson.231@buckeyemail.osu.edu

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6:00 PM-7:00 PM C068

FOOD SECURITY FACTORS RELATED TO OBESITY. A CLINICAL AND POPULATION HYBRID APPROACH

Brenda Rooney, PhD, MPH[1], John Gabbert, MS[2]

[1]Gundersen Health System, La Crosse, WI; [2]Gundersen Health Systems, La Crosse, WI

INTRODUCTION: Obesity is one of the most common serious health concerns today. A recent national study examining food security and obesity found self-reported obesity highest in people from census tracts with low income and low access to healthy food. They concluded low income was the dominant factor. Self-reported telephone survey data is suspect and accuracy can vary by these and other factors. Measured obesity would shed more accurate light on the relationship between obesity and food security. METHODS: Height, weight, gender, age, insurance type and appointment type were obtained from the electronic health records (EHRs) for 126,453 patients seen in 2012 within a Wisconsin healthcare system. BMI was available for 91.5%. Patients living in a 5-county area with highest market share (N=61,406) were included in the analysis. Their addresses were geocoded to census tract. Census tract characteristics (urban/rural, income, food accessibility) obtained from the U.S. Department of Agriculture’s Food Access Research Atlas were examined to determine obesity relationships. RESULTS: Overall, 40.1% of patients were obese. In multivariate analyses, the best predictors of obesity were: age, gender (male), insurance (private), appointment type (specialty), and living in rural, poor food access, and low income tracts (all p’s $< .001$). Poor food access was significant, but not the primary differentiator. Patients from rural, low-income census tracts had the highest rate of obesity: 49.0%, compared with 41.2% in rural-high income, 41.5% urban-low income, and 37.6% in urban-high income; $p < .0001$. DISCUSSION: EHRs provide data that can better examine population health issues when combined with population based-data.

CORRESPONDING AUTHOR: Brenda Rooney, PhD, MPH, Gundersen Health System, La Crosse, WI, 54601; blrooney@gundluth.org

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6:00 PM-7:00 PM C069

GENDER DIFFERENCES IN ASSOCIATIONS BETWEEN BODY MASS INDEX, WEIGHT LOSS ATTEMPTS, AND BODY WEIGHT PERCEPTIONS AMONG HISPANICS

David O. Garcia, PhD[1], Emily A. Butler, PhD[2], Cynthia A. Thomson, PhD, RD[1]

[1]Mel and Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ; [2]University of Arizona, Tucson, AZ

BACKGROUND: Previous studies have shown women are more likely to report weight loss attempts compared to men. Women also are more likely to perceive themselves as overweight. Little is known about these relationships among Hispanic adults. PURPOSE: To examine associations between Body Mass Index (BMI), weight loss attempts, and body weight perceptions among Hispanics participating in a study of marriage/cohabitation and weight change. METHODS: In a cross-sectional analysis, self-reported data were collected at baseline for age, race, height, weight, body weight perceptions, and weight loss attempts using an adapted Weight and Lifestyle Inventory Questionnaire. Participants were asked to report their perception of their own current weight on a seven-point scale with responses ranging from very underweight to very overweight. Weight loss attempts were defined as currently trying to lose weight or trying to lose weight sometime during the past 6 months. BMI (kg/m^2) was calculated and then categorized according to standard cut-points. RESULTS: Twenty-one Hispanic women (age: 24.0 ± 4.4 yrs; BMI: 28.1 ± 7.6 kg/m^2) and 22 Hispanic men (age: 25.3 ± 4.8 yrs; BMI: 27.0 ± 6.2 kg/m^2) completed the baseline questionnaire. Overall, 61.9% (n=13) of women and 54.5% (n=12) men reported they were currently trying to lose weight; 76.2% (n=16) of women and 59.1% (n=13) of men reported efforts to lose weight within the past 6 months, with no significant differences by gender. Higher BMI was associated with current and 6 month weight loss attempts in males ($r=0.64$, $p < 0.001$ and $r=0.72$, $p < 0.001$, respectively). No significant associations were found between weight loss attempts and BMI in females. Perceptions of body weight were associated with current weight loss attempts in males ($r=0.69$, $p < 0.001$) and females ($r=0.51$, $p=0.018$) such that those who perceived themselves as having a higher BMI were more likely to report recent weight loss attempts. CONCLUSIONS: Overweight status was common in this population. Higher BMI is associated with a greater report of recent weight loss attempts among Hispanic males, but not females. Overweight and obese Hispanic males may represent a target population ready to engage in weight management.

CORRESPONDING AUTHOR: David O. Garcia, PhD, Mel and Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ, 85750; davidogarcia@email.arizona.edu

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CITATION POSTER

6:00 PM-7:00 PM C070

IMPACTS OF A FAITH-BASED OBESITY PREVENTION PROGRAM ON CONGREGATIONAL HEALTH ENVIRONMENT AND POLICIES

Meizi He, PhD[1], Summer Wilmoth, MS[1], Erica Sosa, PhD[1], Zenong Yin, PhD[1], Lauren Correa, BSc[1], Luz-Myriam Neira, PhD[2], Ray Mundoza, BSc[1], Meixia Pan, PhD[1]

[1]The University of Texas at San Antonio, San Antonio, TX; [2]San Antonio Food Bank, San Antonio, TX

Background: Latino children and adults are disproportionally affected by obesity and other obesity related complications. Building a Healthy Temple (BHT) program was a faith-based obesity prevention intervention aimed to promote healthy eating, active living, and healthy bodyweight among Latinos. Setting: Predominantly Hispanic churches in San Antonio, TX, USAIntervention: BHT was a 12-month multi-component intervention including a Health Ministry Committee, Health Sermons, Health Screening, Sunday School Curriculum, Bible Study Sessions, Nutrition Education/Cooking Demonstrations, Physical Activity and Nutrition Environmental and Policy Changes. Using a train the trainer model, intervention activities were delivered by trained lay leaders from participating churches.Evaluation: Institutional level outcomes were assessed using the Congregation Healthy Index (CHI), a tool measuring church nutrition and physical activity environment. Data were collected at baseline, six month and endpoint. Repeat measure ANOVA was used to determine intervention effect.Results: Eight participating churches have showed overall improvement in environment and policies for nutrition and physical activity. Churches made changes such as, no soda at church events, no doughnuts, unsweetened beverages and water, healthy snacks for children, nutrition billboards, community garden, physical activity room, new basketball and volleyball courts, walking trails on church property, gaining access to soccer fields, improving gym lighting, storage for physical activity equipment, BHT Facebook page for sharing healthy recipes and activity announcements, encouragement of healthy sides at church gatherings, closer food label readings for congregation, and declaring Sunday Health Time 6- 8 pm (nutrition lessons or PA). Church nutrition environment scores significantly improved since program start ($p < 0.05$). The endpoint nutrition scores were almost tripled of that at baseline. Physical environmental scores also showed significant improvement.Conclusion: BHT took a holistic approach by integrating and promoting spiritual and physical health that is more likely to result in lasting lifestyle changes. Environmental and policy changes in the faith communities can play a compelling role in encouraging and supporting congregation members in making the healthy lifestyle choices that will keep them well and whole.

CORRESPONDING AUTHOR: Meizi He, PhD, The University of Texas at San Antonio, San Antonio, TX, 78249; meizi.he@utsa.edu

6:00 PM-7:00 PM C071

INCREASED OBESITY RATES AND RISK FACTORS ASSOCIATED WITH OBESITY IN ADULTS DIAGNOSED WITH ARTHRITIS

Christina M. Hopkins, BS[1], Megan M. Fritz, M.S.[2], E. Amy Janke, PhD[1]

[1]University of the Sciences, Philadelphia, PA; [2]University of California, Riverside, Riverside, CA

Both arthritis and obesity are high frequency disorders in the US. Recent prevalence of obesity in adults diagnosed with arthritis is not available, and variability of obesity risk factors in arthritic compared to non-arthritic patients remains poorly understood.To examine in a nationally representative sample whether adults with physician-diagnosed arthritis are more likely to be obese compared to adults not so diagnosed, and how select obesity risk factors differ between these two groups.Data were obtained from the Centers for Disease Control 2011 Behavioral Risk Factor Surveillance System, a nationally representative telephone survey assessing health indicators. Adults (n=474,722) were grouped based on presence of arthritis diagnosis (arthritic=160,182; non-arthritic=314, 540). Obesity status and risk factors associated with obesity were examined using t-tests and Pearson's chi-square tests.Obesity prevalence was higher in adults diagnosed with arthritis (35.9%) compared to those without (23.7%, p < .00). Those with arthritis differed in several behavioral factors known to contribute to obesity, perhaps most importantly in level of physical activity with nearly half of those with arthritis not meeting recommended guidelines (45% arthritic, 37% non-arthritic, p < .00). Overall, adults with arthritis were significantly more inactive (36.1% arthritic, 24.8% non-arthritic, p < .00). Respondents with arthritis also differed in individual/environmental factors associated with obesity. Arthritic adults were more likely to have not graduated from high school (11.9% arthritic, 7.4% non-arthritic, p < .00) and more likely to report an income level at risk for poverty (17.6% arthritic, 10.0% non-arthritic, p < .00).

Finally, those with arthritis were more likely to report a greater number of days with poor mental or physical health (M=7.71 arthritic, M=3.46 non-arthritic, p < .00) and were more likely to have been diagnosed with depression (27.3% arthritic, 13.5% non-arthritic, p < .00).Compared to respondents without arthritis, those with physician-diagnosed arthritis are significantly more likely to be obese. Several factors including inactivity, poverty, and depression may place those with arthritis at increased risk for obesity.

CORRESPONDING AUTHOR: Christina M. Hopkins, BS, University of the Sciences, Philadelphia, PA, 19143; chopkins@mail.usciences.edu

6:00 PM-7:00 PM C072

INTEREST IN A TWITTER-DELIVERED WEIGHT LOSS PROGRAM AMONG WOMEN OF CHILDBEARING AGE

Molly E. Waring, PhD[1], Martinus M. Evans, MS[2], Kristin L. Schneider, PhD[3], Matthew C. Whited, PhD[4], Bradley M. Appelhans, PhD[5], Rui S. Xiao, MD, MPH[1], Tiffany A. Moore Simas, MD, MPH, MEd[1], Sherry L. Pagoto, PhD[1]

[1]University of Massachusetts Medical School, Worcester, MA; [2]University of Massachusetts Medical School, Sturbridge, MA; [3]Rosalind Franklin University of Medicine & Science, North Chicago, IL; [4]East Carolina University, Greenville, NC; [5]Rush University Medical Center, Chicago, IL

High cost and other barriers limit reach of efficacious in-person weight loss interventions. Online social networks may provide a means to deliver evidence-based behavioral strategies for weight loss to women of childbearing age given high rates of use of online social networks among this population. We surveyed women to assess their interest in a weight loss program delivered via Twitter. A recruitment link was tweeted 29 times over 4 weeks. Eligible participants were English-speaking women aged 18-45 years who use Twitter. Women were asked to rate their interest in participating in a weight loss program via Twitter and components of such a program. Women replied to open-ended questions about intervention pros and cons; themes were identified from free responses using thematic analysis. Participants (N=63) were 34.0 (SD: 5.7) years old, 79% were non-Hispanic white, 75% Bachelor's or greater education, and 70% married/cohabitating. Participants were from 7 countries and 22 US states. 29% were normal weight, 30% overweight, and 41% obese; 81% were trying to lose weight. 81% were interested in a weight loss program delivered via Twitter private group. The majority of women were at least somewhat interested in receiving links to healthy recipes (90%), access to a health coach on Twitter (84%), learning evidence-based weight loss strategies via tweeted blog posts (84%), and reading about others' progress (83%). Most were also interested in support from other women (78%), tweeting their progress regularly (71%), scheduled chats (65%), and healthy cooking demo videos (63%). While 11% had ever used a wifi scale, 87% were at least somewhat willing to use a wifi scale that automatically sent their weight to the coach. Program pros reported (n=37) included convenience (38%), support/accountability (43%), and privacy/lack of judgment (30%). Cons (n=37) included lack of privacy (19%), low support/accountability (30%), low engagement (22%), and technology concerns (24%); 16% specifically stated they had no concerns. Women of childbearing age who use Twitter are interested in a weight loss interventions delivered via this online social network, suggesting this delivery mode has potential. User-centered design approaches can incorporate women's desires and concerns into intervention development.

CORRESPONDING AUTHOR: Molly E. Waring, PhD, University of Massachusetts Medical School, Worcester, MA, 01605; molly.waring@umassmed.edu

6:00 PM-7:00 PM C073

IS NEGATIVE URGENCY CONTRIBUTING TO WEIGHT LOSS TREATMENT FAILURE?

Stephanie P. Goldstein, B.S., Evan Forman, PhD, Meghan L. Butryn, PhD, Adrienne Juarascio, Stephanie Manasse, M.S.

Drexel University, Philadelphia, PA

A subset of individuals who receive behavioral weight loss treatment tend to regain most lost weight within a year. Several reviews have posited that treatment failure is often due to an inability to apply adherence strategies when experiencing discomfort (e.g., cravings, emotions). This tendency to act impulsively during times of discomfort is often called negative urgency. Negative urgency is a hallmark trait in binge eaters, who struggle in weight loss programs. Analog studies have suggested negative urgency may have a role in treatment failure among overweight individuals without binge eating as well. The current study sought to investigate the predictive value of negative urgency on eating behavior and weight loss. We also examined negative urgency in a group of participants experiencing loss of control (LOC; unable to stop or control eating), a defining characteristic of binge eating. Participants were 47 overweight or obese adults in a behavioral weight loss treatment study. At baseline, participants completed a mock taste test (disinhibited eating) and a clinical interview (LOC). Participants were given a battery of self-report measures including the UPPS-R (negative urgency subscale), Power of Food Scale (PFS; susceptibility to food environment), and Three-Factor Eating Questionnaire (cognitive restraint, uncontrolled eating, and emotional eating subscales). Results revealed negative urgency to be related to several self-report measures of problematic eating behaviors such as PFS (r=.44, p < .01), uncontrolled eating (r=.50, p < .01), and emotional eating (r=.45, p < .01). However, negative urgency was not found to be predictive of baseline BMI (b = -0.06, p = .72), consumption on a mock taste test (b = -0.40, p = .62), or weight loss at 6 months (b = -0.01, p = .69). However, for individuals endorsing LOC (n = 5), negative urgency was prediction of consumption on a mock taste test (b = 3.52, p = .05). These findings indicate that negative urgency is not a major issue for the average individual attempting to lose weight. Conversely, it may be important to provide more targeted behavioral intervention for individuals with loss of control eating. Additional research should continue to identify sub-groups that struggle to lose weight in traditional behavioral treatments.

CORRESPONDING AUTHOR: Stephanie P. Goldstein, B.S., Drexel University, Philadelphia, PA, 19104; spg38@drexel.edu

6:00 PM-7:00 PM C074

LOW INCOME OBESE WOMEN MISPERCEIVE THEIR WEIGHT STATUS

Jennifer Acker, M.A.[1], Stephanie Milan, PhD[2]

[1]University of Connecticut, Cambridge, MA; [2]University of Connecticut, Storrs, CT

Purpose: Obesity is a growing problem among low-income women. Women living in communities where majority of individuals are overweight or obese may be less likely to accurately evaluate their weight status. This is concerning because perception of weight status is associated to weight change behaviors.Methods: Participants included 103 obese women (M = 42.8, SD = 7.87) in a low-income city with a BMI over 30. Of the participants, 50% were Latina, 31% were African-American, and 29% were White. Participants provided self-report on measures of demographics, weight related questions, self figure rating, and mental health symptoms. Actual weight and height were measured. All data was collected in face-to-face interview and via a touch screen computer survey. This project is part of a larger study of mother-daughter dyads. Of these obese women, 55% reported they were very overweight and 45% reported they were normal weight or slightly overweight.Results: A MANOVA showed significant effects for women who accurately identify as very overweight F(5,94) = 3.76, p < .004. Follow up univariate analyses indicate a significant effect of accurate weight status classification on the self rated figure size, F(1,98) = 12.91, p = .001, body surveillance F(1,98) = 3.94, p = .05, and internalized weight stigma F(1,98) = 6.16, p = .02. There was no effect on depressive symptoms or the discrepancy between self report and actual weight in pounds.Conclusion: Findings indicate that among obese women, those who inaccurately classify their weight are more likely to perceive their figure size as smaller, and have less internalized weight stigma and body surveillance. Thus, health care professionals may need to be more explicit when discussing obesity with patients by using visual figure scales or using phrases such as "very overweight" to increase women's understanding of their weight status and related health risks.

CORRESPONDING AUTHOR: Jennifer Acker, M.A., University of Connecticut, Cambridge, MA, 02139; jennifer.acker@uconn.edu

6:00 PM-7:00 PM C075

OBESITY DOES NOT PREDICT COGNITIVE FUNCTION IN VETERANS

Kristin L. MacGregor, PhD[1], Jennifer Funderburk, PhD[2], Stephen A. Maisto, PhD[3], Randall S. Jorgensen, PhD[3]

[1]UMass Memorial Medical Center/UMass Medical School, Wellesley, MA; [2]VA Center for Integrated Healthcare, Syracuse, NY; [3]Syracuse University, Syracuse, NY

Research on the relationship between body mass index (BMI) and cognitive function has shown that obese young to middle-aged adults have deficits in memory and executive function; mid-life obesity predicts late-life dementia. Waist circumference (WC) and cognitive function has also been studied, as WC may be a better measure of visceral fat and cardiovascular disease risk than BMI. A clear deficit pattern has not yet emerged. Veterans' obesity rates are higher than civilians'. The goal of this study was to examine the obesity-cognition relationship in veterans. A total of 117 male veterans (M age = 42.5) completed demographics, psychological, and cognitive assessments. Height and weight were recorded. Current health diagnoses and concurrent medications were obtained from medical records. Factor analysis was used to create the following cognitive factors: Speeded Measures, Verbal Fluency, Memory, and Executive Function. Then, hierarchical regression models with four blocks entered were calculated. Cognitive factors served as criterion variables, and four groups of predictors were entered in the following order: (1) demographics; (2) health variables (e.g., diabetes diagnosis); (3) psychological variables; (4) obesity index. BMI and WC were tested separately due to their high correlation. Results revealed no relationship between obesity indices and cognition. Age positively predicted cognitive function across domains. Post hoc correlation analyses revealed that age was also positively related to obesity. Mediation analyses were conducted to determine whether age mediated the obesity-cognitive function relationship. Results supported a mediation model. WC predicted performance on Speeded Measures; WC predicted age; age significantly predicted Speeded Measure performance. The WC-Speeded Measures relationship was not significant when age was added to the model. Inconsistent with research on civilian samples, this study does not support a relationship between obesity and cognitive function in veterans. It is possible that the unique contribution of obesity to cognitive function is smaller than originally posited. Age may contribute to the obesity-cognitive function relationship in that age-related changes may partially explain the association. Future research should explore the age-obesity-cognitive function relationship prospectively.

CORRESPONDING AUTHOR: Kristin L. MacGregor, PhD, UMass Memorial Medical Center/UMass Medical School, Wellesley, MA, 02481; kristin309@gmail.com

6:00 PM-7:00 PM C076

OVERWEIGHT AND OBESE CHILDREN'S PERCEPTIONS OF THE IMPACT OF WEIGHT ON QUALITY OF LIFE

Oluwatomisin Olayinka, RN, MPH[1], Shirley Moore, RN, PhD[2]

[1]Case Western Reserve University, Mayfield Hts, OH; [2]Case Western Reserve University, Cleveland, OH

Background: With the epidemic of pediatric obesity now well documented, its effects on children's health and wellbeing are still being identified. In particular, little is known about the impact of weight on quality of life in children. Purpose: To examine the relationship between body mass index (BMI) and self-report of impact of weight on quality of life in low-income, overweight/obese middle school children.Methods: 360 participants with BMI≥ 20.0 were recruited from middle schools in a large urban city. BMI was calculated from height and weight measures obtained by trained, certified staff. Self-report of weight-related quality of life was measured using the Impact of Weight on Quality of Life (IWQOL-Kids) questionnaire. The IWQOL-Kids consists of a total score and 4 subscales: physical comfort, body esteem, social life, and family relations. The sample was predominantly African American (79.2%), aged 9-11years, female (57.8%), and low income (35.8% had annual household incomes < $15,000). The mean BMI was 27.1 (SD=4.8, range= 20.5 - 50.1).Results: Weight-related quality of life total scores were relatively high among this overweight/obese group (M=88.2, SD=16.6) (possible range of scores was 0-100, with higher scores indicating better quality of life). There was a significant inverse relationship between BMI and weight-related quality of life (r=-0.30, p 0.00) on the total IWQOL scale. Similarly, significant inverse relationships were found on all of the IWQOL subscales. Although girls were more likely to report lower quality of life than boys, the difference was not significant. There was no significant relationship between weight-related quality of life and household income. Conclusion: Weight-related quality of life reported by overweight/obese urban middle schoolers is negatively associated with BMI. Interventions and programs aimed at reducing obesity have the potential to improve the quality of life of this vulnerable group of children.

CORRESPONDING AUTHOR: Oluwatomisin Olayinka, RN, MPH, Case Western Reserve University, Mayfield Hts, OH, 44124; oxo29@case.edu

6:00 PM-7:00 PM C077

PERCEPTIONS OF INTERACTIVE VOICE RESPONSE CALLS TARGETING HEALTH BEHAVIOR CHANGE IN RURAL ADULTS

Angela Bailey, MA[1], Kathleen Porter, PhD, RD[2], Yvonnes Chen, PhD[3], Erin Dohm, MS, RD, LD/N[4], Grace A. Wilburn, MS[5], Maja Tyhurst[2], Paul Estabrooks, PhD[6], Jamie Zoellner, PhD, RD[2]

[1]Va Tech, Blacksburg, VA; [2]Virginia Tech, Blacksburg, VA; [3]University of Kansas, Lawrence, KS; [4]Florida Department of Health, Lakeland, FL; [5]Virginia Tech, Roanoke, VA; [6]Virginia Tech / Carilion Clinic / Virginia Tech Carilion School of Medicine, Blacksburg, VA

Interactive voice response (IVR) phone calls targeting health behavior change have the capacity for broad population reach in rural health disparate populations. We examined the relationship between participant's health literacy status and perceptions of IVR calls and qualitatively explored participants' likes, dislikes and barriers of IVR use. As part of a 2-arm RCT participants were randomly assigned to a behavioral intervention to reduce sugary beverages (SipSmartER) or increase physical activity (MoveMore). Both interventions included 11 IVR calls and targeted rural adults in southwest Virginia. Of the 164 participants, 80.8% were female, 93.8% Caucasian, 29.9% with < high school education, 63.8% earning < $25,000/year and 32.6% had low health literacy (LHL). At the 6-month interview-administered summative evaluation, participants reported their perceptions of the calls by rating level of agreement on a 10-point Likert scale and answering open-ended questions. Overall agreement was high regarding usefulness of IVR strategies (M=7.6+ 2.5), ease of use (M=8.3 + 2.4), personal nature of the calls (M=6.8 + 2.9), whether they were willing to use the system again (M=7.4 + 3.2) and overall satisfaction (M=7.7 + 2.5). LHL participants reported significantly stronger agreement as compared to high health literate (HLH) participants regarding: usefulness of strategies (8.2 vs 7.2), willingness to use the system again (8.2 vs 6.9), and overall satisfaction (8.3 vs 7.4). The primary qualitative themes for LHL participants included positive perceptions of the motivating aspect of the calls and the reinforcement of intervention content. Participants indicated that the timing of calls and phone issues were the most common barriers. HHL participants indicated that the calls made them feel more accountable, but in contrast to LHL participants, perceived the reinforcement of intervention content negatively. The biggest barrier for HHL participants was scheduling the calls. IVR is acceptable for use in rural community interventions—in particular for those with LHL. Future research is needed to determine how IVR satisfaction is related to other study factors such as retention, engagement, and health outcomes.

CORRESPONDING AUTHOR: Angela Bailey, MA, Va Tech, Blacksburg, VA, 24060; angela11@vt.edu

6:00 PM-7:00 PM C078

POWER OF FOOD MODERATES THE RELATIONSHIP BETWEEN AN OBESOGENIC HOME ENVIRONMENT AND CALORIC INTAKE

Katherine Schaumberg, PhD[1], Meghan L. Butryn, PhD[1], Michael Lowe, PhD[1], Amy A. Gorin, PhD[2], Evan Forman, PhD[1]

[1]Drexel University, Philadelphia, PA; [2]University of Connecticut, Storrs, CT

Background: Individuals living in food-rich environments are likely to overeat and gain excess weight, though certain individual characteristics may influence the degree of risk conferred by such environments. The current investigation evaluated whether the degree of obesogenic risk in an individual's home food environment interacted with self-reported power of food to predict calorie intake in an obese, treatment-seeking population. Method: Overweight and obese participants (N=214, Mean BMI = 34.41 ± 4.54) completed the Home Food Inventory along with the Power of Food Scale (PFS) at treatment entry. The PFS evaluates the psychological influence of the food environment, including appetite for palatable food. An obesogenic home food availability score was calculated from the Home Food Inventory. Participants also completed a 24-hour dietary recall by telephone for three days over the course of a week. Results: Both the PFS, b = 5.88, t(211) = 1.99, p < .05, 95% CI [.06, 11.72], and obesogenic home food availability, b = 8.83, t(211) = 204, p = .04, 95% CI [.33, 17.31], predicted caloric intake. Furthermore, the interaction between obesogenic home food availability and the PFS significantly predicted intake, b = -.80, t(211) = -2.43, p = .02, 95% CI [-1.44, -.15]. Examination of this interaction indicated that obesogenic risk in the home environment only related to intake when self-reported power of food was low. Reported caloric intake increased as the food environment became more obesogenic except for those scoring highest on the PFS, whose consumption was high regardless of the home food environment. Discussion: Results suggest that having few obesogenic foods in the home environment relates to effective control of caloric intake for individuals who report relatively low levels of power of food. Obese individuals who report high power of food may remain at risk for excess consumption from the larger environment even when obesogenic risk in the home environment is low. Such findings suggest that manipulations of environments outside the home may be necessary to reduce risk for excess caloric intake in obese individuals who report high power of food.

CORRESPONDING AUTHOR: Katherine Schaumberg, PhD, Drexel University, Philadelphia, PA, 19104; katherine.schaumberg@gmail.com

6:00 PM-7:00 PM C079

INTERVENING TO IMPROVE QUALITY OF LIFE IN PARENTS AND CHILDREN WHO HAVE ASTHMA

Sharon Horner, PhD, FAAN

The University of Texas at Austin, Austin, TX

Purpose: To present quality of life (QOL) results after an asthma self-management intervention was provided to school-aged children with asthma and their parents.Background: Asthma affects 13% of school-aged children in the US, resulting in frequent, if intermittent, days with symptoms that require urgent management, disturbed sleep, and is a leading cause of limitations in daily activities. These factors contribute to worsening QOL not only of the child but the parent as well.Methods: Randomized control trial with 3 groups to examine the effect of an asthma self-management intervention delivered in two modes (in-school class vs. day camp) in comparison to an attention control intervention of general health promotion on parents' and children's QOL. The intervention was designed to improve asthma trigger recognition, asthma symptom prevention and treatment, children's problem-solving in common scenarios, self-monitoring, and use of inhaler. Children's QOL was measured with Juniper's 23-item Pediatric Asthma QOL scale, with three subscales measuring symptom burden (SBQOL), emotional functioning (EFQOL), and activity limitations (ALQOL). The 13-item Pediatric Caregiver Asthma QOL scale with two subscales (EFQOL & ALQOL) was used to measure parents' QOL. Repeated measures ANOVA were run to examine changes over time in QOL.Findings: A total of 257 children [63.6% boys, 36.4% girls; 58% Hispanic, 21% African American, 19% white] and their parental caregiver completed the 12-month study. There were no significant differences between the asthma day camp and asthma in-school class groups. Compared to the attention-control group, participants in the asthma day camp and class groups had significant improvements in QOL (parents: F=7.29, p .007; children: F 7.53, p=.007); including children's EFQOL (F=4.05, p=.02) and SBQOL (F=3.28, p=.04), and parents' EFQOL (F=3.27, p=.04) and ALQOL (F=5.29, p=.006). Children's ALQOL improved for all groups but there was no significant difference between the groups. Conclusion: The intervention whether delivered in a day camp or in-school class format effectively improved QOL for children with asthma and for their parents; and increased the options for practitioners who wish to provide group education.

CORRESPONDING AUTHOR: Sharon Horner, PhD, FAAN, The University of Texas at Austin, Austin, TX, 78701; shorner@mail.nur.utexas.edu

6:00 PM-7:00 PM C080

IS BODY DISSATISFACTION A PROSPECTIVE RISK FACTOR FOR HEALTH AND WELLNESS OUTCOMES?

Caroline M. Roberts[1], Christina Verzijl, BA[1], Tarryn Pollard[1], Lisa Smith Kilpela, PhD[1], Tiffany M. Stewart, PhD[2], Carolyn Black Becker, PhD[1]

[1]Trinity University, San Antonio, TX; [2]Pennington Biomedical Research Institute, Baton Rouge, LA

Evidence suggests that body dissatisfaction is associated prospectively with a broad array of negative health behaviors and outcomes in adolescent girls. For instance elevated body dissatisfaction is associated with decreased consumption of fruits and vegetables, decreased exercise, and increased weight gain (Neumark-Sztainer et al., 2006). Although research with younger female populations has been generalized to older women, there remains a lack of research examining the relationship between broader health/wellness variables and body dissatisfaction in older female samples (Peat, Peyerl, & Muehlenkamp, 2008). This work-in progress online survey study investigates whether or not body dissatisfaction may be a prospective variable risk factor for several health/wellness outcomes in older adult females. Utilizing snowball sampling, we recruited a baseline sample of 774 participants with ages ranging from 25 to 86 (M = 40.99, SD = 12.55); 6-month follow-up data collection is ongoing (N = 254). Assessed variables included body dissatisfaction (Body Parts Satisfaction Scale), sleep variables (Pittsburgh Sleep Quality Index), perceived quality of life (World Health Organization Quality of Life Scale), body mass index (BMI), consumption of nutrient dense diet (Eating Behavior Questionnaire), and enjoyment of physical activity (Physical Activity Enjoyment Scale). Baseline data indicated, when controlling for negative affect and BMI, body satisfaction was correlated with overall quality of life (r (774) = .350, p < .001); enjoyment of physical activity (r (774) = .208, p < .001; consumption of nutrient dense foods r (774) = -.165, p < .001; sleep quality r (774) = -.185; sleep duration r (774) = -.134, p < .001). Additionally body satisfaction was correlated with body mass index r (774) = -.357 p < .001). This poster will present longitudinal results. Significant results would identify body dissatisfaction as a potential target for preventive interventions aimed towards health and wellness targets.

CORRESPONDING AUTHOR: Caroline M. Roberts, Trinity University, San Antonio, TX, 78212; crobert3@trinity.edu

6:00 PM-7:00 PM C081

LIFESTYLE DOMAINS OF LATINO LATE MIDDLE-AGED ADULTS: PERCEIVED STRATEGIES TO LIVING A HEALTHY LIFE

Stacey L. Schepens Niemiec, PhD, OTR/L[1], Mike Carlson, PhD[1], Anish Mahajan, MD, MPH[2], Laura M. Guzmán, ProjectAssistant[3], Florence Clark, PhD, OTR/L[3]

[1]Division of Occupational Science and Occupational Therapy, University of Southern California, Los Angeles, CA; [2]Los Angeles County's Department of Health Services, Los Angeles, CA; [3]University of Southern California, Los Angeles, CA

Background: Latino adults who are 50 to 60 years of age, late middle-aged Latinos, are at high risk for developing chronic conditions that may lead to early disability. Because Latino adults demonstrate willingness to change their lifestyles to prevent or manage chronic disease, and because late middle-aged adulthood is a period of life where chronic disease may not yet be in advanced stages, healthcare professionals have a window of opportunity to offset disability and disease progression in later life for this population.Objectives: Explore the salient domains of a healthy lifestyle as perceived by Latino late middle-aged adults, and document their professed strategies for achieving health and well-being.Methods: In this qualitative pilot study, we conducted semi-structured interviews one-on-one with 11 male and female Latino late middle-aged adults. Topics addressed included personal daily routines and activities, health management, and healthcare utilization. Each interview was audio-recorded and transcribed, and a qualitative content analysis of data was conducted.Results: Six important healthy lifestyle domains emerged from the interviews: Weight Management; Disease Management; General Health and Well-being; Personal Finances; Family, Friends, and Community; and Stress Management. A typology of health-actualizing strategies was derived for each emergent domain.Discussion: The resultant healthy lifestyle domains and strategies identified in this study will inform the future development of *¡Vivir Mi Vida!*, a culturally-sensitive, age-appropriate lifestyle management program for Latino late middle-aged adults. Findings will also shed light on additional, potentially workable, lifestyle-based approaches designed to address the challenges faced by this high risk population.

CORRESPONDING AUTHOR: Stacey L. Schepens Niemiec, PhDOTR/L, Division of Occupational Science and Occupational Therapy, University of Southern California, Los Angeles, CA, 90089; schepens@usc.edu

6:00 PM-7:00 PM C082

LOW HEALTH LITERACY PREDICTS DECLINE IN PHYSICAL FUNCTION AMONG OLDER ADULTS: THE LITCOG STUDY

Samuel G. Smith, PhD[1], Rachel O'Conor, MPH[1], Laura M. Curtis, MS[1], Katie R. Waite, BA[2], Michael Paasche-Orlow, MD, PhD[3], Michael S. Wolf, PhD, MPH[1]

[1]Northwestern University, Chicago, IL; [2]Boston Medical Center, Boston, MA; [3]Boston University, Boston, MA

Limited health literacy is prevalent among older groups and has been associated with reduced physical function in cross-sectional studies. Prospective studies are needed to confirm the relationship between health literacy and physical function. We aimed to determine if health literacy is associated with decline in physical function among a longitudinal cohort of older adults with average follow-up of 3.2 years (SD=0.39). Community-dwelling older American adults (n=529) aged 55-74 at baseline were recruited from one academic general internal medicine clinic and five federally qualified health centers in Chicago, IL.The Newest Vital Sign health literacy measure, participant characteristics, and single-item measures of alcohol consumption, smoking status, and physical activity were recorded. The outcome measure was the 10-item PROMIS physical function scale. Nearly half of the sample (48.2%) had either marginal (25.5%) or limited health literacy (22.7%). Average physical function at baseline was 83.23 (SD=16.6) out of 100. In multivariable analyses, lower health literacy was associated with poorer baseline physical function (p=0.013). At follow-up, physical function declined to 81.9 (SD=17.3) (p=0.006) and 20.5% experienced a meaningful decline (>0.5 SD of baseline score). In multivariable analyses, participants with marginal (OR, 2.67; 95%CI, 1.41-5.04; p=0.003) and limited (OR, 2.63; 95%CI, 1.25-5.56; p=0.011) health literacy were more likely to experience meaningful decline in physical function compared with the adequate health literacy group. In exploratory analyses, health literacy attenuated the relationship between black race and decline in physical function by 32.6%, but not to the point of non-significance. Lower health literacy increases the risk of experiencing worse physical function and exhibiting faster physical decline over time. Clinicians should be aware of the prevalence of low health literacy among their patient population, and evidence-based strategies that reduce literacy disparities should be designed, tested and incorporated into care.

CORRESPONDING AUTHOR: Samuel G. Smith, PhD, Northwestern University, Chicago, IL, 60611; samuel.smith@northwestern.edu

6:00 PM-7:00 PM C083

NAMING THE ELEPHANT IN THE ROOM: DISGUST MATTERS IN ANAL INCONTINENCE PATIENTS

Lisa Reynolds, MSc, PGD, Ian P. Bissett, MBChB, FRACS, MD, Katrina J. Simpson, BA, Nathan S. Consedine, PhD

The University of Auckland, Auckland, New Zealand

Background: Despite proximity to feces reliably eliciting disgust, research to date has essentially overlooked the relevance of this emotion to anal incontinence patients. Quality of life varies across patients and variations in disgust sensitivity may help explain why involuntary loss of stool or flatus incapacitates some people, yet is barely noticed by others. The current work prospectively assessed whether disgust sensitivity predicted quality of life and/or moderated the impact of symptom severity in anal incontinence patients.Method: Patients with anal incontinence (n=75) identified from a Pelvic Floor Clinic waitlist, completed questionnaires prior to a first appointment and again three months later. Step-wise multiple regressions assessed whether symptom severity (FISI) and disgust sensitivity (DS-R) predicted incontinence specific (FIQLS) and general quality of life (WHOQOL-Bref).Results: Whilst greater symptom severity prospectively predicted lower quality of life on two domains (FIQLS lifestyle, -β =.29, p=.04; WHOQOL-Bref environmental, -β =.22, p=.08), disgust proved a stronger predictor of general well-being. Greater disgust sensitivity predicted poorer general quality of life (WHOQOL-Bref psychological; -β =.28, p=.03; environmental, -β =.27, p=.03), and moderated the link between symptom severity and well-being; persons with high disgust sensitivity had lower quality of life regardless of symptom severity, whereas those with low disgust reported higher general quality of life (WHOQOL-Bref psychological β =.27, p=.03; physical β =.36, p=.005) at least when symptom severity was low.Conclusion: These findings highlight the importance of considering emotional factors, such as disgust, alongside functional status when seeking to identify the individuals that are likely to struggle with anal incontinence. This work reinforces the need for further research on this understudied emotion in bowel health conditions.

CORRESPONDING AUTHOR: Lisa Reynolds, MSc, PGDipHlthPsych, The University of Auckland, Auckland, 1142; lisa.reynolds22@gmail.com

6:00 PM-7:00 PM C084

PARTICIPATION IN PROACTIVE SECURE MESSAGING

Kathryn DeLaughter, MA, Tana Luger, PhD, Diana Hall, MPH, Timothy Hogan, PhD, Thomas Houston, MD, MPH

VA CHOIR, Bedford, MA

Background: The Veterans Health Administration (VA) has adopted secure messaging (SM) to promote Veteran access to their healthcare providers. . However, most use of SM is characterized by providers responding to patient-initiated messages (i.e., reactive) as opposed to providers initiating contact with patients (i.e., proactive). If successfully implemented, proactive SM could increase engagement in care by encouraging patients to reflect on their health goals and priorities and supporting them to prepare for upcoming clinic visits. Method: 8 primary care teams practicing at a large VAMC were trained by research staff on the benefits and implementation of proactive SM. Teams were equipped with an implementation guide, and the support of a proactive SM ‘champion’ who initiated proactive SM exchanges on behalf of the clinical teams. The champion sent messages to each patient who had access to secure messaging through the VA’s personal health record and also had a scheduled appointment in the upcoming two-weeks. Patients were asked to respond to the secure message that they received with three topics that they would like to discuss at their upcoming appointment. The messages that patients sent in reply were content coded by research staff according to the Taxonomy of Requests by Patients (TORP) classification system. Results: In total, 223 messages were sent to patients. Of the messages sent, 86 (38%) were read by patients, and 27 (12%) patients replied with topics for discussion at their upcoming appointment. Topics voiced were diverse, and ranged from medications to current pain levels to questions about healthcare coverage. Most patients listed their 3 topics, however some simply replied generally; “What I'm most concerned about is the pain in my hands and fingers”. All but one message was sent by the patient themselves. Messages were sent either the same day or the next day from when the message was received. Conclusion: Proactive use of SM may enhance the primary care visit by offering a way for patients to plan ahead and prioritize the time that they have with their providers. Also is the potential for using proactive SM for goal-setting. Our future work will investigate patient perceptions of engagement through proactive SM to determine whether patients and providers derive benefit from such electronic intervention.

CORRESPONDING AUTHOR: Kathryn DeLaughter, MA, VA CHOIR, Bedford, MA, 01730; kathryn.delaughter@va.gov

6:00 PM-7:00 PM C085

PATIENT ATTRIBUTIONS OF CAUSALITY FOR A DISEASE OF UNKNOWN ETIOLOGY

Shadi Gholizadeh, MSc, M.S.[1], Julia H. Drizin, BA[2], Ingunn Hansdottir, PhD[3], Michael H. Weisman, MD[4], Philip J. Clements, MD[5], Daniel E. Furst, MD[5], Vanessa L. Malcarne, PhD[6]

[1]SDSU/UCSD Joint Doctoral Program, San Diego, CA; [2]San Diego State University, San Diego, CA; [3]University of Iceland, Reykjavíc, Iceland; [4]Cedars-Sinai Medical Center, Los Angeles, CA; [5]University of California, Los Angeles, CA; [6]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center; San Diego State University, San Diego, CA

Questions about the etiology of disease concern patients living with any chronic disease, and patients’ causal attributions may impact both coping behavior and psychosocial adjustment. These causal attributions may be of particular interest when individuals are living with diseases for which etiologies have not been identified. Systemic sclerosis (SSc; scleroderma) is a multisystem, autoimmune disease characterized by excessive collagen production with a variable presentation that can include skin thickening and internal organ fibrosis. While hypotheses for disease etiology exist, the cause(s) presently remain unknown and no study has explored patients’ attributions of causality. The present study explored patients’ responses to the open-ended prompt: “What I think caused my SSc…” Each patient could provide up to four responses to the prompt. The cross-sectional sample of SSc patients (N = 114) was recruited through registries maintained at the UCLA and UCSD Schools of Medicine and the Virginia Mason Medical Center. Content analysis was used to analyze the qualitative data and group the responses via an inductively derived codebook using the text-analysis tool Dedoose Version 4.5. Intercoder reliability, assessed after two coders independently coded the data, was very good per Cohen’s kappa statistic (κ = 0.81). The four most commonly attributed causes of SSc were the following (% of attributed causes): 1) Stress (40%); 2) Environment (28.1%); 3) Other medical conditions (22.3%), and 4) Genetics (22.3%). While many of the responses did map on to current popular theories for the causality of autoimmune diseases (e.g., genetic predisposition coupled with environmental exposures), there were also less expected reasons provided (e.g., contact with animals; cold weather; past drug use; restrictive diets). Awareness of patient causal attributions can be valuable in fostering dialogues among patients and healthcare professionals. Patients endorsed both accepted etiologies for autoimmune diseases and less expected causal variables, revealing disparities in patient and clinician conceptualizations of SSc. Discussion and clarifications with healthcare professionals may improve illness related behaviors and patient-clinician relationships.

CORRESPONDING AUTHOR: Shadi Gholizadeh, MSc, M.S., SDSU/UCSD Joint Doctoral Program, San Diego, CA, 92108; shadigholizadeh@gmail.com

6:00 PM-7:00 PM C086

PATIENT KNOWLEDGE AND ATTITUDES TOWARD PLACEBO TREATMENTS

Suzanne Helfer, PhD[1], Andrew Geers, PhD[2]

[1]Adrian College, Adrian, MI; [2]University of Toledo, Toledo, OH

Recently there has been a resurgence of research on placebo effects. Placebos, or inert medications that activate patient expectations for treatment efficacy, can improve patient outcomes and work through identifiable neurobiological pathways. Surveys of health professionals across different countries indicate that ineffective medications are knowingly and frequently administered in clinical practice. In several surveys more than half of the practitioners queried indicated that they prescribed inert treatments on a regular basis. Although the value of placebo effects is being recognized and inert treatments are being administered, there is little information regarding patient knowledge of placebo use or attitudes toward placebo use. The present study addresses this issue. Sixty-nine participants (38 men, 31 women, 71% Caucasian) completed a survey about their knowledge and attitudes about true placebos (inert medications), active placebos (actual medications that are not effective for the patient’s current condition) and off-label use of prescription drugs. Participants did not believe they had ever been prescribed (1) a placebo (81% indicating never), (2) an active placebo (75% indicating never), or (3) an off-label drug (62% indicating never). The majority thought the use of placebos by health professionals was not acceptable. Conversely, most patients did self-prescribe over-the-counter or herbal remedies that they believed were of limited or no effectiveness. When asked if any circumstances warrant placebo administration by a health practitioner, participants cited two circumstances far more often that any others: (1) research use and (2) for treatment of hypochondriasis. In summary, patients are unaware that placebos are being prescribed and do not approve of placebo use by practitioners. Given the research on placebo effectiveness and prescription frequency, this study indicates there is a gap between patient knowledge and clinical research and practice.

CORRESPONDING AUTHOR: Suzanne Helfer, PhD, Adrian College, Adrian, MI, 49221; shelfer@adrian.edu

6:00 PM-7:00 PM C087

PATIENTS' READINESS TO USE A PHR/PORTAL IN A LARGE INNER-CITY OUTPATIENT CLINIC

Eun-Shim Nahm, PhD[1], Catherine Diblasi, BSN[2], Jane Kapustin, PhD[1], Kristi Silver, MD[3]

[1]University of Maryland School of Nursing, Baltimore, MD; [2]University of Maryland Medical Center, Baltimore, MD; [3]University of Maryland School of Medicine, Baltimore, MD

The high prevalence of chronic illnesses is a serious public health problem in the U.S., and promotion of self-care management is an important national strategy to mitigate this challenge. Use of health information technology (HIT) to empower patients in improving their health has become a national priority. "Meaningful Use" regulations mandate that healthcare providers allow patients to access their electronic health records and use eMessaging with patients. While most hospitals are rapidly implementing patient portals, which provide patients with HIT tools, such as tethered Personal Health Records (PHRs), eMessaging, and electronic prescription renewals, many patients are unaware of the programs or unprepared to use them. The aim of this study was to assess patients' readiness to use the PHR/Portal in a large inner-city diabetes clinic that provides care to underserved populations. Seventy patients participated in a volunteer survey. The mean age was 52.7+13.6, and 51.4% (n=36) were Black. The average years of web experience was 14.2+6.3, and 57 patients (82.6%) owned a smartphone. Although only 10 (14.3%) patients had a PHR/Portal account, most non-users showed high interest in using the program (mode, 7; mean, 5.6+1.5; range, 1-7) and self-efficacy (mean, 31.7+10.9; range, 0–40). They, however, showed limited PHR/Portal knowledge (mean, 5.2+1.5; range, 0–8). Focus group meetings with clinicians were also conducted to provide contextual background of the PHR/Portal use in the clinic. Findings revealed that most clinicians had never seen the patient view of the PHR/Portal, and some were unfamiliar with the program. They, however, provided helpful insights into the PHR/Portal workflow and patient educational materials. In summary, despite the small number of users, most patients appreciated and were willing to use the PHR/Portal. The urgent challenge for providers is to identify and implement optimal approaches that can empower patients to use the PHR/Portal for their health management.

CORRESPONDING AUTHOR: Eun-Shim Nahm, PhD, University of Maryland School of Nursing, Baltimore, MD, 21201; enahm@son.umaryland.edu

6:00 PM-7:00 PM C088

PERSONALITY, PERCEIVED STIGMATIZATION AND LIFE SATISFACTION IN CHRONIC SKIN DISEASE

Melissa M. Matos, M.A.[1], Nicholas Noviello, PhD[2]

[1]California School of Professional Psychology at Alliant International University, Los Angeles, Artesia, CA; [2]California School of Professional Psychology at Alliant International University, Los Angeles, Alhambra, CA

Chronic skin disease is often marked by physical pain and discomfort, as well visible alterations in appearance. While skin disease may pose little to no threat to physiological functioning, these conditions are often cosmetically disfiguring in nature and may be accompanied by a host of psychological disturbances, poor coping strategies, and appearance-related concerns. For example, individuals with skin disease have reported use of the words "monstrous, hideous, obscence, repellant human life, painful, and miserable" to describe the physical presentation and disfigurement of the skin. In order to understand the impact of appearance-related concerns among adults with chronic skin disease, the aim of the present study was to examine the extent to which perceived stigmatization and neuroticism influenced life satisfaction. Participants (n = 43) were recruited through Internet postings on social network sites and were diagnosed for at least one year with one or more chronic skin disorders (18.6% Acne Vulgaris, 9.3% Alopecia, 14% Atopic Dermatitis, 44.2% Psoriasis, 14% two or more skin disorders). Participants completed an online survey consisting of a brief demographic questionnaire, Perceived Stigmatization Questionnaire (PSQ), the Satisfaction with Life Scale (SWLS), and the Big Five Mini-Modular Markers (3M40). Multiple regression analyses indicated that neuroticism and perceived stigmatization explained 25% of the variance (R^2=.252, F(2, 40)=6.72, p < .01). It was found that perceived stigmatization significantly predicted life satisfaction (ß= -.501, p < .001). Specifically, absence of friendly behavior (ß= -.483, p < .05) and staring behavior (ß= -.490, p < .05) was associated with life satisfaction. Neuroticism did not make a significant contribution to the explanation of variance. Perceived stigmatization appears to be a strong predictor of life satisfaction in adults with chronic skin disorders. The findings support the often forgotten role of appearance-related concerns on life satisfaction.

CORRESPONDING AUTHOR: Melissa M. Matos, M.A., California School of Professional Psychology at Alliant International University, Los Angeles, Artesia, CA, 90701; mmatos@alliant.edu

6:00 PM-7:00 PM C089

RACIAL/ETHNIC DIVERSITY IN SCIENTIFIC CONFERENCES: EVIDENCE DISPARITIES IN REPRESENTATION

Cesar Villarreal, B.A., Rosemary Estevez, M.S., Christian Goans, B.A., Megan E. Douglas, M.S., John Ruiz, PhD

University of North Texas, Denton, TX

Understanding and reducing racial/ethnic health disparities remains a national priority and NIH goal. The success of this pursuit is moderated by the scope and specificity of the available science. This study aimed to examine differences in representation among the three largest U.S. racial/ethnic groups in abstracts submitted to three major scientific conferences in 2013: the Society of Behavioral Medicine (SBM), the American Public Health Association (APHA), and the Society of Epidemiologic Research (SER). Three *individua*l searches, White (*W*), Black (*B*), and Hispanic (*H*), along with four *comparative* searches, White-Black (*WB*), White-Hispanic (*WH*), Black-Hispanic *(BH),* and White-Black-Hispanic (*BWH*), were conducted for each conference. All abstracts were inspected, coded, and totaled for each of the groups of interest. Inclusion and exclusion criteria were uniformly applied across the three conferences, yielding 3,529 coded abstracts. Out of these coded abstracts, percentages of articles containing *individual* racial/ethnic identifiers were 1,604 out of 2,088 (77%) for APHA, 413 out of 1,238 (33%) for SBM, and 175 out of 203 (86%) for SER, yielding a total of 2,192 abstracts used for the *individual* search. Results show 28% *W*, 34% *B*, and 38% *H* at APHA; 43% *W*, 31% *B*, and 25% *H* at SBM; and 38% *W*, 42% *B*, and 19% *H* at SER. APHA contained proportionally more Hispanic abstracts, whereas Black abstracts were better represented at SER. A subset of 754 abstracts were used to calculate comparative percentages. *Comparative* search results demonstrated that, at APHA and SBM, the *BWH* comparative studies had the highest rate of appearance (42% and 35%, respectively) among the abstracts (*WB*: 23%, *BH*: 27%, and *WH*: 9% for APHA; *WB*: 32%, *BH*: 17%, and *WH*: 17% for SBM). In contrast, *WB* comparative studies had the highest rate of occurrence at SER (50%), followed by 40% for *BWH*, 6% for *WH*, and 4% for *BH*. Overall, APHA presented the most racially/ethnically diverse studies, whereas a significant discrepancy of bi-racial/ethnic comparative abstracts featuring Hispanics was observed among SER and SBM. This study shows that there are still racial/ethnic discrepancies in scientific conferences relative to current U.S. population trends.

CORRESPONDING AUTHOR: Cesar Villarreal, B.A., University of North Texas, Denton, TX, 76203; cesarvillarreal2@my.unt.edu

6:00 PM-7:00 PM C090

PAIN MEDICATION MISUSE AMONG PARTICIPANTS WITH SPINAL CORD INJURY

Jillian M. R. Clark, MA[1], James S. Krause, PhD[2], Lee L. Saunders, PhD[2]

[1]University of Missouri-Kansas City, Kansas City, MO; [2]Medical University of South Carolina, Charleston, SC

Spinal cord injury (SCI) is associated with high incidence of pain, and greater pain severity than general population norms. In non-SCI samples, demographic factors, pain intensity and pain-related limitations have been related to pain medication misuse. One study has examined medication misuse, not solely pain medication, in SCI, reporting 24% misused their medications. No prior study has examined pain medication misuse and related predictors in the SCI population. We examined the relationship of high risk of pain medication misuse (H-PMQ) with demographic and injury factors, pain indices, and frequency of pain medication use among participants with SCI.

Participants (n=919) completed a survey with the Pain Medication Questionnaire (PMQ; scores equal to or exceeding 25 indicative of H-PMQ), and items assessing demographic and injury characteristics, pain severity and interference, and frequency of prescription pain medication use.

Participants were mostly male (72.7%), white, non-Hispanic (70.7%), and non-ambulatory (68.7%). Approximately 26% had H-PMQ scores. Pearson correlation coefficients indicated PMQ total score was positively associated with pain in the past 30 days (*r*=.33), average pain intensity (*r*=.37), and pain interference on daily activities (*r*=.45). The final step of a logistic regression, with demographic and injury characteristics as predictors in step 1, pain indices in step 2, and frequency of pain medication use in step 3, indicated those who were younger (OR=.97, *p*≤.001), had less education (OR=1.80-2.13, *p*=.038), higher average pain intensity (OR=1.12, *p*≤.05), greater pain interference (OR=1.26, *p*≤.001), and took prescribed pain medication more frequently (OR=2.53-3.05, *p*≤.001) were at greater risk for H-PMQ.

These results suggest a relationship between demographic, pain indices, medication use behaviors and H-PMQ. The results highlight the importance of identifying risk factors for H-PMQ among individuals with SCI who experience pain.

CORRESPONDING AUTHOR: Jillian M. R. Clark, MA, University of Missouri-Kansas City, Kansas City, MO, 64110; jillianclark@umkc.edu

6:00 PM-7:00 PM C091

PAIN-RELATED DISABILITY AND BINGE DRINKING AMONG MIDDLE-AGED AND OLDER ADULTS

Tomorrow Wilson, M.S.[1], Linda Wray, PhD[2]

[1]The Pennsylvania State University, Bellefonte, PA; [2]The Pennsylvania State University, University Park, PA

Approximately 15% of the adult population reports chronic pain, with the rates increasing with age. Further, studies have found that up to 38% of community-dwelling middle-aged and older adults report alcohol use as a method to alleviate pain, though alcohol can enhance effects of and negatively interact with medications to manage pain. Using data from the 2010 Psychosocial and Lifestyle Questionnaire and the pain battery of core questions from the 2010 Health and Retirement Study, this cross-sectional study examined whether pain-related disability was related to average pain intensity and number of occasions of binge drinking. Of the 779 nationally representative participants who reported having experienced pain lasting more a week or more, 496 were included in analyses due to missing data on key variables. Sample participants were 68.0 years of age (*SD*= 0.5), 59.8% were women, 92.9% used either over-the-counter (OTC) or prescription (RX) medications for pain (33.2%, OTC; 19.4% RX; and 43.2% both), and 57.5% drank alcohol. After controlling for demographics and medications, average pain intensity was significantly associated with number of binge drinking episodes for older adults ($\beta = -0.09$, $p < .0001$) and trended on significance for middle-age adults ($\beta = -0.03$, $p = .06$). Furthermore, pain-related disability was found to be significantly related to number of binge drinking episodes for the total sample ($\beta = -0.02$, $p = .0003$) and middle-aged adults ($\beta = -0.04$, $p < .0001$), but not older adults. Preliminary results suggest that there may be age differences in binge drinking episodes within pain populations. In particular, middle-aged adults living with chronic pain may be at particular risk for binge drinking. Recognizing that facets of chronic pain that may influence drinking within these populations may aid in tailoring interventions to prevent risky health behaviors that can interfere with medication use and treatment.

CORRESPONDING AUTHOR: Tomorrow Wilson, M.S., The Pennsylvania State University, Bellefonte, PA, 16823; tw1103@psu.edu

6:00 PM-7:00 PM C092

POST-CRANIOTOMY PAIN IN THE BRAIN TUMOR PATIENT: AN INTEGRATIVE REVIEW

Rebecca Guilkey, BA, BSN, RN, CCRN[1], Diane Von Ah, PhD, RN[1], Janet S. Carpenter, PhD, RN, FAAN[1], Cynthia Stone, DrPH, RN[2], Claire B. Draucker, PhD, RN, FAAN[1]

[1]Indiana University School of Nursing, Indianapolis, IN; [2]Indiana University Richard M. Fairbanks School of Public Health, Indianapolis, IN

BACKGROUND: Patients with brain tumors undergo craniotomies, which have been believed to be less painful than other surgical procedures due to the brain's lack of innervation. Pain has been associated with decreased quality of life. Understanding the experience of post-craniotomy pain will help guide patient care, timely interventions, future research and policy development.PURPOSE: This integrative review examined prevalence, influencing factors, associated symptom clusters, and consequences of post-craniotomy, post-brain tumor pain.THEORETICAL FRAMEWORK: The Theory of Unpleasant Symptoms guided this study.METHODS: A literature search was conducted utilizing Medline, OVID, PubMed and CINAHL using key words "traumatic brain injury," "pain, post-operative," "brain injuries," "postoperative pain," "craniotomy," "decompressive craniectomy," and "trephining." The Theory of Unpleasant Symptoms (TOUS) was used as a guide for abstracting information from each article, including: influencing factors, associated symptom clusters, and consequences of post-craniotomy, post-brain tumor pain. Inclusion criteria were indexed, peer-reviewed, full-length, English-language articles.RESULTS: The search yielded 115 articles, with 24 meeting inclusion criteria. Hand-searching yielded an additional 2 articles, for a total of 26 articles reviewed. Most studies reviewed (88%) were randomized, controlled trials conducted outside of the United States, and tested pharmacological pain therapies. Although all articles documented the existence of post-craniotomy, post-brain tumor pain, only 12 each discussed influencing factors and associated symptom clusters and 15 reviewed patient performance, while two included information on all four aspects.CONCLUSION: The TOUS was helpful in providing structure to our search and can be used to study post-craniotomy, post-brain tumor pain. Pain is experienced by post-craniotomy brain tumor patients, yet little is known about how this pain unfolds during the acute post-operative period. Further research is needed to improve understanding and management of post-craniotomy, post-brain tumor pain, thereby improving patients' quality of life.

CORRESPONDING AUTHOR: Rebecca Guilkey, BA, BSN, RN, CCRN, Indiana University School of Nursing, Indianapolis, IN, 46202; refoust@iupui.edu

6:00 PM-7:00 PM C093

PSYCHOLOGICAL FLEXIBILITY PREDICTS OPIOID MISUSE RISK IN BACK PAIN PATIENTS RECEIVING OPIOID THERAPY

Samantha Paniagua, B.A.[1], Kristen D. Rosen, MPH[2], Harvir Virk, B.A.[1], Jennifer S. Potter, PhD, MPH[1]

[1]The University of Texas Health Science Center at San Antonio, San Antonio, TX; [2]The University of Texas Health at San Antonio, San Antonio, TX

Opioid analgesic (OA) misuse among chronic pain patients is a significant public health problem; national estimates suggest 46 deaths each day from opioid misuse. Evidence suggests that psychological flexibility (PF), an individual's capacity to change or persist in their behaviors, depending on the context and their values, mediates the relationship between pain severity/interference and successful chronic pain adaptation. OA misuse may be thought of as an indicator of poor chronic pain adaptation. The present report investigates the relationship between current OA misuse and psychological flexibility, as indicated by mindfulness and acceptance. This IRB-approved study surveyed 150 patients who received chronic opioid therapy presenting with chronic low back pain at an academic-based pain management clinic.Participants must have taken OAs for at least 20 of the past 30 days. The Brief Pain Inventory was used to obtain severity and interference scores. The Current Opioid Misuse Measure (COMM) established OA misuse risk. The COMM is a 17-item, validated scale based on degree of engagement in specific behaviors (e.g., using for reasons other than pain relief.).Psychological flexibility was assessed using the Mindfulness Attention Awareness Scale (MAAS) and the Chronic Pain Acceptance Questionnaire (CPAQ). Overall, 59% (n=88) of respondents met or exceed the $>$13 COMM cut-point. More than 30% of respondents reported at least some degree of high-risk behaviors. On a 0-10 scale, mean pain severity was 6.8 (SD 1.8), and mean interference was 6.8 (SD 2.3). Mean COMM score was 17.02 (SD 10.8). A hierarchical multiple regression analysis indicated that MAAS and CPAQ scores independently predicted COMM scores (ΔR2=. 31) after controlling for pain severity and pain interference. The full model predicted 52% of the variance in COMM scores. Results suggest that PF may be important in addressing OA misuse among chronic pain patients. The results presented in this report suggest an opportunity for Acceptance and Commitment Therapy (ACT), evidenced-based treatment for chronic pain that directly targets psychological flexibility by improving mindfulness and behavioral activation, to be of use in addressing opioid misuse in chronic low back pain patients.

CORRESPONDING AUTHOR: Samantha Paniagua, B.A., The University of Texas Health Science Center at San Antonio, San Antonio, TX, 78229; paniaguasm@uthscsa.edu

6:00 PM-7:00 PM C094

READINESS TO SELF-MANAGE PAIN: NEW PERSPECTIVES ON PAIN STAGES OF CHANGE

Alex L. Koenig, MS[1], Amy E. Kupper, MS[2], Sara Dyson, PhD[3], Jay R. Skidmore, PhD[4]

[1]Seattle Pacific University, Edmonds, WA; [2]Seattle Pacific University, Seattle, WA; [3]VA Northern California Health Care System, Walnut Creek, CA; [4]Seattle Pacific University, Lynnwood, WA

Multidisciplinary rehabilitation programs for chronic pain aim to increase self-management skills by challenging patients to make substantial changes in their beliefs about pain and their coping strategies toward pain. Pain self-efficacy (PSE) is defined as the patient's belief in his or her ability to tolerate pain and perform daily activities despite their pain and has been suggested as the mechanism responsible for successful outcomes in programs that emphasize a self-management approach. This study examined the relationships between pain stages of change (PSOC), PSE, pain severity, depressive symptoms, and pain-related anxiety. First, we hypothesized that change in PSOC over the course of treatment would significantly influence change in PSE, pain severity, depressive symptoms, and pain-related anxiety. Second, we hypothesized that change in PSE would mediate the relationships between change in PSOC and change in pain severity, depressive symptoms, and pain-related anxiety. One hundred and eighty eight chronic low back pain patients in a multidisciplinary rehabilitation program for pain management were studied over the course of 4 weeks. Patients completed self-report questionnaires measuring PSOC, PSE, pain severity, depressive symptoms, and pain-related anxiety at admission and discharge. Structural equation modeling and bootstrapping techniques were used to test the significance of the mediated model. Change in PSOC significantly predicted change in depressive symptoms ($\beta = -.187$; 95% CI = -.321 to -.017, $p = .036$) and pain-related anxiety ($\beta = -.209$; 95% CI = -.362 to -.016, $p = .031$). The relationships between change in PSOC and change in depressive symptoms ($\beta = -.098$; 95% CI = -.185 to -.017, $p = .017$) and pain-related anxiety ($\beta = -.093$; 95% CI = -.165 to -.015, $p = .017$) were mediated by PSE. These findings suggest that pain management programs should target interventions at increasing PSE.

CORRESPONDING AUTHOR: Alex L. Koenig, MS, Seattle Pacific University, Edmonds, WA, 98020; koeniga@spu.edu

6:00 PM-7:00 PM C095

SOCIAL SUPPORT ATTENUATES THE RELATIONSHIP BETWEEN DAILY PAIN AND FUNCTIONING IN FIBROMYALGIA PATIENTS

Elizabeth Stein, M.S.[1], Graham Ford[1], Laurie Steffen, M.S.[2], Bruce W. Smith, PhD[1]

[1]University of New Mexico, Albuquerque, NM; [2]University of New Mexico Cancer Center, Albuquerque, NM

Fibromyalgia (FM) is a chronic condition that is largely experienced by women and is characterized by distinct joint and muscle pain, fatigue, and sleep disturbance (Martin et al., 2014). Evidence suggests that pharmacological interventions alone are insufficient to improve patient outcomes, which has reinforced the need for an integrated approach that includes biopsychosocial elements (Martin et al., 2014). According to the stress-buffering model, social support moderates the relationship between stress and health (Cohen & Wills, 1985). Because pain can be a major form of stress for FM patients, this model was applied in the present study. This study examines the relationship between reports of daily pain and functioning with baseline social support as the moderating factor in a FM patient population. Participants included FM patients who completed a questionnaire at baseline and a daily diary for 21 days. The measures of interest for the present study were a baseline measure of social support and the daily measures of pain and functioning. The sample included 36 female FM patients (M_{age}=49.43 years; SD=8.88; 82.9% obtained more than a high school degree; 64.3% non-Hispanic Caucasian). The data was analyzed using multi-level modeling and a within day model. The model controlled for age, education, and income. The results revealed that pain is correlated with daily functioning such that higher levels of daily pain correspond with lower levels of daily functioning [Est.=-0.013; t=-9.16; $p < .001$]. Although effect of baseline social support on daily functioning was not significant [Est.=0.210; t=1.30; p=0.204], there was a significant interaction between social support and daily pain [Est.=0.0018; t=2.75; p=0.006] such that for those with higher social support, the relationship between daily pain and functioning was not as strong. Social support may be a clinically-modifiable variable that could minimize the impact of daily pain on functioning among FM patients.

CORRESPONDING AUTHOR: Elizabeth Stein, M.S., University of New Mexico, Albuquerque, NM, 87106; steine@unm.edu

6:00 PM-7:00 PM C096

WHAT MAKES YOU SAY ‘OUCH’?: PHYSIOLOGICAL AND PSYCHOLOGICAL RESPONSES TO ACUTE PAIN

Amy Wachholtz, PhD, MDiv, MS

University of Massachusetts Medical School, Worcester, MA

The pain experience involves psychological and physiological components. However, there is still much to learn about the impact psycho-physiological interactions on an acute pain experience.

Purpose: The purpose of this study was to observe psychological and physiological responses to acute pain, assess how participants tolerate stress (distress tolerance), and how this affects pain ratings.

Method: Thirty-nine participants completed a Cold Pressor Test (CPT) to induce acute pain. Mean heart rate, pain rating, Pain Beliefs Questionnaire (PBQ), Pain Self-Efficacy Questionnaire (PSEQ), Pain Catastrophizing Survey (PCS), and Distress Tolerance Survey (DTS) scores were collected.

Results: Using a Pearson correlation and linear regression analysis, significant correlations were found between distress tolerance, pain rating, mean heart rate, PCS, PBQ, and PSEQ (p’s < .05). In a backward linear regression analysis gender, age, and distress tolerance statistically predicted 20% of the variance of pain rating.

Conclusion: It was concluded that higher levels of distress tolerance will reduce the severity of the individual’s pain experience. General distress tolerance's influence on pain rating was stronger than the more specific pain catastrophizing. Therefore, psychotherapy with pain patients may have greater initial benefit from teaching general distress tolerance techniques rather than the more specific stragegies to reduce pain catastrophizing to reduce the severity of the pain experience.

CORRESPONDING AUTHOR: Amy Wachholtz, PhD, MDiv, MS, University of Massachusetts Medical School, Worcester, MA, 01655; amy.wachholtz@umassmemorial.org

6:00 PM-7:00 PM C097

FINANCIAL INCENTIVES FOR EXERCISE AMONG CANADIAN CARDIAC REHABILITATION PATIENTS

Marc Mitchell, PhD(c)[1], Jack Goodman, PhD[1], Paul Oh, MD[2], David Alter, MD/PhD[3], Guy Faulkner, PhD[4]

[1]Univ. of Toronto, Toronto, ON, Canada; [2]Toronto Rehab, Toronto, ON, Canada; [3]ICES, Toronto, ON, Canada; [4]University of Toronto, Toronto, ON, Canada

Background: Financial health incentives, such as paying people to exercise, have recently emerged as a policy alternative in Canada. Before conducting a definitive trial to test the impact of incentives in Canadian healthcare, preliminary/preparatory research is required. The purpose of this study therefore was to examine the feasibility of incentives for exercise self-monitoring in patients who recently graduated from a Canadian cardiac rehabilitation (CR) program. Methods: A 12-week, two-arm, single blind design was used to compare the feasibility of an exercise self-monitoring intervention only or an exercise self-monitoring plus incentive approach. The intervention occurred from October 2013 to January 2014, and data were analyzed in March-April 2014. A range of feasibility outcomes is presented, including recruitment and retention rates, and intervention acceptability. Data for the proposed primary outcome of a definitive trial, aerobic fitness, are also reported. Results: Seventy-four CR graduates were potentially eligible to participate, 27 were enrolled (36.5% recruitment rate; mean age ± SD, 63.1±12.4y), and five were lost to follow-up (80% retention). Intervention acceptability was high with three-quarters of participants indicating they would likely sign-up for an incentive program at baseline. While group differences in exercise self-monitoring (the incentive ‘target’) were not observed, modest (non-significant) changes in aerobic fitness were noted with fitness increasing by 0.23 ml/kg/min among incentive participants, and decreasing by 0.68 ml/kg/min among controls. Conclusion: This preliminary study demonstrates the feasibility of studying incentives in a CR context, and the potential for incentives to be readily accepted in the broader context of the Canadian healthcare system.

CORRESPONDING AUTHOR: Marc Mitchell, PhD(c), Univ. of Toronto, Toronto, ON, M4G 1R7; marc-mitchell@hotmail.com

6:00 PM-7:00 PM C098

IMPACT OF AN AFTER-SCHOOL EXERCISE PROGRAM ON ACADEMIC ACHIEVEMENT IN CHILDREN WITH ADHD AND DBD: A RANDOMIZED-CONTROLLED TRIAL

Eduardo E. Bustamante, PhD[1], Catherine L. Davis, PhD[2], Stacy L. Frazier, PhD[3], Dana B. Rusch, PhD[4], Louis F. Fogg, PhD[5], David X. Marquez, PhD[4]

[1]Medical College of Georgia, Evans, GA; [2]Medical College of Georgia, Augusta, GA; [3]Florida International University, Miami, FL; [4]University of Illinois at Chicago, Chicago, IL; [5]Rush University, Chicago, IL

Attention Deficit Hyperactivity Disorder (ADHD) and Disruptive Behavior Disorders (DBD) are associated with impaired cognitive, behavioral, and academic performance. Evidence suggests that physical activity may improve academics in non-disruptive children, but no trials have examined this relationship in children with ADHD and DBD. This randomized-controlled trial investigated the impact of a physical activity program on academic performance in 6-12 year-old children with ADHD and DBD living in an urban poor community. Students were randomized to a 10-week evidence-based after-school physical activity program (n=19) or a comparable but sedentary attention control program (n=16). Grade point averages (GPA), disciplinary records, and achievement tests (Curriculum-Based Measures of math, reading fluency, and reading comprehension) were collected at baseline and posttest. Intent-to-treat mixed models tested *group x time* and *group x time x attendance* interactions, and correlations were run between attendance and change scores. While no *group x time* interactions were significant (ps>.05, d=-0.23 to 0.27), a trend emerged on the *group x time x attendance* interaction for GPA (F[1,33]=3.0, $p < .10$), such that GPA improvement was related to attendance to the physical activity program (r=.42, $p < .10$), but not the control program (r=-.23, p>.05). Disciplinary referrals per quarter were reduced from pre to post in both groups (control M±SD, 1.2±3.6 to 0.3±0.6; exercise, 1.7±2.4 to 0.7±1.8). Findings suggest that the impact of after-school programs on academic outcomes in children with ADHD and DBD is limited when systematic academic instruction is not included. Provision of a quality sedentary program was as effective as exercise in reducing disciplinary referrals. Nevertheless, the attendance interaction favoring exercise on GPA suggests that the unique neurobiological and cognitive effects of physical activity might translate to academic performance in this population. Evidence-based physical activity programs have capacity to improve children’s physical and mental health simultaneously with greater efficiency than pursuit of these ends in isolation. Funded by NIH Research Grant R36 MH093152.

CORRESPONDING AUTHOR: Eduardo E. Bustamante, PhD, Medical College of Georgia, Evans, GA, 30809; ebustamante@gru.edu

6:00 PM-7:00 PM C099

IMPACT OF WALKING GROUP LEADERS ON ANTECEDENTS TO PHYSICAL ACTIVITY CHANGE IN WALKING GROUP MEMBERS

Sara Wilcox, PhD[1], Melinda Forthofer, PhD[2], Brent Hutto, MSPH[1], Meghan Baruth, PhD[3]

[1]University of South Carolina, Columbia, SC; [2]University of South Carolinaa, Columbia, SC; [3]Saginaw Valley State University, Saginaw, MI

Background: Walking group interventions have been shown to increase walking. Few studies recruit naturally occurring groups, and rarely are leader characteristics assessed relative to member changes.Purpose: To answer three questions: (1) is a group-based walking program associated with changes in PA self-efficacy, self-regulation for goal setting and planning, and social support from group members? (2) do changes in these psychosocial constructs among leaders relate to changes in members? (3) do members' ratings of effective leader skills and behaviors relate to member changes in psychosocial constructs?

Methods: Walking group leaders (n=59) were recruited and formed walking groups (n=236 members) from existing social networks. Leaders and members (86% women, 66% African American, M=51 years) completed a survey at baseline and 6 months to assess psychosocial constructs, and members rated leader qualities and behaviors at 6 months (6-month response rate: 64%). Repeated measures ANCOVA examined changes in constructs over time. Residualized change scores were used in regression models to address questions 2 and 3. Analyses accounted for group clustering and controlled for age, gender, race, and education.Results: Goal setting ($p < .001$) and group social support ($p < .0001$) increased, self-efficacy decreased (p=.02), and planning did not change over time. Leader increases in planning (p=.02) and group social support (p=.0029) were associated with member increases in these same constructs. More positive member ratings of leaders were associated with greater increases in self-efficacy (p=.02) and group social support ($p < .0001$). Members' ratings of more frequent communication and more frequent organization of group walks, as well as more frequent participation in group walks were associated with increased perceptions of group social support ($p < .0001$).Conclusions: Walking group leaders appear to influence walking group members, especially ratings of social support. Effective leadership skills, regular communication, organizing group walks, and leader increases in perceived group support predicted member increases in perceived group support. Mobilizing these processes in social networks may be valuable for promoting lasting improvements in physical activity.

CORRESPONDING AUTHOR: Sara Wilcox, PhD, University of South Carolina, Columbia, SC, 29208; wilcoxs@mailbox.sc.edu

6:00 PM-7:00 PM C100

IMPACTS OF REGULAR EXERCISE ON ADAPTIVE DAILY LIVING AMONG PEOPLE WITH CHRONIC SCHIZOPHRENIA

Adrian H.Y. Wan, PhDCandidate[1], Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA[2], Pantha Joey C.Y. Siu, MSocSc[3], Friendly S.W. Au Yeung, MSocSc[4], Cathy P.K. Wong[5], Eric Chen, FRC, FHKAM[6]

[1]Centre on Beahvioral Health, HKU, Hong Kong, Hong Kong; [2]The University of Hong Kong, Hong Kong, China, Peoples Rep; [3]Department of Social Work & Social Administration, HKU, Hong Kong, Hong Kong; [4]HKSKH Welfare Council/ The Providence Garden for Rehab, Hong Kong, Hong Kong; [5]The Providence Garden for Rehab, Hong Kong, Hong Kong; [6]Department of Psychiatry, HKU, Hong Kong, Hong Kong

Background: Most people with chronic schizophrenia suffer from the deterioration of adaptive daily living, which is associated with impaired quality of life, sense of control, and poor prognosis of the illness. And thus, the maintenance of adaptive daily living is a focus of psycho-social care for people with schizophrenia. The benefits of regular exercise in enhancing physical well-being of people with chronic illness have been documented in the literature, however little is known on its impact on people with chronic schizophrenia.Purpose: To purpose of the study is to explore the effectiveness of a 12-week exercise program in improving daily living ability of Chinese with chronic schizophrenia receiving healthcare service in a residential setting.Methods: The study adopted a non-blind, 2-arm randomized-controlled study design. A total of 90 participants were recruited and randomized into either the 12-week Exercise Group or a Wait-List Control Group. Participants were surveyed before and immediate post-intervention on a measurement of adaptive daily living skills (ADL).Results: Findings suggested that significant *Time x Group* effects on the measurement of adaptive daily living (F(1, 91)=7.62, $p \leq .01$) were found. Participants in the Exercise Group showed significant improvements in their adaptive daily living skills (T_0: 94.04; T_1: 98.94) at immediate post-intervention when compared with those who are in the Wait-List Control Group (T_0: 95.98; T_1: 95.87).Implications: Regular exercise regime improves the ability in adaptive daily living of people with chronic schizophrenia residing in a long-term care setting; whereas those who do not have a regular exercise regime showed deterioration in this aspect. Therefore, our finding implied that exercise appeared to reverse the deleterious effect of schizophrenia has on adaptive daily living; suggesting that the development of an exercise regime should be considered as part of the psycho-social support service for people with chronic schizophrenia to help them regain sense of control in their daily living.

CORRESPONDING AUTHOR: Adrian H.Y. Wan, PhDCandidate, Centre on Beahvioral Health, HKU, Hong Kong, 0000; awan@hku.hk

6:00 PM-7:00 PM C101

IMPROVEMENTS IN SELF-REGULATION PREDICTS IMPROVEMENTS IN PHYSICAL ACTIVITY AMONG LATINO ADULTS

Carla Dellaserra, M.S., ACSMCPT, HFS, Noe Crespo, PhD, MPH, Jennifer Huberty, PhD

Arizona State University, Phoenix, AZ

Background: Self-Regulation (SR) towards physical activity (PA) is positively associated with moderate to vigorous physical activity (MVPA) participation among adults. However, no studies have experimentally tested whether changes in self-regulation predicts greater PA participation in Latino adults.Methods: A pre-post, 12-week PA intervention was conducted in a community center located in an underserved community of Phoenix, AZ. A total of 25 Latino adults completed a demographics survey, self-reported MVPA, a SR scale and a program satisfaction survey. The intervention was twice-per week fitness- and skill- oriented PA and educational sessions to promote PA. Mean change of days engaging in MVPA and mean change for SR subconstructs of introjected (mean of 4 items) internal (6 items), and external (6 items) SR were computed. Post measures of perceived happiness and health were also examined. Paired-samples t-test assessed intervention-related changes in MVPA and SR. Linear regression explored relationships between SR mean change scores, and perceived happiness and health on MVPA change.Results: Participants were aged 35+6.1 years, 88% female, 78% completed high school or a GED equivalent, 80% had an average monthly income less than $1,500, and 84% were born in Mexico. Mean days per week MVPA increased by 2.2 days post-intervention, $t(25)= 6.9$, $p< .01$. Additionally, mean changes in pre-post internal [$t(25)= 4.22$, $p< .01$] and external SR [$t(25)= 3.00$, $p= .01$] increased by 2.65 and 1.62 points, respectively (scale range: 1= low SR and 4= high SR). Mean change of internal (Stdrz β = .59, p= .04) and external SR (Stdrz β =.65, p= .02) were significantly associated with increased days per week of MVPA. Additionally, perceived happiness (β = .41, p= .04) was significantly associated with increased days per week of MVPA.Discussion: Increasing motivational constructs of internal and external SR appears to increase days of MVPA participation in Latino adults. Future research should continue to explore strategies to increase SR and the mechanisms by which SR influences MVPA.

CORRESPONDING AUTHOR: Carla Dellaserra, M.S., ACSMCPT, HFS, Arizona State University, Phoenix, AZ, 85016; cdellase@asu.edu

MERITORIOUS POSTER
6:00 PM-7:00 PM C102

IMPROVING ACCELEROMETER ESTIMATES OF PHYSICAL ACTIVITY IN A SEDENTARY DIABETIC POPULATION

Daniel Schulman, PhD[1], DeAnna Mori, PhD[1], Barbara Niles, PhD[2], Rebecca L. Reese, PhD[1], Kelly Allsup, BS[1], Daniel Forman, MD[3], Amy Bachand, PhD[4]

[1]VA Boston Healthcare System, Boston, MA; [2]VA Boston Healthcare System, Jamaica Plain, MA; [3]University of Pittsburgh Medical Center, Pittsburgh, PA; [4]ENRM VA Medical Center

Although accelerometers are widely used as an objective measure of physical activity (PA), this assessment method potentially has important shortcomings, particularly in a sedentary, ill patient population. To estimate PA levels or energy expenditure, accelerometers activity counts must be calibrated to a measure of exertion. Most prior calibration work has three major limitations: (1) estimates are derived primarily from young and healthy participants; (2) individual variability is not taken into account; and (3) linear relationships between exertion and activity are assumed. Inappropriate cutpoints may yield poor estimates of PA intensity levels, diminishing our ability to draw accurate conclusions from accelerometer data. We address these issues and generate cutpoints for activity levels which are appropriate for a sedentary diabetic population. We develop methods that give group-based calibration estimates as well as individualized estimates, and model a non-linear relationship between exertion and accelerometer measurements.Seventy sedentary diabetic participants in a trial of an automated PA intervention underwent treadmill-based cardiopulmonary stress tests at study intake. Actigraph GT1M accelerometers were worn at the waist, and oxygen consumption (VO_2) was assessed as a gold-standard measure of exertion. We applied nonlinear mixed-effect regression, in which the relationship between exertion and activity counts is a 3-parameter logistic curve, yielding: (1) a group-level calibration curve; (2) estimates of between-participant variability; and (3) individual calibration curves that are partially pooled with the group-level curve for improved estimates.The resulting group-level calibration curve gives lower activity counts than prior work for a given level of exertion: our lower cutpoint for moderate activity is 1385, versus 1952 in a widely-used reference (Freedson et al. 1998). Participant variability was high: individual cutpoints ranged 240-4344 (sd 819). These results have significant implications for the use of accelerometry in research, particularly with patient populations. We recommend that future work use cutpoints for the specific study population or a closely comparable population, and use individualized estimates when feasible.

CORRESPONDING AUTHOR: Daniel Schulman, PhD, VA Boston Healthcare System, Boston, MA, 02130; daniel.schulman@va.gov

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INCREASING PHYSICAL ACTIVITY FOR WOMEN: A GENDER-BASED APPROACH

April Ennis Keippel, MA[1], Elizabeth L. Ciemins, PhD, MPH, MA[2], Amanda L. Golbeck, PhD[3], Diane Duin, PhD, MHA[4], Tracy Neary, MS[1], Dean Wells, MS[5]

[1]St. Vincent Healthcare, Billings, MT; [2]Billings Clinic, Billings, MT; [3]University of Montana, Missoula, MT; [4]Montana State University-Billings, Billings, MT; [5]St. Vincent Healthcare Foundation, Billings, MT

Background: Gender, the socially constructed roles and activities deemed appropriate for men and women, is an important factor in women's physical inactivity. The Healthy By Design Coalition in Yellowstone County, Montana, utilized a gender-based approach to develop a gender-tailored intervention and social marketing campaign to increase leisure-time physical activity for women.Methods: The project employed the Gender Analysis Framework of the Liverpool School of Tropical Medicine which consisted of three steps: examine sex-disaggregated quantitative data to identify existing patterns for women's health, examine why those patterns exist through qualitative research, and determine how those gender factors constrain or support women's health. Data from the 2011 Community Health Needs Assessment was examined by sex to determine existing disparities. Following the quantitative analysis, a qualitative analysis was conducted with 13 focus groups. Analysis of the focus group transcripts uncovered themes related to environment, gender-specific activities, resources, gender norms, and power. These themes were identified as gender-based constraints or gender-based opportunities.Results: From the qualitative analysis, several gender-based constraints emerged including women's roles as caregiver which left little time or energy for physical activity, women's leisure time activities and hobbies such as knitting and reading which were less active than men's hobbies, and expectations for women's appearance which made them uncomfortable sweating in front of strangers. Gender-based opportunities included women's enjoyment of activity as a social connection, less rigid gender roles for younger women, and a sense of responsibility for women to set a good example for their families.Conclusions and Implications: From these results, an intervention was developed using the Active Living Every Day curriculum with an added focus on gender-based barriers for physical activity. In addition, a social marketing campaign was developed to focus on gender-based activities women engaged in, but did not consider to be physical activity. The campaign theme, "It all adds up" was designed to focus on accumulated activity which would be less likely to be derailed by gender-based caregiving role expectations.

CORRESPONDING AUTHOR: April Ennis Keippel, MA, St. Vincent Healthcare, Billings, MT, 59101; april.keippel@sclhs.net

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INDIVIDUAL, SOCIAL, AND NEIGHBORHOOD ASSOCIATIONS WITH SITTING TIME AMONG VETERANS

Rachel Millstein, PhD, MHS[1], Katherine Hoerster, PhD, MPH[2], Dori Rosenberg, PhD, MPH[3], Karin Nelson, MD, MSHS[4], Gayle E. Reiber, PhD[5], Brian Saelens, PhD[6]

[1]MGH, Boston, MA; [2]VA Puget Sound Healthcare System, Seattle, WA; [3]Group Health Research Institute, Seattle, WA; [4]VA Puget Sound, University of Washington, Seattle, WA; [5]VA Puget Sound, Lake Forest Park, WA; [6]University of Washington/Seattle Children's Research Institute, Seattle, WA

Background: Sedentary behavior is an increasingly recognized health risk factor, independent of physical activity. Although several correlates of sedentary behavior are known, little research has identified them among U.S. veterans, a population that faces disproportionate disease burden.Methods: A survey was mailed to 1,997 randomly selected veterans at a large urban VA medical center in 2012 and re-mailed in 2013 to non-responders, resulting in a 40% response rate. We examined individual-, social-, and neighborhood-level factors in association with self-reported sedentary behavior. Factors correlated with sedentary behavior at $p < .05$ were included in a multiple linear regression model.Results: In the regression model, higher depression (B=8.4, 95% CI=2.7-14.2), BMI (B=5.7, 95% CI=1.8-9.6), and functional impairment (B=5.0, 95% CI=2.1-7.8) were associated with higher sitting time (ps < .01).Conclusions: Individual-level, but not social- and neighborhood-level, variables were associated with sitting time in this population. This study identified individual-level targets for reducing sitting and improving overall health among veterans.

CORRESPONDING AUTHOR: Rachel Millstein, PhD, MHS, MGH, Boston, MA, 02114; rmillstein@gmail.com

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IS STANDING MORE DEPLETING THAN SITTING? THE EFFECT OF POSTURE ON ACUTE PSYCHOLOGICAL OUTCOMES.

Madelaine S. H. Gierc, MPH, Lawrence Brawley, PhD

University of Saskatchewan, Saskatoon, SA, Canada

There is now strong evidence of a relationship between sedentary behaviour (SB) and deleterious health outcomes, such as mortality and type-2 diabetes. In recent years, much research has examined the feasibility of reducing SB (e.g., changing posture via standing desks), and whether such tactics affect health outcomes. However, little attention has been paid to the potential psychological outcomes of SB change: could standing not only be more physically demanding than sitting, but also require more mental resources? The purpose of this pilot study was to examine the pairing of different postures (sitting vs. standing) with cognitively-demanding tasks on three psychological outcomes: objective and subjective self-regulatory depletion, and perceived task demands. It was hypothesized that standing would (1) increase self-regulatory depletion, and (2) be perceived as more difficult. Volunteers (N=19) were randomized to sit or stand, where they engaged in two depleting tasks (the stimulus detection task, the Stroop) followed by a task perception questionnaire. MANOVA indicated no significant group differences (p>0.05) in Stroop reaction times or perceived task demands. On the other hand, despite comparable depletion experiences, significant differences ($p < 0.01$) emerged when participants were asked to contemplate task demands had they been assigned to the other posture (e.g., if they been instructed to stand rather than sit). SIT participants associated standing with *poorer* concentration and greater mental/physical effort, whereas STAND participants associated sitting with *improvements* in these variables (e.g., Cohen's d = 1.93 for concentration, 3.13 for mental effort). In summary, although performance was unaffected by posture, post-test perceptions suggest a possible challenge: given negative expectations, will individuals be motivated to participate in SB change? Future studies on SB change should examine individuals' psychological reactions, particularly in the context cognitively-demanding tasks.

CORRESPONDING AUTHOR: Madelaine S. H. Gierc, MPH, University of Saskatchewan, Saskatoon, SA, S7N 5B2; m.gierc@usask.ca

6:00 PM-7:00 PM C106

LESSONS LEARNED FROM IMPLEMENTATION OF A PROMOTORA-LED PHYSICAL ACTIVITY INTERVENTION FOR LATINAS IN SOUTH TEXAS

Deborah Parra-Medina, PhD[1], Daisy Y. Morales-Campos, PhD[1], Laura A. Esparza, MS[2], Edna K. Villarreal, MPH[3]

[1]Institute for Health Promotion Research, UTHSCSA, San Antonio, TX; [2]University of Texas Health Science Center at San Antonio, San Antonio, TX; [3]Regional Academic Health Center, University of Texas Health Science Center at San Antonio, Harlingen, TX

Latinas have disproportionately high rates of physical inactivity compared to the general population, putting them at risk for obesity and chronic disease. Increasing Latinas' participation in physical activity (PA) is critical to improving health outcomes and reversing current health disparities. Eight community resource centers (CRCs) in 3 predominantly Latino counties in South Texas were randomly assigned to either the Enlace PA Intervention (4 CRCs) or a control condition (4 CRCs). To date we have enrolled 208 women; 111 PA (28/CRC) and 97 control (24/CRC). The 40-week Enlace intervention includes 16 promotora-led weekly sessions plus a 24-week maintenance program. Using the RE-AIM framework we structured a process evaluation to identify issues relevant to implementation of the PA intervention in our randomized controlled trial. Sources of process data included site observations, attendance logs, program implementation checklists, and promotora weekly reports and debriefings. Immediately following the 16-week intervention, these data were triangulated to identify issues relevant to program content, delivery, infrastructure, and environmental context. We identified implementation barriers at multiple levels: individual level (health literacy, motivation, varying levels of fitness and exercise skills), interpersonal level (childcare and other family responsibilities), organizational level (adequate meeting space and equipment; community relations; promotora schedules), and environmental level (border patrol, parks). Strategies to address these implementation barriers include curriculum modifications to simplify content, additional training for promotoras, strategic communication with CRC directors, and enhanced rewards/recognitions structure to increase program identity and participation, including self-monitoring. Successful interventions must engage in continuous quality improvement to address factors at multiple levels that contribute to Latinas' ability to participate in physical activity.

CORRESPONDING AUTHOR: Deborah Parra-Medina, PhD, Institute for Health Promotion Research, UTHSCSA, San Antonio, TX, 78229; parramedina@uthscsa.edu

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MEDIATORS OF PHYSICAL ACTIVITY OUTCOMES IN A PEER-LED INTERVENTION FOR CANCER SURVIVORS

Bernardine M. Pinto, PhD[1], Kevin Stein, PhD[2], Shira I. Dunsiger, PhD[3]

[1]University of South Carolina, Columbia, SC; [2]American Cancer Society, Atlanta, GA; [3]The Miriam Hospital, Providence, RI

Physical activity (PA) adoption can reduce some treatment-related sequelae of breast cancer. Peer-led interventions to increase PA are exciting, relatively inexpensive approaches to increasing the breadth of dissemination. We partnered with the American Cancer Society's Reach to Recovery program (RTR) whose volunteers (breast cancer survivors) provide information and emotional support to breast cancer survivors. This randomized controlled trial compared the effects of a 12-week PA telephone counseling program delivered by RTR volunteers (Reach Plus) vs. a contact control condition (Reach Standard). RTR volunteers/coaches=s (n=18; mean age=54.9 years, mean 7.0 years since diagnosis) were trained to deliver the program which was based on social cognitive theory and motivational readiness. Seventy-six breast cancer survivors (mean age=55.6 years, mean 1.1 years since diagnosis, 44.7% Stage 2 cancer) were randomized to Reach Plus or Reach Standard. At baseline, 12 and 24 weeks, participants completed measures of PA (7 Day Physical Activity Recall interview), and potential mediators of PA: self-efficacy, exercise decisional balance and social support for exercise. Reach Plus participants significantly increased their weekly PA at 12 and 24 weeks vs. Reach Standard participants (data previously presented). Using a multiple mediation approach (with bootstrapped standard errors), we found that exercse-related self-efficacy was a significant mediator of intervention effects on PA at 12 weeks, while controlling for baseline values of other posited mediators, baseline PA, age, and chemotherapy use (a=0.93, SE=0.21, $p < .01$; b=26.38, SE=12.46, p=0.04; *indirect effect*=24.48, 95% CI:3.35-57.42). In addition, there were significant intervention effects on Decisional Balance (Cons subscale) and Social Support (Friends Participation subscale) (*a* paths). These results are consistent with the literature on PA promotion in non-cancer populations. Potential mediator effects on PA outcomes at 24 weeks will also be presented. We conclude that peers delivering a PA intervention should focus on increasing survivors' self-efficacy for exercise.

CORRESPONDING AUTHOR: Bernardine M. Pinto, PhD, University of South Carolina, Columbia, SC, 29208; PINTOB@mailbox.sc.edu

6:00 PM-7:00 PM C108

MHEALTH TEXT MESSAGING FOR PHYSICAL ACTIVITY PROMOTION IN COLLEGE YOUTH: A PARTICIPATORY APPROACH

Alice Fang. Yan, MD, PhD

University of Wisconsin, Milwaukee, WI

Objectives: To develop mobile-based physical activity promotion text messages, understand users' preferences, and assess feasibility and acceptability in a college student sample.Methods: Five focus groups (n=33) were conducted using a youth-participatory approach. An Audience Response Systems device (Clicker) was adopted for data collection to ensure confidentiality. Focus group data were transcribed and summarized using Atlas.ti qualitative analysis software. Descriptive statistics about the participants were obtained using SPSS 20.0.Results: Participants were uniformly enthusiastic about a text message-based intervention to encourage them to be active. They also preferred positive and encouraging messages that were personally tailored. Message features they deemed particularly important were establishing and self-monitoring realistic and achievable goals. Conclusions: mHealth text messaging was well received. The results support the feasibility and acceptance of such an intervention.

CORRESPONDING AUTHOR: Alice Fang. Yan, MD, PhD, University of Wisconsin, Milwaukee, WI, 53202; yanf@uwm.edu

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MOTIVATION AND SELF-REGULATION ARE REPORTED HIGHER AMONG ADULTS SUCCESSFULLY MAINTAINING REGULAR PHYSICAL ACTIVITY

Kristen Welker, BS[1], Kate Lynn. Renneke, BS[2], Karly S. Geller, PhD, MEd, BA, BA[1]

[1]Miami University, Oxford, OH; [2]Miami University, Hamilton, OH

Introduction: Physical activity is heavily researched in chronic disease prevention; yet, consistent evidence suggesting the most effective approach to physical activity maintenance remains unclear. The Self-Determination Theory (SDT) is a framework to conceptualize motivation to adopt and sustain long-term physical activity.Purpose: The current study examined mean differences in SDT motivations and associated self-regulation styles (external regulation, introjected regulation, identified regulation, and intrinsic regulation) based on participants' physical activity maintenance.Methods: Consented participants (age 28-45) completed an online, one-time self-report assessment of their physical activity levels currently and at least 10 years prior, motivations (TSRQ-E), and self-regulation styles (SRQ-E). Analysis: Four sample subgroups were created based on whether participants met physical activity recommendations: *maintainers* (meet recommendations previously and currently), *improvers* (did not meet recommendations previously but currently do), *decliners* (previously met recommendations but no longer do), and *sedentary* (did not meet recommendation previously or currently). ANOVA with post hoc tests was used to determine group differences in SDT motivations and self-regulation.Results: The majority of participants (N=721; mean age=33.4, SD=3.9) were female (63%), White, non-Hispanic (90%), with at least a college degree (96%). Maintainers (n=461) reported significantly higher intrinsic regulation than all other subgroups (*p*s range from .000 to .045) and improvers (n=79) were higher than decliners (n=125) and sedentary individuals (n=56; *p*s=.000). Identified regulation was significantly higher among maintainers than decliners and the sedentary (*p*s=.000); and higher among improvers than decliners and sedentary individuals (*p*s=.000). For introjected regulation, maintainers were significantly higher than both decliners and sedentary individuals (*p*s=.000); and improvers were higher than sedentary individuals (*p*=.002). No group differences emerged for external regulation. Discussion: Results may prove valuable for health professionals seeking to gain a better understanding of effective mechanisms to promote long-term, sustained physical activity.

CORRESPONDING AUTHOR: Kristen Welker, BS, Miami University, Oxford, OH, 45056; welkerk2@miamioh.edu

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OURSPACE: THE EFFICACY OF A GROUP DYNAMICS-BASED SOCIAL MEDIA APP IN INCREASING PHYSICAL ACTIVITY

Daniel L. Kurz, B.S., Brandon C. Irwin, PhD

Kansas State University, Manhattan, KS

Purpose: Traditional forms of social media used to facilitate participant interaction (e.g., message boards) in web-based physical activity [PA] promotion programs are rarely used. Given the strong potential of online social networks to influence physical activity, more effective designs of social media are needed. Face-to-face programs that use group dynamics-based principles of behavior change have been shown to be highly effective in promoting group cohesion and PA, but no studies examine its effects in web-based programs. The present study examines the effect of a GDB social media application on cohesion and physical activity. We expected that the effect would be moderated by the partner's level of presence. Methods: Subjects (n=102) were randomized into same-sex pairs and then randomly assigned to an experimental condition: low cohesion/low presence (LCLP), High cohesion/low presence (HCLP), High cohesion/high presence (HCHP), or individual. Participants then performed two sets of planking exercises (pre-post). In between sets, participants in partnered conditions were given pseudonyms and met their partner using either a standard social media app (LCLP) or GDB social media app, where they participated in a series of team-building exercises. Individual subjects were given a rest period in between sets. During the second set, subjects in the HCHP saw a live video stream of their partner, while subjects in the HCLP condition only saw a video of themselves exercising. The main dependent variable was physical activity duration, calculated as the difference in persistence between Set 1 and Set 2 (corrected for fatigue). Results: Preliminary results indicate that participants in the partnered conditions exercised no longer than those in the individual condition (M = -6.85s, SD = 183.85s), except for the HCHP condition, in which participants exercise 29.58s (SD = 54.51s; CI: -25.11s, 21.50s) longer than those in the individual condition. Conclusions: These preliminary results indicate that duration of physical activity can be reliably enhanced by using a GDB social media app, especially when participants can monitor each other's performance.

CORRESPONDING AUTHOR: Daniel L. Kurz, B.S., Kansas State University, Manhattan, KS, 66502; dkdude@ksu.edu

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PARENTAL INVOLVEMENT IN CHILDREN'S PHYSICAL ACTIVITY INTERVENTIONS: IS EXTERNAL VALIDITY INFORMATION REPORTED?

Chelsey Schlechter, B.S., Amy Ptacek, Richard R. Rosenkranz, PhD, David A. Dzewaltowski, PhD

Kansas State University, Manhattan, KS

Purpose: Reporting an intervention's reach (R) of the target population, effectiveness/efficacy (E), adoption (A) and implementation (I) by delivery setting and agent, and maintenance (M) provides important evaluation information on external validity. For multi-component interventions, it is important to report external validity information for each intervention component, in addition to reporting RE-AIM for the intervention as a whole. Many physical activity interventions targeting children include a parental component. The aim of this systematic review was to evaluate intervention studies on RE-AIM for both the overall intervention, and for the specific parental component. Methods: Thirty-five articles identified by O'Connor and colleagues' (2009) systematic review plus fourteen articles identified from an updated literature search (2008-2013) of databases Pubmed, PsychINFO, and Cochrane Libraries met review criteria. Studies included in the review reported physical activity as a primary outcome, targeted healthy children or adolescents, included a parental component, and a control or comparison group. Two independent raters assessed RE-AIM reporting separately for each physical activity intervention and accompanying parent-targeted component for the forty-nine included articles.Results: Studies reported reach (overall=65%; parent=NA), effectiveness (overall=73%; parent=29%), adoption (overall=21%; parent=16%), implementation (overall=22%; parent=7%), and maintenance (overall=2%; parent=0%). Median reporting of all elements was higher for the overall intervention (20%) than for the parental intervention component (12%). Least reported RE-AIM subcomponents included characteristics of participants compared to non-participants of settings and adoption agents (overall=0%; parent=1%), cost of implementation (overall=2%; parent=0%), and adaptation of implementation (overall=2%; parent=2%).Conclusion: Reporting of external validity information was lacking in all studies, especially for the parental intervention component. Increased emphasis should be placed on full reporting of RE-AIM elements to enable identification and dissemination of successful intervention components into practical application.

CORRESPONDING AUTHOR: Chelsey Schlechter, B.S., Kansas State University, Manhattan, KS, 66502; chelseyschlechter@ksu.edu

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PARENTAL PERCEPTION OF SAFETY AND GENDER INFLUENCES ON CHILDREN'S PHYSICAL ACTIVITY LEVELS IN MEXICO

Amy M. Hutchens, MS, RN, CNE[1], Erica G. Soltero, BA[2], Simon Barquera, MD, MS, PhD[3], Lucie Levesque, PhD[4], Edtna Jauregui[5], Juan Lopez y Taylor, MD[6], Rebecca E. Lee, PhD[7]

[1]Arizona State University, Norman, OK; [2]University of Houston, Phoenix, AZ; [3]National Institute of Public Health, Cuernavaca, Mexico; [4]Queen's University, Kingston, ON, Canada; [5]Professor/University opf Guadalajara México, Guadalajara, Mexico; [6]University of Guadalajara, Guadalajara, Mexico; [7]Arizona State University, Phoenix, AZ

Approximately 3.2 million people die worldwide each year from a lack of physical activity (PA). One in four Mexican children are inactive. Neighborhoods perceived as unsafe impact PA levels of residents of these areas. Parental perception of safety may be a barrier to PA in children, particularly in girls, and further research is necessary to investigate the nature of that relationship. This study of data from Guadalajara (n=804), Mexico City (n=703) and Puerto Vallarta (n=207), Mexico aimed to determine the effects of gender and parental perception of safety on children's PA. Parents of school aged Mexican children (53.1% girls; M age=9.6 years), in grades 3-5, completed surveys measuring demographics and their children's outdoor play, participation in sports teams, and participation in other organized physical activities. On average, parents reported that their child played outdoors for 30 minutes about twice a week (M=2.4±2.3), nearly half participated in at least one sports team (45%) and over one third (39%) participated in other organized physical activities such as dance lessons, martial arts, soccer, or gymnastics. Boys participated more in outdoor play and sports teams (all ps= < .001). PA indicators were evaluated using linear and logistical regression models controlling for age, grade level, number of people in the home, and city. Increased parental perception of safety was significantly associated with increased outdoor play (b=.08, t=2.25, p < .05). Boys were more likely than girls to participate in outdoor play (F=7.9, b=-.09, t=-3.78, p < .001) and organized sports (*Wald* (1)=39.8, p < .001; b=-.68, p < .001). Gender did not moderate the relationship between parental perception of safety and PA. Gender and parental perception of safety are significant components of children's PA, but the lack of a moderating effect suggests unexplained differences in this sample. Low levels of PA suggest a need for additional interventions promoting PA in girls in Mexico.

CORRESPONDING AUTHOR: Amy M. Hutchens, MS, RN, CNE, Arizona State University, Norman, OK, 73072; amy-hutchens@ouhsc.edu

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PARENTAL PERCEPTIONS OF CHANGES IN BEHAVIOR IN YOUTH WITH DEVELOPMENTAL DISABILITIES: A PILOT STUDY

Allison Randel, Psy.D., Carl Sorensen, M.A., Michael Beets, Kate Flory

University of South Carolina, Columbia, SC

Background: Childhood obesity is at an all time high, particularly among youth with developmental disabilities (DD). Youth with DD are at a higher risk for sedentary lifestyle and obesity due to their social and behavioral difficulties, as well as the lack of opportunities for modified physical activity (PA) programs. As a result, youth with DD commonly lead inactive lifestyles, which predispose them to the development of chronic diseases, and other psychological problems including social isolation. Numerous studies have reported the benefits of PA for youth with DD including decreased stereotypic movements and other deviant behaviors, as well as increased positive behaviors such as social skills (SS), self-esteem, independent functioning, and self-competence.Purpose: To determine the correlations among parental perceptions of their child's progress in SS, self-competence, self-esteem, independent functioning, and PA during the first year of a multi-modal summer day camp, including modified PA and a SS component for youth for DD.Methods: Children (K-12th grade) participated in a pilot camp for youth with DD two days a week (9:00am-1:30pm) for up to six weeks. Age specific groups of children rotated through modified PA and SS lessons throughout the day. Parents completed post-intervention surveys to assess perceived level of progress in their child's SS, self-esteem, self-competence, independent functioning, deviant behaviors, and PA. Data was analyzed using a Pearson Correlation matrix.Results: A total of 13 parents completed post-intervention surveys. Analyses revealed significant associations among: 1) dose (weeks in the program) and progress in SS (r=.633), self-competence (r=.569), and deviant behavior (r=.740); 2) increases in PA and progress in deviant behavior (r=.646); and 3) improved independent functioning and SS (r=.858), self-competence (r=.740), and deviant behavior (r=.677).Conclusion: Results indicate strong associations between dose, increased PA, and parent-reported increases in independent functioning on parent-perceived DD-related symptomology. Future studies will look at objective PA data using accelerometers, as well as validated pre-post psychosocial measures on a larger sample of youth with DD.

CORRESPONDING AUTHOR: Allison Randel, Psy.D., University of South Carolina, Columbia, SC, 29208; randel@mailbox.sc.edu

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PHYSICAL ACTIVITY BARRIERS, FACILITATORS, AND STRESS AMONG LOW-INCOME SINGLE MOTHERS

Deirdre Dlugonski, PhD, Emily Pineda, MS

East Carolina University, Greenville, NC

Background: Many mothers in the United States are not meeting national physical activity guidelines and as such, have an increased risk for mental and physical health problems. Low-income and single mothers are two subpopulations of mothers that have increased risk of physical inactivity and negative health consequences such as stress, depression, heart disease, and diabetes. Information about the physical activity barriers, facilitators, and experiences of low-income single mothers is important for designing interventions that promote the adoption and maintenance of physical activity. Purpose: This mixed methods study examined barriers and facilitators to physical activity and stress among 32 low-income, African-American single mothers. Methods: Mothers completed questionnaires to measure demographic characteristics, physical activity, barriers, and stress. Subsequently, mothers participated in one of six focus groups to better understand perceptions of physical activity, barriers, facilitators, and stress. Results: Mothers were aged 32.4 ± 10.5 years and 60% of the sample had two or fewer children. Most mothers had less than a college degree (77%), were employed part-time or unemployed (70%), earned less than $25,000 (71%), and were overweight/obese (71%). Physical activity scores (177 ± 208 minutes of moderate activity per week) were associated with barriers (r=−.42, p=.02), but not stress (r=−.02, p=.46). The main themes from qualitative focus group data included: other life priorities that conflict with physical activity choices, the importance of female role modeling, lack of and resistance to asking for social support, physical activity as a luxury, and the primacy of nutrition concerns over physical activity concerns. Conclusions: Low-income, African-American single mothers experience unique stressors and barriers to physical activity that should be considered when creating physical activity interventions for this subpopulation of mothers.

CORRESPONDING AUTHOR: Deirdre Dlugonski, PhD, East Carolina University, Greenville, NC, 27858; dlugonskid@ecu.edu

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KNOWLEDGE AND ATTITUDES TOWARD GENETIC TESTING FOR AUTISM SPECTRUM DISORDERS IN TAIWANESE PARENTS

Salah Alshagrawi, MS

Texas A&M University- College Station, College Station, TX

Background: ASDs, one of the fast growing disabilities in Taiwan with a higher prevalence than global epidemiological rates. A number of genetic testing techniques such as ASD genetic testing have been developed to provide earlier diagnosis of ASDs and facilitate behavioral interventions. However, major uptake of such novel methods depends on the understanding and perceptions of parents of children with ASDs. Therefore, it is important to assess knowledge and attitudes of such population to help improve parents' decision-making process towards ASD genetic testing. The purpose of this study is to: 1) examine knowledge and attitudes of Taiwanese parents toward genetic testing for ASD, and 2) assess how those factors are associated with demographic characteristics among Taiwanese parents of affected children with ASD.Methods: The sample consisted of 443 parents having children with ASDs. Participants were recruited from 236 public schools with special education classes in multiple cities and counties across Taiwan. Parents filled out paper-pencil surveys measuring knowledge and attitudes toward genetic testing for ASDs and demographic characteristics. Multiple regression analysis was utilized to assess the relationships.Results: Participants' average age was 39.9 years and were predominately female (77.4%) and married (88.7%).Overall, parents had favorable attitudes toward genetic testing for ASDs. Their attitudes were positively related to the severity of their children with ASD (p=0.02), but negatively with parents education level (p=0.01), the child age with (p =0.02), type of ASDs (p =0.01) and current employment status (p =0.01). As for knowledge, only 0.9% reported knowing about ASD genetic testing quite a lot. The majority of the participants (62.7%) stated they did not know anything about genetic testing for ASDs. Participants with a family history of ASDs had better understanding of ASD genetic testing (p =0.02).Conclusion: Taiwanese parents of children with ASDs in our sample had favorable attitudes toward genetic testing for ASDs. Nevertheless, their knowledge regarding ASD genetic testing was low. Future interventions can be developed to bridge this gap and educate those parents regarding genetic testing for ASDs to aid with reproductive decisions.

CORRESPONDING AUTHOR: Salah Alshagrawi, MS, Texas A&M University- College Station, College Station, TX, 77845; sshagrawi@gmail.com

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PARENTAL INVOLVEMENT POSITIVELY IMPACTS FUTURE OUTCOMES OF YOUNG, SEXUALLY ACTIVE BLACK MALES

Ivy W. Terrell, MPH[1], Richard A. Crosby, PhD[2], Ryan H. Pasternak, MD, MPH[1], Laura F. Salazar, PhD[3]

[1]Louisiana State University Health Sciences Center New Orleans, New Orleans, LA; [2]University of Kentucky College of Public Health, Lexington, KY; [3]Georgia Sate University School of Public Health, Atlanta, GA

Young Black men (YBM) are at risk for incarceration and early parenthood. YBM are incarcerated at rates 6 times higher than whites. Incarcerated youth are 20-30% less likely to be employed; 2/3 of the formerly incarcerated return to prison. Early parenthood negatively impacts future outcomes. 50% of teen mothers complete high school by 22; teen fathers are 30% less likely to earn a diploma/GED. Teen parents are less likely to participate in the labor force and more likely to rely on public assistance. We examined if higher levels of Parental Monitoring (PM) had an impact on arrest/incarceration and pregnancy.Baseline data from YBM 15-23 years old attending a STI clinic in New Orleans was analyzed. An audio administered survey assessed living situation, 56.5% indicated primary residence as 'Living with a parent/guardian'; these completed a 9-item 'Parental Monitoring Scale' (Cronbach's alpha=.80). Higher scores equal greater levels of parental monitoring (PM); range=10–45. Incarceration/arrest history was assessed by asking if participants had ever been arrested and/or incarcerated, coded as 'ever vs. never'. History of causing a pregnancy was determined by asking participants if they had ever caused a pregnancy, coded as 'ever vs. never'. Pregnancy intent was measured by asking if they wished to get a partner pregnant, coded as '+ intent' vs. '- intent'.The mean PM score for no unprotected sex (past 2m) was 30.2, mean score for those reporting unprotected sex was 28.5 (P = .047). Mean PM score for positive pregnancy history is 27.7 vs. 30.3 for negative pregnancy history (P = .001). Mean PM score for current intent to cause a pregnancy was 28.5 versus 29.9 for those without intent (P = .08). Mean PM score for positive arrest history was 28.5 versus 30.1 for those without arrest history (P = .04). Mean PM score for a history of incarceration was 28.2 versus 30.6 for no history (P = .032).Findings from this analysis support the hypothesis that greater levels of parental involvement can lead to a decrease in adverse social outcomes, specifically incarceration and early parenthood. In planning future interventions with this at risk population consideration should be given to programs that address and support primary parents/guardians.

CORRESPONDING AUTHOR: Ivy W. Terrell, MPH, Louisiana State University Health Sciences Center New Orleans, New Orleans, LA, 70112; iwils1@lsuhsc.edu

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PERCEIVED RISK AND WORRY ABOUT HEALTH AND APPEARANCE CONSEQUENCES ON MOTIVATION TO QUIT SMOKING

Karen Higgins, Renee E. Magnan, PhD

Washington State University Vancouver, Vancouver, WA

Perceived risk and worry about health consequences are commonly associated with motivation to engage in various health behaviors, including cigarette smoking. Far less focus has been given to perceived risk and worry associated with non-health related consequences including appearance-related consequences. The purpose of the current cross-sectional investigation was to test the ability of perceived risk and worry to predict motivation to quit smoking in two different consequence domains: health and appearance consequences of smoking. We anticipated that, consistent with previous findings, worry would predict motivation to quit over and above the effects of perceived risk regardless of consequence type. In an ongoing investigation, to date forty-seven smokers reported their current perception of risk and worry about health and appearance consequences of smoking. Motivation was assessed using both a self-report measure of motivation to quit and the contemplation ladder (Biener & Abrams, 1991.) All perceived risk and worry measures of health and appearance consequences were significant individual predictors of motivation to quit and contemplation to quit (all *p*s < .03). Simultaneous regressions including worry and perceived risk revealed that worry of health-related consequences remained a significant predictor of both motivation to quit (β=.56,p=.001) and contemplation to quit (β=.33,p=.05), but perceived risk was no longer a significant predictor for either. In contrast to expectations, perceived risk of appearance consequences due to smoking remained a significant predictor of motivation (β=.45, p=.01) and contemplation to quit (β=.49, p=.01), but worry about appearance consequences was not. Age did not moderate these outcomes. These findings suggest that the role of perceived risk and worry on motivation to quit smoking may depend on the type of consequence being considered. Although these data are cross-sectional, these outcomes may have implications for health behavior models as well as implications for practice. Specifically, when trying to motivate behavior change, researchers may need to take into account the type of consequence being evaluated in addition to the differential roles of feelings and cognitions on motivation.

CORRESPONDING AUTHOR: Karen Higgins, Washington State University Vancouver, Vancouver, WA, 98684; karen.higgins@email.wsu.edu

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POPULATION DISPARITIES AMONG HOSPITALIZED SMOKERS ENROLLED IN ONE OF SIX CHART STUDIES

Jeffrey L. Fellows, PhD[1], Nancy A. Rigotti, MD[2], Michael C. Leo, PhD[1], Kimber Richter, PhD, MPH[3], Kathleen F. Harrington, PhD, MPH[4], Scott E. Sherman, MD[5], Hilary A. Tindle, MD, MPH[6], Sonia A. Duffy, PhD, RN[7], Catherine Stoney, PhD[8]

[1]Kaiser Permanente Center for Health Research, Portland, OR; [2]Harvard School of Medicine, Boston, MA; [3]University of Kansas Medical Center, Kansas City, KS; [4]University of Alabama at Birmingham, Birmingham, AL; [5]New York University, New York, NY; [6]Vanderbilt University, TN; [7]University of Michigan, Ann Arbor, MI; [8]National Heart Lung and Blood Institute, Bethesda, MD

Introduction: Linking hospitalized smokers to outpatient cessation services has been shown to be efficacious. In 2010, the National Institutes of Health (NIH) funded 7 studies testing the effectiveness of alternative inpatient interventions to reduce smoking, some connecting smokers to outpatient counseling and/or medications. The studies created the Consortium of Hospitals Advancing Research on Tobacco (CHART) to foster collaboration and build a merged database for over 9,500 enrolled participants. We pooled data from 6 CHART studies to evaluate the role of race-ethnicity on variations in tobacco use and confidence in quitting.

Methods: Baseline data from the Alabama, Kansas, Massachusetts, Michigan, New York, and Oregon sites, were collected for hospitalized smokers who were planning to remain abstinent from cigarettes after discharge. Data included patient demographics, cigarettes/day, other tobacco use, and confidence in quitting. Self-reported race-ethnicity at enrollment included non-Hispanic White (NHW), non-Hispanic Black (NHB), Hispanic, Native American/Alaska Native (NAAN), Asian/Pacific Islander (API), ≥2 races, and other race.

Variations in smoker characteristics by race-ethnicity were conducted using chi-square and ANOVA.

Results: Of 5708 smokers planning to remain abstinent post discharge, 59% were NHW, 24% NHB, 11% Hispanic, 5% ≥2 races, and 1% (each) were NAAN and API. Patients differed significantly by race-ethnicity ($p < .001$) for age, gender, education level and insurance type. Mean age ranged from 45 years (API) to 49 years (NHW); males were 42% (NAAN) to 88% (API); having ≥high school/GED were 45% for ≥2 races to 64% for Hispanic; and private insurance type was 15% for NHB to 42% for ≥2 races. Cigarettes/day (CPD) and confidence in quitting varied significantly ($p < .001$) by race-ethnicity. NHB had the lowest CPD (9), while NHW had the highest (14). Being fairly/very confident in quitting ranged from 51% (NHW) to 66% (Hispanics). Overall, 9% reported other tobacco use, with insignificant (p=.184) differences by race-ethnicity.

Conclusion: Racial and ethnic variations in important baseline smoker characteristics underscore the need for more research to understand what, if any, impact such variations have on long term quitting. Pooled data enabled cross-site analyses that limited individual site analyses of race-ethnicity data.

CORRESPONDING AUTHOR: Jeffrey L. Fellows, PhD, Kaiser Permanente Center for Health Research, Portland, OR, 97227; jeffrey.fellows@kpchr.org

6:00 PM-7:00 PM C119

PREDICTORS OF HEALTH BEHAVIORS DURING A COLLEGE NATIONAL CHAMPIONSHIP SPORTS EVENT

Kristen E. Riley, M.A., Crystal Park, PhD

University of Connecticut, Storrs, CT

Introduction: Few studies have examined relations between college sporting events and maladaptive health behaviors among non-athlete college students. This issue is important because risky behavior can be dangerous in short- and long-term ways (e.g., alcohol poisoning, sexually transmitted infections, unwanted pregnancies, missing important deadlines, vandalizing, arrests), and there is a possibility for intervention (e.g. psychoeducation, condoms) with additional knowledge about risk factors and protective factors.

Method: 97 college students completed baseline measures and then a nightly survey about daily health behaviors (alcohol, eating, physical activity, sexual risk taking, smoking) for 11 days. The National Championship game was on the 9th day of the study.Results: The sample reported a mean of 3.24 alcoholic beverages consumed, and 24.3% reported missing an important commitment the following day. Six incidents of sexual risk taking behavior were reported. Bivariate correlations indicated that baseline stress, rumination, and neuroticism predicted increased poor eating and sexual risk taking behavior while baseline mindfulness predicted less poor eating and less alcohol consumption. Hierarchical linear modeling indicated that all maladaptive health behaviors significantly increased the day of the sporting event compared to individuals' baseline levels ($p < .05$). Further, rumination significantly predicted an increased spike in maladaptive health behaviors such as alcohol use and sexual risk taking behavior on the day of the game ($p < .05$).

Discussion: Identified risk factors for maladaptive health behaviors include stress, neuroticism, and rumination, and a protective factor is mindfulness. It is important to empirically test what interventions may work to make large sports events on campus safer for students (condoms, reminder emails, mindfulness interventions for at risk groups, etc.). More descriptive and intervention research is needed.

CORRESPONDING AUTHOR: Kristen E. Riley, M.A., University of Connecticut, Storrs, CT, 06269; kristen.riley@uconn.edu

6:00 PM-7:00 PM C120

PROVIDING A "DON'T KNOW" RESPONSE OPTION CHANGES POPULATION PERCEIVED RISK ESTIMATES

Marc T. Kiviniemi, PhD[1], Erin M. Ellis, PhD[2], Heather Orom, PhD[3], Erika A. Waters, PhD, MPH[4], Jennifer Hay, PhD[5]

[1]University at Buffalo, SUNY, Buffalo, NY; [2]National Cancer Institute, Silver Spring, MD; [3]University at Buffalo, Buffalo, NY; [4]Washington University School of Medicine, St Louis, MO; [5]Memorial Sloan Kettering Cancer Center, New York, NY

BACKGROUND: Perceived risk is a central construct in health decision making and is frequently measured in both basic research and intervention studies. A non-trivial portion of individuals (2%-50%, depending on the population and study features) report that they don't know their risk for a given health problem. However, many risk perception studies do not provide a "don't know" response option. We examined how providing versus not providing an explicit don't know option impacted both the number of don't know responses provided and, more importantly, how providing (versus not providing) a don't know option affected estimates of population perceived risk.METHOD: 960 adults took part in an online survey. Participants reported perceived absolute and comparative risk for heart disease, colon cancer, skin cancer, and automobile accidents. They were randomly assigned to receive risk questions that either did (DK Option) or did not (No DK Option) have a "don't know" category included in the response options.

RESULTS: In the DK Option condition, "don't know" answers ranged from 3.5% of responses (absolute-automobile accident) to 12.7% (comparative-colon cancer). In the No option condition, the highest frequency of skipping/not answering was 0.9% (absolute-heart disease). For all four of the absolute risk questions, the population estimate of risk was significantly higher in the DK Option condition relative to the No Option condition; all Fs (1, 932) < 3.79, all ps < .05. Examination of the distributions of responses suggested that this was due to an increased clustering of responses in the lowest risk category in the No DK Option condition. There was no difference by condition for the comparative risk questions.

DISCUSSION: Absolute risk perceptions were significantly different when participants were given a "don't know" option than when no option was provided. For research describing population risk or examining the relation of population risk to other constructs, these findings have implications for assessing the validity of measured risk estimates and of relations between constructs.

CORRESPONDING AUTHOR: Marc T. Kiviniemi, PhD, University at Buffalo, SUNY, Buffalo, NY, 14214; mtk8@buffalo.edu

6:00 PM-7:00 PM C121

SURROGATE-OLDER PATIENT DISCREPANCIES ON READINESS TO COMPLETE ADVANCE CARE PLANNING BEHAVIORS

Donya Sorensen, M.A.[1], Mark L. Robbins, PhD[2], Andrea L. Paiva, PhD[3], Colleen A. Redding, PhD[4], Miryam Yusufov, MA[5], Terri Fried, MD[6]

[1]University of Rhode Island, Cranston, RI; [2]University of Rhode Island, Kingston, RI; [3]University of Rhode Island / Cancer Prevention Research Center, Kingston, RI; [4]Cancer Prevention Research Center/ University of Rhode Island, Kingston, RI; [5]Cancer Prevention Research Center, Kingston, RI; [6]Yale, School of Medicine, New Haven, CT

Advance care planning (ACP) is a framework used to describe the process of end-of-life care planning. ACP includes four behaviors: completing a living will documenting end-of-life wishes, appointing a health care proxy, discussing the use of interventions with loved ones, and discussing quality versus quantity of life with loved ones. Older patients, even those who have documented a living will and health care proxy, often insufficiently communicate their ACP wishes with loved ones and physicians. This study examines the level of agreement between older patients and their surrogates on readiness to complete the four ACP behaviors as measured by the Transtheoretical Model (TTM) construct, Stage of Change. Difference scores between the surrogate Stages of Change and that of their older patient counterpart reflected discrepancies in readiness for ACP behaviors. Analyses of Variance (ANOVAs) and correlations were used to examine relationships between Discrepancy and a series of surrogate variables: age, race, gender, experience with medical decision making, relationship to the older patient, frequency of contact, perceived Pros and Cons of ACP. Stage of Change distributions revealed surrogates were more ready to participate in ACP behaviors than the older patients. Increased surrogate age was associated with less agreement on readiness to engage in creating a living will (r=.140, p< .05). Female gender (η^2=.028, p=.02) and higher surrogate ratings on Pros was associated with more agreement in discussing interventions (r=-.559, p<.01). Higher surrogate ratings of Cons was significantly associated with less agreement to discuss interventions, (r=.246, p<.01), and more agreement to discuss quality versus quantity of life (r=-.218.p< .01). The present results appear to be mixed and longitudinal research may clarify these relationships. Given that surrogates appear to be more willing to participate in ACP than older patients, they may play an important role in older patients' readiness to complete ACP behaviors.

CORRESPONDING AUTHOR: Donya Sorensen, M.A., University of Rhode Island, Cranston, RI, 02920; donyasorensen@gmail.com

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READINESS TO QUIT SMOKING AND SMOKING CESSATION TREATMENT PREFERENCES AMONG PATIENTS IN MULTIDISCIPLINARY PAIN CLINICS

Anayansi Lombardero, M.A.[1], Duncan G. Campbell, PhD[1], Patrick J. Davis, PhD[2], Holly E. Schleicher, PhD[3]

[1]The University of Montana, Missoula, MT; [2]St. Patrick Hospital, Missoula, MT; [3]Advanced Pain & Spine Institute of Montana, Missoula, MT

Smoking and chronic pain are significant public health concerns, as patients with chronic pain smoke at higher rates than the general population (Zvolensky, McMillan, Gonzalez, & Asmundson, 2009). Using survey methodology, we examined smoking prevalence, readiness to quit, and cessation treatment preferences in patients of two multidisciplinary pain treatment centers (N=97). Lifetime smoking prevalence (100+ cigarettes) was 62%; current smoking prevalence was 36%. Among current smokers, 72% reported smoking to manage pain [17% "always," 33% "quite often," and 22% "seldom"]. The top methods used by current smokers in previous quit attempts were: "cold turkey" (21%), gradual cutting down (15%), electronic cigarettes (12%), nicotine patches (10%), and Chantix (9%). Regarding readiness to quit, 66% of current smokers were considering quitting in the next 6 months, with 50% of these smokers planning to quit in the next 30 days. 87% of smokers reported openness to using smoking cessation medications. The preferred provider choices for help with quitting were a physician (21%) or a counselor/other mental health professional (21%), followed by a registered nurse (17%), physical therapist (14%), and pharmacist (14%). When queried about concurrent treatment targets in smoking cessation interventions, patients wanted to focus on pain management (23%), depression (23%), anxiety (19%), and the interactive pain-smoking relationship (15%). Most smokers in chronic pain treatment want to quit and many are amenable to support in doing so. Smoking cessation treatments for delivery in pain clinics should target concurrent depression, anxiety, and the use of smoking as a pain-coping strategy.

CORRESPONDING AUTHOR: Duncan G. Campbell, PhD, The University of Montana, Missoula, MT, 59812; duncan.campbell@mso.umt.edu

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RELATIONSHIP BETWEEN SMOKING BEHAVIOR AND ACTIVITY SPACE IN KOREAN AMERICAN YOUNG ADULTS

Eldin Dzubur, MS[1], Malia Jones, PhD, MPH[2], Jimi Huh, PhD[1]

[1]University of Southern California, Los Angeles, CA; [2]Keck School of Medicine of USC, Los Angeles, CA

Objective: Advances in developing smoking cessation strategies for young adults continue to face challenges in minority groups such as Korean-Americans where cultural norms favor smoking. Recent findings have shown that Korean young adults perceive greater social acceptability for smoking at Korean-owned businesses, suggesting a greater likelihood of smoking associated with certain locations. Rapid adoption of smartphones presents an opportunity for researchers to monitor location data in real-time and prompt participants with surveys or interventions based on geospatially sensitive cues. This study examines geospatial data obtained through ecological momentary assessment (EMA) on Korean-American young adult smokers to determine whether participants' activity spaces differ depending on whether they are smoking or not. Methods: 78Korean-American young adults (ages 18-25) were monitored for a period of 7 days using a smartphone application developed to prompt and record survey responses and geospatial location data. Random prompts occurred across 5 time windows each day. Event-contingent prompts were programmed to occur immediately after a participant indicated they were about to smoke a cigarette. ESRI ArcMap 10.1 was used to plot GPS coordinates of participants. For each participant, activity space areas for random and event-contingent prompts were derived using two methods: minimum bounding geometry and 2-standard deviational ellipses. Results: A Winsorized paired sample t-test revealed that the random and event-contingent convex hull areas were significantly different in size ($p < 0.001$). Similar results were found when ellipse areas were examined ($p < 0.001$). On average, event-contingent activity spaces were 27.3 km^2 and 77.8 km^2 smaller than random activity spaces for hulls and ellipses, respectively. Subsequent ANOVAs revealed no differences in age or gender. Conclusions: The study found that smokers, on average, show markedly smaller activity spaces when smoking compared with other everyday behaviors. Moreover, the ability to replicate results across multiple geospatial analytic methods supports robustness of our findings. These results suggest a promising target for just-in-time adaptive interventions through real-time geospatial monitoring on smartphones.

CORRESPONDING AUTHOR: Eldin Dzubur, MS, University of Southern California, Los Angeles, CA, 90032; dzubur@usc.edu

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RXCOACH™: A MOBILE APP TO INCREASE TOBACCO CESSATION MEDICATION ADHERENCE

Judith Gordon, PhD[1], Myra Muramoto, MD, MPH[1], James Cunningham, PhD[1], Julie Armin, MA, ABD[1], Steven Christiansen[2], Thomas Jacobs[2]

[1]University of Arizona, Tucson, AZ; [2]InterVision Media, Inc., Eugene, OR

Introduction: Although effective tobacco cessation medications exist, the impact of these medications is diminished by lack of adherence. Factors that are commonly associated with poor adherence to medication therapy include: side effects, poor patient-provider communication, and complicated dosing schedules. A mobile health app could help overcome these barriers. We developed and evaluated *RxCoach*™, a mobile app to increase adherence to varenicline.

Methods: The study consisted of 3 stages: 1) Development: app content creation, interface design, prototype app programming and revisions based on input from our consultant, iterative focus groups, and user testing with 15 smartphone users; 2) Feasibility test of the prototype app with five participants; and 3) Supplemental development and testing of a barcode scanning feature with 10 participants.

Results: At 1 month, 80% of participants reported current use of varenicline. The average number of days reported for taking medication was 28 out of the past 30 days. All participants (n=5) reported never forgetting to take their medication. 40% of participants reported refilling their prescription once, 40% twice, and 20% did not refill (due to side effects). At 3 months, 20% reported using varenicline, as 60% had finished their course of treatment, and 20% had stopped due to side effects. The mean number of days of use was 63.7 over the past 90 days. 75% of participants reported never forgetting to take their medication. 20% reported refilling their prescription once, and 60% reported filling their prescription three times (the maximum) over the past 90 days. Participants liked the program overall, thought it was easy to use, found it helpful, and would recommend it to others.

Conclusions: The use of *RxCoach*™ resulted in good medication adherence, received high consumer satisfaction ratings, and demonstrated substantial feasibility and usability. We plan to expand devices, and include all tobacco cessation medications.

CORRESPONDING AUTHOR: Judith Gordon, PhD, University of Arizona, Tucson, AZ, 85719; judithg@email.arizona.edu

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SOCIAL CONTEXTS OF MOMENTARY URGE TO SMOKE AMONG KOREAN AMERICAN YOUNG ADULTS

Jimi Huh, PhD, Matthew G. Kirkpatrick, PhD, Genevieve F. Dunton, PhD, MPH, Adam M. Leventhal, PhD

University of Southern California, Los Angeles, CA

Background: Young Korean American smokers anecdotally report that social contexts heavily influence momentary urge to smoke, leading to frequent smoking in group settings. These young smokers also tend to perceive smoking as a culturally-acceptable social behavior and overestimate the smoking prevalence among Korean Americans. Here, we used ecological momentary assessment (EMA) to test whether and how social contexts influence the association between urge to smoke and affective states for these young smokers. Methods: Seventy eight Korean American young adults (28% Female; Mean±SD age = 22.4±1.79) participated in a 7-day mobile-based EMA study. Participants responded to both signal-contingent (random) and event-contingent (smoking) prompts. At each prompt, participants were asked to report their mood, urge to smoke, and who they had been with in the last 15 minutes prior to the prompt. Multilevel models were conducted to examine the effects of negative affect on urge to smoke and the moderating effect of social contexts. Results: When reporting more negative affect than her/his average level, participants reported greater urge to smoke (est=.42, $p < 001$). The positive association between negative affect and urge to smoke did not vary depending on who they were with (i.e., non-significant interaction). However, being with their Korean/Korean American peers also increased urge to smoke (est=.08, p=.037), but being with non-Korean American peers or being with family did not increase the urge to smoke, relative to when they were alone. Additionally, being with Korean friends increased the urge to smoke compared to other non-Korean American peers (est=.03, p=.018), suggesting that social contexts incrementally increased the urge to smoke (that is, alone being the weakest social context and Korean peers being the strongest). Discussion: For these young smokers, their Korean/Korean American peers may serve as context-cued stimuli. The findings have implications for interventions and emphasize the importance of addressing these young smokers' social contexts/space.

CORRESPONDING AUTHOR: Jimi Huh, PhD, University of Southern California, Los Angeles, CA, 90032-3628; jimihuh@usc.edu

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THE ASSOCIATION OF LIVING WITH A SMOKER TO LOW PHYSICAL ACTIVITY, UNHEALTHY DIET, AND OBESITY

Charles Holahan, PhD, Carole K. Holahan, PhD

University of Texas at Austin, Austin, TX

Living with a smoker is linked to increased risk for heart disease, lung cancer, and other respiratory illnesses. This increased health risk is assumed to be a function of exposure to second-hand smoke. However, the possibility that living with a smoker fosters a broader household culture of negative health behaviors is largely unstudied. Two areas of research provide a foundation for this hypothesis. Health behaviors of different types, such as smoking, low physical activity, and poor diet, cluster within individuals. Moreover, the capacity for the same health behavior to spread between individuals has been observed for smoking, physical activity, and healthy eating, as well as for obesity. Here, we integrate these two areas of research in a novel way. The present study tests an innovative model linking living with a smoker to low physical activity, unhealthy diet, and obesity. The study involved secondary analyses with baseline self-report data from the Women's Health Initiative (WHI) Observational Study. The WHI Observational Study included 93,676 women who were between 50 and 79 years of age at enrollment and were postmenopausal. The inclusion of participants from racial/minority groups proportionate to their age-group representation in the U.S. was a priority. Among women not living alone, 6,675 women (12% overall; 28% of African American women and 26% of women in low income families of < $20,000 annually) reported living with a smoker. Effect sizes were estimated in cross-sectional logistic regression analyses. To adjust for demographic confounding and non-random mating, all analyses controlled for age, education, income, ethnicity, and living alone. Effects were examined separately in the full sample and among never smokers. Living with a smoker was associated with increased odds of: (a) low physical activity (exercise MET hours/week, median split) of 41% in the overall sample and 34% among never smokers, (b) a high fat diet (>30% calories from fat) of 72% in the overall sample and 55% among never smokers, and (c) obesity ($BMI \geq 30$) of 21% in the overall sample and 48% among never smokers. All effects were significant beyond the .01 level. Understanding the role of social ties in health has potential to advance population health and to reduce health disparities.

CORRESPONDING AUTHOR: Charles Holahan, PhD, University of Texas at Austin, Austin, TX, 78712; holahan@utexas.edu

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THE EFFECT OF ACUTE EXERCISE ON CIGARETTE CRAVINGS WHILE USING A NICOTINE LOZENGE

Amelia Tritter, MA[1], Lyndsay Fitzgeorge, PhD[2], Harry Prapavessis, PhD[1]

[1]Western University, London, ON, Canada; [2]Fanshawe College, London, ON, Canada

Rationale: It is imperative that smoking cessation aids effectively alleviate cigarette craving and withdrawal symptoms because their intensity has shown to predict relapse. The nicotine lozenge is a pharmacotherapy that has shown to reduce intense episodic cravings. Likewise, research has also shown that a single session of exercise can provide relief from craving for smokers who are both temporarily abstaining and undergoing a real quit attempt. These two efficacious monotherapies have distinct mechanics pathways and applying them concurrently may provide additive craving relief benefit. *Objective:* To examine whether an acute bout of moderate intensity exercise provides additional craving relief to the NRT lozenge in recently quit smokers. *Results:* Thirty recently quit smokers were randomized to either the experimental (exercise and lozenge) or control (lozenge alone) condition. *Result:* A significant condition by time interaction effect was found for craving, $F(6, 23) = 2.70$, $p = .039$, Wilks' $\Lambda = .59$, $\eta_\rho^2 = .41$. While both conditions demonstrated reductions in craving, the reduction was significantly greater for the experimental group. *Conclusion:* These findings demonstrate that an acute bout of exercise provides additional craving relief to the nicotine lozenge in recently quit smokers. We recommend smokers who attempt to quit employ both cessation aids simultaneously to maximize reductions in cravings.

CORRESPONDING AUTHOR: Harry Prapavessis, PhD, Western University, London, ON, N6A 3K7; hprapave@uwo.ca

6:00 PM-7:00 PM C128

CAN RELIGION/SPIRITUALITY PREVENT BURNOUT AMONG EMERGENCY DEPARTMENT PHYSICIANS?

Elena Salmoirago-Blotcher, MD, PhD[1], George Fitchett, DMIn, PhD[2], Kathy Leung, MA[3], Gregory Volturo, MD[3], Edwin Boudreaux, PhD[4], Farr Curlin, MD[5]

[1]The Miriam Hospital & Alpert Medical School of Brown University, Providence, RI; [2]Rush University, Chicago, IL; [3]University of Massachusetts, Worcester, MA; [4]University of Massachusetts Medical School, Worcester, MA; [5]Duke University, Durham, NC

Background Burnout is highly prevalent among Emergency Department (ED) physicians and has significant impact on quality of care and workforce retention. The role of Religion/Spirituality (R/S) on the prevention of burnout has received limited attention. This aim of this pilot cross-sectional study was to assess whether higher R/S may be associated with reduced burnout among ED physicians.Methods A random sample of ED physicians from the Massachusetts Association of Emergency Physicians (MACEP) mailing list received a link to a confidential on-line survey, followed by a paper copy by mail. Burnout was measured using a 2 items form of the Maslach inventory. R/S metrics included intrinsic religiosity; religious affiliation; frequency of worship attendance and prayer; religious observance of a day of rest; and self-rated spirituality. Confounders included demographics, years in ED, type of hospital setting, and weekly hours dedicated to direct patient care. Linear regression was used to model burnout (continuous score) as a function of the different R/S predictors. Results are presented as unadjusted and adjusted β coefficients with 95% confidence intervals. The study was approved by the UMass Institutional Review Board. Results The mean age of our sample (n= 136) was 48 yrs (range: 32-83); 71% were male, 90% married and 80% white. Physicians had worked in the ED for an average of 16 yrs. Forty percent worked in academic hospital and 54% in community hospitals. About 25% reported no religious affiliation; 26% were Catholic, 20% Jewish, 14% Protestant, 15% other denominations. The prevalence of burnout was 27%. Physicians reporting greater intrinsic religiosity (β=1.84, CI=0.23 to 3.45, p= 0.02); more frequent spiritual practice (β=-1.34, CI=-2.80 to 0.11, p=0.07); and higher self-rated spirituality (β=-1.76, CI=-3.69 to 0.17, p=0.07), vs. doctors with low scores, had lower burnout, independently of important covariates. Burnout was consistently and inversely associated with the remaining R/S predictors although associations did not reach statistical significance.Conclusion This analysis suggests that R/S may have an independent protective effect on burnout among ED physicians. These findings deserve to be confirmed in prospective cohort studies involving a large and more diverse ED physicians' population

CORRESPONDING AUTHOR: Elena Salmoirago-Blotcher, MD, PhD, The Miriam Hospital & Alpert Medical School of Brown University, Providence, RI, 02903; Elena_Salmoirago-Blotcher@brown.edu

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CHANGES IN RELIGIOUS INVOLVEMENT AND HEALTH BEHAVIORS AND OUTCOMES OVER 4 YEARS IN AFRICAN AMERICANS

Jin Huang, PhD, MS[1], David Roth, PhD[1], Eddie Clark, PhD[2], Daisy Le, MPH/MA[3], Cheryl L. Holt, PhD[4]

[1]Johns Hopkins University, Baltimore, MD; [2]Saint Louis University, Saint Louis, MO; [3]University of Maryland, College Park: CHAMP LAB, Silver Spring, MD; [4]University of Maryland, College Park, MD

African Americans are disproportionately affected by most adverse health conditions as compared to other racial/ethnic groups. There are a number of social and cultural factors associated directly or indirectly with health behaviors and outcomes in African Americans, including but not limited to religious involvement. Cross-sectional studies have documented positive associations between religious involvement and physical and emotional health outcomes in African Americans, and prospective, longitudinal studies are now needed to examine the temporal nature of these relationships. This study examined changes in religious beliefs and behaviors and a variety of health-related variables over a four-year period in a national probability sample of 3,173 African Americans (39% retained at four years). Of 20 variables assessed for differential attrition, only self-esteem (those retained had higher self-esteem) and depressive symptoms (those retained reported fewer depressive symptoms) were significant ($p < .01$; $p < 05$, respectively). Cross lagged panel analyses examined two patterns of change over time: 1) baseline health variables predicting change in religious beliefs or behaviors over time; and 2) religious beliefs or behaviors predicting change in health variables over time. Analyses were controlled for age, education, and sex. For the first set of paths, depressive symptoms at baseline predicted a significant reduction in religious beliefs from baseline to year four. For the second set of paths, religious beliefs at baseline predicted a significant decrease in depressive symptoms, a significant increase in physical functioning, and a significant increase in emotional functioning from baseline to year four. Religious behaviors at baseline were predictive of a significant decrease in heavy drinking, a significant decrease in physical functioning, and a significant decrease in emotional functioning from baseline to year four. There were notable sex differences, with some effects more evident and including more health behavior changes (e.g., fruit/vegetable intake; colorectal cancer screening) as a result of religious involvement for men. Findings suggest reciprocal causality, where health status and religious involvement have mutual and complementary influences on each other over time.

CORRESPONDING AUTHOR: Cheryl L. Holt, PhD, University of Maryland, College Park, MD, 20742; cholt14@umd.edu

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EVALUATION OF THE 40-DAY JOURNEY TO BETTER HEALTH IN PHILADELPHIA AREA CHURCHES

Nicole Vaughn, PhD[1], Beatriz Reyes, MPH[1], Elizabeth Dalianis, MPH, MA[1], Crystal Wyatt[1], Kimberly Arnold, MPH[1], Darryl Brown, PhD[1], Maria Battle, MBA[2]

[1]Drexel University School of Public Health, Philadelphia, PA; [2]AmeriHealth Caritas Family of Companies, Philadelphia, PA

In Pennsylvania, currently 28.6% of the population is overweight or obese (CDC, 2013). Studies have shown that individuals with who lose weight, modify their eating behaviors and increase their physical activity can prevent or delay the onset of many chronic conditions such as diabetes, hypertension, and CVD. African Americans have the highest age-adjusted rates of obesity in the U.S. and are at increased risk for developing many chronic conditions (i.e., 49.5%; CDC, 2012). The "40-day Journey to Better Health", designed by AmeriHealth Caritas Partnership, is a program designed to target individuals to engage in changing their eating and exercise behaviors by using the DanielFast during the 2013 Lenten season. The Daniel Fast is a Bible-based program that promotes eating fruits, vegetables and whole foods during the 40 days of Lent. This research study was designed to evaluate the impact of the Daniel Fast on weight change behavior. Participants in the "40-Day journey to Better Health" study engaged in weekly group activities across 2 participating churches. We examined shopping behavior as well as clinical outcomes (i.e., weight, blood pressure, LDL, etc.) and nutrition knowledge. The active phase of this intervention study occurred within 2 churches over 7 weeks. The follow-up phase of the intervention occurred at 3 month after the conclusion of the health journey. Results: One hundred thirty-five participants enrolled across the 2 churches and completed at least one assessment. Weight loss data were collected at pre (i.e., at intake), post (i.e., 6 weeks) and at month 3. There was a statistically significant drop between baseline and post for weight, waist circumference and cholesterol ($p < .05$). Specifically, there was a 13 percent drop in total cholesterol across both churches' attendees ($p < .01$), a 10 percent drop in overall blood pressure among participants ($p < .05$) in one of the churches and an average weight loss of four pounds across both churches ($p < .01$). In addition, there was a one inch loss in waist circumference across both churches ($p < .05$). Finally, participants also reported a significant improvement in their overall well-being, including social and physical functioning, vitality and mental health. Participants also increased their awareness of nutrition content in foods and their willingness to try healthier foods and substitutes.

CORRESPONDING AUTHOR: Nicole Vaughn, PhD, Drexel University School of Public Health, Philadelphia, PA, 19104; nicole.vaughn@drexel.edu

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FAITH AND OTHER FACTORS THAT IMPEDE OR FACILITATE COLORECTAL CANCER SCREENING AMONG AFRICAN AMERICAN WOMEN

Crystal Y. Lumpkins, PhD, Candice R. Coffey, MD, Allen Greiner, MD, MPH

University of Kansas Medical Center, Kansas City, KS

Objective:African American women have the highest rates of colorectal cancer (CRC) of any female, racial/ethnic group in the US. Furthermore, African American women also have the highest mortality rate of colon cancer. This disparity among African Americans has been a topic of interest by researchers for more than a decade often concomitantly with other factors such as barriers that often hinder screening uptake. Research shows the faith community has a significant role in helping to increase awareness of cancer prevention. Because of the vital role faith-based organizations have in this community, CRC screening interventions that target African Americans are largely both culturally and religiously targeted. The purpose of this study was to explore perceptions about the church as a health promoter of CRC screening among African American women and how FBOs through this type of strategy can address barriers to screening. Screening knowledge, attitudes, barriers and preferences were also explored. Setting & Design: Focus groups were conducted at nine predominately African American churches in the Midwest. Focus groups were stratified by location (urban and suburban) and male and female gender. For this study, 13 groups were selected to analyze data among the female strata. Of these, 78 self-identified, African American women ages 34 -87 participated. An open coding process of the text was conducted for thematic findings.Results: Analysis was conducted using a coding system looking for thematic findings. Themes included; 1) *Fear*- fear that CRC diagnosis is a death sentence, 2) *Fatalism* – belief that diagnosis of CRC does not change outcome so need for screening is unnecessary, 3) *Denial* – belief that not knowing health status will make CRC diagnosis impossible, 4) *Knowledge* – lack of knowledge about CRC, diagnosis, treatment and an interest in more information, and 5) *Faith* - use of prayer for guidance in medical decision-making as well as prayer for healing and cure after CRC diagnosis.Conclusions: African American women affiliated with churches would be more likely to get screened for CRC if the church or leader within the church promoted screening either through the pulpit or with promotional materials. Furthermore, collaboration with a well-known cancer organization to create these faith-based materials would promote belief in the materials as accurate and trustworthy.

CORRESPONDING AUTHOR: Crystal Y. Lumpkins, PhD, University of Kansas Medical Center, Kansas City, KS, 66160; clumpkins@kumc.edu

6:00 PM-7:00 PM C132

PREDICTING PRENATAL CARE UTILIZATION: PREGNANCY INTENTION, MARITAL STATUS, EDUCATION AND RELIGIOSITY

Andrea Clements, PhD, Beth A. Bailey, PhD

East Tennessee State University, Johnson City, TN

Adequacy of prenatal care is predictive of maternal and child health, but can we reliably predict which women are likely to adequately utilize care? Women experiencing planned pregnancies are known to be more likely to have adequate prenatal care utilization than those with unplanned pregnancies, while some research has also linked being married and having higher levels of education with prenatal care compliance. Religiosity, defined in various ways, predicts a variety of healthy behaviors and good health outcomes; however, no studies to date have investigated religiosity in relation to prenatal care adherence. In this study, relationships among predictors of prenatal care utilization were explored in a sample of 782 women in Southern Appalachia. Demographic characteristics and church attendance frequency were reported via interview at entry to prenatal care, intrinsic religiosity was measured using the BMMRS during the third trimester, and Kessner Index indicating adequacy of prenatal care utilization was calculated from chart review data. Significant bivariate correlations among Kessner Index, demographic variables (marital status, education level), and other predictors (intendedness of pregnancy, church attendance, intrinsic religiosity) revealed all variables were significantly correlated with the exception of the religious variables with Kessner Index. Two hierarchical linear regression models predicting the religiosity measures revealed that the predictors as a set accounted for a very small proportion of variance in Kessner Index (R^2=.04), and only education remained a significant independent predictor in either model (β = .16, p < .001). Findings suggest religiosity was not related to adequacy of prenatal care utilization, but that lower education level may be a potential risk factor. Because none of the expected predictors, with the exception of education level, predicted who would and would not attend the recommended prenatal care visits in this population, it underscores the importance of educating ALL women as to the importance of prenatal care. Specifically encouraging all patients to attend prenatal care visits holds out the most promise to positively impact both maternal and infant health in this area.

CORRESPONDING AUTHOR: Andrea Clements, PhD, East Tennessee State University, Johnson City, TN, 37614; clements@etsu.edu

6:00 PM-7:00 PM C133

RELIGIOUS ORIENTATION AND UNPROTECTED VAGINAL SEX AMONG YOUNG ADULT WOMEN

Cecilia Bess, B.A., Jennifer Brown, PhD, Amelia E. Talley, PhD, Andrew Littlefield, PhD

Texas Tech University, Lubbock, TX

Young adult women engage in sexual behaviors that may compromise their health (e.g., unprotected sexual intercourse) and contribute to STI health disparities. High religiousness has been associated with lower contraception use and less sexual health knowledge. However, the relation between religious orientation (i.e., intrinsic and extrinsic) and risky sexual behavior has been understudied. This study investigated the relation between religious orientation and the likelihood of reporting unprotected vaginal sex (i.e., most recent sexual encounter, past month) among a sample of female college students (N = 384; 18 - 34 years; M = 20.6 years) from a large Southwestern university. Participants completed an online survey with measures of religious orientation and sexual behaviors. Logistic regression analyses were conducted among participants reporting vaginal sex (a) at their most recent sexual episode (n = 244) or (b) during the past month (n = 130) to examine the association between religious orientation and the occurrence of unprotected vaginal sex, adjusting for participant age and having a religious affiliation. Those with greater intrinsic religious orientation (i.e., who live according to their religious beliefs) were more likely to report the use of a condom for their most recent sexual encounter (AOR = 1.06, 95% CI 1.01 – 1.11), with no differences in condom use during the past month (AOR = 1.03, 95% CI 0.97 – 1.08). Extrinsic religious orientation was unassociated with the likelihood of reporting condom use at the last sex (AOR = 0.97, 95% CI 0.91 – 1.04) or in the past month (AOR = 1.05, 95% CI 0.98 – 1.12). Additional research is needed to determine under what situations intrinsic and extrinsic religious orientations predict more or less risky sexual behavior.

CORRESPONDING AUTHOR: Cecilia Bess, B.A., Texas Tech University, Lubbock, TX, 79416; cecilia.bess@gmail.com

6:00 PM-7:00 PM C134

SPIRITUAL CHANGES OCCURRING IN BREAST CANCER SURVIVORS

Paige Wimberley, PhD, APRN, CNS, CNE

Arkansas State University, State University, AR

Narratives of breast cancer survivors (BCS) often include descriptions of the women's spiritual practices. Semi-structured interviews were conducted with 15 BCS about their lives since being diagnosed and treated for breast cancer. The participants ranged in age from 36-65 at time of diagnosis, and were 41-76 when interviewed. Spiritual practices were expected to be well established. Interpretive phenomenology was used to analyze the interviews and revealed changes occurred over the course of the illness in their spiritual practices. Three major themes emerged: Personal relationship with God, God is revealed through the Bible, people, and nature, and lack of recognition of spiritual needs by the current healthcare system. With one exception participants stated they were now closer to God and felt a greater desire to minister to others by sharing what had happened to them; focused more on relationships with families and God; and experienced a decrease in the importance of material possessions. The participants valued knowing their healthcare providers were believers, prayed, and were willing to share this with them. The major limitation of this study was the geographical location; all participants were from the region referred to as the Bible Belt where open belief in God is culturally supported.

CORRESPONDING AUTHOR: Paige Wimberley, PhD, APRN, CNS, CNE, Arkansas State University, State University, AR, 72467; pwimberley@astate.edu

6:00 PM-7:00 PM C135

SPIRITUALITY IS ASSOCIATED WITH LESS DIFFICULT PROSTATE CANCER TREATMENT DECISION MAKING

Michelle Mollica, PhD, RN, OCN[1], Willie Underwood, MD, MPH, MSci[2], D. Lynn Homish[3], Heather Orom, PhD[4]

[1]University at Buffalo School of Public Health and Health Professions, Newfane, NY; [2]Roswell Park Cancer Institute, Buffalo, NY; [3]University at Buffalo School of Public Health and Health Professions, Buffalo, NY; [4]University at Buffalo, Buffalo, NY

Background: Most prostate cancer (PCa) patients face a challenging decision between multiple treatment modalities associated with serious, yet different side-effect profiles, and a lack of evidence for the superior effectiveness of one treatment over another. Faith and spirituality can help PCa patients cope with the fear and shock of a cancer diagnosis and is associated with better quality of life in survivorship. However, it is not known whether spirituality helps cancer patients cope with uncertainty and stress associated with treatment decision-making.Purpose of Study: The goal of our study was to examine whether spiritual beliefs (e.g. a belief that 'whatever happens with my illness, things will be okay') function as resources during the treatment decision-making process and are associated with lower decisional conflict, decision difficulty, and greater satisfaction with the decision-making process.Methods: Participants were 1072 men diagnosed with clinically localized PCa who had recently made their treatment decision, but had not yet been treated. We used multivariable linear regression to analyze the relationship between spirituality and decision-making difficulty and satisfaction and decisional conflict, controlling for self-reported Gleason score, PSA, educational level, employment status, race/ethnicity, age at diagnosis, and perceived social status, and recruitment site. Results: Greater spirituality was associated with lower decision-making difficulty (b=-0.09; p < 0.001), and decisional conflict (b= -0.45; p < 0.001) and higher decision-making satisfaction (b=0.02; p < 0.001). Minorities experienced more decisional conflict and lower satisfaction compared to non-Hispanic White participants. Conclusions and Implications: Results confirm that spiritual beliefs may contribute to resilience in the face of cancer diagnosis and the stress and uncertainty is common among PCa patients when they make their treatment decision. These spiritual resources may help men make meaning out of their illness experiences or be more optimistic about treatment outcomes. Providing opportunities for patients to discuss their spiritual beliefs in the context of their diagnosis and treatment decision-making could help reduce patient uncertainty and stress during treatment decision-making.

CORRESPONDING AUTHOR: Michelle Mollica, PhD, RN, OCN, University at Buffalo School of Public Health and Health Professions, Newfane, NY, 14108; mm89@buffalo.edu

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6:00 PM-7:00 PM C136

STRESS-BUFFERING EFFECTS OF HOPE ON DEPRESSIVE SYMPTOMS AND HEALTH RELATED QOL IN PERSONS WITH INSOMNIA AND MILD DEPRESSION

Jessie SM Chan, PhDcandidate, MPH[1], Cecilia LW Chan, PhD[1], Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA[2]

[1]The University of Hong Kong, Hong Kong (SAR), China, Peoples Rep; [2]The University of Hong Kong, Hong Kong, China, Peoples Rep

Background: Stress influences depressive symptoms and also health related quality of life. Hope is an important protective coping resource. However, the role of hope in adjusting to stress usually was neglected. This study aims to investigate the effects of hope on associations between stress level, depressive symptoms and health related quality of life among people with mild depression. Methods: 225 participants with sleep complaints in the community were screened for depressive disorder by Chinese version Center for Epidemiologic Studies Depression Scale (CES-D). Outcome measures included CES-D, Pittsburgh Sleep Quality Index (PSQI), perceived stress scale (PSS), adult trait hope scale (ATHS) and SF-12 for health related quality of life (HRQoL). Correlation coefficient and partial correlation coefficient analyses were conducted. Results: The mean age was 55.7 (SD = 9.2). The majority were female (n=172, 76.4%). Participants had higher perceived stress level (PSS: mean = 20.8, SD = 3.9), severe sleep disturbance [PSQI: 13.3 (3.0)], mild to moderate depression [CES-D: 21.8(6.6)] and poor HRQoL [SF-12 Physical component scale (PCS) = 39.8 (SD=8.8) and mental component scale (MCS) = 42.1 (8.5)].We found that stress was positively associated with CES-D (r = 0.479, p < .001) and negatively associated with HRQoL (PCS: r = - 0.184, p= .006; MCS: r = - 0.375, p < .001) and hope scale (r= - 0.420, p < .001), but not for PSQI (r = 0.009, p = .902). CES-D was negatively associated with HRQoL (PCS: r = - 0.186, p=.005; MCS: r= - 0.550, p < .001). However, hope was negatively associated with stress (PSS: r = -0.420, p < .001) and CES-D (r = -0.483, p < .001), and positively associated with HRQoL (PCS: r = 0.209, p=.002; MCS: r = 0.376, p < .001), but not for PSQI (r = -0.047, p=.532).Controlling for hope, the association between stress and CES-D was reduced (r = 0.346, p < .001), as well as MCS (r = -0.257, p < .001), but not for PCS (r = -0.108, p=.108). The correlation coefficient was also reduced between CES-D and MCS (r = 0.451, p < .001), but not for PCS (r = -0.096, p=.155). Conclusion: This study showed that hope had mediating effects on associations between stress and depressive symptoms and HRQoL. It implied that hope had stress buffering effects on the adjustment of depressive symptoms and HRQoL.

CORRESPONDING AUTHOR: Jessie SM Chan, PhDcandidate, MPH, The University of Hong Kong, Hong Kong (SAR), 852; chansm5@hku.hk

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6:00 PM-7:00 PM C137

THE IMPACT OF SOCIAL ACTIVITY AND SOCIAL SUPPORT ON SPIRITUAL WELL-BEING IN HEALTHY OLDER ADULTS

Christina P. Moldovan, MA, Imari-Ashley F. Palma, MA, Clint Norseth, MA, K'dee Elsen, BA, Adrianna Holness, MA, Floribeth Rivera, MA, Robert Weise, MS, Adam L. Aréchiga, PsyD, DrPH, Sujatha Rajaram, PhD, Joan Sabaté, MD, DrPH

Loma Linda University, Loma Linda, CA

Prior reports indicated that subjective well-being, or self-reported satisfaction with life, is associated with positive health-related outcomes. For instance, individuals with higher levels of optimism have been shown to have a lower risk of heart disease, diabetes, and cancer in comparison to their pessimistic counterparts. In addition to protecting against disease, a sense of well-being has been associated with increased longevity, resilience, and healthy aging.Spirituality, or having a sense of purpose, meaning, or power from within or from a transcendent source, is another significant predictor of positive health outcomes. Spiritual well-being (SWB) is a novel concept developed to measure a dimension of spirituality that is linked to well-being.Prior researchers have found that social contact and having supportive relationships contribute to well-being. However, the impact of different sources of support on well-being has not been explored. Additionally, researchers have not currently examined predictors of SWB. Thus, the current study tested the influence of social activity and significant other, family, and friend support on SWB in healthy older adults. Participants were 365 adults ages 62-80 years (M = 69.57, SD = 3.90). The Spirituality Index of Well-Being measured SWB; the Social Activity Subscale of the Cognitive Reserve Questionnaire assessed level of involvement in social activities; and, the Multidimensional Scale of Perceived Social Support appraised three sources of social support: significant other, family, and friends.Regression analysis revealed that 20.6% of the variance in SWB was accounted for by social activity and significant other, family, and friend support, $F(4, 329) = 21.32$, $p < .001$. SWB was significantly predicted by social activity ($\beta = .206$, $t = 3.94$, $p < .001$) and family support ($\beta = .306$, $t = 4.68$, $p < .001$).Results revealed social activity and family support as new predictors of SWB, and confirmed prior findings indicating a relationship between social support and well-being. Outcomes from this study have major implications for healthcare providers and individuals, suggesting that social interventions may have a positive impact on SWB. Consequently, an increase in SWB may contribute to the prevention of illness in an aging population.

CORRESPONDING AUTHOR: Christina P. Moldovan, MA, Loma Linda University, Loma Linda, CA, 92354; cmoldovan@llu.edu

Saturday
April 25, 2015
8:45 AM-10:15 AM

Paper Session 37 8:45 AM-9:03 AM

HEALTH BELIEFS OF SOLDIERS ABOUT SEEKING PHYSICAL HEALTH SERVICES OVER TIME

Radhika Pasupuleti, PhD[1], Lisa McAndrew, PhD[2], Nicole Anastasides, M.S.[3], Karen S. Quigley, Ph.D.[4]

[1]WRIISC Veterans Affairs, East Orange, NJ; [2]Veterans Affairs, East Orange, NJ; [3]Department of Veterans Affairs, East Orange, NJ; [4]Department of Veterans Affairs, BEDFORD, MA

Not all soldiers and veterans receive needed healthcare. Known barriers to receiving mental healthcare among veterans include stigma, health beliefs, and logistical barriers (e.g., distance to hospital). Almost nothing is known about soldiers' or veterans' barriers to seeking healthcare for their physical health. Access to physical health healthcare is critical for soldiers and veterans, who are at higher risk of physical health problems after combat (e.g., chronic pain). The goal of this study was to describe soldiers' reasons for delaying seeking healthcare for their physical health and to assess changes in these beliefs over time. We hypothesized that soldiers would report fewer reasons for delaying physical healthcare over time.

The HEROES study is a prospective longitudinal study of 790 Army National Guard and Reserve Soldiers assessed prior to deployment and up to one year post-deployment (see McAndrew et al., 2013 for complete methods). Soldiers were asked to endorse the reasons that they delayed getting care for any physical health problems immediately post-deployment and one year post-deployment (n=210; responded at both time points).

Immediately post-deployment, almost half of the sample reported some reason for delaying healthcare seeking during the prior 12 months (during combat deployment). During deployment, soldiers were too busy (49%), could not get an appointment soon enough (12.4%), had to wait at the doctor's appointment (12.9%), did not think they would be able to help (21.4%), and did not want to know there was a problem (11.4%). One year post-deployment, soldiers reported fewer reasons for delaying seeking healthcare: too busy (24.3%); could not get appointment soon enough (10%); had to wait at the doctor's appointment (5.2%); did not think they would be able to help (4.3%); and did not want to know if there was a problem (1.4%). Additional analyses will be conducted to further explore these reasons.

All the barriers occur more frequently during deployment compared to the post-deployment period. Barriers such as a busy schedule are systemic issues that can be modified. Reasons such as not thinking they can get adequate help are beliefs that should be explored further. In addition, the need to further explore stigma and health beliefs for seeking physical health services will be discussed.

CORRESPONDING AUTHOR: Radhika Pasupuleti, PhD, WRIISC Veterans Affairs, East Orange, NJ, 08071; radhika.pasupuleti@va.gov

Paper Session 37 9:03 AM-9:21 AM

PTSD AND DISTRESS TOLERANCE IN A SAMPLE OF MALE VETERANS WITH COMORBID SUBSTANCE USE DISORDERS

Christine Vinci, Ph.D.[1], Natalie Mota, MA[2], Erin Berenz, Ph.D.[3], Kevin Connolly, Ph.D.[4]

[1]University of Texas MD Anderson Cancer Center, Houston, TX; [2]University of Manitoba, New Haven, CT; [3]Virginia Institute for Psychiatric and Behavioral Genetics, Virginia Commonwealth University, Richmond, VA; [4]Jackson VAMC/University of Mississippi Medical Center, Jackson, MS

Investigations into the mechanisms maintaining PTSD are lacking, and preliminary evidence in civilians indicates that the ability to tolerate distress may be one factor implemented in the maintenance of PTSD. Thus, the present study examined the relationship between PTSD and distress tolerance in a sample of predominately African American, male veterans (*n*=75) diagnosed with comorbid PTSD and a substance use disorder (SUD). High comorbidity between PTSD and SUD in veterans is common. Among OEF/OIF veterans diagnosed with PTSD, 76.1% also have a diagnosis of SUD, and about 73% of Vietnam veterans have been diagnosed with PTSD and a lifetime diagnosis of alcohol use disorder. Extending prior research, the current study hypothesized that veterans diagnosed with comorbid PTSD and SUD would demonstrate an inverse relationship between PTSD symptoms and distress tolerance. Measures utilized were: MINI International Neuropsychiatric Interview, Posttraumatic Stress Disorder Checklist, Distress Tolerance Scale, UPPS-P, and the Beck Depression Inventory. Separate hierarchical linear regression models examined whether distress tolerance predicted total PTSD symptom score, as well as 4 PTSD symptom clusters. Depression and impulsivity were controlled within each model. Results indicated that distress tolerance inversely predicted total PTSD symptom score (final model accounting for 32% of the variance), and 3 of the 4 symptom clusters also demonstrated significant inverse relationships (final models accounting for 22% of the variance for intrusions, 11% for avoidance, and 36% for hyperarousal). Thus, as ability to tolerate distress decreased, PTSD symptoms increased. Future studies may want to determine whether treatment incorporating distress tolerance skills would be useful for individuals undergoing PTSD treatment. To our knowledge, this is the first study to examine these relationships in a sample of predominately African American veterans with SUD.

CORRESPONDING AUTHOR: Christine Vinci, Ph.D., University of Texas MD Anderson Cancer Center, Houston, TX, 77054; cvinci28@gmail.com

Paper Session 37 9:21 AM-9:39 AM

IMPLEMENTING BLUE BUTTON IN VA PRIMARY CARE SETTINGS: SURVEY AND INTERVIEW FINDINGS

Lorilei M. Richardson, MS[1], Tana Luger, PhD[2], Jennifer N. Hill, MA[3], Kim Nazi, PhD[4], Howard Gordon, MD[5], Jeffrey Whittle, MD, MPH[6], Frances Weaver, PhD[3], Keith McInnes, ScD[7], Steven Simon, MD[8], Bridget Smith, PhD[3], Timothy Hogan, PhD[2]

[1]eHealth Quality Enhancement Research Initiative, Veterans Affairs, Bedford, MA; [2]VA CHOIR, Bedford, MA; [3]VA, Hines, IL; [4]Veterans and Consumers Health Informatics Office, Albany, NY; [5]VA, Chicago, IL; [6]VA, Milwaukee, WI; [7]VA, Bedford, MA; [8]VA, Jamaica Plain, MA

Implementation of VA's medical home model is intended to enhance the patient-centeredness of care delivery, particularly within its primary care settings. Technology can facilitate coordination, communication, and patient education, and is a critical component of VA's medical home model. My Health*e*Vet (MHV),VA's personal health record portal, has a variety of features that can support patient-centered care. Its Blue Button (BB) feature allows users to view, print, or download an electronic file comprised of self-entered information and extracts from their VA medical record–including clinical progress notes. Despite the potential of BB to support effective information sharing, use of the feature is low, and few resources exist to support its uptake in primary care. The objective of this study is to examine current perceptions and use of BB among VA primary care team members and to use these insights to design a toolkit to promote the adoption and integration of BB in VA's medical home model. As part of a two phase design, we began by conducting an online survey (N=245) and semi-structured interviews (N=20) with VA primary care team members. Survey findings revealed that less than half of our sample (45.99%) had heard of BB. Over 75% of respondents reported that they never discussed the BB or its content with patients, although nearly 40% agreed that giving Veterans access to their clinical progress notes through BB was a good idea. Interviewees reported general awareness of the MHV portal, but expressed concerns about corresponding technical issues, the time necessary to promote its use, and that there was little incentive for them to integrate features of the portal into their practice. Interviewees were generally unaware of the BB and there were mixed concerns about the consequences of patients viewing their clinical notes through it. We are developing the components of our toolkit based on these findings. Prototypes are being developed for tip sheets that explain how to use BB, BB data class summaries, clinical vignettes, and a decision support tool for identifying situations that would benefit from BB use. The toolkit will subsequently be tested at three VA facilities. We expect that toolkit components will demonstrate the value of the BB feature to primary care teams–an important first step towards broader implementation.

CORRESPONDING AUTHOR: Lorilei M. Richardson, MS, eHealth Quality Enhancement Research Initiative, Veterans Affairs, Bedford, MA, 01730; lorilei.richardson@va.gov

Paper Session 37 9:39 AM-9:57 AM

REACH AND EFFECTIVENESS OF EVIDENCE-BASED PSYCHOTHERAPIES FOR VETERANS WITH POST-TRAUMATIC STRESS DISORDER

Eu Gene Chin, MA[1], Jeanne M. Gabriele, PhD[2], Sara N. Edmond, M.A.[3], Amee B. Patel, Ph.D., M.S.Ed.[4], Lauren Baillie, PhD[5]

[1]University of Mississippi Medical Center / G.V. (Sonny) Montgomery Jackson VAMC, Jackson, MS; [2]G.V. (Sonny) Montgomery VAMC, Jackson, MS; [3]University of Mississippi Medical Center / G.V. (Sonny) Montgomery VAMC, Jackson, MS; [4]G.V. (Sonny) Montgomery VA Medical Center, Jackson, MS; [5]G.V. (Sonny) Montggomery Jackson VAMC, Jackson, MS

The VA's Evidence-Based Psychotherapy (EBP) initiative is a national, multilevel dissemination and implementation initiative that promotes the delivery of two EBPs, Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE), as first-line treatments for PTSD. Although initial efficacy studies indicate that these treatments are effective for Veterans, there is a paucity of data to show the percent and type of Veterans reached by these treatments and the effectiveness of these treatments when delivered in everyday clinical practice.

This study examined the reach and effectiveness of these PTSD EBPs in a population of 301 returning Veterans newly diagnosed with PTSD and assessed whether age, gender, ethnicity, percent service connection, and employability are related to treatment engagement. All Veterans were enrolled in a VA Medical Center or one of its seven associated community-based outpatient clinics. Twenty-seven percent of Veterans initiated a PTSD EBP through an outpatient clinic (20.27%), residential treatment program (5.32%), or day treatment program (1.66%). There was a trend for younger age to be associated with greater likelihood of initiating treatment (p = .055). Of Veterans who received services from an outpatient clinic, 44.26% received eight sessions of treatment. Females were more likely than males to have at least eight sessions (p = .04). Treatment effectiveness was assessed by evaluating the change in PTSD Checklist (PCL) scores, with a 10-point change indicating clinical significance, and the percent of Veterans who had a final PCL score below 50. Of Veterans who had at least two PCL scores (n = 43), scores decreased from 62.00 to 44.81. Over half (51.27%) had a final PCL score below 50. Analyses were also conducted to assess clinical improvement in Veterans who received 8 sessions of treatment. PCL scores decreased from 62.14 to 39.59 with 63.63% of Veterans having a final PCL score below 50. These findings indicate that, with the exception of age, Veterans appear to have equal access to CPT and PE regardless of demographic factors and VA benefit status. In addition, Veterans are showing clinically significant treatment gains that are comparable to those seen in controlled research trials. Future research should further assess whether other patient-level and provider-level factors moderate treatment outcome.

CORRESPONDING AUTHOR: Jeanne M. Gabriele, PhD, G.V. (Sonny) Montgomery VAMC, Jackson, MS, 39157; jeanne.gabriele@va.gov

Paper Session 37 9:57 AM-10:15 AM

SHARED MEDICAL VISIT FOR HYPERTENSION IN A VETERANS AFFAIRS AMBULATORY CARE CLINIC

Sierra Thompson, PsyD[1], LaDonna Saxon, Ph.D.[2], Daniel C. Kildow, PharmD, MSHA, BCACP, CDE[3]

[1]VA North Texas Health Care System, Cluj-Napoca, Romania; [2]Dept of Veterans Affairs, Dallas, Texas, Dallas, TX; [3]Texas Tech University Health Science Center School Of Pharmacy / VA North Texas, Dallas, TX

Background: Shared medical visits started in the late 1990s as a way to address complex, chronic health conditions efficiently and with maximum support for both patients and providers. Many benefits have been documented for conditions such as diabetes, including improved access to care, reduced medical costs, and increased self-management efficacy.

Objective: The current study was designed to test the efficacy of a shared medical visit for hypertension. Design: Within-subjects experimental design. Setting: Veterans Affairs Ambulatory Care Clinic. Patients: 84 patients with uncontrolled hypertension (failed two medication trials, blood pressure readings equal to or greater than 140 mm Hg/90 mm Hg). Intervention: Patients attended four visits at least one month apart. Visits lasted 90 minutes and included a group check in, education (didactic and experiential) regarding hypertension self-management tasks, and individual session to adjust medications. Provider disciplines included Pharmacy, Nursing, Dietician and Psychology. Measurement: Data was gathered on patients' demographic information, comorbid medical and mental health conditions, additional hypertension-related episodes of care, and blood pressure readings (at each visit and six months post-completion). The independent variable was completion of all four visits, and dependent variables were blood pressure readings and being at goal (< / = 140/90). Repeated measures t-tests were run to analyze differences in blood pressure between visits, and six-months post-completion. Correlational analyses explored the relationship between attendance and outcome. Results: At first visit, mean blood pressure was 158/83 and no patients were at goal. By second visit, mean blood pressure was 145/77, which was a significant reduction from visit one ($t(83) = 5.76$, $p < .001$, d=.53), and 46 % of patients were at goal. No significant differences were observed in blood pressure or percent at goal following visit two, regardless of number of shared medical or individual visits. Limitations: Inconsistent measurement techniques across providers may have contributed to variability in blood pressure readings. Diagnostic data was gathered from the VA's computerized medical records system that may not be updated regularly.

CORRESPONDING AUTHOR: Sierra Thompson, PsyD, VA North Texas Health Care System, Cluj-Napoca, 400168; sierraelliott@gmail.com

Paper Session 38 8:45 AM-9:03 AM

GENOMIC AWARENESS AND ATTITUDES AMONG ENGLISH- AND SPANISH-SPEAKING LATINOS

Jada G. Hamilton, PhD, M.P.H.[1], Elyse Shuk, MA[1], Guedy Arniella, LCSW[2], Carlos J. González, MFA[1], Geoffrey S. Gold, BA[3], Francesca Gany, MD, M.S.[1], Mark E. Robson, M.D.[1], Jennifer Hay, PhD[1]

[1]Memorial Sloan Kettering Cancer Center, New York, NY; [2]Institute for Family Health, New York, NY; [3]Memorial Sloan Kettering Cancer Center, Merrick, NY

Advances in genome sequencing have allowed for the development of genetic tests that provide valuable information for disease prevention, diagnosis, and treatment. Test users can experience substantial health benefits; however, it is possible that not all members of society will have equal access to these benefits. Latinos, whose views are rarely represented in genomic research studies, may be at risk of missing out on these health benefits. To explore this possibility, we conducted a qualitative study of awareness and attitudes about genetic testing among Latinos in New York City. We conducted a series of 4 focus groups (English-speaking women, n=13; English-speaking men, n=7; Spanish-speaking women, n=13; Spanish-speaking men, n=5; all ages 20-70, M=37 years). The Diffusion of Innovations model guided discussion topics, which were designed to assess factors that influence the adoption of new innovations through the discussion of genetic testing in general, as well as participants' responses to a hypothetical vignette describing a genetic test for skin cancer risk, in particular. Focus group transcripts were analyzed through inductive thematic text analysis by a multidisciplinary team. We identified themes within knowledge and attitudes; communication and sources of information; anticipated responses; factors that may increase adoption; and barriers to adoption of genetic testing. Specifically, a majority of participants expressed some degree of uncertainty regarding the purpose of genetic tests and information these tests provide, rarely discussed genetic testing with others in their social networks, and expressed concerns about the misuse of and possible adverse emotional responses to genetic information. However, all groups also expressed high levels of interest in receiving a skin cancer genetic test in response to the vignette, and believed that receiving actionable health information was a primary reason to consider genetic testing. Gender-based differences in perceived barriers to testing emerged: whereas women worried about physical pain, men noted employment-related challenges. Results highlight beliefs and barriers that future intervention efforts could target to help ensure that Latinos have adequate understanding of and access to the health benefits of genomic medicine.

CORRESPONDING AUTHOR: Jada G. Hamilton, PhD, M.P.H., Memorial Sloan Kettering Cancer Center, New York, NY, 10022; hamiltoj@mskcc.org

Paper Session 38 9:03 AM-9:21 AM

GENETIC COUNSELORS' DISCUSSION OF ILLNESS REPRESENTATIONS AND THE IMPACT ON PATIENT PARTICIPATION

Courtney L. Scherr, PhD[1], Susan Vadaparampil, PhD, MPH[1], Marifran Mattson, PhD[2]

[1]Moffitt Cancer Center, Tampa, FL; [2]Purdue University, West Lafayette, IN

Introduction: Patient centered communication can facilitate the goals of the genetic counseling session by providing care consistent with patients' values and preferences, and can improve health outcomes. Previous studies found genetic counselors could increase patient participation in the genetic counseling session, yet few strategies or steps exist that provide guidance for doing so. The application of a mental models framework, such as the Common Sense Model of Illness Representation may identify critical content that promotes patient participation. In the current study, we examined whether genetic counselors' discussion of illness representations including: illness identity, timeline, consequence, and control, increased patient participation in the genetic counseling session.Methods: As part of a larger study, cancer genetic counseling sessions at a community hospital genetic counseling program were audio taped for women ages 18 or above. Content analysis of the recordings was conducted by two coders using a previously established patient-centered coding scheme and a new coding scheme to identify occurrence when the four categories of illness representation were discussed. Inter-coder reliability was established using Krippendorf's alpha, and linear regression was used to assess the impact of discussing illness representations on patient participation.Results: Thirty-five participants consented to have their genetic counseling sessions audio-taped. Coders were reliable at $\alpha = .81$. Linear regression analysis established that genetic counselors' discussion of illness representation constructs significantly predicted patient participation, $F(1, 33) = 24.28$, $p < .005$, and genetic counselors discussion of illness representations explained 40.6% of the explained variation in patient participation.Conclusion: Results suggest a direct and linear relationship between genetic counselors' discussion of illness representations and patient participation during the session. Future studies should confirm these findings in diverse settings with larger patient populations. If findings mirror those of the present study, interventions to increase patient participation in cancer genetic counseling sessions should consider incorporating illness representations in the discussion.

CORRESPONDING AUTHOR: Courtney L. Scherr, PhD, Moffitt Cancer Center, Tampa, FL, 33612; courtney.scherr@moffitt.org

Paper Session 38 9:21 AM-9:39 AM

THE IMPACT OF CANCER GENETIC COUNSELING ON PATIENTS' MENTAL MODELS OF GENETIC RISK FOR CANCER

Courtney L. Scherr, PhD[1], Susan Vadaparampil, PhD, MPH[1], Marifran Mattson, PhD[2]

[1]Moffitt Cancer Center, Tampa, FL; [2]Purdue University, West Lafayette, IN

Introduction: An important goal of pre-test genetic counseling is to increase patient understanding of their risk of hereditary cancer. Prior studies examined the impact of genetic counseling using satisfaction and knowledge scales, but calls were made for a theoretical approach to systematically explore session outcomes and guide session content. This study used the Common Sense Model of Illness Representation (CSM) to assess changes in patients' mental models (i.e., patients' psychological understanding) of their genetic risk of cancer after genetic counseling. Methods: As part of a larger study conducted at a community hospital cancer genetic counseling program, women ages 18 or over undergoing genetic counseling for hereditary cancer completed a survey at two time points: 1) before pre-test genetic counseling and 2) immediately after pre-test genetic counseling. A 38-item illness perception questionnaire (IPQ-R GP) was used to assess patients' mental models of hereditary cancer risk and included 6 subscales: timeline, consequence, personal control, treatment control, illness coherence, and emotional representation. Results: Thirty-five participants completed the survey at both time points and were included in the analysis. Chronbach's alpha indicated acceptable reliability for all subscales at both time points. The Wilcoxon rank sum test revealed that women reported an increase in illness coherence (i.e., their understanding of personal genetic risk of cancer) from pre-counseling ($n = 35$; $Mdn = 3.80$) to post-counseling ($n = 35$; $Mdn = 4.00$), $z = 2.47$, $p = 0.013$; however, no statistically significant differences were found for other subscales. Conclusions: The significant change in illness coherence is reassuring as it indicates patients perceive a better understanding of their hereditary cancer risk after genetic counseling. The lack of change in other subscales is not entirely unexpected as illness representations often are created over time via a dynamic process of inputs. Therefore, changes in the other subscales may be identified if the survey administration time points were extended. The small sample size may also have limited the ability to identify significant differences. Future studies should consider replicating this study on a larger sample with increased time between data collection.

CORRESPONDING AUTHOR: Courtney L. Scherr, PhD, Moffitt Cancer Center, Tampa, FL, 33612; courtney.scherr@moffitt.org

Paper Session 38 9:39 AM-9:57 AM

GENOMIC INFORMATION MAY INHIBIT BEHAVIOR CHANGE INCLINATIONS AMONG INDIVIDUALS IN A FEAR STATE

Susan Persky, PhD[1], Rebecca A. Ferrer, PhD[2], William M. Klein, PhD[2]

[1]National Human Genome Research Institute, NIH, Bethesda, MD; [2]National Cancer Institute, Bethesda, MD

Genetic and genomic information are likely to be integrated into personalized prevention and treatment regimens of the future. Previous research has shown that provision of genomic information can motivate, demotivate, or (most often) be unrelated to patient motivation for health-promoting behaviors. We contend that the documented influence of emotion on judgment and decision-making may, in part, account for this discrepancy. We conducted an internet-based experiment using a national sample of 874 women who are overweight. Participants were randomized to complete a standard anger or fear induction, or a neutral task (in the control condition). They then received information about either genomic or behavioral underpinnings of overweight and obesity from a digital, virtual doctor. For participants in the control condition and those made to feel angry, receiving genomic versus behavioral information about the causes of weight and overweight did not result in differences on health behavior cognition outcomes. However, fearful participants who received the genomic (rather than behavioral) message were less likely to endorse diet and exercise as causes of weight [F(1,868)=3.22, p=.041] and less worried about weight-related breast cancer risk [F(1,869)=4.35, p=.013]. They also had lower intentions to change diet [F(1,867)=3.59, p=.028] and exercise [F(1,866)=3.53, p=.030] behavior. Feelings of fear are typically associated with a lack of perceived control. As such, fearful participants may have interpreted genomic causal messages as suggesting that they had lower control over their weight, to which they may have responded with defensive processing. There has previously been little evidence to support the common concern that genomic information will be associated with demotivation for health behavior change. However, the current findings suggest that patients' emotional state may be very influential on these processes.

CORRESPONDING AUTHOR: Susan Persky, PhD, National Human Genome Research Institute, NIH, Bethesda, MD, 20892; perskys@mail.nih.gov

Paper Session 38 9:57 AM-10:15 AM

CHANGES IN OVARIAN CANCER WORRY AND RISK AMONG HIGH-RISK WOMEN AFTER GENETIC COUNSELING

M. Robyn Andersen, PhD, MPH[1], Jason Thorpe, MS[1], J. David Beatty, MD[2], Kate Watabayashi[1], Robert Resta[2], Charles Drescher, MD[2], Nicole Urban, ScD[1]

[1]Fred Hutchinson Cancer Research Center, Seattle, WA; [2]Swedish Hospital, Seattle, WA

Background: Although women at high risk for BRCA1 and BRCA2 mutation are at high risk for both breast and ovarian cancer, few are aware of their risk of ovarian cancer, and little is known regarding the effects of genetic counseling about BRCA mutations on ovarian cancer knowledge, perceived risk, worry, and use of risk reducing surgery.Method: A randomized controlled trial (RCT) of referral for genetic counseling that included education about ovarian cancer risk. Of 458 women with high-risk family histories enrolled in the RCT, 228 were allocated randomly to a genetic counseling intervention, and 230 were allocated to the usual care control arm of the study. Study outcomes included use of risk reducing surgery and perceived risk and worry about breast and ovarian cancer. Risk reducing surgery was assessed via review of medical records. Self-report questionnaires shortly after intervention, and at 1 and 2 years post-enrollment, were used to assess perceived risk and worry about breast and ovarian cancer. Results: Modest transient increases in women's perceptions of their risk of ovarian cancer, and worry about ovarian cancer risk were found in the GC intervention group ($p < 0.05$), no differences were found between study arms at 1 year follow-up. Intervention was also associated with increased use of prophylactic surgery to reduce risk of ovarian cancer ($p < 0.05$). Reductions in worry about breast cancer risk were found in both study arms and not associated with allocation to the GC arm.Conclusions: A genetics counseling intervention that increased use of recommended risk reducing surgery, was found to be associated with very modest transient increases in knowledge of ovarian cancer risk and worry about ovarian cancer.

CORRESPONDING AUTHOR: M. Robyn Andersen, PhD, MPH, Fred Hutchinson Cancer Research Center, Seattle, WA, 98109-1024; rander@FredHutch.org

Paper Session 39 8:45 AM-9:03 AM

MANAGING TYPE 1 DIABETES IN LATE ADOLESCENCE: INDIVIDUAL AND DAILY FLUCTUATIONS IN GOAL REGULATION

Deborah Wiebe, PhD[1], Cynthia Berg, PhD[2], Ashley Baker, MS[1], Tammy Stump, MS[2]

[1]University of California, Merced, Merced, CA; [2]University of Utah, Salt Lake City, UT

Adolescent type 1 diabetes management is a difficult self-regulation task that requires sophisticated skills directed toward setting and achieving diabetes management goals. This may be especially important as late adolescents assume independence in managing diabetes away from home. We examined how adherence and metabolic control were associated with both individual differences and intra-individual (i.e. within-person day-to-day) fluctuations in diabetes goal regulation among late adolescents with type 1 diabetes. Adolescents recruited during their senior year in high school (N = 219; 59.6% female; 77% non-Latino Caucasian, 12% Latino, 5% African American) completed surveys describing their most important diabetes, social, academic/work, and family goals, and rated which non-diabetes goals interfered most with diabetes, their level of planning to achieve diabetes and interfering goals, and adherence; metabolic control was obtained through HbA1c test kits. Participants then completed a 2-week daily diary indicating daily adherence as well as daily effort to achieve their diabetes goal and to keep other people from interfering with diabetes goals. At the individual level, most late adolescents (54.6%) rated academic goals as most interfering with diabetes, followed by social (26.3%) and family goals (19.1%). Those who rated family goals as most interfering had poorer HbA1c than those with other interfering goals, and those with higher levels of goal interference displayed poorer adherence and metabolic control ($ps < .05$). Higher planning to achieve diabetes goals was associated with lower goal interference, $r=-.237$, and better adherence, $r=.546$, and metabolic control, $r=-.217$, $ps < .05$. Beyond these individual differences, there were day-to-day fluctuations in goal regulation that were related to daily adherence. On days adolescents reported greater effort and worked to keep others from interfering with diabetes goals, they had better adherence, $t > 3.87$, p values < .001. Findings demonstrate the self-regulation challenges facing late adolescents with type 1 diabetes, and indicate there are both individual and daily contextual factors that may be targeted to promote better diabetes management in this vulnerable population.

CORRESPONDING AUTHOR: Deborah Wiebe, PhD, University of California, Merced, Merced, CA, 95343; dwiebe@ucmerced.edu

Paper Session 39 9:03 AM-9:21 AM

PATIENTS' PERSPECTIVES ON TEXT MESSAGING TO SUPPORT MEDICATION ADHERENCE

Lauren Rapacki, MS, Jennifer Piemonte, BA, Ben Gerber, MD, Lisa Sharp, PhD

University of Illinois at Chicago (UIC), Chicago, IL

Medication non-adherence is a common, serious, and costly problem worldwide. Despite significant efforts, long-term adherence remains elusive in the context of chronic diseases. Interest in text messaging to support adherence is growing as cell phone usage exceeds 90% in the United States. Research exploring the mechanisms through which text messaging might improve medication adherence is limited.As part of a study exploring the use of text messages to support adherence, we conducted a qualitative evaluation to identify potential mechanisms of action in an urban, underserved patient population with chronic diseases. Fifty low-income patients taking daily medications for hypertension, type 2 diabetes and/or asthma were recruited from ambulatory clinics in an academic health center. Patients received tailored text messages daily, including: (1) reminders to take medications; (2) reflective questions about their medications and conditions; (3) non-health related messages (e.g., biblical quotes or humor); and (4) motivational messages. After three months, an in-person, semi-structured interview was administered. Questions assessed patients' experiences and feelings towards the texts and how they impacted their medication taking behavior. Responses were independently coded by two investigators and organized into themes. Approximately half the sample reported that the texts changed the way they felt about their medicines and/or improved their adherence. One quarter of the sample liked receiving the texts but felt that they were already adherent. Respondents perceived that the texts were coming from various sources ranging from a nurse to an automated system. Data suggest that text messages may support medication adherence through at least five pathways: 1) memory aid, 2) accountability, 3) social support or nurturing, 4) habit formation, or 5) positive affect. Most patients reported texts were easy to receive, read, and send.Future study including adherence outcomes will further describe the mechanism by which text messages can function in medication use behaviors. With the increased use of technology in society, it is critical to further explore the use of text messaging in a clinical setting.

CORRESPONDING AUTHOR: Lauren Rapacki, MS, University of Illinois at Chicago (UIC), Chicago, IL, 60608; lrapacki@uic.edu

Paper Session 39 9:21 AM-9:39 AM

LATENT CLASS SYNDEMIC FACTORS AND MEDICAL ADHERENCE AMONG AFRICAN-AMERICAN HIV-POSITIVE DRUG USERS

Allysha C. Robinson, M.P.H., PhD Candidate[1], Amy R. Knowlton, Sc.D., M.P.H.[2]

[1]Johns Hopkins University Bloomberg School of Public Health, Miramar, FL; [2]Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD

Introduction: Extant research suggests that substance use, mental illness, and familial conflict are associated with negative health outcomes among persons living with HIV (PLHIV). Specifically, these factors may contribute to frequent Emergency Department (ED) visits, non-adherence to antiretroviral therapy (ART), and detectable viral load among African-Americans more so than other racial groups. Therefore, the proposed study explored these factors (substance use, mental illness, and familial conflict) as a potential latent syndemic among injection drug-using (IDU) PLHIV. Methods: Data were from baseline of the BEACON study of adult former or current IDU PLHIV on ART, living in Baltimore, Maryland. Latent class analyses (LCA) identified classes representing behavioral patterns of syndemic risk among the African-American participants only. LCA regression assessed class membership as a function of sex, and HIV medical adherence, defined as HIV viral load suppression and optimal acute care utilization (no ED visits/hospitalizations in past 6 months). Results: Among the full sample, participants were 92% African-American, and 61% Male (N=383). Fifty-seven percent of participants earned $500-999 monthly, and average age was 48.2 years. Additionally, African-American females were less likely than their male counterparts to achieve both viral suppression (67.1% vs. 65.9%), and optimal acute care utilization (53.9% vs. 48.5%, respectively; N=351). Based on LCA among African-Americans only, 9% percent of participants had high substance use/mental illness prevalence (Class 4); 23% had moderate levels of all 3 factors (Class 3); 27% had high mental illness (Class 2); 41% had moderate substance use/mental illness (Class 1; N=331). Compared to Class 4, females had 79% lower odds of being in Class 1 or Class 3 ($p < .01$). Compared to Class 4, viral suppression odds were 4.6 times higher in Classes 2 or 3 ($p < .05$). Discussion: Odds of HIV medical adherence were 2 to 4 times higher in Classes 1-3 as compared to Class 4. Moreover, Class 4 was overwhelmingly female (68%). Therefore, interventions should target African-American IDU PLHIV females, as they are most vulnerable to HIV medical non-adherence and other negative health outcomes. Findings suggest need for a comprehensive syndemic approach to HIV treatment and adherence intervention, rather than individual methods.

CORRESPONDING AUTHOR: Allysha C. Robinson, M.P.H., PhD Candidate, Johns Hopkins University Bloomberg School of Public Health, Miramar, FL, 33029; arobin52@jhu.edu

Paper Session 39 9:39 AM-9:57 AM

HOW WE ASK: COMPARING SIMPLE TO BARRIERS-BASED METHODS OF ASSESSING MEDICATION NONADHERENCE IN TYPE 2 DIABETES

John Billimek, PhD, Marco A Angulo, MD MA, Dara H Sorkin, PhD, Sheldon Greenfield, MD, Sherrie H Kaplan, PhD MPH

University of California, Irvine, Irvine, CA

Nonadherence to medication regimens is a major contributor to poor outcomes and health disparities in diabetes. A growing number of medical practices attempting to assess medication nonadherence from patient report must weigh the benefits of a simple measure–that is fast and easy to collect–against more comprehensive measures that aim to identify specific barriers to adherence that the provider can help address. The current study compares the proportion of patients identified as nonadherent using two different patient-reported measures: a "simple" measure, consisting of a single question "Do you take your medication as prescribed?" and a "barriers-based" method in which patients are asked whether they have skipped or delayed taking medications for any of a list of nine reasons. Data collected included a questionnaire with both adherence measures, and chart review for blood sugar control outcomes (A1c), collected 12-months after the questionnaire date, for adults with type 2 diabetes who consented to the Reducing Racial Disparities in Diabetes Coached Care study (R2D2C2; N=1484). Nonadherence rates, measured twice for each participant, once with each measure, were compared with McNemar's test. The association between nonadherence, assessed by each method, and poor blood sugar control at one-year follow-up (A1c>8%) was examined using logistic regression adjusting for baseline A1c and diabetes duration. The barriers-based method revealed significantly more nonadherence in the sample compared to the simple method (59% vs. 27%, p < .001). Furthermore, nonadherence defined by the barriers-based measure was associated with higher rates of poor blood sugar control at 12-month follow-up (42% of nonadherent vs. 27% of adherent patients; aOR=1.44, 95% CI: 1.01, 2.04; p=.042), but nonadherence defined by the simple measure was not. Although more cumbersome to collect, the barriers-based measure reveals higher rates of nonadherence and carries a stronger association with future blood sugar control compared to the simple method.

CORRESPONDING AUTHOR: John Billimek, PhD, University of California, Irvine, Irvine, CA, 92617; jbillimek@gmail.com

MERITORIOUS PAPER

Paper Session 39 9:57 AM-10:15 AM

PREDICTORS OF ANTIRETROVIRAL ADHERENCE AMONG ACTIVE METHAMPHETAMINE USERS WITH HIV

Jessica L. Montoya, M.S.[1], Ben Gouaux, B.A.[2], Alexandra Rooney, B.A.[3], Kaitlin Casaletto, MS[1], Igor Grant, M.D.[2], David A. Moore, Psy.D.[4]

[1]SDSU/UCSD Joint Doctoral Program in Clinical Psychology, San Diego, CA; [2]University of San Diego, California, San Diego, CA; [3]University of California San Diego, San Diego, CA; [4]MD Anderson Cancer Center at Cooper University Hospital, Philadelphia, PA

Objective: HIV infection and methamphetamine use disorders (HIV/MA) are highly comorbid, and MA use is associated with worse adherence to antiretroviral (ARV) therapy. The individualized texting for adherence building (iTAB) intervention aimed to improve ARV adherence among HIV/MA individuals. The present study evaluates predictors of adherence separately for days with, and days without, self-reported MA use.
Participants and Methods: ARV medications of 59 HIV/MA participants were tracked for 30 days using the Medication Event Monitoring System (MEMS). Participants were randomized to iTAB (n=41) or an active comparison intervention (CTRL; n=18). Both groups received a daily text message assessing whether they had used MA in the last 24 hours; the iTAB group also received ARV medication reminder texts. Given that overall adherence did not differ by intervention arm (i.e., iTAB v. CTRL; p < .05), we collapsed the two study arms and examined predictors of adherence on days in which participants endorsed or denied MA use via text. For each participant, adherence was averaged separately for non-MA-using days and MA-using days and then a ≥90% cut-off point was used to classify each individual as adherent or non-adherent on non-MA-using (non-MA MEMS) and MA-using days (MA MEMS). Constructs of the Health Belief Model [e.g., intentions to adhere and subjective norms (belief about whether key people approve of adherence and motivation to gain their approval)], psychiatric and HIV disease characteristics were considered as covariates.
Results: We identified univariate predictors of adherence within the non-MA MEMS (nadir CD4 count) and MA MEMS groups (subjective norms, nadir CD4 count, depressed mood) (p < .10). These variables and intervention group were entered into logistic regression models predicting adherence among non-MA MEMS and MA MEMS. Within the non-MA MEMS model, lower nadir CD4 count and the CTRL-arm were associated with being adherent. Among the MA MEMS group, greater subjective norms and lower nadir CD4 count were uniquely associated with being adherent.
Conclusions: A stronger sense that family and friends support medication adherence and a history of more severe immunocompromise are strong predictors of ARV adherence among HIV/MA individuals in the context of active MA use. Future adherence interventions in HIV/MA may benefit from targeting modifiable health beliefs such as subjective norms.

CORRESPONDING AUTHOR: Jessica L. Montoya, M.S., SDSU/UCSD Joint Doctoral Program in Clinical Psychology, San Diego, CA, 92103; jess.lyn.montoya@gmail.com

Paper Session 40 8:45 AM-9:03 AM

USING COMPUTATIONAL METHODS TO ASSESS INTERPERSONAL INTERACTIONS IN A SMOKING CESSATION FACEBOOK COMMUNITY

Heather Cole-Lewis, PhD, MPH, MA[1], Adler Perotte, MD, MA[2], Kasia Galica, MA[1], Lindy Dreyer[3], Mary Schwarz[4], Erik Augustson, PhD, MPH[5], Heather Patrick, PhD[5]

[1]ICF International, Rockville, MD; [2]Department of Biomedical Informatics, Columbia University, New York, NY; [3]ICF International, Fairifax, VA; [4]ICF International, Fairfax, VA; [5]The National Cancer Institute, Rockville, MD

Despite an increase in the research and practice of using social network sites for health, many underlying mechanisms of effectiveness are yet to be uncovered. Exploration into nuances of interactions on social network sites for health is necessary to build hypotheses to inform new and enhance current theories and ensure that behavioral medicine can utilize the technologies to their fullest potential. This study employed social network analysis, correlation analysis, computational text analysis and qualitative content analysis to investigate interpersonal interactions and behavioral patterns on a social network site dedicated to smoking cessation- Smokefree Women Facebook (FB). Results from social network analysis visualizations reveal the moderator role in keeping the community together and distribution of hubs- active participants who connect many people. Computational text analysis of topics discussed by hubs (N=1000), compared to less engaged participants (N=4129) reveal that hubs used terms of encouragement and congratulations while less engaged participants discussed issues related to seeking help, smoking status and strategies for cessation. Correlation analyses comparing length of cessation with engagement show positive correlation for those with < 1 year cessation (Spearman r= 0.20, p=0.01) and negative correlation for those with >1 year cessation (Spearman r= -0.59, p < 0.001). Findings directly address gaps and limitations in existing knowledge on social network sites for health as identified by three recently published systematic reviews. Specifically, this observational study uses computational methods to provide insight and generate hypotheses on specific characteristics of social network sites for health that promote engagement and behavior change. Furthermore, the use of social network analysis provides a particular focus on the multidirectional communication potential afforded by social network site technology. Findings are discussed in the context of implications for practitioners and researchers seeking to use social network sites for smoking cessation. The benefit of utilizing computational methods to enhance social science methods to better utilize technology for behavior change will also be highlighted. This work aligns with the National Prevention Strategy Framework as it explores tools to support communities of empowered people.

CORRESPONDING AUTHOR: Heather Cole-Lewis, PhD, MPH, MA, ICF International, Rockville, MD, 20850; heather.cole-lewis@icfi.com

Paper Session 40 9:03 AM-9:21 AM

EVALUATION OF A SMOKING CESSATION TEXT MESSAGE PROGRAM WITH FORMER AND CURRENT USERS

Sondra Dietz, MPH, MA[1], Bethany Tennant, PhD[1], Brian Keefe, MA[2], Carol Freeman[2], Mary Schwarz[1], Erik Augustson, PhD, MPH[3], Heather Patrick, PhD[3]

[1]ICF International, Fairfax, VA; [2]ICF International, Rockville, MD; [3]The National Cancer Institute, Rockville, MD

The negative health effects of smoking and the burden of smoking on the United States healthcare system are well established. Despite this, an estimated 18.1% of American adults currently smoke cigarettes. Increasing the number of smokers who take steps towards quitting smoking and reducing smoking relapse among persons trying to quit is therefore a key public health goal. One way to effectively increase attempted and sustained quit attempts may be through emerging mHealth technologies, such as text message intervention programs. The goal of this in-depth interview study was to explore knowledge, attitudes, and behaviors related to smoking cessation and feelings toward the National Cancer Institute's SmokefreeTXT smoking cessation text message intervention among thirty-six persons: nine males and nine females who opted out of the SmokefreeTXT program and nine males and nine females who completed the program. Findings from the interviews revealed similarities across the two segments. Users shared similar reasons for smoking—primarily stress—and similar reasons for wanting to quit—to improve their health. Regarding the text program, one feature users particularly liked was being able to interact with the program by answering questions and texting keywords for added support. A feature interviewees overwhelming wanted was the option to customize message delivery, such as the frequency and timing of messages. Those who remained in and completed the program did so because they liked the convenience and having an additional source of support. On the other hand, more than half of the interviewees who opted out did so because they started smoking again or realized that they were not ready to quit. An encouraging finding, however, was that many expressed a willingness to re-sign up when they felt ready to quit again. The data gathered from these interviews are being used to inform changes to the SmokefreeTXT program that will help retain users, increase participation, and develop messages that better help smokers take steps toward leading a healthier, smoke-free lifestyle. Additional research is needed to assess the impact of the text message program on smoking cessation outcomes for this target audience.

CORRESPONDING AUTHOR: Brian Keefe, MA, ICF International, Rockville, MD, 20850; brian.keefe@icfi.com

Paper Session 40 9:21 AM-9:39 AM

COLLECTIVE-INTELLIGENCE VERSUS RULE-BASED TAILORING: PRELIMINARY RESULTS OF AN RCT

Rajani Sadasivam, PhD[1], Thomas English, PhD[1], Roy Adams, MS[2], Benjamin M. Marlin, PhD[2], Thomas Houston, MD, MPH[3]

[1]Umass Medical School, Worcester, MA; [2]UMass Amherst, Worcester, MA; [3]VA CHOIR, Bedford, MA

Background: Current computer tailored health communication (CTHC) systems collect baseline patient "profiles" and then use expert-written, rule-based systems to target messages to patient subsets. Web 2.0 companies (e.g., Netflix and Amazon) use recommender systems, a machine-learning-algorithms-based approach to tailor content based on the collective-intelligence data (e.g. behavior and preferences) of users. Applying recommender systems to CTHC could potentially improve upon current rule-based tailoring. Methods: In a pilot randomized trial, current smokers were either randomized to receive a daily email message tailored using a traditional rule-based or a collective-intelligence-based approach. Tailored messages were sent for 45 days or until smokers had rated thirty messages on a 5 point Likert scale. Ratings were assessed using the question: Does this message influence you to quit smoking. Our primary hypothesis was that the collective-intelligence approach would select messages with better influence than the rule-based CTHC. We also assessed smoking cessation at follow-up.Results: Overall, 35 smokers had completed follow-up at time of analysis. 60% of our sample was female, and 55% were between ages 35-44. Collective Intelligence smokers rated their messages slightly higher (mean rating: 4.1, SD: 0.6) than control smokers (mean rating: 4.0, SD: 0.5) (P=0.6). However, at follow-up, 45% of intervention smokers had set a quit date or already quit, as compared with 25% of control smokers. The goal of the trial is to recruit 120 total smokers.Conclusion: Preliminary results indicate that the collective-intelligence approach could potentially be more beneficial than rule-based tailoring.

CORRESPONDING AUTHOR: Rajani Sadasivam, PhD, Umass Medical School, Worcester, MA, 01655; rajani.sadasivam@umassmed.edu

Paper Session 40 9:39 AM-9:57 AM

REAL-WORLD ENGAGEMENT WITH A TEXT-MESSAGE DELIVERED SMOKING CESSATION INTERVENTION

Yvonne M. Hunt, PhD, MPH[1], Amy Sanders, MA[2], Heather Cole-Lewis, PhD, MPH, MA[3], Mary Schwarz[4], Erik Augustson, PhD, MPH[5]

[1]Tobacco Control Research Branch, Behavioral Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute, National Institutes of Health, Rockville, MD; [2]ICF Interactive, Rockville, MD; [3]ICF International, Rockville, MD; [4]ICF International, Fairfax, VA; [5]The National Cancer Institute, Rockville, MD

Background: Emerging evidence supports the efficacy of text message delivered interventions for promoting smoking cessation. However, individual users of these interventions may vary widely with respect to their engagement with the program. Engagement represents an important dimension of tobacco treatment; greater treatment engagement is associated with more favorable cessation outcomes. Most of the currently available data on user engagement with text-message based smoking cessation programs has come from participants enrolled in randomized controlled trials. Data from real-world users of public-facing programs are lacking. This presentation will attempt to address this gap, by using data from a prospective observational study to examine patterns of user engagement with a national text messaging smoking cessation intervention. Methods: The National Cancer Institute's SmokefreeTXT program has reached nearly 70,000 smokers since its inception in July 2011. The program provides encouragement, advice, and tips to help smokers quit. Users receive cessation support messaging for up to two weeks before and six weeks after their quit date. Users may opt out of the program at any time by texting STOP. We conducted a retrospective records analysis of individual-level SmokefreeTXT system data of program users from 2011-2014. A combination of qualitative and quantitative methods were used to describe patterns of user engagement with the SmokefreeTXT intervention. Results: Of the 18,080 program users included in the analysis, 62.5% were female, 88% were daily smokers, and the mean age was 34.89. 48.8% (n=8,831) of program users opted out of the program before the end of treatment. The majority of treatment opt-out occurred within the first 7 days post quit date (45.9%); opt-outs declined as the intervention continued. In-depth interviews with program users suggest that opting-out was associated with relapse to smoking. A subset of program users who opted out rejoined the program at a later time. Conclusions: Despite substantial dropout, more than half of users completed the SmokefreeTXT program. This suggests that text-message delivered cessation interventions can successfully engage and retain real-world users. Future research should explore how best to optimize user engagement, especially early on when users are more likely to opt-out.

CORRESPONDING AUTHOR: Yvonne M. Hunt, PhD, MPH, Tobacco Control Research Branch, Behavioral Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute, National Institutes of Health, Rockville, MD, 20850; huntym@mail.nih.gov

Paper Session 40 9:57 AM-10:15 AM

TESTING A CONTEXT-AWARE, EVIDENCE BASED JUST-IN-TIME ADAPTIVE INTERVENTION FOR SMOKING CESSATION

Ellen Beckjord, PhD, MPH[1], Saul Shiffman, PhD[2], Alexandra Cardy, BS[2], Dana H. Bovbjerg, PhD[2], Daniel Siewiorek, PhD[3], Gagan Jindal, MPH[4], Vincent Smith, BS[4], Dave Klein, MBA[5], Praduman Jain, M.S.[6]

[1]University of Pittsburgh Cancer Institute, Pittsburgh, PA; [2]University of Pittsburgh, Pittsburgh, PA; [3]Carnegie Mellon University, Pittsburgh, PA; [4]Vignet Corporation, Fairfax, VA; [5]Vignet / FitNinja, Fairfax, VA; [6]FitNinja Inc, Fairfax, VA

Though hundreds of mobile applications for smoking cessation exist, few apps provide context-appropriate, theory-driven, evidence-based smoking cessation interventions. We have developed QuitNinja, a mobile, just-in-time adaptive intervention (JITAI) for smoking cessation that uses real-time data collection (ecological momentary assessment (EMA)) to inform real-time delivery of context-aware, evidence-based interventions (ecological momentary intervention (EMI)) to smokers trying to quit. QuitNinja uses stochastic decision rules about what EMI to deploy when, so each EMI deployment is a "microexperiment:" there is real-time random variation as to whether QuitNinja deploys a context-matched EMI or not (or any EMI at all) so that the system can learn what works best for the user. Thirty adult smokers (average age=52.2 (9.3); 64% female; 64% African American; average cigarettes per day (cpd)=18.5 (11.6)) used QuitNinja for one month during user testing. All participants were given a smartphone (46% of participants had previously used a smartphone), a brief in-person cessation intervention, and a six-week supply of the nicotine patch. Based on the initial 17 participants, after 30 days, 59% participants reported being abstinent and all of the ones not abstinent reduced their intake by an average of 10.5 cpd. Additionally, 71% were more confident in their ability to resist smoking. Qualitative data suggested users had uniformly positive experiences with the QuitNinja app: average ratings (0-10) were high for how much QuitNinja made users feel in control of their smoking (7.8); confident in quitting (7.3); and supported (8.5). Only two users reported the EMA protocol triggered urges to smoke. Analyses of the real-time microexperiments will be complete in December 2014. These preliminary results support the development of just-in-time adaptive interventions that use a combination of EMA and EMI for real-time behavior change. (Funding: KL2TR000146).

CORRESPONDING AUTHOR: Ellen Beckjord, PhD, MPH, University of Pittsburgh Cancer Institute, Pittsburgh, PA, 15232; beckjorde@upmc.edu

MERITORIOUS PAPER

Paper Session 41 8:45 AM-9:03 AM

SURROGATE DIGITAL ACCESS: A FAMILY-SYSTEMS INVESTIGATION OF OLDER ADULT TECHNOLOGY ACCESS AND USE

Tana Luger, PhD[1], Lorilei M. Richardson, MS[2], Lisa Cioffari-Bailiff, BA[3], Timothy Hogan, PhD[1], Kimberly L.L. Harvey, MPH[3], Thomas Houston, MD, MPH[1]

[1]VA CHOIR, Bedford, MA; [2]eHealth Quality Enhancement Research Initiative, Veterans Affairs, Bedford, MA; [3]University of Massachusetts Medical School, Bedford, MA

Older adult Veterans, with their complex profiles of chronic illness, stand to benefit from the support of eHealth technology for self-management, but certain factors limit older Veteran access to e-tools and "apps." Older adults are less likely to be computer literate, use the Internet, or own smartphones than other age groups[1]; such disparities are even more pronounced in the older Veteran population[2]. Yet, 39% of all online health information-seekers are “surrogate seekers,” searching on behalf of someone else[3,4]. Thus, older adults may gain access to information and eHealth tools through their social relationships. To clarify disparities in access, we examined older Veterans' ability and preferences for technology use and surrogate digital access via adult children, extended family members and other informal caregivers. A purposeful sample of 750 Veterans over 65 years old was identified from a national repository of Veteran data. The mail survey quantified the number of members in older Veterans’ social networks, the potential for surrogate access, as well as Veteran technology ownership, computer experience, and health information management. 115 older Veterans responded to the first wave of data collection (*Mage*=75.61, *SD*=7.64). Older Veterans reported a mean of 3.56 (*SE*=.94) family members with access to the Internet out of a total mean of 4.41 family members (*SE*=.97). Of these digitally connected family members, older Veterans reported that an average of 2.15 family members (*SE*=.65) would allow the older Veteran Internet access through the family member’s device (e.g. computer or mobile phone). In fact, 15% (N=17) reported that they gain access to the Internet through a family member’s computer. Older Veterans also reported that a mean of 2.23 family members (*SE*=.63) would be willing to access the Internet on their behalf. Older Veterans were surrounded by a modest network of family members who have Internet access, and perceived most of their family to be willing to assist them by lending access to a computer or accessing the Internet on their behalf. These initial findings suggest that leveraging family relationships may be a potential solution for reducing older Veteran disparities in Internet and eHealth access and enhance older Veterans’ ability for eHealth-facilitated management of chronic disease.

CORRESPONDING AUTHOR: Tana Luger, PhD, VA CHOIR, Bedford, MA, 01730; tana.luger2@va.gov

Paper Session 41 9:03 AM-9:21 AM

DISPARITIES IN ACTIVATION AND USE OF AN ONLINE PATIENT PORTAL AMONG OLDER ADULTS

Samuel G. Smith, PhD[1], Rachel O'Conor, MPH[1], William Aitken, MS[2], Laura M. Curtis, MS[1], Mita S. Goel, MD, MPH[1], Michael S. Wolf, PhDMPH[1]

[1]Northwestern University, Chicago, IL; [2]Northwestern University Feinberg School of Medicine, Chicago, IL

Patient portals are secure websites for patients, typically maintained by provider practices, which offer access to a variety of functions linked to a physician’s electronic health record. Their adoption by hospitals and providers in the US is rising. It is important to document disparities in the uptake and use of this technology if it is routinely implemented in clinical care. We investigated health literacy, educational and ethnic disparities in the activation and use of an online patient portal among older adults.Data from 534 adults aged 55 years and older were linked with information from the Northwestern Medicine Electronic Data Warehouse on: portal activation; and use of functions (messaging, prescription refill ordering, scheduling appointments, checking test results, and monitoring vital statistics). Demographic data and the Newest Vital Sign health literacy measure were available from an existing cohort. Since the introduction of the portal, most patients (93.4%) were offered access to the patient portal and among these 57.5% activated their portal accounts. In multivariable logistic regression analyses, White patients (OR, 4.19; 95% CI, 2.48-7.07; $p < 0.001$) and college graduates were more likely to have activated their portal (OR, 2.47; 95% CI, 1.19-5.13; p=0.015). Patients with marginal (OR, 2.18; 95% CI, 1.06-4.49; p=0.034) or adequate (OR, 4.15; 95% CI, 2.07-8.35; $p < 0.001$) health literacy were also more likely to have activated their portal. Adequate health literacy patients were more likely to have used the messaging function (OR, 7.78; 95% CI, 1.98-30.62; p=0.003), White patients were more likely to have accessed test results online (OR, 10.53; 95% CI, 2.14-51.76; p=0.004), and patients with a college degree (OR, 3.34; 95% CI, 1.03-10.91; p=0.045) or graduate degree (OR, 4.52; 95% CI, 1.40-14.61; p=0.012) were more likely to have used the prescription refill function. Among this cohort of older American adults, there were stark health literacy, educational and ethnic disparities in the activation and subsequent use of an online patient portal. These population sub-group differences may exacerbate existing health disparities. If patient portals are implemented, intervention strategies are needed to monitor and reduce disparities in their use.

CORRESPONDING AUTHOR: Samuel G. Smith, PhD, Northwestern University, Chicago, IL, 60611; samuel.smith@northwestern.edu

Paper Session 41 9:21 AM-9:39 AM

WILLINGNESS TO EXCHANGE HEALTH INFORMATION USING MOBILE PHONES: A QUANTITATIVE ANALYSIS

Katrina J. Serrano, PhD, CHES, Audie A. Atienza, PhD

National Cancer Institute, Science of Research and Technology Branch, Bethesda, MD

Background: The rapid proliferation of mobile and smart phones offers unprecedented opportunities for patients and providers to exchange health information (HI), but relatively little is known about the public’s willingness to exchange various types of HI using these devices. Qualitative research suggests that the types of HI being exchanged and trust in healthcare providers may be important factors in determining a person’s willingness to use a mobile phone to exchange HI. In addition, various demographic groups may differ in their willingness to exchange HI via mobile phones. Objective: This study quantitatively examined willingness to use mobile phones to exchange 9 types of HI by various factors (e.g., demographics, provider trust) in a population-based sample.Methods: Data from the 2014 Health Information National Trends Survey were analyzed (n=3,165). Descriptive analyses, chi-square tests, and ordinal regression models were used to assess the correlates of willingness to exchange 9 different types of HI.Results: Individuals were more willing to exchange certain types of HI (e.g., appointment reminders, 58%) than other types (e.g., diagnostic information (Dx), 25%). In bivariate analyses, age and education were associated with willingness to exchange all types of HI ($p < .05$); whereas sex and provider trust were only associated with some types of HI (e.g., vital signs or lab results, $p < .05$). In multivariate analyses, age correlated with willingness to exchange all types of HI ($p < .05$). Provider trust correlated with willingness to exchange 6 out of 9 types of HI ($p < .05$). Race/ethnicity correlated with willingness to exchange medication reminders and lab results (e.g., Hispanics & non-Hispanic Blacks had higher odds ($p < .05$) of being more willing to exchange medication reminders as compared to Whites).Conclusions: There was variation in willingness to use mobile phones to exchange different types of HI, with individuals more willing to exchange less sensitive information. Demographic factors and provider trust were also associated with willingness to exchange various types of HI. Health communication and technology experts should consider both HI type and particular demographic groups when developing and tailoring mobile health technologies for patients and providers.

CORRESPONDING AUTHOR: Katrina J. Serrano, PhD, CHES, National Cancer Institute, Science of Research and Technology Branch, Bethesda, MD, 20892; katrina.serrano@nih.gov

Paper Session 41 9:39 AM-9:57 AM

SEEKING HEALTH INFORMATION ONLINE AMONG OLDER ADULTS FROM A NATIONAL REPRESENTATIVE SURVEY HINTS

Jinmyoung Cho, Ph.D.[1], Yan Hong, Ph.D.[2]

[1]Baylor Scott & White Health, Temple, TX; [2]Texas A&M Health Science Center School of Public Health, College Station, TX

Background: Internet has become an important source of health information and promotion, even among older adults, but limited data are available on older adults’ online health seeking behaviors, the trends and factors related to their behavior. Objective: In this study we aim to answer two main research questions: 1) What are the changes in older adult’s online health seeking behaviors over the past decade? 2) What are the moderators for these changes? Methods: We used Health Information National Trend Survey (HINTS) data from 2003, 2005, and 2010 surveys; and those who were older than 55 years were selected for further analysis. Online health seeking behavior was defined as online users who ever seek health information, communicated with provider, bought medication/supplements, or obtained social support online. Older adults’ use of Internet and online health seeking behaviors were analyzed over the three time measurements. Age, gender, education, race/ethnicity, rural/urban residence, cancer diagnosis, and self-rated health status were selected as moderators to further examine the subgroup differences. Results: Internet use among older adults had increased from 40% to 61% from 2003 to 2010; among the online users, 34% had the online health seeking behaviors. Although overall the older adults had increasing online health seeking behaviors, there were significant subgroup differences. For example, among the 75 years or older group, the online health seeking behavior increased from 6.8% in 2003 to 25.7% in 2010 compared to 37.1% to 65.2% among 55 to 64 years old group. Among those with less than high school education, online health seeking behavior increased from 5.2% in 2003 to 14.0% in 2010 compared to 45.3% to 76.0% among those with college education. Conclusion: Internet has been increasingly adapted by older adults to seek health information, communicate with providers, and obtain social support. Future health policies and programs need to design more senior-friendly online programs for these online health seekers. Programs are also needed to facilitate adoption of Internet use and appropriate online health seeking for some “late adopters”, especially minorities, older than 75 years, who had less education and poorer health.

CORRESPONDING AUTHOR: Yan Hong, Ph.D., Texas A&M Health Science Center School of Public Health, College Station, TX, 77843; yhong@sph.tamhsc.edu

Paper Session 41 9:57 AM-10:15 AM

FAMILY TIES: THE ROLE OF FAMILY CONTEXT ON FAMILY HEALTH HISTORY COMMUNICATION ABOUT CANCER

Vivian M. Rodriguez, PhD[1], Rosalie Corona, Ph.D.[2], Joann N. Bodurtha, MD, MPH[3], John M. Quillin, Ph.D., MPH[2]

[1]Memorial Sloan-Kettering Cancer Center, New York, NY; [2]Virginia Commonwealth University, Richmond, VA; [3]Johns Hopkins University, Baltimore, MD

Family health history about cancer has been recognized as an important prevention and health promotion tool. Yet, few studies have identified family context factors that promote such discussions. Thus, we explored relations among family context (cohesion, flexibility, and openness), self-efficacy, and cancer communication (gathering family history, giving cancer risk information, and frequency) in a diverse group of women enrolled in a randomized control trial examining the effects of an educational intervention on family communication about hereditary cancers. Baseline survey data including measures on demographics, family context, self-efficacy, and communication about cancer for 472 women were analyzed. Average age was 34 years, 59% identified as Black, and 31% graduated high school. Two-thirds of women reported a history of cancer in a 1st or 2nd degree relative. Results showed that greater family cohesion and flexibility were related to higher communication frequency ($r = .242, p < .001$; $r = .160, p < .001$) and giving cancer risk information ($r = .096, p = .038$; $r = .104, p = .024$) respectively. Women who reported greater self-efficacy were also more likely to gather family history ($r = .223, p < .001$), give cancer risk information ($r = .160, p < .001$), and communicate more frequently with relatives ($r = .317, p < .001$). Openness was not associated with communication but was related to greater family cohesion ($r = .485, p < .001$) and flexibility ($r = .455, p < .001$). Adjusting for demographic variables, self-efficacy ($\beta = .275, p < .001$) and family cohesion ($\beta = .193, p = .011$) significantly predicted communication frequency. Women with a higher sense of self-efficacy were also more likely to gather family health history about cancer, $OR = 1.25$, 95%CI [1.12, 1.40], and give cancer risk information to relatives, $OR = 1.19$, 95%CI [1.04, 1.38]. Findings reveal the importance of family organization and self-efficacy in generating discussions about cancer risk within the family. Future research may benefit from considering these factors when developing biobehavioral theories that, in turn, may inform cancer prevention interventions.

CORRESPONDING AUTHOR: Vivian M. Rodriguez, PhD, Memorial Sloan-Kettering Cancer Center, New York, NY, 10022; rodrigv4@mskcc.org

Paper Session 42 8:45 AM-9:03 AM

POPULATION ASSESSMENT OF SLEEP DURATION, CHRONOTYPE AND BODY MASS INDEX

Susan K. Malone, RN, PhD (candidate)[1], Freda Patterson, PhD[2], Yinghui Lu, PhD[3], Alexandra L. Hanlon, PhD[1]

[1]University of Pennsylvania, Philadelphia, PA; [2]Temple University, Philadlphia, PA; [3]Temple University, Philadelphia, PA

Obesity remains a leading cause of morbidity and mortality worldwide. Sleep may be a determinant of body mass index (BMI), whereby short sleep duration is predictive of weight gain. However, this relationship has not been found in all studies in adults. One reason for these inconsistent findings may be the failure to consider chronotype, which describes the extent to which an individual is a "morning" or an "evening" person. To address this gap, we conducted a descriptive examination of the association between sleep duration, chronotype and BMI in a population of 501,766 adults residing in the United Kingdom (UK). Cross-sectional data were collected as part of the UK Biobank study. Fruit and vegetable consumption as well as number of days with moderate and vigorous physical activity in the last week were also examined. The majority of the sample was Caucasian (95%), 55% were female, 58% were employed and the mean age was 62.5 (SD=8.1) years. Mean BMI was 27.4 (SD=4.8). The average self-reported sleep duration was 7.2 hours per night (SD=1.1). The majority of the sample reported a morning chronotype (62.5%; N=277). The average number of servings of cooked vegetables per day was 2.7 (SD=1.9) while the average number of servings of raw vegetables per day was 2.2 (SD =2.2). On average, participants reported 3.6 days (SD=2.3) of moderate physical activity and1.8 days (SD=2.0) of vigorous activity per week. Longer sleep duration (B= -0.11; SE=0.006), morning chronotype (B= -0.21; SE=0.005), greater raw vegetable consumption (B= -0.03; SE=0.003), greater moderate physical activity (B= -0.20; SE=0.003), and greater vigorous activity (B= -0.23; SE=0.004) were associated with a lower BMI. Eating more fresh fruit (B=0.01; SE=0.004) and cooked vegetables (B=0.03; SE=0.004) was associated with a higher BMI. Preliminary models suggest that the main effect of longer sleep duration on a lower BMI is greater for adults who report a morning chronotype (B= -0.13; SE=0.008) as compared to an evening chronotype (B= -0.07; SE=0.011). This is the first population-based study to suggest that chronotype may moderate the relationship between sleep duration and BMI.

CORRESPONDING AUTHOR: Freda Patterson, PhD, Temple University, Philadlphia, PA, 19122; fredap@temple.edu

Paper Session 42 9:03 AM-9:21 AM

VIOLENCE EXPOSURE, SOCIAL COGNITIVE PROCESSING, AND SLEEP PROBLEMS IN URBAN ADOLESCENTS

Stephen Lepore, PhD[1], Kliewer Wendy, PhD[2]

[1]Temple u, Philadelphia, PA; [2]Virginia Commonwealth University, Richmond, VA

Among adolescents, violence exposure has been linked to sleep problems which, in turn, have been linked to poorer health and academic outcomes. However, the potential social and psychological mechanisms linking violence exposure to sleep problems have not been examined. This study tested a social cognitive processing path model linking experiences of witnessing and directly experiencing community violence to sleep problems. Participants were 362 adolescents from urban communities who were enrolled in a larger school-based intervention study that was designed to reduce the negative effects of violence exposure. Intervention condition, which had no effect on variables in the current study, was included as a covariate in analyses. Participants in the larger study were included in the current study if they reported witnessing or directly experiencing community violence. Participants completed four assessments over 18-months, reporting on exposure to community violence, sleep problems, intrusive thoughts about and social constraints in talking about violence, and potential confounding variables. Hearing gunfire was the most frequent type of violence exposure (70.6%). Other common exposures were: seeing people using or selling drugs (61%), seeing someone beaten up or mugged (61%); being physically assaulted (51%), seeing others threatened with serious harm (45%). Sleep problems included inadequate amounts of sleep, with most students (74%) reporting waking up at least once per night. A 4-wave, longitudinal path model revealed that wave 1 witnessing violence, but not direct victimization, was associated with elevated social constraints in talking about violence at wave 2, which was associated with elevated intrusive thoughts at wave 3, which was associated with elevated sleep problems at wave 4. Prior levels of all constructs were statistically controlled in the model, in addition to life events, single parent status, child age and sex, intervention condition, and school. The data fit the model adequately ($N = 327$; $\chi^2(23) = 40.05, p < .05$; RMSEA = .048; CFI = .943). Youth exposed to violence may benefit from help in processing their experiences, thus reducing social constraints in talking about their experiences and associated intrusive thoughts. This in turn may improve sleep outcomes.

CORRESPONDING AUTHOR: Stephen Lepore, PhD, Temple u, Philadelphia, PA, 19034; slepore@temple.edu

Paper Session 42 9:21 AM-9:39 AM

RISK FOR SLEEP APNEA AND WEIGHT LOSS TREATMENT OUTCOMES AMONG ADULTS WITH METABOLIC SYNDROME

Matthew C. Whited, PhD[1], Gin-Fei Olendzki, MS, MBA[2], Yunsheng Ma, MD, PhD[3], Molly E. Waring, PhD[3], Kristin L. Schneider, PhD[4], Bradley M. Appelhans, PhD[5], Andrew M. Busch, PhD[6], James Chesebro, MD[3], Sherry L. Pagoto, PhD[3]

[1]East Carolina University, Greenville, NC; [2]Umass Medical School, Worcester, MA; [3]University of Massachusetts Medical School, Worcester, MA; [4]Rosalind Franklin University of Medicine & Science, North Chicago, IL; [5]Rush University Medical Center, Chicago, IL; [6]The Miriam Hospital and the Alpert Medical School of Brown University, Providence, RI

Obstructive Sleep Apnea (OSA), a condition in which breathing is periodically inhibited during sleep due to airway obstruction. It is associated with poor sleep quality, non-restorative sleep, metabolic dysfunction, obesity, and diabetes. Patients with OSA are often encouraged to lose weight, but impaired ability to achieve restful, restorative, sleep may interfere with weight management. We compared weight loss outcomes following a 1 year dietary weight loss intervention between adults with a low versus high risk of having OSA. At baseline, participants who answered 2 or more items as "yes" on the STOP (Snoring, Tiredness, Observation of halted breathing by others, and high blood Pressure) questionnaire were considered at high risk for OSA. Weight was measured at baseline and 12 months. Multivariate regression analysis estimated the association between OSA risk status and percent of baseline weight lost at year 1, adjusting for gender, age, education, marital status, self-reported sleep duration, and type of diet intervention. Participants (N=173) were 75% female with an average age of 52.2 (SD: 10.1) years; 45.5% were at high risk for OSA at baseline. During the trial, the average weight loss was 5.8 (SD=10.6) pounds, representing 2.8% (SD=5.0%) of baseline weight. In adjusted analyses, participants with high risk of sleep apnea lost a significantly lower percent of their initial weight than those at low risk (b=-2.8%, 95% CI:-4.5, -1.2). Results were consistent when determining if the difference in weight loss between the two groups was clinically significant (≥5%). Participants at high risk for OSA had 70% lower odds of losing ≥5% of their initial weight than participants at low OSA risk (OR = 0.30, 95% CI: 0.13, 0.67). Neither change in diet nor in physical activity mediated this association. Our findings suggest that OSA is a risk factor for poor weight loss outcomes. Future research should investigate the mechanisms through which OSA impairs weight loss (e.g., poor sleep quality, metabolic issues) and determine if optimal OSA diagnosis (polysomnography) and treatment (CPAP with proper settings) enhances weight loss outcomes.

CORRESPONDING AUTHOR: Matthew C. Whited, PhD, LicensedPsychologist, East Carolina University, Greenville, NC, 27858; whitedm@ecu.edu

Paper Session 42 9:39 AM-9:57 AM

THE INFLUENCE OF WEIGHT LOSS ON SLEEP IMPROVEMENT IN OBESE ADULTS: RESULTS FROM THE HEADS UP STUDY

Valerie H. Myers, PhD[1], Phillip J Brantley, PhD[2], Krystal K. Waldo, MA[2], Robert L. Newton, Jr., PhD[2], Melissa N. N. Harris, MPA[2], Patricia S. Boyd, BA[2], Ricky D. Brock, RD[2], Catherine M. Champagne, PhD, RDN[2], Molly R. Matthews-Ewald, PhD, MS[2], William D. Johnson, PhD[2], Dachuan Zhang, MA[2], Timothy Church, MPH, MS, PhD, MD[2], Donna H. Ryan, MD[2]

[1]Klein Buendel, Inc., Golden, CO; [2]Pennington Biomedical Research Center, Baton Rouge, LA

Obstructive sleep apnea (OSA) and sleep disturbances are common comorbidities associated with obesity, and weight loss is a frequently recommended treatment. However, little research exists on the amount of weight loss needed or the preferred weight loss approach to induce sleep improvements. The Heads Up Demonstration Project is a non-randomized prospective cohort study funded by a state insurance company examining the effectiveness of both surgical and nonsurgical approaches for weight loss among adults with severe obesity. Patients (n=555, 47.9+10.1 yrs; 86% female; 61% White) received either weight loss surgery (WLS; n=209) or an intensive medical and behavioral intervention (IMI; n=346). Sleep disturbances were evaluated using the Epworth Sleepiness Scale (ESS) and Pittsburgh Sleep Quality Index (PSQI). Proc mixed analyses revealed that a significant reduction in sleep disturbances at 6 months occurred in IMI patients, but not WLS patients. Among IMI patients, significant improvements in sleep disturbance were reported in White males (p=0.0003), White females (p=0.0004), and AA females (p=0.0064). Significant sleep quality improvements at 6 months occurred in IMI patients who are White males (p=0.0011), White females (p < 0.0001), and AA women (p=0.0010). Among WLS patients, significant sleep quality improvements at 6 months occurred in both White and AA females (ps=0.0003 and 0.0004, respectively), but not in males (ps=0.20 and 0.75; White and AA, respectively). Findings suggest that weight loss through IMI approaches produced a significant reduction in sleep disturbances and improvement in sleep quality at 6 months for all patients except AA men while WLS only produced sleep quality improvements for women. This suggests that race, gender, and weight loss approach may influence the impact of weight loss on sleep outcomes. Additional analyses including one year outcomes and the influence of demographic factors will be presented.

CORRESPONDING AUTHOR: Valerie H. Myers, PhD, Klein Buendel, Inc., Golden, CO, 80401; vmyers@kleinbuendel.com

Paper Session 42 9:57 AM-10:15 AM

BIOLOGICAL MARKERS OF IMPROVEMENT IN SLEEP QUALITY FOLLOWING EXERCISE IN MAJOR DEPRESSIVE DISORDER

Chad D. Rethorst, PhD, Tracy Greer, Ph.D, Ira Bernstein, Ph.D., Madhukar Trivedi, M.D.

UT Southwestern Medical Center, Dallas, TX

Objective: To assess biological correlates and predictors of improvements in sleep quality following exercise augmentation in persons with non-remitted Major Depressive Disorder (MDD).Methods: Participants with non-remitted MDD following SSRI treatment were randomized to receive augmentation with one of two doses of exercise: 16 kilocalories per kilogram of body weight per week (KKW) or 4 KKW for 12 weeks. The four sleep-related items on the clinician-rated Inventory of Depressive Symptomatology (IDS-C) (Sleep Onset Insomnia, Mid-Nocturnal Insomnia, Early Morning Insomnia, and Hypersomnia) were used to assess self-reported sleep quality. Inflammatory cytokines (TNF-α, IL-1β, IL-6,) and brain derived neurotrophic factor (BDNF) were assessed in blood samples collected prior to and following the 12-week interventionResults: Improvements in insomnia ($t = -7.76$, $p < 0.0001$) and hypersomina ($t = -2.67$, $p = 0.009$) were observed following the exercise intervention, while no difference in changes were observed between groups (p>0.05). Reduction in hypersomnia was correlated with reductions in BDNF ($r_s = 0.26$, $p = 0.029$) and interleukin (IL)-1β ($r_s = 0.37$, $p = 0.002$). Lower baseline levels of IL-1β were predictive of greater improvements in insomnia during the 12-week exercise intervention (F = 3.87, $p = 0.0498$); however, changes in inflammatory markers and BDNF were not related to changes in insomnia (p's > 0.05).Conclusions: Improvement in hypersomnia is related to reductions in inflammatory markers and BDNF in persons with non-remitted MDD. Distinct biological mechanisms may explain reductions in insomnia.

CORRESPONDING AUTHOR: Chad D. Rethorst, PhD, UT Southwestern Medical Center, Dallas, TX, 75390-9119; chad.rethorst@utsouthwestern.edu

Paper Session 43 8:45 AM-9:08 AM

RELATION OF BATTERY FOR HEALTH IMPROVEMENT 2 SCORES AND SPINAL CORD STIMULATOR SURGERY

Brandon N. Kyle, PhD[1], Claude E. Davis, PhD[2], Jacob Thorp, PT, DHS[1], Qiang Wu, PhD[3], Juan Firnhaber, MD[4]

[1]East Carolina University, Greenville, NC; [2]School of Dental Medicine at East Carolina University, Greenville, NC; [3]East Carolina University, Greenville, ND; [4]East Carolina Pain Consultants, Greenville, NC

Selecting patients as best candidates for specific treatments for chronic pain may be important in order to optimize treatment effectiveness. One useful intervention for some patients with chronic pain is implantation of spinal cord stimulator (SCS). The few investigations that have examined what psychosocial factors predict SCS-related outcomes have suggested constructs such as depression may be related to poor outcomes. Previous research, however, also suggests patients evaluated prior to SCS surgery report fewer such symptoms when compared to other patients with chronic pain, despite reporting similar levels of pain and functioning. The purpose of the current study was to evaluate the relation of SCS surgery to scores on validity indices, physical symptom scales, and affective scales on a multiple-choice psychological assessment for medical patients. A final sample of 93 patients being considered for SCS surgery (57% female, mean age = 53.8 years, *SD* = 13.6) completed the Battery for Health Improvement 2 (BHI 2) as part of pre-surgical psychological evaluation. In addition to scales for physical symptoms of pain and functioning and scales for affective symptoms of depression, anxiety, and hostility, the BHI 2 includes validity scales for willingness to disclose information (i.e., self-disclosure) and tendency to minimize symptoms (i.e., defensiveness). Self-disclosure ($r_{pb} = -.46$, $p < .001$) and defensiveness ($r_{pb} = .25$, $p < .05$) were both related to advancement to SCS trial; self-disclosure also was related to having a SCS implanted ($r_{pb} = -.24$, $p < .05$). On other scales of the measure, less depression ($r_{pb} = -.26$, $p < .05$) and less hostility ($r_{pb} = -.22$, $p < .05$), but not pain or functional complaints, were related to having an implant. This study suggests that patients who are less self-disclosing and more defensive are more likely to advance towards SCS surgery. In light of other results suggesting depression and hostility, but not pain and functioning, are related to proceeding to SCS implantation, health care providers may need to be cautious about biased self-report in patients being considered for SCS surgery.

CORRESPONDING AUTHOR: Brandon N. Kyle, PhD, East Carolina University, Greenville, NC, 27834; kyleb@ecu.edu

CITATION PAPER

Paper Session 43 9:08 AM-9:30 AM

A HYBRID IN-PERSON AND MHEALTH PAIN COPING SKILLS INTERVENTION FOR STEM CELL TRANSPLANT PATIENTS

Sarah A. Kelleher, PhD, Hannah M. Fisher, B.S., Rebecca A. Shelby, PhD, Keith M. Sullivan, M.D., Amy P. Abernethy, M.D., Ph.D., Francis J. Keefe, PhD, Tamara J. Somers, Ph.D.

Duke University Medical Center, Durham, NC

Pain is a challenge for patients following hematopoietic stem cell transplantation (HSCT). We used focus groups to develop a feasible and acceptable mobile pain coping skills training (mPCST) protocol that addresses the unique needs of HSCT patients with pain. Following development, intervention user-testing was conducted. All participants reported pain following HSCT; 25 participants were in focus groups and 7 in user-testing. Qualitative data on experiences were collected along with demographics, medical data, and measures of pain, pain disability, fatigue, pain self-efficacy and satisfaction. Participants were 50% female, M=61 years old (SD=7), and M=21 months (SD=14) post-transplant. On the Brief Pain Inventory severity scale participants reported pain in the last week as M=3 (SD=2) and on the Pain Disability Inventory rated disability in the last week as M=19 (SD=14). We presented the focus groups and users with a preliminary description of a 6-session mPCST protocol for HSCT patients. Iterative qualitative data led to refinements of the mPCST protocol that increasingly tailored intervention content to meet patients' specific needs. For example, patients emphasized spending time in meaningful ways resulting in enhancing the traditional pain coping skill of pleasant activity planning to incorporate meaningful activities (e.g., volunteering, community involvement). All user-testers completed the mPCST protocol; ratings of pain, pain disability, fatigue, and pain self-efficacy showed improvement trends. User-testers reported high satisfaction on the Client Satisfaction Questionnaire (M=35/40; SD=4). Based on feedback obtained we produced a final version of the mPCST protocol that is tailored to meet the challenges patients reported. The protocol bridges hospitalization (1 session) and home (5 video-conference sessions), teaches relaxation techniques, cognitive-restructuring, activity pacing/planning, problem solving, and goal setting, and uses a website with personalized messages based on daily assessments. The results of this work demonstrate that a mPCST intervention tailored to meet the needs of HSCT patients is feasible and acceptable to patients and shows promise in decreasing pain. We are currently using a small, randomized trial to test the developed intervention.

CORRESPONDING AUTHOR: Sarah A. Kelleher, PhD, Duke University Medical Center, Durham, NC, 27705; sarah.kelleher@duke.edu

Paper Session 43 9:30 AM-9:52 AM

CO-MORBID ADDICTION AND PAIN: LONG TERM PSYCHO-PHYSIOLOGICAL EFFECTS AFTER OPIOID CESSATION

Amy Wachholtz, PhD, MDiv, MS

University of Massachusetts Medical School, Worcester, MA

Aims: Medication assisted treatment with opioids for opioid dependence alters the pain experience. The purpose of this study is to evaluate changes pain sensitivity and tolerance with these opioid treatments; and duration of this effect after treatment cessation. This study will also, assess differences in pain sensitivity and tolerance between treatment with a partial mu-agonists (buprenorphine) or a full mu-agonists (methadone). *Method*: One hundred and twenty individuals with history of pain and treatment with opioids were recruited in 4 groups (n=30): 1- current methadone for opioid addiction; 2- current buprenorphine for opioid addiction; 3-history of opioid agonist treatment for opioid addiction but with current prolonged abstinence of opioids (M=121 weeks;SD=23.3);and 4-opioid naïve. Participants completed a psychological assessment and a cold water task. Time to first pain report (sensitivity) and time to disengagement from the pain task (tolerance) were recorded. The main data analyses used survival (time to event) analysis. *Results*: A Kaplan-Meier analysis showed significant group differences for both pain sensitivity and tolerance (Log rank=20.11; p < .001). A follow up Cox analysis, found that any current or historical use of opioid maintenance treatment resulted in significant differences in pain sensitivity compared to opioid naïve individuals (p's < .01). However, tolerance to pain was better among those with a history of opioid maintenance compared to active methadone patients (p < .05), with the highest tolerance found among opioid naïve participants (p's < .001). Correlations showed that among prolonged abstinent group, pain tolerance was significantly improved as the weeks since last opioid dose increased (R=.37;p < .05); but duration of abstinence did not alter sensitivity (ns). *Conclusion*: Among individuals with a history of prolonged opioid treatment, there appears to be long-term differences in pain sensitivity that do not resolve with discontinuation of opioid treatment. Although sensitivity does not change, tolerance to pain does appear to increase after the completion of treatment. This has significant implications for treating individuals with co-morbid opioid addiction and pain, including both chronic pain and acute pain conditions.

CORRESPONDING AUTHOR: Amy Wachholtz, PhD, MDiv, MS, University of Massachusetts Medical School, Worcester, MA, 01655; amy.wachholtz@umassmemorial.org

CITATION PAPER

Paper Session 43 9:52 AM-10:15 AM

TWO PHASES OF PILOTING A MHEALTH BEHAVIORAL INTERVENTION FOR CANCER PAIN

Tamara J. Somers, Ph.D.[1], Sarah A. Kelleher, PhD[1], Sara N. Edmond, M.A.[2], Anava A. Wren, M.A.[1], Hannah M. Fisher, B.S.[1], Amy P. Abernethy, M.D., Ph.D.[1], Francis J. Keefe, PhD[1]

[1]Duke University Medical Center, Durham, NC; [2]University of Mississippi Medical Center / G.V. (Sonny) Montgomery VAMC, Jackson, MS

Pain is common in cancer patients and related to poor outcomes. Behavioral cancer pain interventions are efficacious, but have limited reach. Mobile Health (mHealth) technology provides new opportunities to improve intervention reach. Here we describe 2 phases of a mHealth pain coping skills training intervention (mPCST). The mPCST protocol included 4 sessions delivered in the participants' home via video-conferencing (i.e., Skype+iPad). Both phases recruited participants who had a primary diagnosis of breast, lung, prostate, or colorectal cancer, a life expectancy of >6 months, and 2 clinical pain ratings of >3. Participants provided demographic and medical data, and measures of pain, physical symptoms, pain catastrophizing, psychological distress, and pain self-efficacy pre- and post-intervention. Phase 1 participants (N=25) were M=54(13) years old, female (76%), and white (76%). Cancer diagnoses were breast (48%), lung (16%), prostate (16%), or colorectal (20%). Phase 2 participants (N=30) were M=61(11) years old, female (50%), and white (97%). Cancer diagnoses were prostate (46%), breast (23%), lung (23%), or colorectal (11%). Phase 1 participants received mPCST; feasibility, acceptability, and initial efficacy were evaluated. 21 of 25 participants completed the study. Participants completed M=3.4 (SD=1) sessions. All participants rated the quality of the program as good or excellent. Pre- to post-intervention reductions in pain, physical symptoms, psychological distress, and pain catastrophizing were found (p's < .01). Phase 2 recruited 30 participants who were randomized to mPCST or PCST-trad, with a focus on access. PCST-trad was conducted in-person at the medical center. mPCST participants completed M=3.6 (SD=.8) sessions and PCST-trad participants completed M=3.8 (SD=.9). Average time to intervention completion was 62 days for PCST-trad compared to 30 days for mPCST. All phase 2 participants reported high satisfaction. Pre- to post-intervention changes in pain, pain self-efficacy, and pain catastrophizing (p's < .05) were found. mHealth technology is a feasible, acceptable, and potentially efficacious way to deliver behavioral cancer pain interventions. We are currently running a larger trial (N=160) examining a broader range of outcomes.

CORRESPONDING AUTHOR: Tamara J. Somers, Ph.D., Duke University Medical Center, Durham, NC, 27705; tamara.somers@duke.edu

Paper Session 44 8:45 AM-9:03 AM

ONLINE COGNITIVE BEHAVIORAL THERAPY IS A NOVEL APPROACH FOR DELIVERING MENTAL HEALTH TREATMENT TO MINORITY POPULATIONS

Charles Jonassaint, PhD, Bea Belnap, PhD, Kaleab Abebe, PhD, Bruce Rollman, MD, MPH

University of Pittsburgh, Pittsburgh, PA

Patients from underrepresented racial/ethnic groups often have limited access to mental health treatment. Internet-delivered computerized cognitive behavioral therapy (CCBT) may be a scalable, cost effective method for providing effective mental health treatment to these groups 24/7 in the privacy of their home; however, the uptake and impact of CCBT in this population is largely unknown. We examined these issues among a racially/ethnically diverse primary care patient population enrolled into an ongoing NIMH-funded trial of online collaborative care for mood and anxiety disorders.Methods: Patients aged 18-75 with current depression, panic or generalized anxiety disorder, were referred to our trial from 26 Pittsburgh-area primary care practices. Consenting patients who reported elevated levels of mood and/or anxiety symptoms (PHQ-9 or GAD-7 ≥10) and had Internet access were randomized to one of three groups, including two with care manager-guided access to the proven-effective “Beating the Blues” CCBT program, or to their doctor’s usual care (3-3-1 randomization ratio).Results: Between 8/1/12 and 7/31/14, 664 patients (124 non-whites) were randomized to one of the two study arms with CCBT access (mean age: 42.7 years; range 18-75). Non-white patients, compared to whites, had lower baseline PHQ-9 scores (11.6 vs. 13.1; p < .01) and completed slightly fewer CCBT sessions at both 3- and 6-months follow-up (mean sessions: 4.2 vs. 4.8; p=.03 and 4.7 vs. 5.4; p=.02, respectively) but their self-reported decline in PHQ-9 scores from baseline were similar (6-month decline: -6.2 vs. -7.0, p=.20).Conclusion: Our preliminary trialdata indicate depressed and/or anxious white and non-white primary care patients will use and equally benefit from an Internet-delivered and supervised CCBT program. Widespread deployment of CCBT into typical primary care could, therefore, become an efficient and widely replicable first-step to providing effective evidence-based mental health care while also reducing racial disparities in access and treatment.

CORRESPONDING AUTHOR: Charles Jonassaint, PhD, University of Pittsburgh, Pittsburgh, PA, 15213; jonassaintcr@upmc.edu

Paper Session 44 9:03 AM-9:21 AM

ACCEPTANCE AND COMMITMENT THERAPY FOR TREATMENT-REFRACTORY PATIENTS WITH MEDICAL AND PSYCHIATRIC CONDITIONS

Megan Oser, PhD[1], Gabe Gruner, LICSW[2], Vanessa Alvarez, MA[3]

[1]Brigham and Women's Hospital/Harvard Medical School, Boston, MA; [2]Brigham and Women's Hospital, Boston, MA; [3]Suffolk University, Boston, MA

Acceptance and Commitment Therapy (ACT) is theoretically grounded and empirically supported as a transdiagnostic therapy model (Levin et al., 2012). Recently, ACT was adapted for a heterogenous treatment-resistant patient population (Clarke et al., 2012; Clarke et al., 2014). To expand upon these findings, ACT was evaluated as an open trial group intervention for heterogeneous psychiatric outpatients experiencing difficulties with their medical conditions (N = 24; 63% female; 71% Caucasian). We characterize the sample and evaluate purported mechanisms of change from pre to post intervention to assess what adaptations might be needed for this medical patient population with multiple attempts at psychiatric treatment. Treatment completers (n=14; attending > 70% of group sessions) did not differ from non-completers on experiential avoidance, anxiety sensitivity, and distress tolerance or a depression or anxiety screening measure. Interestingly, the largest numerical difference between completers and non-completers was anxiety sensitivity with non-completers scoring 4.5 points higher at baseline. Distress tolerance significantly improved during treatment ($t(12) = -2.53$; $p = .03$; $d = .60$). Experiential avoidance decreased by 3.1 points on average, ($t(12) = 0.91$; $p = .38$; $d = .35$) and anxiety sensitivity decreased an average of 3.3 points ($t(9) = 0.71$; $p = .49$; $d = .22$). Although modest improvements were observed in all process measures, only distress tolerance significantly improved from pre- to post-intervention. Findings will be discussed in terms of limitations due to small sample size, effect sizes for a heterogeneous patient sample, the incubation period of capturing improvements in ACT, and future refinement and adaptations of ACT for patients with medical conditions.

CORRESPONDING AUTHOR: Megan Oser, PhD, Brigham and Women's Hospital/Harvard Medical School, Boston, MA, 02115; moser1@partners.org

Paper Session 44 9:21 AM-9:39 AM

MENTAL HEALTH RECOVERY IN THE PATIENT-CENTERED MEDICAL HOME

Marisa Sklar, M.S.[1], Erik J. Groessl, Ph.D.[2], Gregory A. Aarons, Ph.D.[3]

[1]SDSU/UCSD Joint Doctoral Program in Clinical Psychology, Providence, RI; [2]University of California San Diego, San Diego, CA; [3]University of California San Diego, La Jolla, CA

Rationale: The current United States (US) healthcare system focuses primarily on acute needs. As a result, the US ranks poorly in preventable mortality, and the incidence and prevalence of chronic conditions has increased. The Patient-Centered Medical Home (PCMH) is posited as an innovation for improving the healthcare system at lower costs. However, evidence regarding the effectiveness of the PCMH in improving health outcomes is limited. Additionally, a healthcare system that fails to address mental health will be incomplete and minimally effective. An assessment of the effectiveness of the PCMH in improving the health, including mental health, of its patients is necessary. This study examined the impact of transitioning clients with severe mental illness (SMI) from a County mental health treatment clinic to a PCMH on mental health recovery.Design: Data were drawn from the San Diego County Behavioral Health Services administrative data set. Client demographic and clinical characteristics were used to develop and conduct propensity scores analysis, and multilevel modeling was used to assess the impact of the PCMH on mental health recovery by comparing PCMH participants (n = 215) to similar clients receiving service as usual (SAU) in County outpatient mental health clinics (n = 22394). Mental health recovery is repeatedly assessed over time (days since baseline assessment range: 0-1,639, M = 186) by the Illness Management and Recovery (IMR) scale and the Recovery Markers Questionnaire (RMQ). Results suggested that for total IMR (LR χ^2 (1) = 4696.97, p < .0001) and IMR Factor 2 Management scores (LR χ^2 (1) = 7.9, p = .005), increases in mental health recovery scores over time were greater for PCMH participants than SAU participants.Relevance: This study is among the first that demonstrates the promise the PCMH model of healthcare delivery holds for improving the mental health recovery of its patients. Results suggest similar or greater increases in mental health recovery over time can be expected when patients with SMI are provided treatment through the PCMH than through SAU. These results hold tremendous implications as interest regarding the potential for the PCMH model of healthcare delivery to improve the quality of health care in the US grows.

CORRESPONDING AUTHOR: Marisa Sklar, M.S., SDSU/UCSD Joint Doctoral Program in Clinical Psychology, Providence, RI, 02906; masklar@ucsd.edu

CITATION PAPER

Paper Session 44 9:39 AM-9:57 AM

QUALITY OF LIFE IMPROVED IN INDIVIDUALS WITH DIABETES AND CHRONIC PAIN IN A CBT-BASED PROGRAM DELIVERED BY CHWS

Susan J. Andreae, MPH[1], Christopher Gamboa, MPH[2], Joshua S. Richman, MD, PhD[2], Monika M. Safford, MD[1]

[1]University of Alabama at Birmingham, Birmingham, AL; [2]UAB, Birmingham, AL

As many as 75% of people with diabetes report chronic pain. While cognitive behavioral therapy (CBT) improves pain and functioning in individuals with chronic pain, many rural and underserved communities lack resources for such programs. We tested the hypothesis that a CBT-based program delivered by community health workers (CHW) can improve quality of life in individuals with diabetes and chronic pain.Living Healthy was a community-based, clustered randomized controlled trial engaging adults with diabetes, chronic pain, and a primary care doctor. The intervention (INT) group received an 8-session telephonic diabetes self-management program administered by CHW over 12 weeks and incorporating adaptive coping skills, setting diabetes self-management behavioral goals, practicing stress reduction techniques, and cognitive restructuring. Controls (C) received general health advice with equal number of CHW contacts. Coping behaviors were assessed using the Coping Strategies Questionnaire-24 (range 0-46). Pain was assessed using the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC, range 0-1), A Measure of Intermittent and Constant Osteoarthritis Pain (ICOAP, range 0-100), and the McGill Pain Questionnaire (MPQ, range 0-45). Physical activity (PA) was measured by assessing the number of days in the past week with intense PA enough to work up a sweat, number of days walked, and participating in PA despite pain.Of the 153 individuals with complete data, mean age was 59.4 ±10.6 years, 95% (n=146) were African Americans, and 80% (n=122) were women. Coping scores improved in INT by 5.1 points more than in C, p < 0.001. Compared to C, ICOAP, WOMAC, and MPQ scores improved more in INT from baseline to follow-up by 8.2 (p=0.01), 0.05 (p=0.05), and 2.1 points (p=0.09), respectively. Intense PA levels did not significantly differ at follow-up (0.24 days, p=0.47), but INT participants walked 1.2 more days (p < 0.001) and walked or participated in other forms of PA despite pain for 1.5 more days (p < 0.001) compared to C.The program improved coping, pain, physical functioning, and PA in individuals with diabetes and chronic pain. Such interventions hold promise to improve health of residents of rural and under-resourced communities.

CORRESPONDING AUTHOR: Susan J. Andreae, MPH, University of Alabama at Birmingham, Birmingham, AL, 35205; sandreae@uabmc.edu

Paper Session 44 9:57 AM-10:15 AM

DEPRESSED AND ANXIOUS PRIMARY CARE PATIENTS' USE OF AN INTERNET-DELIVERED COMPUTERIZED CBT PROGRAM

Bea Belnap, PhD, Kaleab Abebe, PhD, Patrice Gibbs, MS, Amy Anderson, MS, Christopher Wiltrout, BS, Bruce Rollman, MD, MPH

University of Pittsburgh, Pittsburgh, PA

Background: Numerous trials have demonstrated the effectiveness of Collaborative Care (CC) strategies at treating depressed and anxious primary care patients, yet providing expedient access to psychotherapy within this setting remains challenging. Internet-delivered computerized CBT (iCCBT) programs could overcome this impediment, but studies have not evaluated the effectiveness of this treatment that can be conveniently provided 24/7 within the context of a CC program.Methods: PCPs from 26 Pittsburgh-area primary care offices were encouraged to refer their depressed and anxious patients aged 18-75 to our NIMH-funded trial of online CC, in response to an electronic medical record system prompt. Consenting patients with at least moderate levels of mood and/or anxiety symptoms (PHQ-9 or GAD-7 $\geq$10) and Internet access were randomized to one of three groups, including two with access to the proven-effective *Beating the Blues* iCCBT program. Study care managers guided patients through the use of the program and encouraged completion of all eight 50-minute sessions within a 6-months period.Results: From 8/12-6/14, we randomized 555 patients to iCCBT. Of these, 84% started the program and 36% completed all 8 sessions (mean sessions completed: 5.3). Although non-whites were less likely than whites to complete all 8 iCCBT sessions (26% vs. 38%, p=0.02), completion rates were similar by gender, age, educational level, baseline working status and symptom severity. Patients who completed all 8 sessions reported mean decreases in PHQ-9 and GAD-7 scores of 5.8 and 5.7, respectively, regardless of sociodemographic subgroup, and 71% reported a $\geq$ 50% decline in mood and anxiety symptoms from baseline. Conclusions: Depressed and anxious primary care patients will engage with and benefit from use of an iCCBT program provided within a CC intervention. We will present updated data after we open our study blind next spring.

CORRESPONDING AUTHOR: Bea Belnap, PhD, University of Pittsburgh, Pittsburgh, PA, 15213; belnapbh@upmc.edu

MERITORIOUS PAPER

Paper Session 45 8:45 AM-9:03 AM

ASSOCIATION OF FOOD INSECURITY AND OVERWEIGHT AND OBESITY ACROSS LOW-INCOME HISPANIC SUBGROUPS

Teresa M. Smith, MS[1], Uriyoán Colón-Ramos, PhD[2], Courtney A. Pinard, PhD[3], Amy Yaroch, PhD[4]

[1]University of Nebraska Medical Center, Omaha, NE; [2]George Washington University, Washington, DC; [3]Gretchen Swanson Center for Nutrition, Omaha; [4]Gretchen Swanson Center for Nutrition, Omaha, NE

An estimated 78% of Hispanics in the United States (US) are overweight or obese. Household food insecurity, a condition of limited or uncertain access to adequate food, has been associated with obesity rates among Hispanic adults in the US. However, the Hispanic group is multiethnic and therefore the associations between obesity and food insecurity may not be constant across country of origin subgroups. This study sought to determine if household food insecurity was associated with overweight or obesity rates across low-income ($\leq$200% poverty level) Hispanic country of origin subgroups (Mexican, Central American, South American, Spanish-American, and Puerto Rican) living in California. Data are from the cross-sectional 2011-12 California Health Interview Survey (n = 5498). Rates of overweight or obesity (BMI $\geq$ 25), select dietary behaviors (fruit, vegetable, soda, and fast food intake), neighborhood food environment, Calfresh receipt (California's Supplemental Nutrition Assistance Program), acculturation, and stress were examined for differences across subgroups. Weighted multiple logistic regressions examined if household food insecurity was significantly associated with overweight or obesity after controlling for age, sex, education, marital status, acculturation, and Calfresh receipt (P < .05). Significant differences across subgroups existed for prevalence of overweight or obesity, food security, select dietary behaviors, perceived availability of fresh fruit and vegetables in neighborhood, Calfresh receipt, acculturation, and stress. Household food insecurity was significantly associated with overweight or obesity for the overall sample while controlling for age, sex, education, marital status, acculturation, and Calfresh receipt (OR 1.6, 95% CI 1.3-1.9). When stratified by subgroup, household food insecurity was significantly associated with overweight or obesity only among Mexican Americans (OR 1.4, 95% CI 1.2-1.8). These results suggest Hispanic subgroups behave differently in their association between food insecurity and obesity. By highlighting these factors among Hispanic subgroups, we can promote targeted obesity prevention interventions, which may contribute to more effective behavior change and reduced chronic disease risk in this population.

CORRESPONDING AUTHOR: Teresa M. Smith, MS, University of Nebraska Medical Center, Omaha, NE, 68114; tsmith@centerfornutrition.org

Paper Session 45 9:03 AM-9:21 AM

RACE MODERATES THE ASSOCIATION BETWEEN BODY WEIGHT AND SUBJECTIVE HEALTH AMONG MID-LIFE ADULTS

Juliette M. Iacovino, M.A., Ryan Bogdan, Ph.D., Thomas F. Oltmanns, Ph.D.

Washington University, Saint Louis, MO

The prevalence of obesity and related illnesses (e.g., type 2 diabetes) are pressing public health concerns. Compared with white Americans, black Americans are more likely to be overweight/obese and to suffer from related illnesses. However, evidence suggests that increased weight is associated with better subjective mental health among blacks, while the opposite is found among whites. It is unclear whether this pattern holds for physical health.We examine this question in a sample of 856 black and white adults (33% black), ages 55-64, participating in a longitudinal study of aging and health. Subjective physical health was measured with the RAND-36 Health Status Inventory, diagnosed illnesses were measured with the Computerized Diagnostic Interview Schedule, and height and weight were self-reported. Body weight was represented continuously (body mass index; BMI) and categorically (weight status; WS). Hierarchical regression models examined predictors of subjective health and diagnosed illnesses. Post-hoc t-tests examined group differences in health by race and WS. Gender, education and income were controlled in analyses.Black participants and those with higher weights reported lower subjective health and more illnesses. In addition, race moderated the association between weight and subjective health, even after controlling for diagnosed illnesses. Higher BMI and WS were associated with lower subjective health for whites. For blacks, subjective health was not associated with BMI and did not differ significantly across WS groups. Race did not moderate the association between WS or BMI and diagnosed illnesses.In this study, black participants did not report lower subjective health as a function of increasing weight, in contrast to white participants. This pattern may contribute to the higher rates of overweight and obesity among black Americans. Notably, the positive association between weight and number of diagnosed illnesses was of similar magnitude between whites and blacks. The discrepancy in the impact of weight on subjective versus objective health status may contribute to racial disparities in obesity-related chronic illnesses. Health care professionals may benefit from addressing in weight loss interventions factors that improve subjective health among black patients.

CORRESPONDING AUTHOR: Juliette M. Iacovino, M.A., Washington University, Saint Louis, MO, 63130; jcmcclen@wustl.edu

Paper Session 45 9:21 AM-9:39 AM

RISK AND PROTECTIVE FACTORS FOR CHILDHOOD OBESITY IN SOUTHEAST ASIAN COMMUNITIES

Akilah Dulin Keita, PhD[1], Shannon Whittaker, BA[1], Jamila Wynter, BA[2], Tamnnet Kidanu, BA[3], Michelle Cardel, PhD[4], Kim M. Gans, PhD[5]

[1]Brown University School of Public Health, Providence, RI; [2]Warren Alpert Medical School at Brown University, Providence, RI; [3]St Catherine's University, St. Paul, MN; [4]University of Colorado, Aurora, CO; [5]Brown University, Providence, RI

AbstractBackground: The purpose of this study was to identify Southeast Asian (Laotian, Hmong, and Cambodian) parents and grandparents perceptions of the perceived risk and protective factors for childhood obesity.Methods: We used a community-engaged mixed methods research design, which involved collecting and analyzing qualitative and quantitative data using concept mapping methodology. Fifty-nine participants engaged in the concept mapping process which included 1) focus group meetings to elicit statements related to weight status and 2) structuring meetings where participants sorted and rated statements based on similarity and relative importance. Concept mapping software generated clusters of ideas, cluster ratings and pattern matches.Results: Eleven clusters related to risk and protective factors were identified. Healthy food changes made within the school was the most important cluster and focused on school lunch programs that increase servings of vegetables and remove unhealthy foods. Parent-related physical activity factors focusing on the protective effects of physical activity was the second most important cluster. Results differed somewhat by Southeast Asian subgroups, but pattern match results suggested that Cambodian and Hmong participants moderately agreed on cluster ratings (r=0.62) whereas there were lower correlations with Laotians.Conclusion: The findings indicate that healthy food changes within schools, parent-related physical activity, parent involvement in healthy behaviors and culture are important factors within Southeast Asian communities that may influence weight status among Southeast Asian children. These key themes can be utilized to develop interventions for Southeast Asian populations.

CORRESPONDING AUTHOR: Akilah Dulin Keita, PhD, Brown University School of Public Health, Providence, RI, 02903; akilah_keita@brown.edu

Paper Session 45 9:39 AM-9:57 AM

THE EFFECTS OF AGE AND SOCIAL LIFE ON PHYSICAL ACTIVITY IN UNDERSERVED AFRICAN AMERICAN ADULTS

Tyler C. McDaniel, M.A., Dawn K. Wilson, PhD, Sydney S. Smith, M.S.

University of South Carolina, Columbia, SC

Age is important to consider when investigating physical activity (PA) as PA levels greatly decline as age increases. Given current health disparities, it is important to examine factors that may promote PA in underserved (low-income, minority) populations. Though research has indicated that social support and having a larger social network may lead to greater PA in older adults, some studies have found social networks to be more important in predicting PA for young adults. However, researchers have yet to examine how age may influence neighborhood social environment characteristics jointly, such as collective efficacy, neighborhood social life, and neighborhood support for exercise, on PA in underserved communities. Given that previous research has shown that older individuals have greater concerns about neighborhood safety and are more constrained to their neighborhood, it was hypothesized that neighborhood social connections would be more strongly associated with being more physically active in this group. Thus this study examined the moderating effects of age with collective efficacy, neighborhood support for exercise, neighborhood social life, neighborhood perception of crime, and family and peer social support on PA in African American adults. Baseline data from the PATH trial were used and participants were African-American adults ($N = 417$, $M_{\text{age}} = 51.65$, age range: 18-85). Moderate-to-vigorous activity (MVPA) was assessed using 7-day accelerometry estimates. Social-environmental variables were measured using psychosocial questionnaires. Hierarchical regression analyses indicated a significant age x social life interaction on PA ($b = -.465$, $p < 0.05$) controlling for sex, education, community, and body mass index. Contrary to our hypothesis, analysis of simple slopes revealed that younger adults who had more social interactions within the neighborhood engaged in more PA ($b = 1.23$, $p < 0.05$) while social interactions did not impact PA in older adults ($b = .093$, p = .787). Future research is needed to understand how age and social environmental factors may predict greater PA for elderly individuals, given the sharp decline of PA in this population. Future interventions should consider incorporating components that advocate for improved social life in young African American adults.

CORRESPONDING AUTHOR: Tyler C. McDaniel, M.A., University of South Carolina, Columbia, SC, 29201; mcdani47@email.sc.edu

Paper Session 46 9:57 AM-10:15 AM

USING WEB-BASED TECHNOLOGY TO PROMOTE PHYSICAL ACTIVITY IN LATINAS IN ALABAMA: RESULTS OF A PILOT STUDY

Tanya Benitez, PhD[1], Andrea Cherrington, MD[2], Rodney P. Joseph, PhD[1], Colleen Keller, PhD[3], Becky Marquez, PhD, MPH[4], Bess H. Marcus, PhD[5], Dorothy Pekmezi, PhD[2]

[1]Arizona State University, Phoenix, AZ; [2]University of Alabama at Birmingham, Birmingham, AL; [3]Arizona State University, Phonix, AZ; [4]UC San Diego, San Diego, CA; [5]University of California, San Diego, La Jolla, CA

Introduction: Latinas in the U.S. report disproportionately high levels of physical inactivity and related health conditions (e.g., diabetes, stroke); thus, innovative strategies are necessary for reducing these disparities. Internet-based interventions can help to ovecome common barriers of in-person interventions and may be particularly well-suited for physical activity promotion among Latinas living in a state with a history of some of the harshest immigration laws in the country. Methods: In Muévete Alabama, a one-month single-arm pre-posttest design was utilized to assess the feasibility and acceptability of a theory driven (Social Cognitive Theory and Transtheoretical Model), culturally and linguistically adapted, Internet-based physical activity intervention for Spanish-speaking Latinas. Changes in physical activity (as measured by Seven Day Physical Activity Recall interviews) and related psychosocial variables were measured at baseline and one month assessments. Results: The sample was comprised of 24 Latinas (mean age= 35.17, SD= 11.22). Most (83.3%) were born outside of the continental United States. Countries of origin included Mexico (n= 15, 62.5%), Colombia, Guatemala, Puerto Rico, Venezuela, Peru, and Argentina. A majority of participants had a high school education or less (n=13, 54.2%) and an annual household income under $30,000 (n=12, 57.1%). Intent-to-treat analyses indicated that there was a significant increase (p= .001) in self-reported moderate-to-vigorous intensity PA from median of 12.5 minutes per week at baseline to 67.5 minutes per week at the one-month assessment. Participants also reported significant increases in self-efficacy as well as cognitive and behavioral processes of change. Nearly half (45.8%) of participants reported advancing at least one stage of change during the course of the one-month intervention. Findings on the consumer satisfaction measure were favorable: 100% (n=21) of participants who completed the one-month intervention felt motivated to start or continue exercising as a result of using the website, and would recommend the website to family or friends. Conclusions: Findings support the feasibility and acceptability of using interactive Internet-based technology to promote physical activity among Latinas in Alabama.

CORRESPONDING AUTHOR: Tanya Benitez, PhD, Arizona State University, Phoenix, AZ, 85004; tanya.benitez@asu.edu

Paper Session 46 8:45 AM-9:08 AM

COMPARING EATING AND EXERCISE BEHAVIORS IN HISPANIC/LATINO AND NON-HISPANIC WHITE WOMEN

Celina D. Herrera, B.A. Psychology[1], Angelee G. Shamaley, PhD[1], Joe Tomaka, PhD[1], Dejan Magoc, PhD[2]

[1]New Mexico State University, Las Cruces, NM; [2]Stetson University, Deland, FL

The purpose of this study was to more closely examine evolving cultural differences in eating and exercise behaviors. It has been observed that as Hispanic/Latina women acculturate, they adopt the eating and exercise patterns more commonly seen in White women. This has special significance for Americans living on the U.S.-Mexico Border, which serves as a catalyst for cultural exchange. Although, the literature is mixed on whether ethnic minority groups still show fewer eating disturbances than Whites, Shaw, Ramirez, Trost, Randall & Stice (2004) suggest that ethnic minority groups have reached a parity with Whites in this domain. This study investigated the ethnic differences of eating behavior, risks for eating disorders, weight management practices and perceived power of food differences among Hispanic and non-Hispanic White women.Participants at two large universities completed an online survey that included the Three Factor Eating Questionnaire (TFEQ; de lauzon et al., 2004), the Eating Disorders Examination 9EDE-Q, Fairburn, 2008), and the Power of Food Scale (POF; Lowe et al., 2009). Sample 1 from the study included 290 female students, 79.7% Hispanic with a mean age of 23 from the University of Texas at El Paso. Sample 2 included 410 students from Eastern Illinois University, 82% female, 90% White with a mean age of 24. Data collection was voluntary and collected with professor approval through introductory nutrition classes. Students in each sample voluntarily completed the measures as part of a larger study of weight management practices among college students.Results showed that despite the notion that Hispanic women are reaching a parity with White women, Hispanics have not reached the level of restricting eating behaviors as seen traditionally among White females. In contrast, the study did find Hispanic women used exercise as a means of weight control more than the White females. This study serves as a snapshot of a culture in transition. As Hispanic/Latina women acculturate to American society, they will learn habits, both adaptive and maladaptive, from their White American counterparts. One such example is overcoming cultural barriers to exercise. Since Hispanic/Latinos have become established as the dominant minority group in the U.S., their attitudes will impact American health behaviors as well.

CORRESPONDING AUTHOR: Celina D. Herrera, B.A. Psychology, New Mexico State University, Las Cruces, NM, 88003; che86@nmsu.edu

Paper Session 46 9:08 AM-9:30 AM

PERCEIVED BEHAVIORAL CONTROL AND PHYSICAL ACTIVITY (PA) INFLUENCE MEXICAN PHYSICIAN PA PRESCRIPTION

Lucie Levesque, PhD[1], Karla Galaviz, PhD[2], Edtna Jauregui[3], Leandre Fabrigar, PhD[1], Latimer-Cheung Amy, PhD[1]

[1]Queen's University, Kingston, ON, Canada; [2]Emory University, Atlanta, GA; [3]Professor/ University opf Guadalajara México, Guadalajara, Mexico

Purpose: To describe the physical activity (PA) prescribing behavior of Mexican primary care physicians and determine if the constructs of the Theory of Planned Behavior (TPB) explain this behavior. Methods: 400 primary care clinics from Jalisco, Mexico were randomly selected. Physicians in these clinics were asked to complete an online questionnaire about the frequency with which they ask patients about their PA, provide verbal and written PA prescriptions, assess patient fitness, and refer patients to PA resources. Frequency of verbal and written PA prescription was used to estimate physician prescribing behavior. TPB constructs (attitudes, subjective norm, perceived behavioral control, intention) and physician PA were also measured. Structural equation modeling was employed. Results: 633 physicians (56% male, mean age 38 years) answered the questionnaire. Around 48% of physicians reported that they always ask patients about their PA levels, 33% provide verbal prescriptions, 8% refer patients, 6% provide written prescriptions, and 4% assess patient fitness. The main barriers reported were having no time (14%) and perceiving that patients do not follow the advice (7%). The fit of the TPB model with physician PA and age was satisfactory (RMSEA=0.05, CFI=0.98, SRMR=0.05), although not all of the TBP tenets were supported. Only subjective norm (β=.76, $p < .05$) and attitudes (β=.14, $p < .05$) were significant predictors of physician intention to prescribe PA. Perceived behavioral control (β=.38, $p < .05$) and physician PA (β=.16, $p < .05$) were the only significant predictors of physician prescription behavior. Conclusion: Overall, Mexican primary care physicians have a positive attitude toward prescribing PA, experience social pressure to prescribe PA and highly intend to prescribe PA. However, they perceive a modest level of ability to prescribe PA and their prescription rates are low. Strategies aimed at improving physicians' perceived ability to prescribe PA and their own PA behaviors seem worthwhile.

CORRESPONDING AUTHOR: Lucie Levesque, PhD, Queen's University, Kingston, ON, K7L3N6; levesqul@queensu.ca

Paper Session 46 9:30 AM-9:52 AM

A RANDOMIZED CONTROLLED TRIAL OF AN INTERNET-DELIVERED, PHYSICAL ACTIVITY INTERVENTION FOR LATINAS

Bess H. Marcus, PhD[1], Shira I. Dunsiger, PhD[2], Sheri J. Hartman, PhD[3], Sarah Linke, PhD[1], Dorothy Pekmezi, PhD[4], Becky Marquez, PhD, MPH[5], Britta Larsen, PhD[1], Kim M. Gans, PhD[6]

[1]University of California, San Diego, La Jolla, CA; [2]The Miriam Hospital, Providence, RI; [3]University of California San Diego, La Jolla, CA; [4]University of Alabama at Birmingham, Birmingham, AL; [5]UC San Diego, San Diego, CA; [6]Brown University, Providence, RI

Latinas in the U.S. report low rates of physical activity and are disproportionately burdened by related medical conditions. Physical activity interventions tailored to Spanish speaking Latinas that utilize technology to improve access are needed. Pasos Hacia la Salud, a 6-month Spanish-language randomized controlled trial, tested a culturally and linguistically adapted, individually tailored, Internet-based physical activity intervention vs. an Internet-based Wellness Contact Control condition among under-active Latinas. Intent to treat analyses tested the change in minutes of moderate to vigorous physical activity (MVPA). Participants (n=205) were a mean age of 39.21 years (SD=10.47) and the majority identified themselves as Mexican (84.4%), White (51.7%) and First Generation (81%). Intervention participants (n=103) reported increasing MVPA (as collected by the 7-day Physical Activity Recall) from a mean of 7.89 min/week (SD=14.98) at baseline to 110.51 min/week (SD=95.20) at 6 months, whereas control participants (n=102) reported increasing their MVPA from a mean of 8.46 min/week (SD=14.60) at baseline to 63.45 min/week (SD=88.71) at 6 months ($p < .05$). This difference was corroborated by accelerometer readings (rho= ,0.48 $p < .01$ at 6 months). Using a mixed effects regression model, we tested the effect of the Intervention, controlling for baseline and including a subject specific intercept. Results showed a significant intervention effect such that Intervention participants reported, on average, 47 more min/week of MVPA than Controls at 6 months (SE=9.45, $p < .01$). Moreover, at 6 months, 30.6% of Intervention vs. 12.8% of Control participants (adjusted OR=3.00, p=0.004) met national PA guidelines (≥150 min/week of MVPA). Findings support the efficacy of using interactive Internet technology to promote physical activity in Latinas. This Internet-delivered intervention has the potential to reach Spanish-speaking Latinas who may have difficulty accessing other physical activity programs. Future studies should evaluate the feasibility and appeal of other delivery channels such as text messaging, and other populations such as Latino men, which could further increase reach and cost-effectiveness and help eliminate health disparities in this population.

CORRESPONDING AUTHOR: Bess H. Marcus, PhD, University of California, San Diego, La Jolla, CA, 92093; bmarcus@ucsd.edu

Paper Session 46 9:52 AM-10:15 AM

HEALTH LITERACY MODERATES CHANGE IN PHYSICAL ACTIVITY AMONG LATINAS IN A RANDOMIZED TRIAL

Gregory M. Dominick, PhD[1], Shira I. Dunsiger, PhD[2], Dorothy Pekmezi, PhD[3], Britta Larsen, PhD[4], Becky Marquez, PhD, MPH[5], Jesse Nodora, DrPH[4], Kim M. Gans, PhD[6], Bess H. Marcus, PhD[4]

[1]University of Delaware, Newark, DE; [2]The Miriam Hospital, Providence, RI; [3]University of Alabama at Birmingham, Birmingham, AL; [4]University of California, San Diego, La Jolla, CA; [5]UC San Diego, San Diego, CA; [6]Brown University, Providence, RI

Background: Latinas report low rates of physical activity (PA) and are at risk for poor health outcomes. Language, acculturation, and literacy barriers impede access and utilization of PA-related resources. This study examined health literacy (HL) as a moderator of changes in moderate-to-vigorous physical activity (MVPA) in 196 Latinas enrolled in Seamos Saludables, a randomized-controlled trial of a six month culturally and linguistically adapted PA print intervention Methods: Secondary analyses were conducted focusing on HL, measured by the Newest Vital Sign (NVS), as a moderator of the intervention effects on MVPA, measured by 7-Day Physical Activity Recall, at 6 months, controlling for potential confounders. General Linear Models were used to assess the interaction effects between HL and treatment assigned, and their effect on MVPA at 6 months, controlling for baseline, potential confounders and the main effects of HL and treatment assigned. Results: Mean NVS score was 2.38 ± 1.59, suggesting limited or marginal HL overall. Mean Baseline MVPA was 2.73 ± 9.06 min/week. No group differences were found for mean NVS scores or MVPA at baseline between Intervention and Control. HL moderated the intervention effects on MVPA at 6 months, controlling for baseline. Among participants with the lowest HL scores, mean differences in MVPA at six months between Intervention and Control were 40.13 ± 17.38 min/week. No group differences were found among Latinas with higher HL scores at six months (0.62 min/week ± 25.79). Discussion: Through extensive formative research, the development of tailored intervention materials and activities can be effective for increasing MVPA among first generation Latinas with limited HL. As the U.S. Latino population grows, research must continue to identify optimal PA programs that can be implemented within communities to meet the needs of Latinas at all literacy levels.

CORRESPONDING AUTHOR: Gregory M. Dominick, PhD, University of Delaware, Newark, DE, 19716; gdominic@udel.edu

Paper Session 47 8:45 AM-9:03 AM

PSYCHOLOGICAL DISTRESS IN PATIENTS AND CAREGIVERS DURING RADIOTHERAPY FOR HEAD AND NECK CANCER

Hoda Badr, PhD[1], Vishal Gupta, MD[1], Andrew Sikora, MD, PHD[2], Marshall Posner, MD[1]

[1]Icahn School of Medicine at Mount Sinai, New York, NY; [2]Baylor College of Medicine, Houston, TX

OBJECTIVES. Head and neck cancer patients and their caregivers report high rates of psychological distress. High rates of physical symptom burden and the increased need for family members to provide caregiving during treatment may contribute to this distress.METHODS. This intensive longitudinal dyadic study examined trajectories of patient and caregiver distress over the course of radiotherapy for head and neck cancer as well how patients and caregivers influence each other's distress. Forty-nine head and neck cancer patient-caregiver dyads completed 6 weekly assessments of physical symptoms (MDASI-HN) and distress (e.g., NCCN distress thermometer) over the course of radiotherapy.RESULTS. Patient and caregiver distress increased steadily over the course of treatment, peaking at week 5; patients (82% male; 69% Stage 4) and caregivers (90% female) reported significant distress in 77% of cases. Linear mixed models with the patient-caregiver dyad as the unit of analysis showed that increases in patient-rated head and neck specific physical symptoms had a significant ($p < .05$) time-varying effect on both patient and caregiver distress. Increases in one dyad member's distress levels were also significantly associated with decreases in the other's distress levels over time.CONCLUSION. Findings highlight the adverse impact of patient physical symptoms during radiotherapy on both patient and caregiver distress. They also support a dyadic coping model whereby patients and caregivers manage their distress together as a unit. Overall, dyadic supportive care interventions that focus on controlling patient physical symptoms and that address both patient and caregiver distress are sorely needed in head and neck cancer.

CORRESPONDING AUTHOR: Hoda Badr, PhD, Icahn School of Medicine at Mount Sinai, New York, NY, 10029; hoda.badr@mssm.edu

Paper Session 47 9:03 AM-9:21 AM

PARENTING SELF-EFFICACY AND PSYCHOLOGICAL DISTRESS IN CANCER PATIENTS WITH SCHOOL-AGED CHILDREN

Julie M. Cessna, M.P.H., M.A.[1], Joseph A. Pidala, M.D., Ph.D.[2], Paul B. Jacobsen, PhD[2]

[1]University of South Florida, Tampa, FL; [2]Moffitt Cancer Center, Tampa, FL

Objective: Studies demonstrate that cancer patients with school-aged children are at greater risk of psychological distress. However, sources of distress remain uninvestigated. One possible modifiable source of distress is parenting self-efficacy (PSE) or a parent's confidence in their ability to raise their children. The first objective of this study was to determine the relationship between PSE and distress. The second objective was to compare parents with cancer to parents without cancer on PSE and distress.Methods: A sample of parents with cancer who had undergone hematopoietic cell transplantation (HCT; $n = 57$; age $M = 46$ years, $SD = 8$; 49% female; child age $M = 13$ years, $SD = 4$), and a control group of parents with no history of cancer ($n = 57$; age $M = 40$ years, $SD = 7$, 68% female; child age $M = 9$ years, $SD = 4$) were recruited for participation in the study. Medical record reviews assessed clinical variables, and participants filled out self-report measures of demographics, parenting self-efficacy, general self-efficacy, and psychological distress.Results: Patients reported less parenting self-efficacy, less general self-efficacy, and more psychological distress than controls (p's < .05). Furthermore, both parenting self-efficacy and general self-efficacy mediated the relationship between cancer status and psychological distress (p's < .05).Conclusions: Findings expand understanding of the potential sources of distress among patients with cancer who have school-aged children. They also suggest that interventions aimed at reducing distress in these individuals should seek to target both parenting and general self-efficacy.

CORRESPONDING AUTHOR: Julie M. Cessna, M.P.H., M.A., University of South Florida, Tampa, FL, 33602; jmcessna@mail.usf.edu

Paper Session 47 9:21 AM-9:39 AM

COGNITIVE PERFORMANCE AND IMPAIRMENT PRIOR TO ALLOGENEIC HEMATOPOIETIC CELL TRANSPLANTATION (HCT)

Ashley M. Nelson, BA[1], Brian D. Gonzalez, PhD[2], Steven K. Sutton, PhD[2], Julie M. Cessna, M.P.H., M.A.[1], Melissa Rose, MHA, MPH[2], Margaret Booth-Jones, PhD[2], Teresa Field, MD PhD[2], Paul B. Jacobsen, PhD[2], Heather Jim, PhD[2]

[1]University of South Florida, Tampa, FL; [2]Moffitt Cancer Center, Tampa, FL

Background: Cancer patients undergoing HCT are at risk for deficits in cognitive function even prior to transplantation. Previous studies examined mixed samples of patients receiving autologous or allogeneic HCT, populations that differ in terms of demographic and clinical characteristics. To address this limitation, the present study investigated the prevalence and correlates of cognitive performance prior to allogeneic HCT.Method: Allogeneic HCT recipients awaiting transplant and an age- and gender-matched non-cancer control group were recruited as part of a longitudinal study of quality of life and cognitive function. Participants completed a standardized battery of neuropsychological tests assessing estimated premorbid IQ, verbal memory, visual memory, attention/concentration, and executive function. Self-reported depression, anxiety, and fatigue were also assessed. Primary outcomes were total neuropsychological performance (TNP, average of domain scores) and impaired test performance (i.e., scores of -1.5 SD on ≥ 2 tests or -2.0 SD on ≥ 1 test).Results: A total of 206 HCT recipients (age $M = 53$, 40% female) and 44 controls (age $M = 53$, 55% female) participated. All analyses controlled for estimated premorbid IQ. HCT recipients demonstrated worse verbal memory, executive function, and TNP than controls (p values < .05). HCT recipients were more likely than controls to exhibit impaired test performance (52% versus 27%, $p < .05$). Fatigue, but not anxiety or depression, predicted lower TNP and a greater likelihood of impaired test performance among controls (p values < .02), but not among patients (p values > .57).Conclusion: Results suggest that allogeneic HCT recipients awaiting transplantation exhibit worse cognitive performance, particularly in verbal memory and executive function, and are more likely to exhibit impaired test performance compared to non-cancer controls. The observed relationship between fatigue and cognitive performance among controls but not HCT recipients suggests separate mechanisms underlying test performance among healthy individuals and allogeneic HCT recipients.Funding Acknowledgement: K07 CA138499 (PI: Jim)

CORRESPONDING AUTHOR: Ashley M. Nelson, BA, University of South Florida, Tampa, FL, 33612; amnelson2@mail.usf.edu

Paper Session 47 9:39 AM-9:57 AM

IMPACT OF PATIENT-PHYSICIAN COMMUNICATION ON PSYCHOLOGICAL DISTRESS AMONG 5,106 CANCER PATIENTS FROM A U.S. NATIONAL SURVEY

Mohamedtaki A. Tejani, MD[1], Charles Kamen, PhD, MPH[2], Anita R. Peoples, PhD[1], Marie Flannery, PhD, RN, AOCN[3], Karen Mustian, PhDMPH[1], Michelle Janelsins, PhD, MPH[1], Luke Peppone, PhD, MPH[1], Supriya Mohile, MDMS[2], Gary Morrow, PhD, MS[1]

[1]University of Rochester Medical Center, Rochester, NY; [2]University of Rochester, Rochester, NY; [3]University of Rochester, Fairport, NY

Background: Two core functions of good patient-centered communication are to respond to patients' emotions and help manage uncertainty. There are few data demonstrating the potential association between these communication skills and psychological distress among cancer patients.Methods: The LIVESTRONG Foundation conducted a national survey of cancer patients in 2010 focusing on issues of cancer treatment, symptom management and information seeking. In this cross-sectional analysis, we study the relationship between single-item responses regarding patient-provider communication and psychological distress (i.e. anxiety, depression, worry and cancer-related concerns) using descriptive statistics and chi-square analyses.Results: 5,106 patients were included in our study (63% women, median age: 51). Most common cancer diagnoses were breast (26%), prostate (7%), colon (6%) and testicular (6%) cancer. Only 12.6% and 19.3% of subjects responded 'Sometimes/Never' to the questions *'How often did providers give you the chance to ask all your health-related questions?' and 'How often did they make sure you understood what you needed for your health?'* In contrast, 33.7% and 37.7% answered 'Sometimes/Never' to the questions *'How often did they give the attention you needed to your feelings and emotions?'* and *'How often did they help you deal with feelings of uncertainty about your health or health care?'* Patients who answered 'Sometimes/Never' when asked about providers responding to emotions and managing uncertainty were more likely to report depression ($p < 0.05$), anxiety ($p < 0.05$), constant worry ($p < 0.05$) and preoccupation with concerns about cancer ($p < 0.05$). There was no association between age, gender or marital status and patient-provider communication about emotions or uncertainty.Conclusion: Approximately 1/3 of cancer patients perceive providers as not responding to their emotions or helping manage uncertainty. This is an especially vulnerable group of patients who are more likely to report psychological distress. Further research is needed to develop interventions for improving patient-provider communication and ameliorate distress among these patients

CORRESPONDING AUTHOR: Mohamedtaki A. Tejani, MD, University of Rochester Medical Center, Rochester, NY, 14542; mohamed_tejani@urmc.rochester.edu

Paper Session 47 9:57 AM-10:15 AM

MEDIATING AND MODERATING DETERMINANTS OF HEALTH-RELATED QUALITY OF LIFE IN BREAST CANCER SURVIVORS

Aria M. Miller, DrPH, MPH, MS, CPH[1], Kimlin Ashing, PhD[2], Naomi N. Modeste, DrPH, CHES[3], R. Patti Herring, PhD, RN[3], Diadrey-Anne T. Sealy, PhD, MS[3]

[1]City of Hope National Medical Center, Duarte, CA; [2]City of Hope, Duarte, CA; [3]Loma Linda University, Loma Linda, CA

Objective: This study aimed to identify mediating and moderating effects of contextual determinants of overall health-related quality of life (HRQOL) in a cohort of African American (AA) and Latina breast cancer survivors (BCS) who participated in a psycho-educational intervention.*Methods*: Baseline data of 320 BCS were abstracted from the parent study. Simple mediation analyses examined indirect effects of systemic-level (socio-ecological, cultural, demographic, and healthcare system) variables on HRQOL through individual-level variables (i.e., number of side effects, number of comorbidities, and healthier lifestyle habits since breast cancer diagnosis), adjusting for covariates. Moderation analyses assessed whether relationships between individual-level contextual factors and HRQOL were moderated by ethnicity.*Results*: There were significant positive associations between HRQOL and being in a committed relationship, higher educational level, higher annual household income, employment outside of the home, AA ethnicity, higher satisfaction with healthcare, and higher perceived social support (r = .12 to .49; p < .01). Higher neighborhood stress, more treatment-related side effects, and more comorbidities were significantly associated with worse HRQOL (r = -.42 to -.26; p < .01). The relationship between ethnicity and HRQOL was mediated by number of treatment-related side effects (ab = 0.42, p < .05), and the influence of neighborhood stress on HRQOL was mediated by number of comorbidities (ab = -1.18, p < .01). Ethnicity moderated the association between number of treatment side effects and HRQOL (b= -0.49, p < .05), and between healthier lifestyle habits since breast cancer diagnosis and HRQOL (b = 0.07, p < .001).*Conclusions*: Understanding the relationships among predictors of HRQOL in BCS will enable researchers to most appropriately tailor interventions to improve patient outcomes. Our results provide insight into optimal individual- and systemic-level targets for interventions designed to improve the HRQOL of ethnic minority BCS. Additionally, our findings suggest that multi-level, clinically- and culturally-responsive approaches may be critical to integrated patient-centered cancer care.

CORRESPONDING AUTHOR: Aria M. Miller, DrPH, MPH, MS, CPH, City of Hope National Medical Center, Duarte, CA, 91010; armiller@coh.org

CITATION PAPER

Paper Session 48 8:45 AM-9:03 AM

RACE, SOCIOECONOMIC CONTEXT, AND POST-TREATMENT MAMMOGRAPHY AMONG BREAST CANCER SURVIVORS

Hayley S. Thompson, Ph.D.[1], Julie J. Ruterbusch, M.P.H.[2], Lois Lamerato, Ph.D.[3], Richard Krajenta, B.S.[3], Michael Simon, M.D.[4], Kendra Schwartz, M.D., M.S.P.H.[5], Jason Booza, Ph.D.[6]

[1]Wayne State University - Karmanos Cancer Institute, Detroit, MI; [2]Wayne State University, Detroit, MI; [3]Henry Ford Health System, Detroit, MI; [4]Karmanos Cancer Institute - Wayne State University, Detroit, MI; [5]Wayne State University School of Medicine, Detroit, MI; [6]Wayne State University School of Medicine, Afghanistan

There is a growing literature on disparities in breast cancer survivorship. Previous studies have reported lower adherence to mammography surveillance guidelines among African American (AfAm) survivors compared to whites but none have examined the relationship between socioeconomic context and adherence. The current study investigated the association between race, socioeconomic context, and post-treatment mammography in the patient population of the Henry Ford Health System (HFHS), an integrated health system with multiple sites serving the tri-county metropolitan Detroit area. The study population included 947 AfAm and 1835 white women diagnosed with breast cancer and treated between 1996-2005. Clinical, demographic, and treatment data from HFHS administrative databases were supplemented with data from the Metropolitan Detroit Cancer Surveillance System and US Census Bureau. Post-treatment mammography was examined over a 5-year study period and full adherence was defined as consecutive, annual mammograms across all years. Socioeconomic context was assessed with a deprivation index (DI) based on a composite of census variables associated with health outcomes including neighborhood-level unemployment, poverty, overcrowding, telephone and car availability. Unadjusted logistic regression analyses showed that AfAms were less likely to be fully adherent (OR=0.68, 95%CI: 0.57-0.82). However, in analyses controlling for the primary socioeconomic factors, DI and health insurance status, race was no longer significant (OR = 0.84, 95% CI:0.65-1.09). It should be noted, however, that 85% of AfAms fell within the highest two quintiles of DI compared to only 19% of whites (that is, the levels indicating greatest deprivation). Additional analyses were conducted in a subgroup with private, employment-based insurance that limited all healthcare to HFHS, thereby ensuring complete data on mammogram receipt. In this subgroup, AfAms were less likely to be fully adherent, even when controlling for socioeconomic context (OR=0.64, 95%CI: 0.45-0.92). Findings suggest that among the more socioeconomically advantaged, racial differences exist independent of other factors, thus warranting further investigation of post-treatment mammography adherence among AfAm survivors across socioeconomic strata.

CORRESPONDING AUTHOR: Hayley S. Thompson, Ph.D., Wayne State University - Karmanos Cancer Institute, Detroit, MI, 48201; thompsoh@karmanos.org

Paper Session 48 9:03 AM-9:21 AM

SOCIAL ECOLOGICAL CORRELATES OF PHYSICAL ACTIVITY IN KIDNEY CANCER SURVIVORS

Linda Trinh, PhD[1], Kristian Larsen, PhD[1], Guy Faulkner, PhD[1], Ronald C. Plotnikoff, PhD[2], Ryan E. Rhodes, PhD[3], Scott North, MD, FRCPC[4], Kerry S. Courneya, PhD[5]

[1]University of Toronto, Toronto, ON, Canada; [2]University of Newcastle, Newcastle, , Australia; [3]University of Victoria, Victoria, BC, Canada; [4]Cross Cancer Institute, Edmonton, AB, Canada; [5]University of Alberta, Edmonton, AB, Canada

Background: Physical activity (PA) has beneficial effects on overall quality of life and cancer-specific concerns in kidney cancer survivors (KCS). However, only a quarter of KCS are meeting public health PA guidelines. Previous studies in cancer survivors have examined the behavioral correlates of PA. No study to date has evaluated the social-ecological model to conceptualize the environment as a multi-dimensional concept in understanding PA in KCS, and in any cancer survivor group. The purpose of this study was to examine the associations between demographic, medical, behavioral, and environmental correlates of PA in KCS.

Methods: All 1,985 KCS diagnosed between 1996 and 2010 identified through a Canadian provincial Registry were mailed a survey consisting of medical, demographic, behavioral, and the Godin Leisure Time Exercise Questionnaire measures via self-report. Environmental variables included both self-report and objective measures using Geographic Information Systems (GIS).

Results: Completed surveys were received from 432 KCS with M_{age} = 64.4±11.1 years, 63.2% male, and 82.2% having localized kidney cancer. A series of binary logistic stepwise regression analyses were conducted with demographic, medical, behavioral, perceived environmental, and objective environmental variables entered. In the final multivariate model that included environmental variables, meeting PA guidelines was associated with having no drug therapy (p=.009), higher levels of instrumental attitude (p=.053), higher levels of intention (p=.002), and reporting a higher number of shops and retail destinations in the neighborhood (p=.032).

Conclusions: Various aspects of the social ecological model explained meeting PA guidelines in KCS, specifically select medical, behavioral, and perceived environmental variables. These findings suggest that select psychosocial and perceived environmental factors may be more important targets for interventions to increase PA among KCS.

CORRESPONDING AUTHOR: Linda Trinh, PhD, University of Toronto, Toronto, ON, M5S2W6; linda.trinh@utoronto.ca

Paper Session 48 9:21 AM-9:39 AM

PREDICTORS OF PSYCHOLOGICAL OUTCOMES IN A LONGITUDINAL STUDY OF HISPANIC BREAST CANCER SURVIVORS

Betina Yanez, PhD[1], Melinda Maggard Gibbons, M.D.[2], Patricia I. Moreno, M.A.[3], Alexandra Jorge, M.A.[3], Annette L. Stanton, PhD[3]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]University of California, Los Angeles, David Geffen School of Medicine, Los Angeles, CA; [3]University of California, Los Angeles, CA

Background: Cancer is the leading cause of death among Hispanics in the US and for Hispanic women breast cancer is the most commonly diagnosed cancer. Hispanics in the US report significantly worse psychological outcomes after breast cancer than do non-Hispanic Whites. However, few longitudinal studies have examined predictors of psychological outcomes among Hispanics diagnosed with breast cancer. Guided by the lifespan biopsychosocial model of cumulative vulnerability and minority health, this longitudinal study sought to investigate how sociodemographic, cultural, and treatment-related factors were associated with depressive symptoms and cancer-specific distress among Hispanics. Methods: Participants were 141 English or Spanish-speaking women (mean age = 50.6) diagnosed with non-metastatic breast cancer who were assessed within 18 months of diagnosis (T1) and three months later (T2). Predictors were clinical and cancer treatment-related factors, sociodemographics, language use and ethnic identity, satisfaction with surgical treatment, and efficacy in patient-physician communication. Outcomes were depressive symptoms and cancer-specific distress. Results: Approximately 40% of the sample experienced clinically elevated depressive symptoms and 45% experienced clinically elevated distress. After adjusting for sociodemographic factors, only greater Latino ethnic identity was significantly associated with greater distress at T1 (β=.26, p < .01). Post-hoc analyses revealed that the relationship between Latino ethnic identity and distress was moderated by English language such that women high in Latino ethnic identity and high in English language use had significantly lower distress at T1 than women high in Latino ethnic identity but low in English language use (p < .001). After adjusting for T1 depressive symptoms, type of treatment, and sociodemographic factors, the only predictor of lower T2 depressive symptoms was greater satisfaction with surgical treatment (β= -.31, p < .001). After controlling for T1 distress and sociodemographic factors, the only predictor of lower distress at T2 was greater satisfaction with surgical treatment (β= -.33, p < .001). Conclusions: Cultural factors likely influence psychological outcomes after breast cancer treatment. Findings also underscore the importance of satisfaction with surgery in predicting psychological outcomes.

CORRESPONDING AUTHOR: Betina Yanez, PhD, Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; betina.yanez@northwestern.edu

CITATION AND MERITORIOUS PAPER

Paper Session 48 9:39 AM-9:57 AM

PHYSICIAN-LYMPHOMA SURVIVOR DISCUSSIONS OF HEALTH PROMOTION: A QUALITATIVE ANALYSIS

Danielle Blanch-Hartigan, PhD, MPH[1], Elyse Shuk, MA[2], Kara McLarney, MPH[3], Errol J. Philip, PhD[4], Steven Horwitz, MD[2], Carma Bylund, PHD[5]

[1]Bentley University, Waltham, MA; [2]Memorial Sloan Kettering Cancer Center, New York, NY; [3]Memorial Sloan Kettering Cancer Center, Charlotte, NC; [4]Private Practice, Diamond Bar, CA; [5]Hamad Medical Corporation, Houston, TX

BackgroundMany cancer survivors feel "lost in transition" as they complete active treatment and attempt to improve their health. Most survivorship care plans lack specific recommendations for health promotion and physicians often fail to provide detailed follow-up care guidance. Beyond measurement of frequency, we must assess quality and content of communication between physicians and survivors to understand how best to encourage healthy behaviors in survivorship. MethodsData consisted of audio-recorded discussions during survivorship visits between 21 physicians and their patients who were survivors of Hodgkins or Diffuse Large B Cell lymphoma and 0-3 years post-treatment. Physicians were located at two sites (Memorial Sloan Kettering Cancer Center and MD Anderson Cancer Center), 57% male, and in practice an average of 17.8 yrs. Transcribed discussions were evaluated using a thematic content analysis approach that consisted of coding and interpretation of the transcripts by coding team consensus. ResultsHealth promotion topics, such as weight loss, exercise, and diet, arose frequently, often during the physical examination. However, these topics were not systematically discussed. Some survivors volunteered information regarding engagement in physical activity or diets without prompting by their physicians. Physicians frequently discussed health behaviors after commenting generally on the survivor appearing "good." Physicians rarely provided specific recommendations, instead imparting more general advice or encouragement regarding health promotion. Discussions of health promotion had a positive emotional tone, with physicians congratulating survivors for recent efforts and successes. Interestingly, the physician often seemed more positive about health promotion efforts than the survivor, who expressed modesty over health behavior changes and a desire to accomplish more. ConclusionsFor many survivors, cancer represents a teachable moment for health promotion. Our results suggest that although health promotion is often brought up in survivorship visits and physicians are encouraging of survivors' efforts, physicians may be missing opportunities to have in-depth and goal-directed health promotion discussions.

CORRESPONDING AUTHOR: Danielle Blanch-Hartigan, PhD, MPH, Bentley University, Waltham, MA, 02452; danielleblanch@gmail.com

Paper Session 48 9:57 AM-10:15 AM

PERSISTENT TOBACCO USE AFTER LUNG OR HEAD/NECK CANCER DIAGNOSIS: A SYSTEMATIC LITERATURE REVIEW

Jessica L. Burris, PhD[1], Jamie L. Studts, PhD[2], Antonio P. DeRosa, MLIS[3], Jamie Ostroff, PhD[3]

[1]University of Kentucky, Lexington, KY; [2]University of Kentucky College of Medicine, Lexington, KY; [3]Memorial Sloan Kettering Cancer Center, New York, NY

Background: Tobacco use after cancer diagnosis is associated with adverse disease and treatment outcomes. Unfortunately, reliable prevalence estimates for this health-risk behavior are lacking. Objective: To conduct an exhaustive review of studies that report prevalence and/or amount of tobacco use in lung or head/neck cancer survivors. Method: This systematic literature review involved a search of electronic databases (MEDLINE, Embase, Cochrane Library, CINAHL, PsycINFO, Web of Science) to identify relevant studies (i.e., reported the prevalence, frequency, and/or quantity of tobacco use after lung or head/neck cancer diagnosis) published between 1980 and 2012. The initial search yielded 6730 studies. After reviewing titles and abstracts, 196 studies appeared to meet inclusion criteria. The first author reviewed the full-length paper for all studies, and the last author independently reviewed half of the studies to ensure reliability. Results: 120 studies met inclusion criteria and form the basis of this review. At the sample level (Ns=13-7990; median: 166), the prevalence of current tobacco use (mostly cigarette smoking) among lung and/or head/neck cancer survivors was 35.9% (0.0-100.0%; median: 33%). Among lung and/or head/neck survivors who were current tobacco users at the time of diagnosis, the prevalence of current tobacco use (mostly cigarette smoking) was 54.6% (16.1-97.0%; median: 50%). In most studies, an operational definition of "current" tobacco use was absent as was quantity of tobacco use (e.g., cigarettes/day). Similarly, very rarely was data on quit attempts provided. Conclusion: Due to wide variation in how (e.g., 7-day vs 1-year point prevalence) and when (e.g., during treatment vs 5-years post-diagnosis) tobacco use is measured, definitive conclusions regarding the prevalence of persistent tobacco use among lung and head/neck cancer survivors are premature. However, it is clear that prevalence is higher than desired, as all cancer survivors are urged to abstain from tobacco use. Understanding the prevalence of persistent tobacco use after cancer diagnosis is a necessary first-step toward development of more efficacious interventions. Thus, we recommend adoption of a standardized approach to assessment of tobacco use in clinical and cancer research settings.

CORRESPONDING AUTHOR: Jessica L. Burris, PhD, University of Kentucky, Lexington, KY, 40506-0044; burris.jessica@gmail.com

Saturday
April 25, 2015
10:15 AM-11:15 AM

10:15 AM-11:15 AM D001

PSYCHOLOGICAL SYMPTOMS ACROSS TIME IN SPANISH-SPEAKING LATINA CANCER PATIENTS UNDERGOING CHEMOTHERAPY

Morgan Lee, M.A.[1], Suzanne C. Lechner, PhD[2], Brian D. Gonzalez, PhD[3], Michael H. Antoni, PhD[4], Yvelise Rodriguez[5], Cathy D. Meade, PhD, R.N., F.A.A.N.[6], Dinorah Martinez Tyson, PhD, MPH, Ma[1], Andrea Vinard, M.S.Ed.[4], Madeline Hernandez. Krause[4], Roohi Ismail-Khan, MD[7], Sachin Apte, MD, MS, MBA[3], Paul B. Jacobsen, PhD[3]

[1]University of South Florida, Tampa, FL; [2]University of Miami Miller School of Medicine, Miami, FL; [3]Moffitt Cancer Center, Tampa, FL; [4]University of Miami, Miami, FL; [5]Moffitt Cancer Center, Land O Lakes, FL; [6]H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL; [7]H. Lee Moffitt Cancer Center, Tampa, FL

Background: Chemotherapy causes aversive physical symptoms and is associated with reduced psychological well-being. However, little is known about the trajectory of anxiety and depression symptoms over time in Spanish-speaking Latina cancer patients undergoing chemotherapy.Method: Spanish-speaking Latina cancer patients scheduled to receive chemotherapy and randomized to a usual care control group in a larger intervention trial completed study measures prior to starting chemotherapy (Time 1) and at 6-week (Time 2) and 13-week (Time 3) follow-ups. Demographics and acculturation were assessed at Time 1, and anxiety and depression symptoms were assessed at all 3 time points using the Spanish version of the Hospital Anxiety and Depression Scale (HADS).Results: Participants were 33 patients [mean age 53.55 (range 34-77); cancer type: 64% breast, 15% ovarian, 21% other]. Mean anxiety scores changed over time [$F(2,31)=8.43$, $p=.001$], decreasing between Time 1 and Time 2 ($p < .001$) and demonstrating no significant change between Time 2 and Time 3 ($p=.42$). Mean depression scores also changed over time [$F(2,31)=4.38$, $p=.02$], demonstrating a borderline significant increase between Time 1 and Time 2 ($p=.06$) and no significant change between Time 2 and Time 3 ($p=.21$). Using standard HADS cutoffs, rates of clinically significant anxiety and depression over time were 55%, 36%, 39% and 15%, 24%, 30% respectively. Anxiety scores were significantly higher than depression scores at Time 1 ($p < .001$) and Time 2 ($p < .05$), but not at Time 3 ($p=.08$). Age and acculturation were not associated with anxiety or depression at any time point ($ps \geq .10$).Conclusion: Spanish-speaking Latina cancer patients receiving chemotherapy experience notable anxiety and depression symptoms. As treatment progresses, symptoms of anxiety appear to decrease, while symptoms of depression increase. These findings suggest a need for psychosocial care for Spanish-speaking Latina cancer patients undergoing chemotherapy.

CORRESPONDING AUTHOR: Morgan Lee, M.A., University of South Florida, Tampa, FL, 33647; mrl1@mail.usf.edu

10:15 AM-11:15 AM D002

PUBLIC RESPONSES TO A CELEBRITY'S CANCER-RELATED DISCLOSURE ABOUT GENETIC TESTING

Sarah D. Mills, M.S.[1], Julia H. Drizin, BA[2], Elizabeth A. Klonoff, PhD[2], Laura E. Barnes, PhD[3], Vanessa L. Malcarne, PhD[4], Allison A. Vaughn, PhD[2], Kristen J. Wells, PhD, MPH[2]

[1]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center, San Diego, CA; [2]San Diego State University, San Diego, CA; [3]University of Virginia, Charlottesville, VA; [4]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center; San Diego State University, San Diego, CA

In 2013, Angelina Jolie, an Academy Award-winning actress, disclosed in an op-ed published by the *New York Times* (NYT) that she underwent a preventative double mastectomy after learning that she carried the BRCA1 gene mutation. Over three days, the public provided comments to the article on the NYT website, until the NYT disabled the ability to provide comments. This study presents a detailed content analysis on one emerging theme identified in the comments, the United States (US) health care system. Conventional content analysis was conducted with Nvivo 10 on all comments ($N = 1{,}712$). With this conventional approach, coding categories were derived from the data. Content analysis identified 334 comments addressing the public's attitudes towards the US health care system. From these comments, nine subthemes emerged: cost of testing ($n = 58$), patents ($n = 29$), Myriad Genetics and 23andme ($n = 25$), insurance companies ($n = 109$), the Affordable Care Act (ACA; $n = 15$), health care outside of the US ($n = 24$), accessibility ($n = 172$), greed ($n = 32$), and Jolie's wealth ($n = 51$). Some comments provided data for multiple subthemes. Overall, these findings highlight the public's concern about access to health care, and the cost of genetic testing and preventive surgery. There were conflicting opinions, however, on several aspects of the US health care system. Commenters critiqued insurance companies and Myriad Genetics, a diagnostic company that owned the patent to BRCA 1 and 2 genes, for the high cost of genetic testing, precluding access to those with limited resources. Others noted that the ACA would cover genetic testing or discussed other low-cost options. Variability in the public's response may reflect the uncertain time at which the NYT op-ed was published, when the legality of gene patenting was under consideration and prior to the implementation of ACA health care financing. Efforts are needed to educate consumers on access to and ACA coverage of genetic testing and preventive cancer surgery.

CORRESPONDING AUTHOR: Sarah D. Mills, M.S., SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center, San Diego, CA, 92120; sarah.mills.29@gmail.com

10:15 AM-11:15 AM D003

RELATIONS OF MEANING IN LIFE AND SENSE OF COHERENCE TO DISTRESS IN CANCER PATIENTS: A META-ANALYSIS

Joseph Winger, M.S., Rebecca N. Adams, MS, Catherine Mosher, PhD

Indiana University-Purdue University Indianapolis, Indianapolis, IN

The related constructs of meaning in life (MiL) and sense of coherence (SOC) have long been recognized as important factors in the psychological adjustment to cancer. MiL generally refers to the extent to which a person feels that his or her existence is meaningful, including a sense of purpose or direction, coherence, and significance. Alternatively, SOC is conceptualized as a global orientation to life experiences, including the degree to which life is viewed as comprehensible, manageable, and meaningful. Both constructs' relationships with psychological distress have not been quantitatively reviewed in cancer patients. Furthermore, MiL and SOC are theoretically distinct, yet they have not been quantitatively compared in relation to psychological distress. Informed by Park's integrated meaning-making model and Antonovsky's salutogenic model, the goals of this meta-analysis were: (1) to compare the strength of MiL-distress and SOC-distress relationships in cancer patients; and (2) to examine potential moderators of both relationships (i.e., gender, age, race, religious affiliation, advanced disease stage, and time since diagnosis).

A total of 61 records were included in analyses, with 43 MiL-distress associations and 18 SOC-distress associations. The average effect sizes were quantified as Pearson's r correlation coefficients, weighted by sample size and transformed using Fisher's Z-transformation. Homogeneity of effect sizes was quantified using the I^2 statisticand potential moderators were examined. Lastly, Orwin's fail-safe N was calculated for each association.

Comparing MiL to SOC, the average effect size for studies using a MiL measure was significantly smaller than the average effect size for studies using the SOC scale (Q_b=10.35, df=1, $p < .01$, k=61). Both MiL and SOC displayed large, negative, and significant relationships with psychological distress (r =-.40 and r=-.59, respectively); however, none of the tested variables were significant moderators. Findings support the theoretical distinction between MiL and SOC as well as the importance of targeting both constructs in interventions for demographically and medically diverse cancer patients with significant distress.

CORRESPONDING AUTHOR: Joseph Winger, M.S., Indiana University-Purdue University Indianapolis, Indianapolis, IN, 46214; jgwinger@iupui.edu

10:15 AM-11:15 AM D004

ROLE OF SITUATIONAL AND DISPOSITIONAL COPING IN PHYSICAL HEALTH-RELATED ADJUSTMENT TO BREAST CANCER

Margaret R. Bauer, M.A.[1], Lauren Harris, MA[1], Joshua F. Wiley, C.Phil.[1], Karen L. Weihs, MD[2], Annette L. Stanton, PhD[1]

[1]University of California, Los Angeles, CA; [2]University of Arizona, Tuscon, AZ

Few studies examine whether dispositional emotion regulation and stressor-specific coping strategies differentially or similarly predict physical adjustment to stress. The present study tests three theoretical models of how dispositional and situational avoidance and approach-oriented coping influence later physical symptoms: main effects model, moderation model, and mediation model. Women with breast cancer (N= 362) completed measures of dispositional avoidance and approach tendencies (i.e., nonacceptance and acceptance of emotion) within three months of their diagnosis (study entry), and situational coping (i.e., avoidance and approach of the cancer experience) and physical symptoms (e.g., pain, fatigue) at study entry and every six weeks through six months.Multilevel models support main effects, but not moderation, models of coping and physical symptoms in which dispositional avoidance ($b = .01$, $p = .005$), situational avoidance ($b = .15$, $p < .001$) and situational approach ($b = .06$, $p = .02$) predict higher physical symptoms, and dispositional approach ($b = -.002$, $p = .02$) predicts fewer symptoms. Multilevel structural equation models also support mediation models. Dispositional avoidance predicts higher physical symptoms indirectly through greater use of situational avoidance (b [95% CI] = .07 [.03, .12]). Dispositional approach indirectly predicts fewer physical symptoms through less use of situational avoidance (b [95% CI] = -.04 [-.08, -.00]), but also indirectly predicts higher physical symptoms through greater situational approach (b [95% CI] = .07 [.03, .12]).Findings indicate that dispositional and situational avoidance coping predict physical symptoms in the expected directions. Contrary to expectation, situational approach predicted higher symptoms, and dispositional approach directly predicted lower symptoms but predicted higher, rather than lower, physical symptoms indirectly through situational approach. Interventions targeting avoidance and ill-fitting approach coping processes may improve physical health-related adjustment.

CORRESPONDING AUTHOR: Margaret R. Bauer, M.A., University of California, Los Angeles, CA, 90095-1563; margaretbauer@ucla.edu

10:15 AM-11:15 AM D005

SEDENTARY BEHAVIORS AND QUALITY OF LIFE IN BREAST CANCER SURVIVORS

Sheri J. Hartman, PhD[1], Catherine Marinac, BA[1], Jillian Tom[1], Jacqueline Kerr, PhD[1], Loki Natarajan, PhD[1], Ruth Patterson, PhD[2]

[1]University of California San Diego, La Jolla, CA; [2]University of California, San Diego, La Jolla, CA

Engaging in moderate to vigorous intensity physical activity (MVPA) has been shown to improve quality of life in cancer survivors, but less is known about the associations between sedentary time and quality of life. The aim of this study was to examine the relationships between sedentary time and quality of life in breast cancer survivors. Quality of life was assessed using the SF-36 and PROMIS sleep impairment; self-reported sedentary behavior was measured by the PACES+; objective sedentary time and physical activity was assessed with 7-day hip-worn accelerometers. Linear regression models were used to examine the associations of time spent in sedentary activities (self-report and accelerometer) with the SF-36 and sleep impairment while controlling for relevant demographic (e.g., age, BMI) and clinical (e.g., cancer stage, time since diagnosis) variables. Participants were breast cancer survivors (n=136), a mean of 63 years old (SD=6.6), diagnosed on average 2.1 years ago (SD=1.3) with Stage 1 (50%), 2 (35%), and 3 (15%) breast cancer. More time spent watching TV was significantly related to worse SF-36 physical component scores (β=-0.48, SE=0.18, $p = .01$) and greater sleep impairment (β=0.17, SE=0.08, $p < .05$). Greater TV time was also associated with worse SF-36 mental component scores, but this was not statistically significant (β=-0.24, SE=0.17, p=.15). TV time remained related to the physical and mental component scores and sleep impairment after adding accelerometer measured MVPA to the model. Time spent on a computer and total sedentary time (self-report and accelerometer) were not significantly related to the physical and mental component scores or sleep impairment. These findings suggest that the relationship between sedentary time and quality of life outcomes varies by type and measurement of sedentary behavior, and that time spent watching TV may be particularly detrimental to quality of life. Additionally, engaging in MVPA may not be able to counteract the negative influence of TV time on quality of life. Future research to improve quality of life in cancer survivors may benefit from focusing on reducing TV time.

CORRESPONDING AUTHOR: Sheri J. Hartman, PhD, University of California San Diego, La Jolla, CA, 92093; sjhartman@ucsd.edu

10:15 AM-11:15 AM D006

SMOKERS' PESSIMISM ABOUT CANCER OUTCOMES AND EARLY DIAGNOSIS: A POPULATION-BASED STUDY OF UK ADULTS

Samantha L. Quaife, MSc, Andy McEwen, PhD, Samuel M. Janes, PhD, Jane Wardle, PhD

University College London, London, United Kingdom

Background: Smoking is linked to cancer risk at many different tumour sites, accounting for a fifth of cancer deaths worldwide. Reducing smoking prevalence is the cornerstone of cancer prevention but smokers can also benefit from early detection. However, smokers generally have lower uptake of cancer screening and delay longer with symptoms. Little is known about their attitudes towards cancers other than lung cancer, so we examined smokers' beliefs about cancer outcomes and help-seeking generally.Methods: A population-based survey of UK adults (n=6965, age>50) was carried out using the Awareness and Beliefs about Cancer scale, as part of the International Cancer Benchmarking Partnership. This included six belief items (e.g. '*a diagnosis of cancer is a death sentence*') and four items describing barriers to help-seeking (e.g. '*I would be too embarrassed*'). Data on smoking status, self-rated health, cancer experience, and demographics were collected.Results: Being a current smoker predicted a greater likelihood of negative beliefs about cancer, compared with former or never smokers who responded similarly. More smokers agreed cancer is a death sentence (34% vs. 24% respectively; p < .001), that they '*would not want to know*' if they have cancer (18% vs. 11%; p < .001), and that being '*worried about what the doctor might find*' might cause them to delay help-seeking (36% vs. 28%; p < .01). Fewer believed normal activities were possible after diagnosis (82% vs. 89%; p < .001). Associations were independent of demographics, self-rated health, and cancer experience.Conclusions: Consistent with their detachment from early detection, smokers were more likely to hold negative and avoidant beliefs about cancer than either non-smokers or former smokers. Research investigating how fatalistic beliefs can be modified will help determine how best to engage smokers in secondary prevention; ultimately facilitating opportunities for early diagnosis and smoking cessation.

CORRESPONDING AUTHOR: Samantha L. Quaife, MSc, University College London, London, WC1E 6BT; samantha.quaife@ucl.ac.uk

10:15 AM-11:15 AM D007

SOCIO-ECOLOGIC PREDICTORS OF DEPRESSION IN US AND CARIBBEAN BORN BLACK CANCER PATIENTS.

Rosario Costas-Muñiz, PhD[1], Migda Hunter-Hernandez, BA[1], Cynthia Gonzalez, BA[1], Julia Ramirez, MA[1], Nicole Roberts, MPH[1], Jennifer Leng, MD, MPH[1], Francesca Gany, MD, M.S.[2]

[1]Memorial Sloan-Kettering Cancer Center, New York, NY; [2]Memorial Sloan Kettering Cancer Center, New York, NY

Introduction: The US black population (~42 million) is heterogeneous and includes US-born individuals and immigrants (~3 million). Caribbean Blacks have lower rates of major depressive disorders than African-Americans in national studies. Low-income black patients are exposed to greater stress than whites, due to socioeconomic and other contextual factors (i.e. social injustice). These factors might vary by ethnicity. This study explores possible socio-ecologic predictors of depression in black cancer patients.Methods: Participants (N=510) completed a demographic questionnaire and the PHQ-9 as part of a larger study of underserved cancer patients.Results: The majority of participants were female (67%), unmarried (26%) and diagnosed with breast (38%) cancer. Average age was 58 years old. 74% reported below-poverty level incomes. Caribbean blacks (n=292) had lower income and education levels than African-Americans (n=218), but resided more frequently in ethnically dense neighborhoods and less frequently perceived their household as crowded.African-Americans (30%) were twice as likely to have a positive depression screen compared with Black Caribbean (15%) patients, even after adjusting for socioeconomic variables. After controlling for socio-demographic characteristics, very low food security, perception of overcrowded household and living in an ethnically dense neighborhood were significant predictors of a positive depression screen.Conclusions: While inadequate living situation and access to food and housing influence the emotional adjustment of black cancer patients, living in an ethnically dense neighborhood has a protective effect on the depression levels of black cancer patients. The socio-ecologic context that influences health outcomes of ethnic minority patients needs to be studied to address patients' health and mental health disparities.

CORRESPONDING AUTHOR: Rosario Costas-Muñiz, PhD, Memorial Sloan-Kettering Cancer Center, New York, NY, 10065; costasmr@mskcc.org

10:15 AM-11:15 AM D008

STARTING THE HPV VACCINE AT 9-10 YEARS OF AGE RESULTS IN HIGHER RATES OF ON-TIME COMPLETION

Jennifer St. Sauver, PhD, MPH, Lila J. Finney Rutten, PhD, MPH, John Ebbert, MD, Debra J. Jacobson, MS, Michaela McGree, BS, Robert M. Jacobson, MD

Mayo Clinic, Rochester, MN

Background. Vaccination rates for human papilloma virus (HPV) have remained disappointingly low. Multiple barriers to completion of the vaccine series have been identified, and there is a critical need to identify means to increase vaccination rates before adolescents become sexually active. The DHHS' Advisory Committee on Immunization Practices (ACIP) routinely recommends that both males and females initiate the 3-dose series at 11 to 12 years of age and complete the series by age 13. The ACIP however gives clinicians permission to start the series as early as 9 years of age. We explored the hypotheses that initiating the vaccine series at 9 or 10 years of age would be associated with improved completion rates by 13 and by 15 years of age as compared to initiating the series at 11 to 12 years of age.Methods. We examined the prevalence of HPV vaccination among a large, population based group of children residing in Olmsted County, MN as of December 31, 2012. We described initiation and completion rates of HPV vaccination between August 2006 and December 2012 overall and by sex, age and race. We compared age at vaccine initiation between individuals who successfully completed the HPV vaccination series by ages 13 or by age 15 and those who had not successfully completed the series using a Chi-square or Fisher's exact test as appropriate.Results. Overall, 11,536 (31.8%) children and adolescents in this population had received at least one dose of the HPV vaccine, and 6,992 (19.3%) had received all three doses according to recommended delivery schedules between August 2006 and December 2012. Initiation and completion rates were lowest among males (10% initiation and 1.9% completion) and the black population (25.9% initiation, 10.8% completion). Completion of the HPV vaccine series by age 13 was significantly associated with younger age at initiation with completion by 98.2% versus 85.6% of girls initiating at ages 9-10 and 11-12, respectively (p < 0.001).Conclusions. Efforts to initiate the HPV series at 9 -10 years of age rather than 11-12 may significantly improve the likelihood of series completion. Continued tracking of series initiation and completion will inform ongoing practice locally and may provide evidence for changes to broader recommendations around HPV vaccination

CORRESPONDING AUTHOR: Jennifer St. Sauver, PhD, MPH, Mayo Clinic, Rochester, MN, 55902; stsauver.jennifer@mayo.edu

10:15 AM-11:15 AM D009

STIGMA, PATIENT ACTIVATION, AND PATIENT-PROVIDER COMMUNICATION IN LUNG CANCER CARE

Heidi A. Hamann, PhD[1], Sarah P. Borderud, MPH[2], Robin Higashi, PhD[1], Lisa Peterson, BS, BA[3], Rachel Funk, PhD[4], Simon J. Craddock. Lee, PhD[1], Cassidy A. Cisneros, BA[1], Megan Johnson. Shen, PhD[2], Jamie Ostroff, PhD[2]

[1]UT Southwestern Medical Center, Dallas, TX; [2]Memorial Sloan Kettering Cancer Center, New York, NY; [3]Memorial Sloan Kettering Cancer Center, Brookfield, CT; [4]University of Oklahoma Health Sciences Center, Oklahoma City, OK

Introduction: Stigma among lung cancer patients is associated with adverse psychosocial outcomes, including depression and quality of life impairment. However, little is known about the connection between lung cancer stigma and patients' experiences within the health care setting, including patient activation and satisfaction with provider communication. Theoretical models suggest a reciprocal relationship between high levels of stigma and poor quality patient-provider interactions, a process that could detrimentally affect lung cancer treatment outcomes. *Method:* The current analyses addressed relationships between stigma, patient activation, and satisfaction with provider communication among 150 patients (96 females; 54 males) diagnosed with lung cancer and either in active treatment or within 1 year post-treatment. Mean age was 62 years, and 72% reported being former or current smokers. Stigma was measured with the Cataldo Lung Cancer Stigma Scale (CLCSS), and patient-reported health care experiences were assessed with the Patient Activation Measure (PAM) and the provider communication scale from the Consumer Assessment of Health Plans Study (CAHPS) instrument. *Results*: Results indicated that after accounting for the effects of age, gender, and smoking status in regression models, higher levels of lung cancer stigma were significantly associated with both reduced patient activation (Beta = -.23, p < .01) and decreased satisfaction with provider communication (Beta = -.17, p < .05). *Discussion*: These analyses demonstrate relationships between stigma and important health care outcomes for individuals with lung cancer. Results underscore the emerging understanding that stigma can have far-ranging negative impact on patients. Mitigating lung cancer stigma could have widespread benefit not only for individual psychosocial outcomes, but also for patient-provider interactions and treatment outcomes.

CORRESPONDING AUTHOR: Heidi A. Hamann, PhD, UT Southwestern Medical Center, Dallas, TX, 75390; heidi.hamann@utsouthwestern.edu

10:15 AM-11:15 AM D010

STIGMA, SOCIAL CONSTRAINTS, AND DEPRESSIVE SYMPTOMS AMONG PATIENTS WITH LUNG CANCER

Heidi A. Hamann, PhD[1], Anna Johnson. Thomas, M.A.[1], Sarah P. Borderud, MPH[2], Emily G. Marks, MS[1], Megan Johnson. Shen, PhD[2], Kenleigh Roden-Foreman, DoctoralStudent[1], Lisa Peterson, BS, BA[3], Allen Liao, B.A.[1], Jamie Ostroff, PhD[2]

[1]UT Southwestern Medical Center, Dallas, TX; [2]Memorial Sloan Kettering Cancer Center, New York, NY; [3]Memorial Sloan Kettering Cancer Center, Brookfield, CT

Introduction: Stigma is associated with depressive symptoms among lung cancer patients, but little is known about underlying mechanisms. Social constraints may negatively impact how patients cope with lung cancer stigma and exacerbate depressive symptoms. These analyses focused on the role of social constraints in understanding the relationship between stigma and depressive symptoms in lung cancer patients. *Method:* Participants included 150 patients (96 females; 54 males) diagnosed with lung cancer and either: a) in active treatment or, b) less than 1 year post-treatment. Mean age was 62 years, and 72% reported being former or current smokers. Stigma was measured by patient report of the Cataldo Lung Cancer Stigma Scale (CLCSS), social constraints were assessed by Lepore's Social Constraints Scale (SCS-12) and depressive symptoms were evaluated by the 10-item short form of Center for Epidemiologic Studies Depression Scale (CES-D). The indirect effect (mediation) of social constraints was tested through the bootstrapping method and calculated within Hayes' PROCESS macro for SPSS. *Results*: Approximately 35% of sampled lung cancer patients reported clinically significant depressive symptoms. Models adjusting for age, sex and smoking status showed a significant direct effect between lung cancer stigma and depressive symptoms ($p < .001$). The model testing indirect effects of social constraints was also significant (mediated effect = .06; 95% CI=.02, .11; p=.004), indicating that social constraints partially mediate the relationship between stigma and depressive symptoms among lung cancer patients. *Discussion*: These results highlight the importance of social constraints, and perhaps interpersonal factors more broadly, in the relationship between stigma and depressive symptoms among patients with lung cancer. Findings suggest that interventions aimed at reducing social constraints (e.g., enhancing social support and activation) may help mitigate adverse psychosocial consequences of lung cancer stigma.

CORRESPONDING AUTHOR: Heidi A. Hamann, PhD, UT Southwestern Medical Center, Dallas, TX, 75390; heidi.hamann@utsouthwestern.edu

10:15 AM-11:15 AM D011

STRESS, SOCIAL SUPPORT, AND INTRUSIVE CANCER WORRY AMONG WOMEN AT RISK FOR BREAST CANCER

Jessica Armer, BS[1], Bonnie A. McGregor, PhD[2], Karly M. Murphy, MS[2], Iris Emerman[2]

[1]Fred Hutchinson Cancer Research Center, Federal Way, WA; [2]Fred Hutchinson Cancer Research Center, Seattle, WA

Social support has been characterized as a buffer in stressful situations, associated with both reduced psychological and physiological distress (Cohen & Ashby-Wills, 1985) and decreased cancer worry among breast cancer survivors (Fagundes et al., 2011). However, to our knowledge, no studies have explored social support as a stress buffer among women at risk for breast cancer. We hypothesized that women at increased risk for breast cancer who have higher levels of perceived stress (PSS) would report higher levels of cancer worry (IES). Additionally, we believed that social support (ISEL-12) would moderate the relationship between perceived stress and cancer worry. Women ($N = 123$) reporting elevated stress and any family history of breast cancer were recruited from the community for a larger intervention study. Self-report measures included perceived stress, intrusive and avoidant thoughts associated with cancer worry, and social support. Data here are from baseline assessment only. When controlling for demographic variables, stress was a significant predictor of cancer worry ($\beta = 2.66, p = .01, \Delta R^2 = 0.11$), and a marginally significant stress by social support interaction effect emerged ($\beta = -0.05$, $p = .05$, $\Delta R^2 = 0.03$). When the intrusion and avoidance subscales of the IES were tested separately, social support moderated the relationship between stress and intrusive thoughts ($\beta = -0.03, p = .02, \Delta R^2 = 0.04$) but not the relationship between stress and avoidant thoughts ($\beta = -0.03$, $p = .13$, $\Delta R^2 = 0.01$). When the subscales of the ISEL-12 were analyzed separately, only tangible social support was a significant moderator of the relationship between stress and cancer worry ($\beta = -0.15, p = .04, \Delta R^2 = 0.03$). These results suggest that social support, in particular tangible support, moderates the relationship between perceived stress and cancer worry among women at risk for breast cancer. Improving social support may be an effective intervention to reduce cancer worry among women with a positive family history of breast cancer.

CORRESPONDING AUTHOR: Jessica Armer, BS, Fred Hutchinson Cancer Research Center, Federal Way, WA, 98023; armerjessica@gmail.com

10:15 AM-11:15 AM D012

SUN PROTECTIVE BEHAVIORS AMONG LATINAS LIVING IN THE US-MEXICO BORDER

Patricia Chalela, DrPH, MPH[1], Edgar Munoz, M.S.[2], Kipling Gallion, M.A.[2], Amelie G. Ramirez, DRPH[2]

[1]UT Health Science Center at San Antonio, San Antonio, TX; [2]University of Texas Health Science Center at San Antonio, San Antonio, TX

BackgroundSkin cancer is the most commonly diagnosed cancer in the US and melanoma incidence is increasing among the US Hispanic population. Even though the incidence of melanoma is lower for Hispanic than for non-Hispanic whites, when diagnosed Hispanics tend to be younger, have a more advanced stage of the disease and have lower survival rates. This is particularly important because Hispanics are the largest and fastest growing racial/ethnic group in the country and are heavily concentrated in the southern and western states which have among the highest ultraviolet indexes in the country. This study examines the prevalence and correlates of sun protective behaviors among low-income Latinas living along the US-Mexico border. MethodsA survey was conducted with 200 adult women, living in the predominantly Latino region of South Texas. Participants completed an English or Spanish language phone survey in November 2012. Self-reported sunscreen use, shade seeking and use of sun protective clothing were the outcomes of interest. Correlates included selective demographic variables, knowledge of skin cancer risk, tanning bed use, past year sunburns and acculturation. ResultsMultiple logistic regression revealed that sunscreen use was associated with education (OR 5.49, CI 2.27-13.26) and skin cancer knowledge (OR 5.06 CI 1.94-13.21) but not with acculturation. English acculturated Latinas were less likely to practice shade seeking behaviors than Spanish acculturated Latinas (OR 0.20 CI 0.054 – 0.74), while use of sun protective clothing was associated with age (OR 6.88 CI 1.23-38.49) and past year sunburns (OR 2.48 CI 1.05-5.87). ConclusionLatinas in the border do not routinely practice sun protective behaviors and are in need of skin cancer prevention interventions. Further research is warranted to design and evaluate interventions to increase sun protective behaviors and reduce the risk for skin cancer among this population group.

CORRESPONDING AUTHOR: Patricia Chalela, DrPH, MPH, UT Health Science Center at San Antonio, San Antonio, TX, 78229; chalela@uthscsa.edu

10:15 AM-11:15 AM D013

SURVIVING RECURRENCE: COPING WITH THE FIRST AND SECOND

Claire C. Conley, M.A., Barbara L. Andersen, PhD

The Ohio State University, Columbus, OH

Objective: Of the 230,000 annual cases of breast cancer, 20% of patients will recur at least once. There are no data examining psychological responses to 2nd recurrence. Available data point to differences between initial diagnosis and 1st recurrence, with patients with recurrence having lower functional status and reporting more pain, fatigue and relationship problems (Frost et al., 2000; Northouse et al., 2002; Sarenmalm et al., 2008). Data documenting patients' psychological responses to initial and 1st and 2nd recurrence breast cancer diagnoses is provided.Methods: Breast cancer patients (N=215) newly diagnosed with initial disease (n=90), or a 1st (n=108) or 2nd recurrence (n=17) were assessed at diagnosis and 4 months later. Measures of stress (IES), mood (POMS), quality of life (QoL; SF-36), sexual satisfaction (SES), and nurse-rated Karnofsky Performance Status (KPS) were used. Linear regressions tested the effects of (1) recurrence status (none, 1st, 2nd), (2) time (baseline, 4 months), and (3) the interaction on psychological outcomes.Results: Results show that all patients had reduced cancer stress, reduced negative mood, and improved mental QoL, but poorer physical QoL by 4 months (all ps < .05). Recurrence status significantly predicted lower SES and lower KPS across time points (ps < .01). Across time, SES and KPS were highest for initial diagnosis (SES:M=4.4, KPS:M=86, respectively), middling for 1st recurrence (SES:M=3.4, KPS:M=75), and lowest for 2nd recurrence patients (SES:M=3.0, KPS:M=73).Conclusions: New data is provided showing that 2nd recurrence patients report lower sexual satisfaction and nurse rated performance status, but the level and change in their other psychological/QoL responses were comparable to those of other diagnosis groups. These data suggest that existing interventions to reduce stress and enhance coping might be applicable for all newly diagnosed patients, with any alterations focused on the unique problem areas within a group.

CORRESPONDING AUTHOR: Claire C. Conley, M.A., The Ohio State University, Columbus, OH, 43215; conley.405@osu.edu

10:15 AM-11:15 AM D014

SURVIVORSHIP CARE PLANS: INITIAL EVIDENCE OF POSITIVE IMPACT FOR CANCER SURVIVORS

Sarah A. Kelleher, PhD[1], Kristi D. Graves, PhD[2], Richard A. Winett, PhD[3]

[1]Duke University Medical Center, Durham, NC; [2]Georgetown University, Washington, DC; [3]Virginia Polytechnic Institute and State University, Blacksburg, VA

With improved detection strategies and medical advances, many people diagnosed with cancer survive their disease at least five years. Survivorship Care Plans (SCP), endorsed by the Institute of Medicine and American Society of Clinical Oncology, are comprehensive post-treatment plans aimed at improving cancer survivors' lifestyles and quality of life, in addition to monitoring for recurrent and/or second cancers. SCPs appear to have the potential to impact clinical outcomes, but research is needed to establish SCPs as an evidence-based component of treatment. The purpose of the current study was to investigate the use of SCPs and whether receipt of a SCP impacts patient-reported psychosocial and health behavior outcomes. Participants were 123 cancer survivors (109 women and 14 men), > aged 21 and diagnosed with cancer in the past 5 years. We evaluated the use of SCPs and the impact of these plans on a variety of behavioral health outcomes (e.g., quality of life, psychological distress, coping self-efficacy, diet and physical activity). More than half of participants (69%) reported *not* receiving any form of written care plan. Multivariate analyses of variance and covariance were used to explore group differences in outcome variables based on receipt of a written care plan. Results suggest significantly lower psychological distress (F [1, 104] = 8.316, p = .005) and higher coping self-efficacy (F [1, 104] = 6.627, p = .011) for survivors who received some form of written care plan versus those who did not. These findings provide initial empirical support for the use of written care plans and illustrate the potential of these documents to impact psychosocial outcomes, which are believed to play a role in disease management and risk reduction. While the current study is an important step in gathering empirical evidence, future research can prospectively examine how delivery of written care plans and improvements in patient-reported outcomes impact long-term clinical endpoints and disease-free survival.

CORRESPONDING AUTHOR: Sarah A. Kelleher, PhD, Duke University Medical Center, Durham, NC, 27705; sarah.kelleher@duke.edu

10:15 AM-11:15 AM D015

THE EFFECT OF NEIGHBORHOOD CONTEXT ON PHYSICAL AND MENTAL HEALTH IN MINORITY BREAST CANCER SURVIVORS

Lisa Barcelo, M.S., Mayra Serrano, MPH, CHES, Chenkai Wu, MPH, Kimlin Ashing, PhD

City of Hope, Duarte, CA

Background: Individual-level determinants of health such as education and income among ethnic minority cancer survivors have been well documented. Little is known about the role of neighborhood context on health among this population.Purpose: The present study sought to explore the relationship between neighborhood context and health among ethnic minority cancer survivors.Method: Three hundred and twenty female African-American and Hispanic post-treatment breast cancer survivors, from 26 to 89 years, were included in the study. Neighborhood context was assessed using self-rated neighborhood stress. Two domains of health were used: general health, measured by self-reported health along with the number of comorbidities; and mental health, assessed using the Center for Epidemiologic Studies Depression (CES-D) Scale in conjunction with self-reported psychological difficulties.Results: Generalized linear regression analyses show higher self-perceived neighborhood stress was shown to be significantly associated with worse self-rated health status, more frequent depressive symptoms, higher number of comorbidities, and increased likelihood of having psychological difficulties among ethnic minority breast cancer survivors after adjusting for important individual sociodemographic and medical covariates such as ethnicity, age, income, education, cancer treatment and cancer stage.Conclusion: Self-reported neighborhood context was shown to be an influential predictor of health among African-American and Hispanic breast cancer survivors. These findings underscore the importance of taking neighborhood context into account in the study of determinants of health outcomes, and have implications for interventions and/or policies focusing on promoting health among underrepresented and underserved populations.

CORRESPONDING AUTHOR: Lisa Barcelo, M.S., City of Hope, Duarte, CA, 91010; lbarcelo@coh.org

10:15 AM-11:15 AM D016

THE IMPACT OF SOCIAL CONSTRAINTS FROM HEALTH PROVIDERS ON BREAST CANCER SURVIVORS' SYMPTOM BURDEN

Rebecca N. Adams, MS[1], Andrea A. Cohee, BSN, RN[2], Victoria L. Champion, PhD, RN, FAAN[2]

[1]Indiana University-Purdue University Indianapolis, Indianapolis, IN; [2]Indiana University, Indianapolis, IN

Breast cancer survivors continue to experience physical symptoms long after diagnosis and treatment of breast cancer is completed. Social constraints (e.g., minimization of survivors' concerns, criticism, avoidance) may contribute to survivors' symptoms. For example, socially constraining behaviors from partners are associated with poorer self-reported health among cancer patients. Socially constraining behaviors from health care providers (HCPs) might also contribute to survivors' increased symptoms by inhibiting the survivors' comfort in soliciting information for symptom management. The present study is the first to examine the potential role of socially constraining behaviors by HCPs on specific symptoms and potential mechanisms for these relationships. It was hypothesized that: (1) greater social constraints from the HCP would be associated with greater survivor symptoms (i.e., fatigue, sleep disturbance, and poor attention functioning); and (2) self-efficacy for breast cancer symptom management and avoidant coping would mediate these relationships. Long-term breast cancer survivors (n=1127) were recruited from a database of 97 sites. Survivors were primarily Caucasian (92%) with a mean age of 57 years. The majority (86%) had been initially diagnosed with early-stage disease and had not recurred. Participants completed questionnaires to assess social constraints from their HCP, self-efficacy for breast cancer symptom management, use of avoidant coping, and symptoms. A macro ("INDIRECT") developed by Preacher and Hayes was used to examine the three hypothesized mediation models, controlling for age, education level, income, and time since diagnosis. As hypothesized, greater social constraints from HCPs were associated wuth greater fatigue, greater sleep disturbance, and poorer attention functioning in the survivors (all ps < .05). In addition, self-efficacy for breast cancer symptom management and avoidant coping both partially mediated the relationships between HCP constraints and each symptom (all confidence intervals did not include zero). Findings suggest that HCPs' socially constraining behaviors impact symptom management and may be an important variable to target in interventions to reduce symptom burden in breast cancer survivors.

CORRESPONDING AUTHOR: Rebecca N. Adams, MS, Indiana University-Purdue University Indianapolis, Indianapolis, IN, 46202; beccanadams@gmail.com

10:15 AM-11:15 AM D017

THE MEDIATING EFFECTS OF EMOTION REGULATION IN CANCER RECURRENCE

Claire C. Conley, M.A., Barbara L. Andersen, PhD

The Ohio State University, Columbus, OH

Objective: Authors have recently called for the study of emotion regulation in the context of health psychology (DeSteno et al, 2013). Patients with cancer recurrence are a particularly appropriate population for study, as recurrence is an emotionally intense experience. Research on emotion regulation processes is needed to understand the strategies that patients use to regulate their emotions. An emotion regulation model was tested using longitudinal data from patients with breast cancer recurrence (N = 122).Methods: Participants completed measures of affect at diagnosis (Profile of Mood States, Center for Epidemiologic Studies Depression Scale, Beck Hopelessness Scale, Life Orientation Test – Revised), measures of emotion regulation 4 months later (COPE Scale), and measures of quality of life (QoL) at 12 months (Medical Outcomes Study – Short Form). Bootstrapped mediation analyses examined the indirect effect of two emotion regulation strategies, engagement and disengagement, on the relationship between affect at diagnosis and QoL at 12 months.Results: Both positive and negative affect significantly predicted later QoL (p < 0.05); the direct path remained significant in mediating models involving negative affect. Regarding mediation, significant effects (p < 0.05) were found for both engagement and disengagement. Greater use of both emotion regulation strategies was associated with higher QoL one year later.Conclusions: This study is the first to examine emotion regulation in patients with recurrent cancer. These results highlight the important role of emotion regulation in this context. For this population, interventions designed to increase emotion regulation may improve QoL.

CORRESPONDING AUTHOR: Claire C. Conley, M.A., The Ohio State University, Columbus, OH, 43215; conley.405@osu.edu

10:15 AM-11:15 AM D018

THE POLARIS ONCOLOGY SURVIVORSHIP TRANSITION (POST) PROGRAM: A CANCER SURVIVORSHIP PLANNING PROGRAM

Erin O'Hea, PhD[1], Juliet Wu, B.S.[2], Laura Dietzen, M.S.[3], Tina L. Harralson, PhD[4], Edwin Boudreaux, PhD[2]

[1]Stonehill University, Easton, MA; [2]University of Massachusetts Medical School, Worcester, MA; [3]Polaris Health Directions, Inc, Glen Carbon, IL; [4]Polaris Health Directions, Wayne, PA

Background: The Institute of Medicine (IOM) recommends all cancer patients ending active treatment have a "survivorship plan," but a comprehensive plan is often neglected. The Polaris Oncology Survivor Transition (POST) system is a web-based breast cancer (BC) survivorship planning program that aims to make adherence to recommendations more feasible through technology. POST generates a tailored Cancer Survivorship Plan (CSP) that has both a Provider and Patient Summary consisting of 7 sections, including a history of cancer diagnosis and treatment, psychological adjustment, short and long-term effects, and supportive care. Data for the summaries comes from a patient's medical record pre-populated from the electronic health record (EHR), provider recommendations, and a patient psychosocial and physical symptom assessment. After data is compiled, the CSP is printed out, reviewed, and given to patients to keep. With consent, the Provider Summary is saved to the EHR and sent to the primary care provider (PCP).
Method: Qualitative interviews were conducted with 10 BC survivors, 6 oncology providers, and 5 PCPs. Shared themes, along with IOM and NCI guidelines, were used to develop core design principles of the POST and craft the content of the CSP. CSP mock-ups were reviewed by 5 BC patients for feedback. POST software was developed and field tested with 4 oncology providers and 25 women entering survivorship. To determine adherence to IOM guidelines, a CSP review of all enrolled patients was conducted, and 5 de-identified CSPs of enrolled patients were reviewed by 2 outside experts who also offered suggestions for improvement. Chart reviews were conducted on 25 non-enrolled BC patients to assess CSP practices before POST testing (no CSPs were documented). Finally, we assessed satisfaction of all end users (oncologists, patients, and PCPs).
Results: The POST was successfully implemented into clinical practice; however, EHR integration was only partially completed. Satisfaction ratings demonstrated that the POST was positively evaluated by patients (4.6 out of 5), oncology providers (4.3), and PCPs (4.1).

Conclusion: This study provides support that a computerized survivorship planning program can be incorporated into clinical practice and can be effective in facilitating and expediting survivorship planning.

CORRESPONDING AUTHOR: Erin O'Hea, PhD, Stonehill University, Easton, MA, 02357; eohea@stonehill.edu

10:15 AM-11:15 AM D019

THE ROLE OF PERSONALITY IN A MINDFULNESS BASED STRESS REDUCTION INTERVENTION FOR BREAST CANCER

Christina Jagielski, MPH[1], Diane Tucker, PhD[2]

[1]University of Alabama at Birmingham, Birmingham, AL; [2]Director - Science and Technology Honors Program, Birmingham, AL

Many clinical interventions have improved psychological well-being in women with breast cancer; however, we have little information about individual differences in response to psychological interventions. In a recently completed randomized controlled trial in Denmark, participants in the Mindfulness Based Stress Reduction (MBSR) treatment arm showed significantly reduced levels of depression after six and twelve months, compared with the group receiving treatment as usual (Wurtzen et al., 2012). The present study sought to investigate whether personality factors, as measured by the NEO-PI-R, contribute independently or as an interaction with treatment group to participant depression at six and twelve month follow-up. We also examined whether the MBSR intervention had an impact on physical health outcomes such as breast cancer recurrence and mortality. In our study of 280 women with breast cancer, multiple regression analyses revealed that after controlling for demographic and treatment related variables, the interaction of two personality factors with treatment group (Agreeableness x Treatment and Neuroticism x Treatment) were significant predictors of psychological well-being. MBSR did not significantly impact physical health outcomes at 24 months in our sample.

CORRESPONDING AUTHOR: Christina Jagielski, MPH, University of Alabama at Birmingham, Birmingham, AL, 35294; cjagiels@uab.edu

10:15 AM-11:15 AM D020

TRAJECTORIES OF DISTRESS AMONG HEMATOPOIETIC STEM CELL TRANSPLANT RECIPIENTS

Yasmin Asvat, PhD[1], Alexander Sokolovsky, MA[2], Johanna Grosse, BA[3], James Gerhart, PhD[1], Henry Fung, MD[4], Stevan Hobfoll, PhD[1]

[1]Rush University Medical Center, Chicago, IL; [2]University of Illinois at Chicago, Chicago, IL; [3]The Chicago School of Professional Psychology, Chicago, IL; [4]Fox Chase Cancer Center, Philadelphia, PA

Hematopoietic stem cell transplantation (HSCT), a standard form of treatment for hematologic and lymphatic cancers, typically has a prolonged course during which patients face numerous physical and psychological challenges. Prior research recipients has documented that, on average, distress peaks at the time of HSCT admission and gradually decrease over time, returning to baseline 1-3 years post-HSCT. However, little is known about individual variation in the distress trajectories of HSCT recipients. Although qualitative research has observed that some patients exhibit resilient and others exhibit chronic patterns of distress, the distress trajectories of HSCT recipients have not been examined empirically. This study aims to empirically classify the distress trajectories of 97 patients (mean age 54, SD = 15.1) undergoing HSCT at a tertiary cancer center. Distress was assessed at 6 time points between baseline (admission for HSCT) and 3 months post-HSCT using the Cancer Treatment Distress Scale. Additionally, baseline predictors of distress profiles were examined, including demographic characteristics (self-reported) and interpersonal problems (Inventory of Interpersonal Problems - Short Circumplex Form; IIP-SC). Analyses using multiple clustering methods appropriate for small samples resulted in a 3 class solution. The 3 classes were consistent with the resilient (high distress at baseline and linear pattern of recovery), resistant (consistently low distress over time), and chronic (consistently high distress over time) trajectories observed in research with breast cancer patients and the broader literature on response to traumatic stress. No differences were observed across classes as a function of age, gender, income, or marital status. On the IIP-SC, higher level of vindictiveness (i.e., being suspicious and distrustful) was associated with worse distress trajectories. Findings highlight the importance of attending to individual variations in distress among HSCT recipients. Assessing interpersonal skills and deficits may help identify patients who are at high risk for chronic distress, thus allowing for optimal allocation of resources and tailoring of interventions.

CORRESPONDING AUTHOR: Yasmin Asvat, PhD, Rush University Medical Center, Chicago, IL, 60612; yasmin_asvat@rush.edu

10:15 AM-11:15 AM D021

TREATMENT-RELATED SYMPTOMS AND BODY IMAGE CONTRIBUTE TO DISTRESS IN ANAL AND RECTAL CANCER SURVIVORS

Catherine Benedict, PhD, Tammy Schuler, Jeanne Carter, PhD, Christian Nelson, PhD, Katherine DuHamel, PhD

Memorial Sloan Kettering Cancer Center, New York, NY

Treatment for anal and rectal cancer (ARCa) can have side effects that impair long-term quality of life (QOL). Persistent bowel dysfunction and/or gastrointestinal (GI) symptoms are post-treatment challenges that may lead to body image problems, and exacerbate symptom-related distress. This study examined relations among bowel and gastrointestinal symptoms, body image, and distress among women who completed ARCa treatment.Methods: Participants completed a baseline assessment as part of a larger sexual health intervention study. Multiple regression was used to test whether greater symptom severity and poorer body image related to greater distress. Body image was tested as a mediator between symptoms and distress. A priori covariates included age and presence of a stoma (yes/no).Main Outcome Measures: The EORTC-QLQ-CR38 diarrhea, GI symptoms, and body image subscales and the Brief Symptom Index (BSI) depression and anxiety subscales. Results: Women (N=70) were on average 54 years old, White (79%), married (57%), and employed (47%); 4-years post-treatment and 15% had a stoma. Worse diarrhea (β=.34, p=.01) and GI symptoms (β=.54, $p < .001$) related to greater depressive symptoms; worse GI symptoms also related to greater anxiety symptoms (β=.45, $p < .001$). Body image mediated the relation between diarrhea and depressive symptoms (Sobel test=2.42, SE=.001, p=.02) and was a partial mediator of the relation between GI symptoms and depressive symptoms (Sobel test=1.86, SE=.001, p=.06). The mediating role of body image between GI symptoms and anxiety symptoms was not supported.Conclusions: Long-term bowel dysfunction and GI symptoms are distressing and may affect how women perceive and relate to their bodies. Body image problems may exacerbate symptom-related distress and lead to greater depressive symptoms. Interventions to improve QOL should address treatment side effects, but also target body image concerns and symptom-related distress. Body image may be a modifiable factor to improve well-being in survivorship. Given cross-sectional analyses, future research should evaluate longitudinal relations.

CORRESPONDING AUTHOR: Catherine Benedict, PhD, Memorial Sloan Kettering Cancer Center, New York, NY, 10022; benedicc@mskcc.org

CITATION POSTER

10:15 AM-11:15 AM D022

WHAT I WISH I HAD KNOWN: ADVICE FROM YOUNG ADULT BLOOD CANCER PATIENTS

Andres F. Salazar[1], Geneva Berra[2], Ruth Mizrahi[3], Guadalupe Morales[4], Amanda M. Marin-Chollom, M.A.[5], Tracey A. Revenson, PhD[6]

[1]Hunter College, City University of New York, Forest Hills, NY; [2]Hunter College, City University of New York, White Plains,, NY; [3]Hunter College, City University of New York, Brooklyn, NY; [4]Hunter College, City University of New York, Flushing, NY; [5]The Graduate Center, City University of New York, Jersey City, NJ; [6]Hunter College and the Graduate Center, City University of NY, New York, NY

Aim: The young adult cancer population is understudied in behavioral medicine and more likely to have unmet psychosocial needs than their older or younger counterparts. Living with cancer during this developmental stage is "off-time", bringing unique stresses and challenges as young adults are creating identities, beginning careers, becoming independent, and developing intimate relationships. We describe what young adults with hematologic cancer wish they had known at the time of diagnosis and before starting treatment. Method: Data were from semi-structured interviews with 50 young adults aged 19-37 (32 women, 18 men) diagnosed with leukemia or lymphoma within the past 2 years. Responses to the question: "What advice would you give to a [*woman/man*] of your age who has just found out that they have [*leukemia/lymphoma*]?" were transcribed verbatim. A coding scheme was developed with 10% of the interviews, tested, and refined. Using Dedoose software, each interview was coded for the number of excerpts within each category, which was adjusted for the number of participants providing excerpts within that category. Results: 105 unique abstracts were coded. The most cited advice (24% of all excerpts) was obtaining adequate information about treatment from one's doctor and nurses about pain and pain management, prognosis, side effects and fertility. The next largest category (18% of excerpts) was to develop and maintain current relationships with family and friends hat provide emotional support *without obligation.* At the same time, they encouraged "new" patients to seek out cancer-related networks (13% of excerpts) including support groups and social media, in order to make connections with other young people who have cancer, obtain information on how to cope with treatment, and find emotional support from others in their situation. Another frequent piece of advice was to maintain hope and optimism (18% of excerpts), although their words reflected expectations that this was the appropriate attitude more than true advice; in contrast, very few participants (3) suggested maintaining a realistic attitude. These data suggest a need for both emotional and social support for young cancer patients *from* young cancer patients. The poster will report the quantitative data and also "illustrate" the data with their own words.

CORRESPONDING AUTHOR: Andres F. Salazar, Hunter College, City University of New York, Forest Hills, NY, 11375; andres.salazar03@myhunter.cuny.edu

10:15 AM-11:15 AM D023

WILL I BE ABLE TO WORK DURING MY TREATMENT?

Irene K. M. Cheung, MSW[1], Rainbow T. H Ho, PhD, BC-DMT, REAT, CGP, CMA[2], Caitlin K. P. Chan[1]

[1]The University of Hong Kong, Hong Kong, Hong Kong; [2]The University of Hong Kong, Hong Kong, China, Peoples Rep

There is a common myth about work stress and the risk of cancer. Patients are always asked about the relationship between their job and the risk of cancer and the treatment effect. Most of them worried about their working conditions during the treatment, as well as its negative influence on the treatment results. In Hong Kong, some of the cancer patients would choose to quit their job and be focused on their cancer treatment. However, it may cause heavy financial strains and family stress. This research finding is aimed at disclosing the differences between working and non-working breast cancer patients on their physiological and psychological characteristics.

Study: 139 breast cancer participants had been recruited from local hospitals and Cancer support organization. Participants were asked to fill in a set of self-reported questionnaires to study their psychosocial characters (stress, anxiety and depression), radiotherapy-related symptom cluster (fatigue, pain and sleep disturbances) and quality of life before and after the commencement of their radiotherapy treatment. Result: Out of 139 participants, 64 of them (46%) had no job or retired and 75 of them (54%) had full-time or part-time job. Result showed that there is no significant difference in psychological distress (anxious and depression), negative symptoms (fatigue, pain and sleeping disturbances) and overall quality of life between the working group and non-working group before and after their radiotherapy treatment. Working group patients were scored slightly higher in distress, anxious scores and depressive level when compared with Non-working group. However, the result was not significantly difference to be detected. Conclusion: The result maybe a revealed on that cancer patients may over worry about working during cancer treatment. Further psychosocial education would be needed in this area.Acknowledgement: This study is supported by the Research Grants Council General Research Fund (HKU745110H), Hong Kong Cancer Fund, Queen Mary Hospital and Pamela Youde Nethersole Eastern Hospital.

CORRESPONDING AUTHOR: Irene K. M. Cheung, MSW, The University of Hong Kong, Hong Kong, 852; irenech@hku.hk

10:15 AM-11:15 AM D024

WORK OUTCOMES OF COLON AND RECTAL CANCER SURVIVORS

Andrea M. Barsevick, PhD[1], Crystal Denlinger, MD[2], Pamela J. Shapiro, PhD[3], Carolyn Y. Fang, PhD[2]

[1]Thomas Jefferson University, Philadelphia, PA; [2]Fox Chase Cancer Center, Philadelphia, PA; [3]Temple University, Philadelphia, PA

With recent advances in diagnosis and treatment, colon and rectal cancers (CRC) are being transformed into survivable diseases. As survival time lengthens, work outcomes become increasingly important as symbols of recovery and return to normalcy. Yet, in contrast with other cancers, CRC survivors are at increased risk for continued unemployment. This research aimed to identify modifiable risk factors for poor work outcomes that can be targeted for intervention to facilitate the transition back to the workplace. A population-based survey was conducted of survivors within 3-5 years post-treatment who were employed at diagnosis. Work outcomes included work status (working or not working); for those currently working, outcomes included work intensity, time to return to work, and satisfaction with work. Respondents were on average 57.4 years of age (SD = 8.9), 56% male, and 86% white. Of 308 respondents, 196 (64%) attempted to work during cancer treatment; 96 (48%) of those stopped working and 72 (76%) returned to work after treatment. Of those who stopped working at diagnosis, 77 (69%) returned to work after treatment. At the time of survey completion, 230 (78%) were working which is high compared to cancer survivors (67%) and low compared to healthy persons (85%). Predictors of current work status included being married ($p = .008$) and having local stage disease ($p = .02$), fewer co-morbid conditions ($p = .001$), health insurance ($p = .03$), continued to work during treatment ($p = .001$), and low symptom burden (all $p < .05$). Surprisingly, some unmodifiable risk factors such as diagnosis (colon versus rectal cancer), amount of treatment, or having an ostomy did not affect current work status. Modifiable risk factors included several prominent symptoms such as fatigue, sleep difficulties and urinary problems. These findings suggest that lingering symptoms could be targeted for future intervention to improve work outcomes for CRC survivors.

CORRESPONDING AUTHOR: Andrea M. Barsevick, PhD, Thomas Jefferson University, Philadelphia, PA, 19107; andrea.barsevick@jefferson.edu

10:15 AM-11:15 AM D025

Y LIVING: A HEALTHY LIFESTYLE PROGRAM FOR CANCER RISK REDUCTION AMONG URBAN, LATINO FAMILIES

Deborah Parra-Medina, PhD[1], Laura A. Esparza, MS[2], Louis Lopez[3], Yuanyuan Liang, PhD[4]

[1]Institute for Health Promotion Research, UTHSCSA, San Antonio, TX; [2]University of Texas Health Science Center at San Antonio, San Antonio, TX; [3]YMCA of Greater San Antonio, San Antonio, TX; [4]The University of Texas Health Science Center, San Antonio, TX

Latinos have disproportionately high rates of obesity and physical inactivity compared to the general population, putting them at greater risk for some cancers, including breast and colorectal cancer. The Y Living program (YL) is a 12-week culturally relevant program for families designed by researchers and a local YMCA. Families received a 3-month no-cost YMCA membership, attended twice-weekly group education sessions, and engaged in physical activity (PA) at least 3 times each week. YMCA staff/volunteers educated participants about nutrition, PA, and behavioral skills. 175 families (n=242 adults, n=106 children) in high-risk, predominantly Latino urban neighborhoods enrolled over the 2-year project period. Average enrollment was 16 families (n=32 individuals) per program (n=11) with 73% retention. We evaluated the program using a single-group pre-test post-test design. We observed significant increases in participant knowledge about PA, obesity, and cancer risk reduction. Adults' overall PA increased (moderate PA increased 28.1 minutes/week, $p=.001$), as did fruit/vegetable consumption (0.37 cup equivalents/day, $p < .01$), and body composition: body weight (mean difference -2.41lb, SD 5.94; $p < .001$); body mass index (mean difference -0.38, SD 1.79; $p < .01$); waist circumference (mean difference -1.27in, SD 2.44; $p < .001$). Participants reported reduced stress (35% to 14%; $p < .001$) and improved perceptions of their health status (health rated fair/poor declined 53% to 31%, $p < .001$). YL was effective at helping participants make the connection between lifestyle and cancer, improving PA/dietary behaviors and body composition, and supporting families to achieve behavior change goals.

CORRESPONDING AUTHOR: Deborah Parra-Medina, PhD, Institute for Health Promotion Research, UTHSCSA, San Antonio, TX, 78229; parramedina@uthscsa.edu

10:15 AM-11:15 AM D026

NEW GUIDELINE UNDERESTIMATES THE RISK OF CARDIOVASCULAR DISEASE IN WOMEN WITH METABOLIC SYNDROME

Bill Lian, MD/PhD[1], Hua Fang, MD, PhD[2], Gioia Persuitte, MPA[2], Gin-Fei Olendzki, MS, MBA[3], Yunsheng Ma, MD, PhD[2]

[1]University of Masachusetts Medical School, Worcester, MA; [2]University of Massachusetts Medical School, Worcester, MA; [3]Umass Medical School, Worcester, MA

Objective: Metabolic syndrome is highly prevalent among U.S. adults and is associated with an increased risk of cardiovascular disease (CVD) morbidity and mortality. Women with metabolic syndrome have higher risks for CVD than men. Based on the new 2013 ACC/AHA guideline, atherosclerotic cardiovascular disease (ASCVD) risk scores were compared between men and women using participants with metabolic syndrome in a dietary trial conducted between June 2009 to January 2014 and the 2009-2010 National Health and Nutrition Examination Survey (NHANES).Methods: The predicted ASCVD scores were computed for 145 obese individuals with metabolic syndrome from the dietary intervention trial [Female: 74%; *M*ean age = 51 years (range: 40-59), ; BMI= 35 kg/m^2] based on the new guideline, using age, sex, race, smoking status, treated and untreated systolic blood pressure, and levels of total and HDL cholesterol. The predicted risk for ASCVD and statin use were compared between males and females using Chi-squared tests and regression models. Similar analyses were conducted for participants of similar age with metabolic syndrome from the NHANES data set (n=169) to cross-validate the new guideline based findings.Results: Data from both the dietary trial and NHANES showed that women's 10-year ASCVD risk scores were significantly lower than men based on the new guideline [dietary trial (Mean ± SD): 2.38 ± 1.33 vs 5.70 ± 3.18, p < 0.001; NHANES: 2.54 ± 1.61 vs 5.65 ± 3.34, p < 0.001]. The dietary trial identified 31.6% male participants as high risk, and in NHANES, 29% were identified. In contrast, only one female was identified as high-risk in NHANES and none were identified in the dietary trial. Despite their estimated lower risk scores, more women in the dietary trial had elevated LDL (female vs. male: 47.6% vs 27%) and hs-CRP (female vs male: 76.6% vs 50%). Furthermore, fewer women took statins compared to their male counterparts (female vs male: 15% vs 26%), despite the fact that these women have higher LDL and hs-CRP levels.Conclusions: Our clinical trial and the national survey data showed that the ASCVD risk score in women with metabolic syndrome is underestimated by the new guidelines. High risk women with metabolic syndrome are excluded by the new guidelines for appropriate treatments.

CORRESPONDING AUTHOR: Bill Lian, MD/PhD, University of Masachusetts Medical School, Worcester, MA, 01655; qylian@yahoo.com

10:15 AM-11:15 AM D027

RETHINKING THE FILE DRAWER PROBLEMS OF NULL FINDINGS: VASCULAR BURDEN DID NOT PREDICT DEPRESSION

Krupa Hegde, Stephen Jefferson, PhD

Eastern Michigan University, Ypsilanti, MI

1. Objective: The current study examined three different methods for determining vascular burden to assess which approach best predicted depression in a nationally representative sample of 548 older adults who did not have depression at baseline.2. Participants and Methods: Data were derived from the Aging, Demographics, and Memory Study. Participants were assessed for depression twice over a two-year period. A 3-4 hour in-home assessment of each participant was conducted by a nurse and a neuropsychological technician. Vascular burden was assessed via the Mast approach, the National Institute of Health's Adult Treatment Panel III (NIH-ATP III) approach, and the Framingham Risk Score approach. A consensus expert panel of neurologists, neuropsychologists, geriatric psychiatrists, and internists reviewed the data and assigned the final diagnoses for depression.3. Results: Separate multivariate logistic regression analyses were conducted to predict depression using each of the three proposed vascular burden scoring systems. Counter to expectations, neither the Mast approach (e^B=1.69), the NIH-ATP III approach (e^B=1.06), nor the FRS approach (e^B=.78) significantly predicted depression in this sample. As a result, a comparison of the relative predictive utility of each of these methods is not possible.4. Conclusions: The current null findings suggest that a more complex relationship likely exists between vascular disease and dementia than previous findings have suggested, particularly in population-based samples. These findings also intimate that this census-derived sample may be more resilient than previous studies indicated.

CORRESPONDING AUTHOR: Krupa Hegde, Eastern Michigan University, Ypsilanti, MI, 48197; khegde@emich.edu

10:15 AM-11:15 AM D028

ROLE OF EMOTION REGULATION, STRESS APPRAISAL, AND HEART RATE VARIABILITY REACTIVITY TO A STRESS TASK

Chantel M. Ulfig, M.S.[1], David K. Chatkoff, PhD[2], Michelle T. Leonard, PhD[2]

[1]University of Michigan Dearborn, Sterling Heights, MI; [2]University of Michigan Dearborn, Dearborn, MI

Stress and emotions (e.g. anger), along with cognitive stress appraisals (e.g. threat), have been associated with altered cardiovascular reactivity (CVR) and cardiovascular disease (CVD). Despite this literature, the relation of cognitive emotion regulation (CER) strategies, which have been described as individual's efforts to change, control or maintain emotional states in response to emotionally arousing stimuli, has not been studied relative to CVR. Given the relation to emotional states, CER may be an important risk factor for CVD via altered CVR. Thus, this study examined the possible associations between maladaptive CER strategies, cognitive appraisals of threat and stressfulness, and CVR to a stress recall task.Participants consisted of 82 undergraduate females. The Stress Appraisal Measure was used to assess threat and stressfulness appraisals of the stress task. CER strategies were measured using the Cognitive Emotion Regulation Questionnaire. Three subscales considered as maladaptive (rumination, self-blame, and catastrophizing) were used. CVR was assessed using heart rate variability (HRV) (LF (ms^2), LF (nu), HF (ms^2), HF (nu), and LF/HF) generated from a 5 minute baseline and 5 minute task electrocardiogram. Results showed that self-blame was marginally associated with threat appraisal (r = .21), stressfulness (r = .18), and LF (nu) (ΔR^2 = .03) and HF (nu) (ΔR^2 = .03) reactivity (all p < .1). Rumination had a marginal association with threat appraisal (r = .21, p < .1), and a statistically significant association with stressfulness (r = .31), as well as LF (nu) (ΔR^2 = .08), HF (nu) (ΔR^2 = .08), and LF/HF (ΔR^2 = .08) reactivity (all p < .01). Catastrophizing had a statistically significant association with threat appraisal (r = .37, p < .01), and a marginal association with stressfulness (r = .20, p < .1). All associations were in the expected direction. In general, maladaptive CER strategies predicted cognitive appraisals of threat and stressfulness, as well as normalized units of HRV. Thus CER strategies may be an important risk factor for CVD via heightened sympathetic arousal and increased parasympathetic withdrawal in response to stressful events. Clinically, improving CER skills may ultimately have an impact on later CVD development.

CORRESPONDING AUTHOR: Chantel M. Ulfig, M.S., University of Michigan Dearborn, Sterling Heights, MI, 48313; chantel.ulfig@gmail.com

10:15 AM-11:15 AM D029

THE ROLE OF FATALISM IN DEPRESSION ASSOCIATED WITH CARDIAC SURGERY

Peggy Trainor -O'Malley, DoctoralCandidate[1], John Allegrante, PhD[2], Ray Marks, Ed.D[2], Sandyha Balaram, MD, PhD[3], Daniel Swistel, MD[4], Karan Omidvari, MD[5]

[1]Mt.Sinai-St. Luke's, Garden City, NY; [2]Teachers College, Columbia University, New York, NY; [3]Mt.Sinai -St.Luke's, New York, NY; [4]Mt.Sinai-St. Luke's, New York, NY; [5]MT.Sinai-St.Luke's, New York, NY

Purpose: Depression post cardiac surgery is more common than appreciated and can adversely impact length of stay, recovery and quality of life. We prospectively analyzed various patient characteristics, socio-economic factors and fatalism to determine their relationship to post-operative depression. If a correlation can be identified it is hoped that pre-operative intervention can be initiated to limit the adverse effects of depression on recovery.Method: Consecutive patients scheduled for coronary bypass or valve surgery were screened for study anaysis. Patients under the age of forty, pre-existing depression and patients needing reoperation were excluded. Ninety-eight patients met criteria over a six month period. Baseline survey consisted of quantitative data relating to heart surgery (Euroscore), socio-economic demographics, depression score (PHQ9) and fatalism scale (Shen, Condit and Wright). Follow-up assessment was at 4-6 weeks and 12 weeks. Data was collected by chart review and direct face-to-face interviews. Initial data was analyzed utilizing SPSS software.Results: Sixty eight men and thirty women qualified. Eighty-five (87%) completed follow-up at 4-6 weeks. Mean fatalism score was 50 (22-88), and mean depression score was 4.2(0-11). Fatalism, female gender, and black race showed a positive correlation with depression at a p-value of .05, R^2 of .083. Age did not correlate with post-operative depression.Conclusion: Fatalism, gender, and race have a strong correlation with post-operative depression at 4-6 weeks. Further study to identify long-term consequences is warranted and pre-operative interventions to limit subsequent depression should be utilized.Key Words: Depression, Fatalism, Cardiac Surgery

CORRESPONDING AUTHOR: Peggy Trainor -O'Malley, DoctoralCandidate, Mt.Sinai-St. Luke's, Garden City, NY, 11530; pomalley@chpnet.org

10:15 AM-11:15 AM D030

VALIDATION OF THE UCSD PERFORMANCE-BASED SKILLS ASSESSMENT (UPSA) IN STROKE SURVIVORS

Denisse Tiznado, MA, Mark Poirier, BA, Joan McDowd, PhD

The University of Missouri - Kansas City, Kansas City, MO

Everyday functioning is an important outcome that is evaluated and targeted in stroke rehabilitation programs. Therefore, it is important to identify assessments of functional capacity that are feasible, acceptable and valid to predict daily life abilities among stroke survivors. The present investigation was designed to evaluate the validity of the UCSD Performance-Based Skills Assessment (UPSA) in a stroke sample. Forty stroke survivors participated in this study. Everyday functioning was evaluated using the UPSA (subscales include: Financial, Organization and Planning, Communication, Transportation and Household Management) and the Executive Function Performance Test (EFPT, a valid measure of daily functioning in stroke survivors). As hypothesized, a negative significant correlation was found between UPSA total scores and EPFT total scores, r (37) = -.602, p < .001, as the two measures are scaled in opposite directions. Also, significant negative correlations were found between the UPSA Communication domain scores and the EFPT Telephone use task scores, r (37) = -.579, p < .001, and the UPSA Household Management domain scores and EFPT Simple Cooking task scores, r (36) = -.391, p= .015. However, no significant correlation was found between the UPSA Finance domain scores and the EFPT Bill Payment task scores, r (37) = -.272, p = .094. This preliminary study suggests that the UPSA test is associated with assessments that measure functional skills. These findings offer preliminary validity for the use of the UPSA in stroke survivors. The UPSA provides advantages for its use in this population including: the limited amount of training needed to administer and score it, its portability, and the time of administration (i.e., 30 minutes). Further studies should examine the relationship between UPSA scores and indicators of real-world functioning (e.g., work performance, residential independence, etc.).

CORRESPONDING AUTHOR: Denisse Tiznado, MasterofArts, The University of Missouri - Kansas City, Kansas City, MO, 64110; dtp64@mail.umkc.edu

10:15 AM-11:15 AM D031

PREDIABETES IN AFRICAN AMERICANS:ROLE OF LAY FACILITATORS AND A NOVEL REALITY SERIES IN PHILADELPHIA

Nicole Vaughn, PhD[1], Crystal Wyatt[1], Beatriz Reyes, MPH[1], Elizabeth Dalianis, MPH, MA[1], Kimberly Arnold, MPH[1], Purni Abeysekara, MPH[2], Idris Robinson, MPH[1], Alexis Amankwanor, BS[1], Longjian Liu, MD, PhD[1]

[1]Drexel University School of Public Health, Philadelphia, PA; [2]School of Public Health/Drexel University, Philadelphia, PA

Prediabetes is a growing concern in the United States with over 86 million individuals in this category (CDC, 2014). African Americans are at-risk for prediabetes and subsequently conversion to Type 2 diabetes. Finding new ways to engage African Americans in weight loss in familiar settings using new methods are needed. In Philadelphia, the Getting People in Sync (GPS) Prediabetes Prevention Program, used the ProjectNOTME video series developed by United Health and Comcast with lay facilitators to deliver the 16-week program in a group church setting. Data collected from 89 participants at baseline and 16-weeks indicated that individuals lost weight (-7.96 lbs, SD=10.62; t(56)=-5.66, p < .000), lost inches around their waists (-3.96 in. SD=2.42; t(51)=-11.78,p < .000) and lowered their BMI (-1.30, SD=1.67;t(56)=-5.87,p < .000). High attenders of the program attended 13 of 16 sessions. In addition, 46% of the sample wanted to have access to the videos outside of the group setting, however, only 10% would have preferred to watch the episodes in the privacy of their home. These results suggest that multiple models of delivery, in group settings, as well as access at home may be needed to reach African Americans at highest risk for this chronic condition. These results hold promise as a potentially sustainable method to reduce diabetes risk and achieve clinically meaningful results with lay facilitators in community settings leading an evidence-based programs such as this DPP based research study.

CORRESPONDING AUTHOR: Nicole Vaughn, PhD, Drexel University School of Public Health, Philadelphia, PA, 19104; nicole.vaughn@drexel.edu

10:15 AM-11:15 AM D032

SLEEP IN ADOLESCENTS WITH TYPE 1 DIABETES: ASSOCIATIONS WITH ADHERENCE AND GLYCEMIC CONTROL

Sarah Jaser, PhD[1], Deborah Ellis, PhD[2]

[1]Vanderbilt University, Nashville, TN; [2]Wayne State University, Detroit, MI

Adolescents with type 1 diabetes (T1D) are at risk for suboptimal glycemic control and problems with adherence. Less than 20% of healthy adolescents report getting the recommended 8.5-9 hours of sleep per night, and insufficient sleep has been linked with insulin resistance and elevated blood glucose levels in adults with diabetes. Little is known, however, about the role of sleep in diabetes management in adolescents with T1D. The aim of the current analysis was to examine sleep duration and quality in relation to adherence and glycemic control in adolescents with T1D.Participants (n=123) included a diverse group of adolescents age 13-20 from two sites (mean age = 16.9, 44% female, 59% white, mean A1C = 9.4%). Adolescents completed the Pittsburgh Sleep Quality Index to assess sleep quantity and quality. Frequency of blood glucose monitoring (meter downloads) was used as a measure of adherence. Glycemic control (A1C) was obtained from adolescents' medical records. Adolescents' sleep duration ranged from 5-12 hours per night. Mean hours of sleep (7.3; SD = 1.5), was well below the recommended amount. There were no significant differences in sleep duration related to gender, race/ethnicity or treatment type (pump/injections), but older adolescents reported fewer hours of sleep per night (*r* = -.19, p = .032). In terms of overall sleep quality, 15.6% reported very good quality, 60.7% reported fairly good quality, 21.3% reported fairly bad quality, and 2.5% reported very bad quality. There were no significant differences in sleep quality related to gender, race, ethnicity, treatment type, or age. Bivariate correlations to test for associations between sleep quality with A1C and frequency of blood glucose monitoring were not significant. However, sleep quantity was associated with adherence; more sleep was associated with higher frequency of blood glucose monitoring (r = .21, p = .037). A1C was not significantly associated with sleep duration (r = .03). Findings suggest that sleep may have an effect on adherence in adolescents with T1D, but more work is needed to determine the mechanism of effect and whether insufficient sleep has an independent effect on poor illness management. Providers should consider assessing for and addressing insufficient sleep in adolescents as a way to improve diabetes management.

CORRESPONDING AUTHOR: Sarah Jaser, PhD, Vanderbilt University, Nashville, TN, 37235; sarah.jaser@vanderbilt.edu

10:15 AM-11:15 AM D033

STAYING POSITIVE: MARKERS OF RESILIENCE IN YOUTH WITH TYPE 1 DIABETES

Jadienne Lord, BA, Tamara Rumburg, BA, Sarah Jaser, PhD

Vanderbilt University, Nashville, TN

Adolescents with Type 1 Diabetes (T1D) are at increased risk for depression, diminished quality of life and deteriorating glycemic control. Although some adolescents are able to adapt to the challenges associated with having diabetes exceptionally well, few studies have examined protective factors in this population. Thus, we sought to examine both observed and self-reported indicators of resilience in youth with T1D.In this longitudinal study we collected observational and questionnaire data from youth (n= 91, ages 10-16, 46% female, mean HbA1C=7.6%) with T1D. Adolescents and their mothers participated in videotaped discussions about diabetes-related stress, which were coded for observed Positive Mood (PM) and Prosocial Behavior (PR). Adolescents' self-reported positive affect was also used as an indicator of resilience. We obtained questionnaire data on quality of life and depressive symptoms at baseline and 6 months. HbA1c was obtained from adolescents' medical records at baseline and 6 months.Bivariate correlations indicated that higher levels of child's observed PM (r= -.32) and PR (r= -.32) were associated with lower HbA1c 6 months later (both p < .005). Higher levels of self-reported positive affect at baseline were associated with better quality of life (r=-.22, p < .05) and fewer depressive symptoms (r=-.25, p < .03) 6 months later. There were no significant differences in indicators of resilience or HbA1c with gender or age, but higher age was associated with worse quality of life(r= .27, p= .02) and more depressive symptoms (r=.22, p < .05). Even after adjusting for age, positive affect predicted both depressive symptoms and quality of life (both p< .05) in multiple regression analyses.Findings from this multi-method, longitudinal study indicate a relationship between observed positive behaviors and self-reported mood with HbA1c, quality of life and symptoms of depression. The ability to maintain high levels of positive mood when confronted with significant stress has been shown to have important implications for adolescents at risk for depression, and may be equally influential in youth with T1D. These behaviors should be reinforced and promoted as protective factors, aiding in the prevention of adverse mental and physical health outcomes in this population.

CORRESPONDING AUTHOR: Jadienne Lord, BachelorsofArts, Vanderbilt University, Nashville, TN, 37235; jadienne.h.lord@vanderbilt.edu

10:15 AM-11:15 AM D034

THE INFLUENCE OF RACE AND SEX ON THE DIET OF PEOPLE WITH TYPE 2 DIABETES AND THEIR PARTNERS

Aarohee P. Fulay[1], Imaobong Essien[2], Vicki Helgeson, PhD[2], Howard Seltman, PhD[2], Mary Korytkowski, MD[3], Leslie Hausmann, PhD[3]

[1]Cornell University, Ithaca, NY; [2]Carnegie Mellon University, Pittsburgh, PA; [3]University of Pittsburgh Medical Center, Pittsburgh, PA

Around one in ten Americans suffers from diabetes. Fortunately, partners of those with diabetes can lessen the burden by helping with diet adherence. This study examined the relation between patient and partner diet as well as the implications of race and sex for diet. Participants were 70 couples in which one person (meanage = 54.61; average length of diabetes in patient = 1.4 years; 48.6% male; 61.4% white) was recently diagnosed with type 2 diabetes. Three 24-hour dietary recall interviews were performed within two weeks of an in-person interview with both patients and partners. Recall data were entered into the ESHA database to analyze nutrient components. Data were averaged across days. The study focused on total calories and percent of calories from protein, carbohydrate, sugar, fat, and saturated fat. Pearson correlations showed that nutrients were modestly correlated (r's ranged from 0.25-0.46, p's < 0.05) for those with diabetes and their partners. Race by sex by role (patient, partner) repeated measures ANOVAs revealed a sex by role interaction ($p < .001$), such that males ate more than females and spouses ate more than patients, but the sex difference was small among patients and large among spouses. That is, male spouses ate the most overall, suggesting more dietary accommodation by female than male spouses. Race effects revealed that black participants ate a higher protein percent ($p \leq 0.001$), and white participants ate a higher fat and saturated fat percent ($p \leq 0.01$ and $p \leq 0.05$ respectively). Race by sex by role interactions appeared for carbohydrates and sugar, such that partners ate more carbohydrates ($p = 0.054$) and sugar ($p \leq 0.05$) than patients as expected, except when the patient was a black female. Black females ate the same amount of carbohydrates and sugars as all of the spouses. The implications of race and sex for dietary adherence and intervention will be discussed.

CORRESPONDING AUTHOR: Aarohee P. Fulay, Cornell University, Ithaca, NY, 14850; apf52@cornell.edu

10:15 AM-11:15 AM D035

TRANSPORTATION BARRIERS IN HEALTHCARE UTILIZATION AMONG URBAN MINORITIES WITH UNCONTROLLED DIABETES

Lisa Sharp, PhD[1], Samina Syed, MD, MPH[2], Shikhi Bhansari, Student[2], Ben Gerber, MD[1]

[1]University of Illinois at Chicago (UIC), Chicago, IL; [2]UIC, Chicago, IL

Transportation problems are frequently described as barriers to healthcare utilization. Among urban minority populations with diabetes, transportation barriers may contribute to delayed or missed clinical appointments and difficulty in obtaining medication refills, resulting in poorer health outcomes.One hundred seventy-nine African-Americans and 65 Latinos with uncontrolled diabetes completed a standardized survey to investigate these transportation barriers in an urban patient population. Of this group, mean age was 54 years, 67% were female, 68% reported annual income < $20,000/year, and 77% had Medicaid or Medicare insurance. Transportation to a primary care physician involved public transportation (33%), driving oneself (27%), someone else driving (21%), or para-transit services (14%). Twenty-five percent reported "some" or "a lot of" trouble getting transportation to the doctor. Thirty-three percent experienced being more than 20 minutes late, 32% missed an appointment, and 26% reported delay in scheduling an appointment due to transportation trouble. Additionally, delays in public transportation and para-transit were frequently cited as reasons for late or missed appointments. Finally, 16% indicated that they ran out of medications due to transportation barriers preventing access to a pharmacy.Transportation problems contribute to delays and missed physician appointments in one-third of this sample of low-income, minority patients with uncontrolled diabetes. These problems likely negatively impact ongoing diabetes care through irregular physician monitoring of their health and potential lack of medication refilling. Overall, the ultimate influence of transportation barriers on outcomes in the context of diabetes self-management remains poorly understood.

CORRESPONDING AUTHOR: Lisa Sharp, PhD, University of Illinois at Chicago (UIC), Chicago, IL, 60608; sharpl@uic.edu

10:15 AM-11:15 AM D036

USABILITY EVALUATION OF DIABETES MAP: AN INTERNET-BASED MEDICATION ADHERENCE PROMOTION INTERVENTION

Magaela C. Bethune, MA, MPA, Chandra Y. Osborn, PhD, MPH, Lyndsay A. Nelson, PhD, Andrea Lagotte

Vanderbilt University, Nashville, TN

Web-delivered interventions are a feasible and effective approach for promoting health behaviors. Web usability evaluation identifies user barriers to having effective, efficient, and satisfactory interactions with a website. We developed a web-delivered intervention called Diabetes Medication Adherence Promotion (Diabetes MAP) and evaluated its usability among a sample of adults with type 2 diabetes (T2DM). We recruited English-speaking adults with T2DM (N=32) from clinics at an academic medical center who were prescribed diabetes medications. At enrollment, participants completed a survey to collect demographic information. We reviewed medical records to collect medication regimen information and most recent hemoglobin A1c (A1C). Participants received instructions on accessing Diabetes MAP, and were asked to use the website independently for two weeks. After using the website, participants (n=29) provided feedback through a web usability survey and/or a focus group. Survey data were analyzed descriptively. Focus group data were coded and analyzed thematically. Participants were on average 51.7±11.8 years old; 66% were female; 60% were non-Hispanic White; 78% were privately insured; 31% had < 12 years of education; and half had household incomes >$50,000. Average diabetes duration was 7.8±6.4 years; average A1C was 7.4±2.0; and 38% were prescribed insulin. Among follow-up survey respondents, 75% agreed Diabetes MAP was easy to learn and 89% agreed its information was clear and easy to understand. However, 28% of participants reported encountering navigational challenges and 32% found it difficult to recover from errors. In focus groups, error-related concerns comprised the most prevalent usability dimension. Additionally, participants expressed concerns across the usability dimensions regarding the complexity of the website's layout and design. Based on the critical usability issues uncovered, detailed recommendations were made for improving the website. Participants suggested improving the website's user interface to facilitate quick, efficient access to and completion of website-related tasks. Usability issues, such as difficulty navigating, understanding, and completing tasks were barriers to using and benefiting from Diabetes MAP. Appropriate usability evaluation ensures web-delivered interventions work as intended and subsequent effects on health behaviors and outcomes are not diminished by usability errors.

CORRESPONDING AUTHOR: Magaela C. Bethune, MA, MPA, Vanderbilt University, Nashville, TN, 37217; magaela.c.bethune@vanderbilt.edu

10:15 AM-11:15 AM D037

USING COMMUNITY HEALTH WORKERS FOR PROMOTING BEHAVIOR CHANGE IN CHRONIC DISEASE

M. Christina R. Esperat, RN, PhD, FAAN[1], Linda McMurry, DNP, RN, NEA-BC[2], Huaxin Song, PhD[2], Du Feng, PhD[3]

[1]Texas Tech University HEalth Sciences Center, Lubbock, TX; [2]Texas Tech University Health Sciences Center, Lubbock, TX; [3]University of Nevada, Las Vegas, Las Vegas, NV

Purpose: To validate the effectiveness of promoting Chronic Disease Self-Management (CDSM) among underserved populations using Community Health Workers (CHWs) in a replication of the original demonstration program. The Transformation for Health (THF) conceptual framework was used to guide this study, allowing integration of existing theories and constructs in explaining transformational behavior.Method: Implemented at a nurse-managed primary clinic in East Lubbock, Texas, a total of 147 patients with diabetes, hypertension, asthma, COPD, and co-morbidities of obesity and/or depression were enrolled in the study. Among the participants, 87% had annual household incomes below $20K; 27% of the participants were African American and 52% were Hispanic. Participants were visited by certified bilingual (English/Spanish) CHWs for maximum two years. Clinical measurements such as HgA1c, blood pressure, and lipid profiles were monitored clinical improvements. The Patient Health Questionnaire, SF-12, Self Efficacy for Diabetes Management Survey (SED), Self Efficacy for Managing Chronic Disease (SEMCD) instrument, Summary of Diabetes Self Care Activities (SDSCA) Questionnaire and Social Provisions Scale (SPS) were used to monitor behavioral changes. Growth curve analysis, paired t-test and mixed model are used to determine the effectiveness of the program.Results: The growth curve analysis shows that 70 patients with diabetes had significantly decreased their HgA1C level (p=.0096) during the navigation period (9.7 ±5.3months). Paired t-tests show that most of the behavioral outcomes were significantly improved through program. The Mental Health Composite Scale score of SF-12 was improved in an average of 6.21 [2.22, 10.19] (p=0.0029). The SED and SEMD Scores were both improved significantly, 1.38 [0.72, 2.04] (p=0.0002) and 0.68 [0.06, 1.30] (p=0.0334), respectively. Three out of five subscales of SDSCA, general diet, blood sugar test and foot check, were also improved significantly, 0.86 [0.22, 1.50] (p=0.0103), 1.49 [0.45, 2.53](p=0.0064), and 0.69 [0.07, 1.31] (p=0.0298), respectively.Conclusion: The CHW, using THF framework in delivering services, effectively promoted CDSM among vulnerable populations in West Texas.

CORRESPONDING AUTHOR: M. Christina R. Esperat, RN, PhD, FAAN, Texas Tech University HEalth Sciences Center, Lubbock, TX, 79430-6264; christina.esperat@ttuhsc.edu

10:15 AM-11:15 AM D038

STRESS-RELATED GROWTH AND COPING AS PREDICTORS OF DEPRESSION IN SOUTH ASIANS WITH HIV/AIDS

Zunaira Jilani[1], Edward Chang, PhD[2], Tina Yu[2], Erin E. Fowler[2], Jiachen Lin[2], Shanmukh Vasant. Kamble, PhD[3], Jameson K. Hirsch, PhD[4]

[1]University of Michigan, Ypsilanti, MI; [2]University of Michigan, Ann Arbor, MI; [3]Karnatak University Dharwad. India, Dharwad, India; [4]East Tennessee State University, Johnson City, TN

Stress-related growth and coping as predictors of depression in South Asians with HIV/AIDS Currently, there are over 33 million people who have been diagnosed with human immunodeficiency virus (HIV) and acquired immune deficiency (AIDS). With more than 39 million mortalities since the first reported cases, the World Health Organization has identified HIV/AIDS as one of the leading causes of death globally. Due to the high rates of sex trafficking, lack of education and limited access to health care, HIV/AIDS has become a crucial issue in India, negatively impacting the households and communities of those infected. While there has been research on psychological adjustment in those diagnosed with HIV/AIDS in populations from the U.S., Africa (viz., Ghana, Tanzania, Kenya, Nigeria, & South Africa) and Southeast Asia (viz., Thailand & China), it is unknown if such results can be applied to other populations, namely, South Asians, due to differences in culture, societal norms, and mentality. This prospective study was conducted to examine stress-related growth and coping dimensions as predictors of depressive symptoms in a South Asian sample of 152 adults diagnosed with the human HIV/AIDS. Survey items were translated and collected in India, with over a third of the participants being illiterate labor workers. The survey consisted of various medical related questions (e.g., CD4 count, ART, treatment adherence), stress-related growth, and dimensions of coping (viz., self-distraction, active coping, denial, substance use, emotional support, behavioral disengagement, venting, positive reframing, humor, acceptance, religious coping, & self-blame). To date, no study has examined such variables in this particular population. Results from conducting a hierarchical regression analyses indicated that stress-related growth and self-distraction, along with income and physical health, were found to be significantly and negatively correlated with depressive symptoms, while denial and emotional support were found to be significantly and positively correlated with depressive symptoms. Overall, our findings offer support for the contention that stress-related growth and coping may play an important role in psychological adjustment in HIV/AIDS diagnosed adults, which may be useful in developing interventions in the future to combat depression tailored to South Asian patients.

CORRESPONDING AUTHOR: Zunaira Jilani, University of Michigan, Ypsilanti, MI, 48198; jilanzun@umich.edu

10:15 AM-11:15 AM D039

THE ROLE OF ACCEPTANCE AND MINDFULNESS IN PEOPLE LIVING WITH HIV/AIDS: A META-ANALYSIS

Tatiana Rodriguez, M.A., William H. O'Brien, PhD, Alaina Smith, B.S., Brent A. Lang, B.A.

Bowling Green State University, Bowling Green, OH

More than 1 million people in the United States live with an HIV diagnosis. HIV/AIDS is a chronic condition that has negative health outcomes and that can affect an individual's physical and emotional life. Acceptance and mindfulness are coping strategies that have been associated with better health outcomes in different medical populations, including people living with HIV/AIDS. This is the first meta-analytic review to explore the relationships among acceptance, mindfulness, and health outcomes in people living with HIV/AIDS. Two sets of studies were conducted. One evaluated treatment outcome studies and the other evaluated correlational studies. Results indicate that pre to post treatment effect sizes for mindfulness and acceptance interventions are moderate and reliable for self-report measures of distress, quality of life, and stable HIV biomarkers (cumulative $d = 0.38$, 95% CI = 0.29 – 0.49). These results remained constant at a six-month follow-up (cumulative $d = .40$, 95% CI = 0.28 – 0.51). The overall effect size for treatment vs. control was small but unreliable. However, the effect size for self report measures was small and reliable at post-treatment comparison ($d = 0.14$, 95% CI = 0.08 – 0.20). For correlational studies, mindfulness and acceptance predicted lower self-reported distress, improved quality of life, and healthier HIV biomarkers ($Zr = 0.38$, 95% CI = 0.34 – 0.41). This pattern of results suggests that acceptance and mindfulness are coping skills that could improve health outcomes and quality of life among people living with HIV/AIDS.

CORRESPONDING AUTHOR: Tatiana Rodriguez, M.A., Bowling Green State University, Bowling Green, OH, 43403; trodrig@bgsu.edu

10:15 AM-11:15 AM D040

UNDERSTANDING FACTORS INFLUENCING ILLICIT DRUG USE AMONG UNDESERVED HIV+ ADULTS 50 AND OLDER

Nicole Ennis Whitehead, PhD, Lauren Hearn, MS, Larry Burrell, MA, Vaughn Bryant, MA

University of Florida, Gainesville, FL

Background: Combination antiretroviral therapy (cART) has transformed HIV into a manageable chronic condition, leading to a large population aging with the disease. However, substance misuse in this population continues and many effective interventions do not translate into meaningful outcomes that improve patient care. Extant literature indicates that 20-50% of those aging with HIV misuse alcohol, illicit drugs, or prescription medications. Substance use has been linked to poorer medication adherence, greater co-morbidities and poorer quality of life (QOL). The purpose of this study was to examine the role of stress on mental and behavioral health outcomes for HIV+ adults 50 and older.Methods: Ninety-two HIV+ participants 50+ who self-identified as Black were recruited from the UF CARES clinic in Jacksonville, Florida from October 2012-January 2014. Qualitative and quantitative (Life Burdens Scale) measures of stress were given; in addition, quantitative assessments of depression (BDI), anger (STAXI) and loneliness (UCLA) were also administered.Results: Of those reporting significant life stressors (n=77), 78% reported non-HIV related stressors such as financial difficulties and problems in social relationships. Quantitative analyses revealed that greater life stressors significantly predicted greater depressive symptoms β= .36, $t(82) = 3.43$, p = .001; greater loneliness β=.43, $t(81) = 4.17$, $p = .000$; and greater suppressed anger β= .32, $t(84) = 3.11$, $p = .003$. Those endorsing greater life stressors were also 5 times more likely to report smoking marijuana (*AOR* = 5.137, 95% CI = 1.58-16.62, p=.006) and crack (*AOR* = 5.00, 95% CI = 1.16-21.55, p=.031) in the past 6 months. Conclusion: Our findings indicate that for African Americans aging with HIV, life stressors may have the most adverse consequences on mental and behavioral health outcomes. Improving the reach of interventions that address life stressors are needed for this population.

CORRESPONDING AUTHOR: Nicole Ennis Whitehead, PhD, University of Florida, Gainesville, FL, 32611; nwhitehead@phhp.ufl.edu

10:15 AM-11:15 AM D041

PSYCHIATRIC COMORBIDITIES IN PATIENTS OF DELIBERATE SELF HARM IN A TERTIARY CARE CENTER IN NEPAL

Subash Ghimire, MBBS[1], Rasmita Budhathoki, MBBS[2], Sagar Devkota, MBBS[3], Akhilesh Thakur, MBBS[2], Nidesh Sapkota, AssociateProfessor[4]

[1]B P Koirala Institute of Health Sciences, Dharan, Nepal, Bharatpur, Nepal; [2]b p koirala institute of health sciences, Kathmandu, Nepal; [3]b and b hospital, Kathmandu, Nepal; [4]b p koirala institute of health sciences, nepal, Dharan, Nepal

Introduction: Deliberate self-harm (DSH) is one of the common psychiatric emergencies in medical practice. DSH carries a greater threat of risk of suicide in future. According to WHO, more than 800,000 people die from suicide every year. However, very few studies have been conducted on this important health issue in Nepal. We conducted a hospital based study to evaluate the cause, mode and psychiatric comorbidities present in patients of DSH presenting to the Emergency Department.Methods: This cross sectional study was performed on 200 cases of deliberate self-harm in a tertiary referral centre in Eastern Nepal, from April 2012 to July. Various sociodemographic parameters and psychiatric comorbidities prevalent in them were studied.Results: Of the total 200 patients, 77% were below the age of 35, with mean age 27±10.76 years. The female-to-male ratio was 1.35:1. Seventy Six Percent of the patients had received formal education. Majority, 73.5%, were married. By occupation, 38% were housewives and 25.5% were students. Most of them consumed Organophosphorous and organochlorine compounds, 72.5%, followed by Zinc phosphide, 9.5% and Paracetamol, 5%. Interpersonal conflicts, 72%, marital conflicts, 14.5%, psychiatric disorder, 5%, and failure in relationship, 3.5% were found to be the major causes of DSH. Psychiatric disorders according to ICD-10 criteria were found in 37% of cases and premorbid personality problems were found in 20% of cases. The most prevalent psychiatric disorder was adjustment disorder (13.5%) followed by mood disorder (11%) and Substance related disorders (7%).Conclusion: Majority of DSH patients were of younger generation. Psychiatric disorders and comorbid personality problems were commonly seen in DSH patients, of which adjustment disorder appeared to be the commonest. This has significance for proper evaluation and management as identifying the problems early help us avoid repeated cases of DSH as well as suicide in the future. Keywords: Deliberate self-harm; Emergency Psychiatry; Para suicide; Psychiatric co-morbidities

CORRESPONDING AUTHOR: subash Ghimire, MBBS, B P Koirala Institute of Health Sciences, Dharan, Nepal, Bharatpur, 00977; subash846492@gmail.com

10:15 AM-11:15 AM D042

PSYCHOLOGICAL WELL-BEING AND SUBJECTIVE MEMORY IMPAIRMENT IN BREAST CANCER SURVIVORS

Krystle E. Zuniga, PhD, RD[1], Michael J. Mackenzie, PhD[2], Elizabeth A. Awick, MS[3], Sarah A. Roberts, B.S.[3], Edward McAuley, PhD[3]

[1]Texas State University, San Marcos, TX; [2]University of Delaware, Newark, DE; [3]University of Illinois Urbana Champaign, Urbana, IL

Evidence suggests a high prevalence of subjective memory impairment (SMI) in breast cancer survivors (BCS). However, it remains unclear whether BCS suffer from SMI at a greater proportion than individuals without a cancer history and whether fatigue or psychological distress contribute to SMI in BCS. The purpose of this study was to determine whether BCS evidenced greater SMI and poorer psychological well-being compared to age-matched women with no prior history of cancer, and whether psychological health moderated differences in SMI. In this cross-sectional study, sixty-two women (30 control; 32 breast cancer) completed self-reported questionnaires assessing SMI, anxiety, depression and fatigue. Multilevel regression analyses assessed the moderating role of anxiety, depression and fatigue on SMI. BCS had significantly greater SMI ($p < 0.001$), anxiety (p=0.044), and number of days fatigued (p=0.014) than noncancer controls. Individuals with greater fatigue interference had significantly higher SMI (p=.007), regardless of disease status. Significant group by anxiety and group by depression interactions suggested that noncancer controls with higher anxiety (p=.0145) or higher depression (p=0.0009) had greater SMI. Anxiety and depression were not significantly related to SMI in BCS ($p>0.05$). Higher SMI, anxiety and days fatigued in the last week suggest BCS suffer from poorer well-being than age-matched healthy controls. Fatigue, but not anxiety or depression, was associated with SMI in BCS; thus, fatigue in BCS may be an indicator of underlying physiological changes that are adversely affecting cognitive function and resulting in greater SMI. Future research should identify psychosocial interventions that can provide effective emotional support and reduce memory complaints.

CORRESPONDING AUTHOR: Krystle E. Zuniga, PhD, RD, Texas State University, San Marcos, TX, 78666; k_z17@txstate.edu

10:15 AM-11:15 AM D043

RELATIONS AMONG PSYCHIATRIC SYMPTOMS, OUT OF SCHOOL ACTIVITY PARTICIPATION AND PHYSICAL ACTIVITY

Carl Sorensen, M.A., Allison Randel

University of South Carolina, Columbia, SC

Levels of physical activity (PA) among youth with developmental disabilities (DD) fall below normative levels and national recommendations, and rates of obesity among youth with DD exceed normative levels. Along with the health benefits of PA (reduced risk of obesity, related disease), additional benefits include reduced symptoms (sx) and improved adaptive functioning. DD-related sx may present barriers to engagement in out of school activities (OSA) and studies show lower OSA participation for DD youth. This study explores relations among DD-related sx, PA, and OSA by examining participation in athletic and non-athletic OSA as mediators of the relation between sx and PA.Data from 21,408 families of the Early Childhood Longitudinal Study (ELCS) were drawn from Waves 5 (grade 3; age: M=5.3, SD=.46), 6 (grade 5), and 7 (grade 8). The Self-Description Questionnaire subscales (0=not true, 1=sometimes, 2=almost always true) measured social functioning (SF), internalizing (INT) and externalizing (EXT) sx. Communication functioning (COM) was computed from teacher ratings of language skills (1=far below average-5=far above average), speech and articulation (1=not yet-5=proficient), and grammar use (1=poor-5=outstanding). PA was measured by parent report of frequency per week (1-7) of 20+ min vigorous PA. Athletic and non-athletic OSA was computed from presence (1=yes, 0=no), level (0=none, 1=participated, 2=officer) and frequency of participation (1=rarely, 2=< 1x/week, 3=1-2x/week, 4=almost every day).Wave 5 sx predicted wave 7 PA (INT= -.192, EXT= -.097, SF= .297, COM= .058) and grade 5 PA (EXT= -.123, SF= .118).For lag 1, there was a mediated effect of INT (ab=-.011) and SF (ab=.013) through athletics and of COM (ab=-.005) through non-athletic OSA. For lag 2 there was a mediated effect of SF through athletic (ab=.125) and non-athletic (ab=.006) OSA and of INT (ab=.006) and COM (ab=.011) through non-athletic OSA. There was a significant total mediated effect of SF (ab=.133) and COM (ab=.031) from wave 5 sx to wave 7 PA through OSA.Findings suggest incorporation of social skills training and communication supports into OSA targeting youth with DD.

CORRESPONDING AUTHOR: Carl Sorensen, M.A., University of South Carolina, Columbia, SC, 29208; sorensec@email.sc.edu

10:15 AM-11:15 AM D044

SEASONAL AFFECTIVE DISORDER ASSOCIATED WITH TANNING ADDICTION AMONG HEAVY TANNERS

Jessica Oleski, MA[1], Grace A. Amponsah, BSc[2], Gin-Fei Olendzki, MS, MBA[3], Jonathan M. Scully, B.A.[4], Martinus M. Evans, MS[5], Sherry L. Pagoto, PhD[1]

[1]University of Massachusetts Medical School, Worcester, MA; [2]University of Massachusetts Medical School, Westerville, OH; [3]Umass Medical School, Worcester, MA; [4]UMass Medical School Division of Preventative and Behavioral Medicine, Worcester, MA; [5]University of Massachusetts Medical School, Sturbridge, MA

Seasonal affective disorder (SAD) affects approximately 5% of the general population. SAD is a type of depression that is related to the changes of seasons, beginning usually in the fall or winter. One study found greater indoor tanning predicted symptoms of SAD in college women. Given that excessive tanning has been associated with higher risk of tanning addiction, we wondered if SAD symptoms might be associated with tanning addiction in frequent tanners. This study examines the relationship between SAD, tanning addiction, and indoor tanning frequency in a sample of frequent indoor tanners. Female participants (n=74, ages 19-63, mean age = 35, sd =12.6) were recruited as part of randomized trial targeting indoor tanning. Baseline measures include indoor/outdoor tanning frequency, Seasonal Pattern Affective Questionnaire (SPAQ), and Indoor Tanning Affect and Pathology Scale (TAPS, a tanning addiction scale). More than half of the participants (57%) exceeded the cutoff for SAD on the SPAQ, a rate far higher than the general population (5%). Using simple linear regression, higher SPAQ scores were associated with higher scores for tanning addiction ($p < 0.001$). Indoor tanning, outdoor tanning and sun protection behavior were not related to SPAQ scores. Findings suggest that SAD is associated with greater risk for tanning addiction among frequent tanners. Given the high rate of SAD among heavy tanners and its association with tanning addiction, dermatologists may have an important role in screening for SAD. Further research is needed to understand the connection between SAD and indoor tanning.

CORRESPONDING AUTHOR: Jessica Oleski, MA, University of Massachusetts Medical School, Worcester, MA, 01655; jessica.oleski@umassmed.edu

10:15 AM-11:15 AM D045

SHALL WE MEET UP? MODE AND FREQUENCY OF SOCIAL CONTACT AS A PREDICTOR FOR DEPRESSION IN THE ELDERLY

Alan R. Teo, MD, MS

Portland VA Medical Center, Portland, OR

Objectives: To determine associations between use of three different modes of social contact (in-person, telephone, and written/email) and risk of depressive symptoms in a nationally representative, longitudinal sample of older adults.Methods: We examined 11,065 adults aged 50 years or older who participated in the Health and Retirement Survey (HRS) between 2004 and 2010. Frequency of participants' use of the three modes of social contact with children, other family members, and friends at baseline were used to predict depressive symptoms (measured by the eight-item Centers for Epidemiological Studies Depression Scale) two years later using multivariable logistic regression models.Results: Participants who had in-person social contact on average every few months or less had a significantly higher probability of clinically significant depressive symptoms two years later (14.9%), compared to those having in-person contact three or more times a week (10.0%; p=.033) or once or twice a week (10.8%; p=.034). When examining with whom social contact occurred, the frequency of in-person contact with children and other family members were not significantly associated with depression after controlling for sociodemographic, clinical, and social support characteristics. However, more frequent in-person contact with friends was associated with lower risk of subsequent depressive symptoms (OR=0.75, p=0.031 for once or twice a month; OR=0.57, $p < 0.001$ for once or twice a week; and OR=0.59, p=0.004 for three times a week or more, compared to contact every few months or less). Conclusions: Frequency of in-person social contact, especially with friends, predicts risk for subsequent depression among older adults.

CORRESPONDING AUTHOR: Alan R. Teo, MD, MS, Portland VA Medical Center, Portland, OR, 97239; teoa@ohsu.edu

10:15 AM-11:15 AM D046

SMARTPHONE APPLICATIONS FOR MENTAL HEALTH: A CONTENT ANALYSIS OF APP STORE DESCRIPTIONS

Ana Radovic, MD, MSc[1], Pamela Vona, MA[2], Antonella Santostefano, BA[3], Samantha Ciaravino, BS[1], Angela Hicks, BA[1], Elizabeth Miller, MD, PhD[1], Bradley Stein, MD, PhD[4]

[1]Children's Hospital of Pittsburgh of UPMC, University of Pittsburgh Medical School, Pittsburgh, PA; [2]University of Southern California, Los Angeles, CA; [3]UCLA Health Services and Society, Los Angeles, CA; [4]RAND Corporation, Pittsburgh, PA

Introduction: Smartphone applications may offer a helpful medium to introduce patients with mental health problems to treatment options. Our aim was to describe apps potential users have available in this consideration stage based on the mental health application advertisement or description (Chiu 2010).

Methods: Apps were searched in the Apple iTunes Store using a key term restricted to English Language: (i.e. mental health, depression, anxiety, schizophrenia, bipolar, trauma, trauma in schools, PTSD, child trauma, and bullying). The first twenty apps appearing in the search were recorded. A first pass codebook was developed based on app descriptions to categorize apps based on function and marketing. Two coders (AR and SC) separately used the initial codebook for the first 6 apps. They then revised the codebook based on new codes, with EM settling any disputes. Further coding was completed by AR, SC, and AH with no new codes emerging after the 35th app.

Results: A total of 161 apps were retrieved; 11 were repeats. Of these, 29 were not relevant and 25 clinician targeted, leaving a total of 96/150 (64%) apps targeted toward patients with mental health problems.

Most apps had no mention of protecting privacy or security (90). Descriptors used to promote the app were that it would be educational (39), improve health (26), improve life skills (26), increase insight (23), be easy to use (23) and be effective (20). The most common marketed purpose of the app was for symptom relief (51). Several apps were marketed for self-screening (34), but only 11 included validated diagnostic screens. Stress was the most commonly mentioned symptom (32). Most apps shared self-help strategies (59) while few shared research evidence (24).

Conclusion: Patients who search for mental health applications under the Apple store may have trouble retrieving apps directed toward mental health treatment options. The apps most immediately displayed are for immediately relieving symptoms and of those targeted toward self-diagnosis, few use a validated screening tool. Alarmingly, most have no mention of protecting the patient's privacy. Mental health applications which are immediately displayed by a smartphone application search engine may benefit from patient and clinician ratings to direct patients toward useful resources.

CORRESPONDING AUTHOR: Ana Radovic, MD, MSc, Children's Hospital of Pittsburgh of UPMC, University of Pittsburgh Medical School, Pittsburgh, PA, 15143; ana.radovic@chp.edu

10:15 AM-11:15 AM D047

THE EFFECTS OF A FOSTER PARENT INTERVENTION ON FOSTER CHILDREN'S HEALTH, GENDER AS A MODERATOR

Kristin Perry[1], Joe Price, PhD[2]

[1]San Diego State University, Lakeside, CA; [2]San Diego State University, San Diego, CA

Children who have been maltreated are more likely to experience internalizing problems, including internalizing problems associated with physical health symptoms such as somatic complaints (e.g. nausea, headache, etc.) (McCauley et al., 1997; Rajindrajith et al., 2014). This study examined the effects of KEEP, a foster parent intervention program on the somatic complaints of 354 foster children from San Diego County at baseline, prior to the intervention (T1), and at four months after the intervention (T2). Somatic complaints were measured using the average unstandardized raw score from the somatic complaints scale of the CBCL (Achenbach, 1991), so scores are out of two points. Covariates were determined by looking at the demographic variables and interview language was the only significant covariate (*F* (1, 319)= 4.3, p= 0.04). English speaking parents had foster children with significantly higher average somatic complaints scores compared to Spanish speaking parents. A repeated measures ANCOVA was used to analyze the effects of condition over time, which was significant (*F* (1, 256)= 3.955, p= 0.048, R^2 = 0.015). When controlling for interview language and on average, across gender, from T1 to T2 children whose parents were in the intervention condition experienced a decrease in their average somatic complaint score (0.05 points out of 2 points), whereas children whose parents were in the control condition experienced an increase in average somatic complaint scores (0.01 points out of 2 points). Gender was marginally significant in moderating the condition over time relationship (*F*(1,254)= 3.40, p= 0.066), such that from T1 to T2, children had a greater reduction in average somatic complaint score if they were in the intervention than the control condition and this difference in reduction was greater for females (a difference of 0.113 points) compared to males (a difference of 0.005 points). These results provide preliminary evidence that, the KEEP foster parent intervention was effective in lowering one aspect of internalizing behavior problems, namely somatic complaints, of children in foster care and suggests that this may be especially true for females. The final presentation will report the effects of condition over time on the standardized scores of the other internalizing subscales of the CBCL as well.

CORRESPONDING AUTHOR: Kristin Perry, San Diego State University, Lakeside, CA, 92040; kperry@mail.sdsu.edu

10:15 AM-11:15 AM D048

THE IMPACT OF CO-MORBIDITY ON HRQOL IN RHEUMATOID ARTHRITIS AND OSTEOARTHRITIS PATIENTS

Lorie L. Geryk, PhD, MPH[1], Delesha M. Carpenter, PhD, MSPH[2], Susan J. Blalock, PhD, MPH[1], Robert F. Devellis, PhD[3]

[1]UNC Eshelman School of Pharmacy, Chapel Hill, NC; [2]UNC Eshelman School of Pharmacy, Ashville, NC; [3]University of North Carolina at Chapel Hill, Chapel Hill, NC

Objective. To address the lack of existing data considering differences between rheumatoid (RA) and osteoarthritis (OA), we investigated whether RA and OA patients with more comorbidities reported worse health-related quality of life (HRQOL).Methods. Adult patients with self-reported doctor-diagnosed RA (n = 159) or OA (n = 149) were recruited from multiple sources and completed an online cross-sectional survey. Patients self-reported sociodemographic variables, arthritis severity and comorbid conditions. HRQOL was assessed using the SF-12v2 and comorbidity counts were assigned using an expanded Functional Comorbidities Index. HRQOL (8 domain and 2 composite (physical and mental health) scores) was compared with norm-based general US population scores and between RA and OA patients to determine if they significantly differed from one another. Linear regression was used to test whether comorbidity count was associated with the physical and mental health of RA and OA patients.Results. OA and RA patients experienced significantly worse HRQOL across all dimensions compared with that of the general U.S. population. There were no significant differences between RA and OA patients on any HRQOL dimension. A higher comorbidity count was associated with worse physical (*P* = .0007) and mental (*P* = .0295) health scores when controlling for patient gender, age, education, and arthritis severity.Conclusion. Arthritis negatively impacted patients' HRQOL. OA patients in our sample perceived their condition as similarly disabling in terms of physical and mental health as RA patients. Arthritis patients with more chronic comorbid conditions may be at particular risk for poor physical and mental health. Providers should discuss management of comorbid conditions with arthritis patients.

CORRESPONDING AUTHOR: Lorie L. Geryk, PhD, MPH, UNC Eshelman School of Pharmacy, Chapel Hill, NC, 27599; llgeryk@email.unc.edu

10:15 AM-11:15 AM D049

THE IMPACT OF PERCEIVED PUBERTAL TIMING ON PSYCHOLOGICAL DISTRESS ACROSS ADOLESCENCE

Jessica D. Cance, MPH, PhD[1], C. Emily Hendrick, MPH[1], Susan Ennett, MSPH, PhD[2]

[1]The University of Texas at Austin, Austin, TX; [2]University of North Carolina at Chapel Hill, Chapel Hill, NC

Adolescents who develop earlier or later than their peers have been shown to have higher rates of psychological distress than their on-time peers, but many studies have been based on one or two time points. The purpose of this study is to determine the longitudinal impact of perceived pubertal timing on adolescent psychological distress.

Results are from a school-based study of three cohorts of adolescents (N=6,417; 50% male, 53% White) enrolled in grades 6-8 at Wave 1. Data collection occurred every semester for a total of five waves. The sample was reconfigured to use age as the unit of time (ages 11 to 17).

Outcomes were past three month *anxiety* (7 items, range 1-5, alpha=.84) and *depressive symptoms* (3 items, range 1-5, alpha=.85). *Pubertal timing* was assessed with a revised version of the Pubertal Development Scale (PDS). Latent class analysis was used to determine the longitudinal pattern of pubertal timing. A three-class solution was the best fit, interpreted as "always on-time," "always early," and "always late."Two sets of analyses were conducted using MPlus 7.1, one for each psychological distress outcome. A linear model fit the data best for both anxiety and depressive symptoms. Early developing adolescents had higher baseline levels of anxiety compared with their on-time (p=.007) and late developing peers (p < .001) and on-time adolescents had higher baseline levels of anxiety compared with late developers (p < .001). Early and on-time adolescents had similar baseline levels of depressive symptoms and late developing adolescents had lower baseline levels of depressive symptoms compared with their on-time peers (p=.023). There were no slope differences for either measure of psychological distress. Gender differences were found for both anxiety and depressive symptoms and will be discussed.This study used an innovative modeling technique to examine the longitudinal relationship between pubertal timing and psychological distress. Early developing adolescents were at higher risk for anxiety symptoms and late developing adolescents had the lowest risk of psychological distress. These differences were evident by age 11 and persisted throughout adolescence.

CORRESPONDING AUTHOR: Jessica D. Cance, MPH, PhD, The University of Texas at Austin, Austin, TX, 78712; jdcance@austin.utexas.edu

10:15 AM-11:15 AM D050

THE ROLE OF STRESS AND INFLAMMATION IN DEPRESSION IN HISPANICS WITH CHRONIC HEART FAILURE

Samira Moughrabi, PhD

CALIFORNIA STATE UNIVERSITY-NORTHRIDGE, Granada Hills, CA

Introduction: Depression is a common comorbidity in heart failure (HF) and is commonly associated with increased inflammation leading to poor outcomes. Low socioeconomic status (SES) and stress are common in Hispanics but have not adequately been described in those with HF. The purpose of this exploratory study was to examine depression and its relationship with socioeconomic status, stress, and inflammation in Hispanics with HF.

Methods: 55 patients (71.62+/-11.33; 74.5% male; 31% Hispanic) with HF were assessed for their perceived stress (PS) using PSS, CRP serum levels, and education level and yearly income as indices of SES. Descriptive data and t-test and chi-square were used to compare Hispanics and non-Hispanic Whites (NHW) on sociodemographic and clinical characteristics and linear multiple regression to assess the relationship between depression, ethnicity, PS, CRP, and SES.

Results: Hispanics were younger and had lower education and income levels than NHW. No significant difference was found between both groups in depression and stress scores, and CRP levels. Independent of age, gender, NYHA class, BMI, education levels, and perceived stress (B=0.39, p=0.009) and marital status (B=0.37, p=0.049) predicted depression scores. When yearly income replaced education level in the multiple regression model, only PS (B=0.43, p=0.003) predicted depression. Hispanic ethnicity and CRP did not contribute to the variation of depression in both models.

Conclusion: This study shows the importance of stress in depression. Sources of stress in HF should be further explored to develop interventions that effectively reduce stress regardless of patient's ethnicity.

CORRESPONDING AUTHOR: Samira Moughrabi, PhD, CALIFORNIA STATE UNIVERSITY-NORTHRIDGE, Granada Hills, CA, 91344; smoghra@gmail.com

10:15 AM-11:15 AM D051

THE TECHNIQUES FOR OVERCOMING DEPRESSION SCALE: MOKKEN ANALYSIS AND CONCURRENT VALIDITY

Kenneth E. Freedland, PhD[1], Mariantonia Lemos, M.A.[2], Frank Doyle, PhD[3], Brian C. Steinmeyer, M.S.[1], Iris Csik, L.C.S.W.[1], Robert M. Carney, PhD[1]

[1]Washington University School of Medicine, St Louis, MO; [2]Universidad de los Andes, Bogotá, Colombia; [3]Royal College of Surgeons in Ireland, Dublin, Ireland

Background. The Techniques for Overcoming Depression (TOD) scale is a new, 16-item questionnaire that assesses the frequency with which patients undergoing cognitive behavior therapy (CBT) for depression use cognitive-behavioral techniques in daily life. This study examines the latent structure of the TOD using a nonparametric item response theory method, and the concurrent validity of the TOD in relation to treatment process and depression measures.Method. The TOD was administered at the initial and final treatment sessions in three trials of CBT for depression in patients with heart disease (combined *n* = 260). The Beck Depression Inventory (BDI) was also administered at these sessions. Mokken scaling was used to determine the dimensionality of the TOD.Results. Psychometric analysis revealed that the TOD is a moderate Mokken scale with a unidimensional structure both at the initial evaluation (H = 0.46) and the end of treatment (H = 0.47). It is sensitive to change and the total score correlates with therapist ratings of the patient's socialization to CBT (r=0.40, p < 0.05), homework adherence (r=0.36, p < 0.05), and use of cognitive-behavioral techniques (r=0.51, p < 0.01). TOD change scores predicted post-treatment BDI scores, after adjusting for the BDI at the initial evaluation (p < 0.05).Conclusions. The TOD is a unidimensional, valid, and clinically informative measure of self-reported use of cognitive-behavioral techniques for overcoming depression.

CORRESPONDING AUTHOR: Kenneth E. Freedland, PhD, Washington University School of Medicine, St Louis, MO, 63108; freedlak@bmc.wustl.edu

10:15 AM-11:15 AM D052

TO TELL OR NOT TO TELL: FACTORS INFLUENCING DEPRESSION SYMPTOM DISCLOSURE AMONG DIVERSE WOMEN

Abiola O. Keller, PA-C, MPH, PhD[1], Rebecca J. Schwei, MPH[2], Elizabeth A. Jacobs, MD, MAPP[3]

[1]Marquette University, Milwaukee, WI; [2]University of Wisconsin School of Medicine & Public Health, Madison, WI; [3]University of Wisconsin School of Medicine and Public Health, Madison, WI

Background: Many women with depression are untreated for their condition. Primary care providers are more likely to initiate depression treatment when patients disclose symptoms or directly request help. Efforts to encourage and facilitate symptom disclosure among women are likely critical for improving treatment outcomes in this population.Purpose: This qualitative study aimed to examine facilitators and barriers to disclosing depression symptoms in the primary care seting among a racially and ethnically diverse group of women.Methods: 24 women with depression were recruited from a mid-size Midwest city for interviews to evaluate decision making about depression care from the patient's point of view. Interviews were recorded, transcribed verbatim, and coded by 2 reviewers for interpretation using NVivo software. Themes were developed using content analysis.Results: 10 white, 9 black, and 5 Hispanic women between age 18-58 were interviewed. Participant's PHQ-8 scores ranged from 3-24 (mean 14.7; scores ≥ 10 identify current depression). A recurring theme was that primary care was not the place to seek care for depression. Other identified barriers and facilitators to disclosure included patient-level factors (trust, beliefs about depression and patient characteristics), provider-level factors (patient and provider relationship, provider behavior during encounter, and provider reaction to disclosure), and system-level factors (continuity of care).Conclusions: Disclosure of depression symptoms is essential for accurate diagnosis and appropriate treatment. While primary care is often seen as the "de facto" mental health system in the US, the study findings suggest that women may not readily identify such clinics as the appropriate place to disclose depression symptoms. This study also identified potentially modifiable factors at the patient, provider, and system level that influence women's willingness to disclose.

CORRESPONDING AUTHOR: Abiola O. Keller, PA-C, MPH, PhD, Marquette University, Milwaukee, WI, 53201-1881; abiola.keller@marquette.edu

10:15 AM-11:15 AM D053

USING GLOBAL MENTAL HEALTH AND TYPE D PERSONALITY TO PREDICT ALCOHOL USE AMONG A COLLEGE SAMPLE

Amir Bhochhibhoya, MS, MBA, Paul Branscum, PhD, RD, Maria Collado, BS

The University of Oklahoma, Norman, OK

Four out of 5 college students drink alcohol and approximately 41.5% engage in problematic alcohol drinking such as binge drinking. Consequences associated with abusing alcohol include an increased risk for interpersonal violence, unintentional pregnancies, and lost productivity. Many factors have been linked to this problem, however previous studies have not explored the relationship between alcohol consumption, mental health and type D personality, which is a joint tendency towards social inhibition (a trait in which individuals have problems connecting and sharing emotions with others) and negative affectivity (a trait for having a negative outlook on life). A convenience sample of 334 students (Male=166, Female=168) from a Southwestern University completed a survey that contained sub-scales for Alcohol consumption, mental health (the Kessler Psychological Distress Scale K6), and Type D personality (Denollett's Scale of Negative Affectivity (NA) and Social Inhibition (SI)). A One-way ANOVA was utilized to compare mean differences among two groups (High, Low) categorized based on risk level for Serious Mental Illness (SMI). Results indicated that participants with high risk for SMI consumed more alcohol (*p=.001*) and engaged in binge drinking more often during the past 30 days (*p=.004)* compared to those at low risk for SMI. Regression models also showed that Type D/NA, Type D/SI, and Mental Health moderately predicted alcohol consumption (adjusted R^2=0.042). Findings from this study provide a basis for future research aimed at determining the casual relationship of the Type D/NA, Type D/SI, and Mental Health with alcohol consumption among college students.

CORRESPONDING AUTHOR: Maria Collado, BS, The University of Oklahoma, Norman, OK, 73019; maria.r.collado-1@ou.edu

10:15 AM-11:15 AM D054

MULTIGROUP CONFIRMATORY FACTOR ANALYSIS OF THE CULTURAL HEALTH ATTRIBUTIONS QUESTIONNAIRE-REVISED

Rina S. Fox, M.S., MPH[1], Sarah D. Mills, M.S.[1], Scott C. Roesch, PhD[2], Georgia Robins Sadler, PhD, M.B.A., B.S.N.[3], Vanessa L. Malcarne, PhD[4]

[1]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center, San Diego, CA; [2]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; San Diego State University, San Diego, CA; [3]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center, La Jolla, CA; [4]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center; San Diego State University, San Diego, CA

The Cultural Health Attributions Questionnaire (CHAQ) was developed to assess health attributions that affect health behaviors among Latinos/Hispanics. The CHAQ – Revised (CHAQ-R) is a 10-item short-form that was derived from the 24-item original measure. Both the CHAQ and CHAQ-R are comprised of two subscales measuring Equity health attributions (e.g., health outcomes caused by punishment from God/others) and Behavioral-Environmental health attributions (e.g., health outcomes caused by diet). The CHAQ-R was derived with a sample of English- and Spanish-speaking Latinos/Hispanics. However, the dimensionality of the measure has never been explored outside of its development sample. Thus, the present study aimed to confirm the structural validity and reliability of the two-factor CHAQ-R across a novel sample of English- and Spanish-speaking Latinos/Hispanics. Latinos/Hispanics with an English ($n = 115$) or Spanish ($n = 140$) language preference completed the CHAQ-R. Multigroup confirmatory factor analysis evaluated the goodness of fit of the two-factor structure across language-preference groups. Both statistical (Satorra-Bentler Chi Squared/SB-χ^2) and practical (Root Mean Square Error of Approximation/RMSEA, Comparative Fit Index/CFI, Standardized Root Mean Square Residual/SRMR) indicators of model fit were considered. Internal consistency reliability of each factor was evaluated using Cronbach's alpha. Results indicated a similar two-factor structure with equivalent response patterns and variances across language-preference groups when the factor loading for one item on the Behavioral/Environmental subscale was unconstrained across groups (SB-$\chi^2 = 142.79$, $p < .01$; RMSEA = .07; CFI = .91; SRMR = .22). Internal consistency was good for both the Equity attributions subscale (αs > .83) and the Behavioral-Environmental subscale (αs > .74) for the full sample, as well as for the English- and Spanish-speaking subsamples. Results indicate that the CHAQ-R can be confidently used to evaluate culturally based health attributions among Latinos/Hispanics with either an English- or a Spanish-language preference. The measure may be a good choice for medical professionals who wish to learn about health attributions among Latinos/Hispanics.

CORRESPONDING AUTHOR: Rina S. Fox, M.S., MPH, SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology; UC San Diego Moores Cancer Center, San Diego, CA, 92120; rsfox@ucsd.edu

10:15 AM-11:15 AM D055

PTSD META-ANALYSIS METHODS COMPARISON: PHARMACOLOGY, COGNITIVE-BEHAVIOR AND NON-TRADITIONAL THERAPY

Haley M. Cook, B.A., Harvey Ginsburg, PhD

Texas State University, San Marcos, TX

The need for research-based PTSD treatment for military veterans is reflected in growing numbers of empirical studies examining treatment outcomes. These can be categorized as pharmacological or behavioral. The latter may be sub-categorized as traditional Cognitive-Behavioral Therapy (CBT), Exposure Therapy (ET), or non-traditional approaches, e.g., exercise, yoga, and meditation/mindfulness. Previous meta-analyses focused exclusively upon outcomes of PTSD treatment for military veterans. Although treatment efficacy is confirmed among all three approaches, the validity of outcomes depends upon fundamentally sound research design and methods. Minimum criteria for sound research methods include having an appropriate relative comparison condition and controlling for pre-existing between-subject differences and/or within subject order effects. The rationale behind this study was to compare the methodological quality of the three broad treatment categories for military PTSD: pharmacological, traditional cognitive-behavioral and non-traditional, e.g., exercise, yoga, and meditation/mindfulness. From 1985 -2014, over 700 published articles were accessed via EBSCO online databases for Post-Traumatic Stress Disorder in veterans; of these, 131 were empirical studies. We predicted a significant difference for the frequencies of well-designed and conducted empirical research studies among the treatment categories, comparing methods quality of 42 pharmacological, 59 traditional and 30 non-traditional cognitive-behavioral empirical studies. Chi-square analysis of methods quality (strong versus weak) for military PTSD treatment categories confirmed a statistically significant difference (p=0008). However, post-hoc paired-comparisons (2x2 Fisher tests) showed that the proportion of sound methods for pharmacological and non-traditional approaches both differed from the traditional cognitive-behavioral treatment for military PTSD (p<001). Clients seeking traditional cognitive-behavioral therapy for military PTSD should have the expectation that their treatment will be based on rigorous research methods on par with pharmacological and non-traditional treatments.

CORRESPONDING AUTHOR: Haley M. Cook, B.A., Texas State University, San Marcos, TX, 78666; hc1138@txstate.edu

CITATION POSTER

10:15 AM-11:15 AM D056

SYMTRAK: MONITORING PATIENT AND CAREGIVER REPORTS OF SYMPTOMS IN PRIMARY CARE

Patrick O. Monahan, PhD[1], Christopher M. Callahan[2], Kurt Kroenke, MD[1], Tamilyn Bakas, PhD, RN, FAHA, FAAN[3], Amanda Harrawood, BS[4], Philip Lofton, B.A.[5], Debra Saliba, MD, MPH[6], James E. Galvin, MD, MPH[7], Timothy Stump, MA[8], Amanda L. Keegan, BA[9], Mary Guerriero. Austrom, PhD[8], Malaz Boustani, MD, MPH[1], Danielle Frye, BS[10]

[1]Indiana University, Indianapolis, IN; [2]Indiana University Center for Aging Research, Regenstrief Institute, Indianapolis, IN; [3]Indiana University School of Nursing, Indianapolis, IN; [4]Regenstrief Institute, Inc., Indianapolis, IN; [5]Indiana University Center for Aging Research, Indianapolis, IN; [6]UCLA Borun Center/Veterans Administration, Los Angeles, CA; [7]NYU Langone Medical Center, New York, NY; [8]Indiana University School of Medicine, Indianapolis, IN; [9]Regenstrief Institute/Indiana University Center for Aging Research, Indianapolis, IN; [10]Regenstrief Institute, Seattle, WA

Background: Health care systems routinely collect physical vital signs such as blood pressure but not patient-reported symptoms. The aim was to develop a new clinically practical, multi-domain assessment tool for measuring and monitoring symptoms of older patients. Existing tools are either too lengthy, disease specific, or cover a single domain. SymTrak was developed to be clinically actionable, sensitive to change, broadly applicable to multiple chronic conditions, culturally sensitive, and easily understood. Methods: Expert panels, existing data, extant instruments, and focus groups were used. Both Self-Report and Caregiver-Report versions were developed. Multidisciplinary experts prioritized the following 7 symptom domains: cognitive, functional, psychological, pain, sleep, fatigue, and other physical symptoms. Potential items were drawn from extant tools. Results: Physician and nurse practitioner focus groups valued instrument performance characteristics: use in practice (administrable within 5 minutes, easily retrievable from electronic medical record systems, graphically reportable, and viewable at item, domain or total score level); purpose (more useful for tracking than screening); and preference for a single brief (10 not 17 items) physical symptom domain instead of multi-item pain, sleep, and fatigue domains. There was no preference for item response format of frequency vs. severity. Preference for number of item response options ranged from 3 to 5 for clinicians, nurses, patients and caregivers. We chose 4 options (never, sometimes, often, always) to balance clinical brevity with sensitivity to change. Patient and caregiver focus groups valued item wording (simple language, and applicability regardless of roles), and were enthusiastic about using SymTrak as a communication aid with providers. "Think aloud" interviewing, held subsequent to focus group sessions for patients and caregivers, was helpful for revising items. SymTrak was rated as highly useful on an 8-item usability scale administered during think aloud interviewing. Version 1.0 (25 items) was finalized and is currently being psychometrically tested. Conclusions: SymTrak has been shown by focus groups of clinicians, patients, and caregivers, to be potentially useful for tracking symptoms in primary care.

CORRESPONDING AUTHOR: Patrick O. Monahan, PhD, Indiana University, Indianapolis, IN, 46202-3002; pmonahan@iu.edu

10:15 AM-11:15 AM D057

THE ACCURACY OF A BRIEF STRESS DAIAGNOSTIC TOOL IN PREDICTING ILLNESS: THE SOS-S

James H. Amirkhan, PhD

California State University Long Beach, Long Beach, CA

The Stress Overload Scale (SOS) is a self-report stress measure that was empirically derived to be (1) consistent with stress theories, (2) psychometrically sound, and (3) appropriate for use in demographically variegated community samples. Unlike other stress measures, it offers options for both continuous and categorical scoring (which groups respondents according to risk for stress-related pathology). The success of these scores in predicting physiological (cortisol) and symptomatic responses to stressors has been well documented. However, at 30 items, the SOS is cumbersome for use in survey research or emergency clinical applications. The present study examined the accuracy of a 10-item short SOS-S as an alternative to the full SOS in predicting markers of illness (symptoms and behaviors). Using a general population sample, 408 participants were recruited from community sites specifically selected to insure a wide range of stress levels. At either a courthouse or an aquarium, volunteers completed either the full SOS or the short SOS-S, along with measures of somatic symptoms and illness-related behaviors (Wave 1). At home, one week later, they all completed the SOS-S and he symptoms and behaviors (Wave 2). Results showed continuous scores from the SOS and the SOS-S to significantly correlate with both illness symptoms and behaviors, both at Wave 1 and Wave 2. Moreover, for those who completed both forms ($n = 72$), significant covariation was found between SOS and SOS-S scores ($r = .80$). Categorical scores from the two forms divided the sample into comparable proportions, with 41% and 46% classified at Low Risk and 23% and 20% classified at High Risk by the SOS and SOS-S, respectively. Comparing mean symptoms and behaviors across risk categories showed significantly more pathology in the High Risk than in the Low Risk group, both for the SOS and the SOS-S, both at Wave 1 and Wave 2. By several metrics, then, current results indicate the SOS-S is a viable substitute for the SOS in assessing stress level and risk for stress-related pathology. Applications of the SOS-S to health research and practice, as well as potential limitations, are discussed.

CORRESPONDING AUTHOR: James H. Amirkhan, PhD, California State University Long Beach, Long Beach, CA, 90840; james.amirkhan@csulb.edu

10:15 AM-11:15 AM D058

USE OF A MODIFIED PARENT MOTIVATION INVENTORY TO ASSESS PARENT ENGAGEMENT IN CHILD OBESITY PROGRAMS

Emily Schmied, MPH, PhD(c)[1], Hala Madanat, PhD[1], David Strong, PhD[2], Emmeline Chuang, PhD[3], Ruth Patterson, PhD[2], Kerri Boutelle, PhD[2], Jamie Moody, MS[4], Guadalupe X. Ayala, PhD, MPH[5]

[1]San Diego State University, San Diego, CA; [2]University of California, San Diego, La Jolla, CA; [3]University of California, Los Angeles, CA; [4]Institute for Behavioral and Community Health, San Diego, CA; [5]Graduate School of Public Health, San Diego State University, San Diego, CA

Introduction: Low parent engagement can severely limit the efficacy of family-based childhood obesity programs. It is critical to identify modifiable predictors of parent engagement such as motivations for participating and readiness to change, yet no measures specific to childhood obesity programs have been empirically tested. This study examines the psychometric properties of a modified version of the Parent Motivation Inventory (PMI) adapted for use among parents enrolled in a childhood obesity program.Methods: A subsample (n=129; mean age=35.6 years [SD=8.6]) of parents assigned to participate in a family wellness workshop series completed the 20-item scale prior to program exposure. Parents were predominantly female (98.2%) and identified as Hispanic (96% versus 4% non-Hispanic white). Originally designed for child behavioral issues, the PMI was modified in several ways to create the new scale: five items not applicable to childhood obesity were omitted, four items specific to childhood obesity were added, and 17 items were reworded. The revised scale was available in English and Spanish. The factor structure of the scale was examined via exploratory factor analysis with promax rotation, and polychoric correlations were used to accommodate the ordinal data. Analyses were performed using R statistical software.Results: One item was removed after initial analyses revealed cross-loading greater than .45 and another was removed due to high inter-item correlation (r=.75). A 2-factor structure which accounted for 63% of the variance was identified. The final model showed reasonable fit: RMSEA=.09, TLI=.04, X^2=73.08, p>.05. The factors were largely consistent with the structure of the original PMI and were named Perceived Relevance (a=.924) and Readiness to Change (a=.915).Conclusions: Study results indicate a modified version of the PMI may be an appropriate instrument to assess potential predictors of parent engagement in childhood obesity programs. However, additional research is needed to validate this measure.

CORRESPONDING AUTHOR: Emily Schmied, MPH, PhD(c), San Diego State University, San Diego, CA, 92120; eschmied@mail.sdsu.edu

10:15 AM-11:15 AM D059

VALIDATION OF AN INTEGRATED PRIMARY CARE BEHAVIORS SCALE (IPCBS) FOR BEHAVIORAL HEALTH PROFESSIONALS

Cerissa L. Blaney, PhD[1], Colleen A. Redding, PhD[2], Andrea L. Paiva, PhD[3], Joseph S. Rossi, PhD[3], James O. Prochaska, PhD[3], Bryan Blissmer, PhD[3], Justin M. Nash, PhD[4], Caitlin T. Burditt, PhD[5]

[1]Alpert Medical School at Brown University, Mansfield, MA; [2]Cancer Prevention Research Center/ University of Rhode Island, Kingston, RI; [3]University of Rhode Island / Cancer Prevention Research Center, Kingston, RI; [4]Brown University / Memorial Hospital of Rhode Island, Pawtucket, RI; [5]Providence VA Medical Center, Providence, RI

Despite benefits of Integrated Primary Care (IPC), the integration process has met barriers, notably, the workforce has limited Behavioral Health Providers (BHP) with sufficient training using a population-based approach in a fast-paced team-oriented setting, conducting brief sessions and treatment. Since BHPs serve as both care providers and as leaders in adopting and guiding integration processes, we need to better understand their readiness and behaviors in integrated care. This study developed an Integrated Primary Care Behavior Scale (IPCBS) and a TTM stage of change measure to assess BHP readiness and behaviors for IPC using split-half cross-validation procedures. Sample included 319 licensed and practicing BHPs including those who were and others who were not working in IPC. Stage distribution was largely bimodal: Precontemplation 53.5%, Contemplation 1.3%, Preparation 0.3%, Action 3.5% and Maintenance 41.5%. Since only one participant was in the Preparation stage, it was merged with the Contemplation stage for analyses. Exploratory principal components analyses on the first half of the data ($N = 152$) yielded a 12-item, 2-factor solution, Consultation/Practice Management (C/PM) and Intervention/ Knowledge (I/K), accounting for 69% of total item variance. Confirmatory factor analyses on the second half of the data ($N = 167$) replicated the hypothesized 2-factor scale structure. The best fitting model was the 2-factor correlated model, $\chi^2(53) = 145.31$, $p< .001$, CFI=.934, AASR= .04, RMSEA=.11, with item loadings ranging from .63 to .91, and a factor correlation of .673. Both factors exhibited excellent internal consistency (C/PM $\alpha = .92$, I/K $\alpha = .91$). A MANOVA found a significant main effect for stage of change, Wilk's $\Lambda = .59$, $F(6, 614) = 31.03$, $p < .001$, multivariate $\eta^2 = .41$. Follow up tests found that both the C/PM, $F(3,308) = 71.12$, $p < .001$, $\eta^2 = .41$, and I/K, $F(3, 308) = 13.09$, $p < .001$, $\eta^2 = .11$, scales significantly differed by Stage, accounting for 41% and 11% of the variance, respectively. This study developed and cross-validated the IPCBS for BHPs using Stages of Change. IPC behavior scale can advance IPC research, education, and training for BHPs in IPC and can be used as external validation for studies examining readiness to practice IPC.

CORRESPONDING AUTHOR: Cerissa L. Blaney, PhD, Alpert Medical School at Brown University, Mansfield, MA, 02048; cerissablaney@gmail.com

10:15 AM-11:15 AM D060

VALIDATION OF THE BIOBANKING ATTITUDES AND KNOWLEDGE SURVEY TRUST SCALE (BANKS-TR)

Sharon H. Baik, B.A.[1], Mariana Arevalo, MSPH[2], Clement Gwede, PhD, MPH, RN[3], Cathy D. Meade, PhD, R.N., F.A.A.N.[4], Paul B. Jacobsen, PhD[3], Gwendolyn P. Quinn, PhD[3], John S. Luque, PhD, MPH[5], Kristen J. Wells, PhD, MPH[6]

[1]SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology, San Diego, CA; [2]University of Texas – Health Science Center at Houston, Houston, TX; [3]Moffitt Cancer Center, Tampa, FL; [4]H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL; [5]Georgia Southern University, Statesboro, GA; [6]San Diego State University, San Diego, CA

Biospecimen research is an increasingly important tool to develop new ways to prevent, detect, and treat cancer. Trust in medical researchers and research-related organizations may affect people's decisions to donate a biospecimen. Few studies have used validated multi-item measures to evaluate trust related to biospecimen donation. This study developed and validated a trust scale as part of the Biobanking Attitudes and Knowledge Survey (BANKS) in English and Spanish. Eighty-five English- and 85 Spanish-speaking participants completed: the BANKS-Tr, a 10-item measure of trust in researchers, research organizations, and various private and public institutions; two other BANKS scales (attitudes toward and self-efficacy related to biospecimen donation); and items on intention to donate blood or urine and receptivity to learning more about biospecimen donation. Internal consistency reliability of the BANKS-Tr was evaluated by Cronbach's alpha, and construct validity was assessed by the known-groups method via bivariate correlations. Results indicated the BANKS-Tr showed adequate internal consistency in both English (α=.92) and Spanish (α=.93), and all item-to-total correlations were positive and ranged from .44 to .80.English-speaking participants who reported greater levels of trust had more: positive attitudes toward biospecimen donation and biobanking (r=.59), self-efficacy related to biospecimen donation (r=.68), receptivity (r=.32), and were more willing to donate blood (r=.37) and urine (r=.44; all p's < .01). Trust was significantly ($p < .05$) positively correlated with intention to donate blood (r=.23) and self-efficacy (r=.54) in Spanish-speaking participants, but was not significantly correlated with intention to donate urine or receptivity. The BANKS-Tr shows evidence of reliability and validity among English- and Spanish-speaking community members. Additional research should be conducted to further evaluate psychometrics of the BANKS-Tr.

CORRESPONDING AUTHOR: Sharon H. Baik, B.A., SDSU/UC San Diego Joint Doctoral Program in Clinical Psychology, San Diego, CA, 92120; sharon.h.baik@gmail.com

10:15 AM-11:15 AM D061

COMPARING ENERGY EXPENDITURE FROM ECOLOGICAL MOMENTARY ASSESSMENT AND SENSOR-INFORMED RECALL

Eldin Dzubur, MS[1], Stephen Intille, PhD[2], Genevieve F. Dunton, PhD, MPH[1]

[1]University of Southern California, Los Angeles, CA; [2]Northeastern University, Boston, MA

Objectives: Measurement of energy expenditure (EE) across the day using accelerometry proves difficult due to device non-wear, whereas multiple-day retrospective self-report methods suffer from biases such as overestimation of higher intensity activities. Ecological momentary assessment (EMA) is a self-report strategy that that can address these issues by prompting short-term recall of recent activity, but EMA cannot continuously measure behavior without excessive burden. This study examines the concordance of EE estimates from a novel smartphone sensor-informed end of day recall methodology to EMA and accelerometry. Methods: Fifty-one high school students (ages 14-19, 55% female, 57% Hispanic) were instructed to carry an Android smartphone with a software application ("app") for 14 days. Each day, participants used the app to interactively label their own activity data using visual cues from automatically-detected major activity transitions over the last 24 hours. The app also prompted EMA self-report surveys between 3-7 times per day to assess activity over the past 30-60 minutes. Participants also wore an Actigraph accelerometer at the hip throughout the 14 days. Self-reported activity types and durations, and accelerometer-generated activity counts were converted to metabolic equivalents (METs). Bland-Altman plots and correlation coefficients were used to evaluate the agreement between the three calculated MET values across 30-sec. epochs and between individuals. Results: At the individual level, sensor-informed recall and EMA data showed similar accuracy (C= 0.15, 0.19) precision (R= 0.31, 0.45) and mean differences (D = -0.408, -0.473) compared to MET values from accelerometry. Sensor-informed recall and EMA MET values were highly correlated (R=0.67, $p < 0.001$) at the individual level. At the epoch level, sensor-informed recall and EMA data showed similar accuracy (c=0.14, 0.13) precision (R= 0.16, 0.15) and mean differences (D = 0.390, 0.370) compared to MET values from accelerometry. Sensor-informed recall and EMA MET values were moderately correlated (R=0.34, $p < 0.001$) at the epoch level. Conclusions: The findings show negligible differences in EE estimates obtained from an EMA-based 60-minute recall compared with a 24-hour sensor-informed end of day recall.

CORRESPONDING AUTHOR: Eldin Dzubur, MS, University of Southern California, Los Angeles, CA, 90032; dzubur@usc.edu

10:15 AM-11:15 AM D062

IMPROVING VEGETABLE INTAKE AMONG PRESCHOOL CHILDREN USING SENSORY EDUCATION PROGRAM

Huaxin Song, PhD[1], Du Feng, PhD[2], M. Christina R. Esperat, RN, PhD, FAAN[3], Christie Hust, MS, RDN, CDE, LD[1], Linda McMurry, DNP, RN, NEA-BC[1]

[1]Texas Tech University Health Sciences Center, Lubbock, TX; [2]University of Nevada, Las Vegas, Las Vegas, NV; [3]Texas Tech University HEalth Sciences Center, Lubbock, TX

Background: Head Start (HS) and Early Head Start centers (EHS) follow USDA and CACFP guidelines in providing children with school lunches that meet one to two thirds of their daily nutritional needs. However, children's actual intake tends to be less than what they are served at school. Increasing young children's vegetable intake is particularly challenging, because many vegetables have a bitter taste, and taste has a major influence on food preference among young children. Several studies in Europe show that taste preferences and food choices are influenced by food experiences and associative sensory and nutrition education, and that early sensory and nutrtition education can improve children's food preferences. This study is focused on improving preschool children's consumption of healthy foods through sensory and nutrition education.Methods: A total of 44 students (3-4 years old) from two HS/EHS programs are included in this study. Pictures of participants' plates taken before and after lunch were compared to evaluate their intake of: 1) 1% milk, 2) meat/cheese, 3) grain, 4) vegetable, and 5) fruits. Children in the intervention group attended up to six sensory and nutrition education classes during the study period with their parents. Sensory education curriculum for young kids was developed.Results: At baseline, over 85% of participants (N = 44) consumed less than 0.5 servings of vegetables at lunch, 34% of them consumed less than 0.5 servings of fruits, over 50% consumed less than 0.5 servings of meat/cheese, over 52% had less than 0.5 servings of grains, and 39% drank less than 0.5 cups of 1% reduced fat milk. After the intervention, children in the Intervention group (n = 17) had a significant increase of vegetable intake (mean difference = 0.33 servings, SE = 0.29, p = 0.0161), while no significant change in vegetable intake (mean difference = 0.13 servings, SE = 0.40, p = 0.1813) was observed among children in the Comparison group (n = 27).Conclusion: Findings of the current study support the positive impact of the sensory training program on vegetable intake among young children. Future randomized control studies are needed to evaluate the effectiveness of the intervention program.

CORRESPONDING AUTHOR: Huaxin Song, PhD, Texas Tech University Health Sciences Center, Lubbock, TX, 79430-6264; huaxin.song@ttuhsc.edu

10:15 AM-11:15 AM D063

INCIDENCE OF MALNUTRITION IN HOSPITALIZED OLDER ADULT WITH AND WITHOUT DEMENTIA IN THE UNITED STATES

Elizabeth W Gonzalez, PhD, PMHCNS-BC[1], Jaime Slaughter-Acey, PhD[2], Rose Ann Dimaria-Ghalili, PhD, FASPEN[3], Purni Abeysekara, MPH[4], Helaine Resnick, PhD, MPH[5], Peggi Guenter, PhD, RN.[6]

[1]Drexel University, Philadelphia, PA; [2]CNHP/Drexel University, Philadelphia, PA, Canada; [3]CNHP/Drexel University, Philadelphia, PA; [4]School of Public Health/Drexel University, Philadelphia, PA; [5]Resnick, Chodorow and Associates, Silver Spring, MD; [6]A.S.P.E.N., Silver Spring, PA

Purpose: This study examined the differences in clinical characteristics and the prevalence of malnutrition in hospitalized older adults with and without dementia using the Healthcare Cost and Utilization Project (HCUP), national inpatient sampleMethods: Data are from the 2010 National Inpatient Sample, which contain patient-level data with ICD-9-CM diagnosis codes on hospital inpatient stays. Data were weighted in order to obtain nationally representative estimates of U.S. hospitalizations. Older adults (>65 years) with and without dementia during their hospital stay were identified and compared.Results: Findings showed 14.8 % (1,965,453) of hospitalized older adults had a primary or secondary diagnosis of dementia; of these, 5.5% (727,858) had a primary or secondary diagnosis of malnutrition (dxmal). Malnutrition in patients with dementia was significantly higher compared to patients without dementia (8.3% vs. 5%, P < 0.001). Patients with dementia were also more likely to have enteral nutrition procedures than patients without dementia (1.8% vs. 0.9%, p < 0.001). Older adults with dementia were also more likely to be admitted to the hospital from the emergency room (72.1% vs. 56.7%, p < 0.001) and discharged to a skilled nursing facility or intermediate care facility (55.5% vs. 24.2%, p < 0.001). The average length of stay (LOS) was also significantly higher for older adults with dementia than without (6.2 vs 5.3 days, p < 0.001); however, the cost of care (COC) was significantly lower for older adults with dementia ($33,747 vs. $41,463, p < 0.001). A higher percentage of patients with dementia were classified as having major loss of function (44.6% vs. 34.1%, p < 0.001) and a higher risk of dying (32.3% vs. 24.1%, p < 0.001) compared to patients without dementia.Conclusions: Older hospitalized adults with dementia had higher incidence of malnutrition diagnoses and were in need of more nutritional procedures than older adults hospitalized without dementia. There is a need to monitor nutritional status in older adults with dementia.

CORRESPONDING AUTHOR: Elizabeth W Gonzalez, PhD, PMHCNS-BC, Drexel University, Philadelphia, PA, 19102; ewg22@drexel.edu

10:15 AM-11:15 AM D064

INFLUENCES OF SPECIFIC SOURCES OF SOCIAL SUPPORT FOR HEALTHY EATING AND PHYSICAL ACTIVITY WITHIN AFRICAN AMERICANS' CHURCHES

Rachel L. Ondrejko, BS[1], Karly S. Geller, PhD, MEd, BA, BA[2], Natasha Burse, MA[3]

[1]Miami University, Canton, OH; [2]Miami University, Oxford, OH; [3]Miami University, Garland, TX

Compared to their Caucasian counterparts, African Americans (AA) are at a disproportional risk for obesity-related diseases; and regular physical activity (PA) and fruit and vegetable consumption (FVC) are protective behaviors. Health promotion programs within African American churches have demonstrated high success, yet less it realized about the most salient sources of social support within this setting. Purpose: To examine relationships between specific sources and types of social support for AA adults' PA and FVC, examining support from family, friends, church members, and pastors.Methods: Participants were recruited from two AA churches to complete a paper-based survey. Participants were asked to report demographic and health-related information, including FVC and moderate-to-vigorous physical activity (MVPA). Specific social support types were also examined, including encouragement/discouragement for healthy eating and participation/reward for PA. Salient sources/types of social support for participants' daily FVC and weekly MVPA minutes were revealed via linear regression. Only significant covariates were included.Results: A participants (n=48; mean age=42.5 years, SD=15.7) were mostly female (73%) and the majority had at least a college education (66%). Eighty four percent of participants were overweight or obese; and, on a perceived stress scale ranging from 1 to 10, participants reported relatively low stress levels (3.15, SD=0.42). For participants' FVC, significant influences included age (p=.011) and encouragement from friends (p=.012); model R^2_{adj}=.214. Reward social support from friends was the only significant predictor of participants' MVPA (p=.002; R^2_{adj}=.252).Discussion: Age and friend encouragement explained 21% of variation in FVC; hence a friend noting participants' unsuccessful/successful attempts to improve their diet strongly contributed participants' FVC. Reward from friends for PA, whether the participant received criticism/rewards from friends, accounted for 25% of the variance in their MVPA. Conclusion: Results partially support previous research, indicating friends as a significant source of social support for AA adults' multiple health behavior. Similar research among larger samples of AA adults are warranted.

CORRESPONDING AUTHOR: Rachel L. Ondrejko, BS, Miami University, Canton, OH, 44709; ondrejrl@miamioh.edu

10:15 AM-11:15 AM D065

MOBILE APPLICATIONS, HEALTHY EATING, AND OLDER ADULTS: A SYSTEMATIC REVIEW

Ivan Watkins, JD, MS[1], Bo Xie, PhD, MS, B.Med.Sci[2], Unmil Karadkar, PhD, M.S., B.E.[1], Henna Kim, PhD[2]

[1]The University of Texas at Austin, Austin, TX; [2]University of Texas at Austin, Austin, TX

A nutritious diet plays an important role in older adults' health, such as reduced rates of heart disease, cancer, and type 2 diabetes. Applications for mobile devices ("apps"), such as smartphones or tablets, may promote a healthy diet among older adults. However, older adults may lack the knowledge and skills necessary to effectively use these apps. To understand if and how mobile apps may be used to promote healthy eating among older adults, we conducted a systematic review of the literature during October-November 2013. We used four selection rounds to select articles: 1) database selection; 2) keyword search; 3) title and abstract screening; 4) full-text screening, resulting in a sample of 33 articles that focused on either healthy eating apps (20 studies) or apps for older users (13 studies). No article focused on both healthy eating and older adults. Key findings for the healthy eating apps included that apps may effectively promote weight loss, interactive features may improve long-term outcomes, and apps may improve adherence to behavioral interventions. Key findings on apps for older adults included that personalized features may improve an app's effect on health outcomes, the importance of involving older users in the design process, the ability to use speech may be perceived as beneficial, and positive feedback may inspire older adults to overcome challenges in using apps. Recommendations based on the key findings included: 1) incorporating educational features; 2) enabling personalized feedback; 3) enabling multiple data entry methods (e.g., text, voice); 4) adding features for sharing data with caregivers or medical professionals; 5) social media inclusion; and 6) personal health records inclusion. These recommendations - along with the finding that no study investigated healthy eating apps for older adult users - highlight a need for future research to focus on the design and evaluation of healthy eating apps for older adults.

CORRESPONDING AUTHOR: Ivan Watkins, JD, MS, The University of Texas at Austin, Austin, TX, 78749; iwatkins@utexas.edu

10:15 AM-11:15 AM D066

SECURE ATTACHMENT ORIENTATION PREDICTS NUTRITIONAL OUTCOMES IN GIRLS: EVIDENCE A BRAIN-TO-SOCIETY COHORT STUDY

Aida Faber, B.A., Laurette Dube, Prof.

McGill University, Montreal, PQ, Canada

Background: Eating is an emotional activity and the attachment system is the foundation of the emotion regulatory system. Although children first develop attachment bonds to their parents, this attachment then evolves to incorporate other peers. Peers are an important part of a child's life from early on, as indicated by the amount of time children spend together interacting and by some children having trouble getting accepted by their peers as early as four. Emotion regulation patterns vary by gender with girls being more likely to seek support to cope with a stressor.Objective: This paper aims to investigate how gender moderates the link between peer attachment styles in children and micro-nutrient and energy consumption.Methods: 246 parents reported on various behaviors of their 6-12 year old child (128 boys, 118 girls; M_{age} = 9.15(*1.57*)) enrolled in a cohort study during a telephonic interview and a follow-up online survey. Attachment was measured using the Attachment Questionnaire-Child (AQ-C) and daily micro-nutrient and energy consumption was measured using a Food Frequency Questionnaire.Results: Overall, our findings showed that peer attachment security was linked with lower daily fat consumption, $p < .10$, albeit only marginally. We also found important attachment by gender effects for these nutritional outcomes. Specifically, girls who were more secure in their peer attachments consumed lower daily fat (β = 9.46(*4.46*), $p < .05$), carbohydrate (β = 25.64(*14.14*), $p = .06$), and energy amounts (β = 195.81(*105.25*), $p = .08$). This was not the case for boys, *p*s > .05. Although, with the exception of daily fat consumption, these results were only marginally significant, when examining girls and boys separately, peer attachment security in girls significantly predicted these outcomes, *p*s < .05, even after controlling for BMI category and child age.Conclusion: Our findings show that girls who benefit from secure peer attachments consume less daily fat. They are also more likely to consume less carbohydrates and overall report consuming fewer calories within a day. As this is not the case for boys, this study shows that peer attachment, specifically secure peer attachment might play an important role in girls' consumption patterns.

CORRESPONDING AUTHOR: Aida Faber, B.A., McGill University, Montreal, PQ, H3A 1G5; aida.faber@mcgill.ca

10:15 AM-11:15 AM D067

USABILITY TESTING FEEDBACK ON A THEORETICALLY DRIVEN ELEARNING PLATFORM TO PREVENT COLLEGE WEIGHT GAIN

Melissa Napolitano, PhD[1], Sarah Lynch, MPH[2], Jessica Rafetto, RN[3], Laurie Posey, EdD[3]

[1]The George Washington University School of Public Health, Washington, DC; [2]University of Colorado-Denver, Highlands Ranch, CO; [3]The George Washington University, Washington, DC

Seventy percent of adolescents matriculate to college, with weight gains by graduation averaging 1.7 to 4.2 kg. Theoretically-based obesity prevention programs are needed to target adolescents in this life stage. Twenty college students completed usability testing of an eLearning obesity prevention platform with modules targeting 8 behaviors (high-fat snacks, breakfast, pizza, sugary beverages, fruits and vegetables, fried foods, physical activity, sedentary behavior). Each student tested no more than 2 modules. Semi-structured interviews assessed constructs specific to Cognitive Load Theory (CLT), Elaboration Likelihood Model (ELM) and Social Cognitive Theory (SCT) to determine success of the application of theoretical concepts to the development of this platform.Qualitative and quantitative feedback (i.e., validated scales for cognitive load (CL), user control (UC), elaboration (EL), and novelty (NV)) was assessed. Qualitative feedback was positive about the tips to promote healthy habits and topic relevance to one's daily life. This is consistent with the moderately high EL scale scores: median (*Mdn*) ranged from 30.4 +7.4 (fried foods) to 36.2 + 8.4 (fruits & vegetables). Seventy percent of students said the messages were easy to read and understand. This theme was echoed with high average CL scale scores: *Mdn* ranged from 11.8 + 1.9 (fruit and vegetable, breakfast, sedentary behaviors, fried foods) to 13.4 + 1.3 (high fat snacks). Students liked the ability to obtain personalized feedback relative to their own behavior. UC and NV scale scores were consistent with this qualitative feedback: UC *Mdn* ranged from15.2+1.5 (physical activity) to 19.4+ 1.8 (fruit & vegetables); NV *Mdn* ranged from7.6+3.2 (physical activity) to 10.6+3.0 (breakfast). Students offered suggestions to improve the platform (i.e., more information on the importance of the target behavior, more information specific to their campus, improve visual appearance). This research is an important first step for developing an obesity prevention program for college students and confirms the importance of using theoretical frameworks for eLearning platform development. Discussion will include how this usability testing will aid in the iterative development of this platform, as well as other theory-based obesity prevention programs.

CORRESPONDING AUTHOR: Melissa Napolitano, PhD, The George Washington University School of Public Health, Washington, DC, 20052; mnapolitano@gwu.edu

10:15 AM-11:15 AM D068

PREDICTORS OF WEIGHT LOSS ATTEMPTS IN CHILDREN AGES 8-15 IN THE UNITED STATES

John A. Naslund, MPH[1], Yulin Hswen, MPH[2]

[1]Dartmouth College, Lebanon, NH; [2]Harvard School of Public Health, Boston, MA

Purpose: With increasing prevalence of childhood obesity, there are a growing number of children actively trying to lose weight. However, there is conflicting evidence about what factors are most likely to predict weight loss attempts in children. We examined whether measured and self-perceived weight status and sociodemographic factors predict weight loss attempts in children.
Methods: In the National Health and Nutrition Examination Survey (NHANES), children ages 8-15 were asked, "In the past year, how often have you tried to lose weight?" Responses (n=5, 818) were "never", "sometimes", or "a lot". A proportional odds ordered logistic regression model was used to assess the predictive effects of measured and self-perceived weight status and sociodemographic factors such as age, race, and household income on weight loss attempts.
Results: Measured weight status strongly predicted weight loss attempts in both girls (adjusted odds ratio [aOR], 5.94 [95% CI, 4.69-7.53] for obese, and aOR, 2.71 [95% CI 2.19-3.35] for overweight) and boys (aOR, 8.54 [95% CI 6.79-10.74] for obese and aOR, 3.97 [95% CI 3.18-4.95] for overweight). Self-perceived weight status also strongly predicted weight loss attempts in both girls (aOR, 2.97 [95% CI 2.35-3.76] for overweight and aOR, 0.48 [95% CI 0.34-0.68] for underweight) and boys (aOR, 2.58 [95% CI 2.03-3.28] for overweight and aOR, 0.38 [95% CI 0.27-0.54] for underweight). Girls from low-income households were more likely to try to lose weight than from high-income households (aOR, 1.31 [95% CI 1.04-1.65]). Among boys, increasing age was inversely related with weight loss attempts, while African American boys were more likely to try to lose weight compared to whites (aOR, 1.31 [95% CI 1.05-1.64]).
Conclusions: These results indicate that in general, children across diverse racial and income groups are equally likely to try to lose weight. Overweight and obese children are highly likely to try to lose weight, emphasizing the need for interventions targeting these individuals and to ensure the use of safe weight loss practices.

CORRESPONDING AUTHOR: John A. Naslund, MPH, Dartmouth College, Lebanon, NH, 03766; john.a.naslund@dartmouth.edu

10:15 AM-11:15 AM D069

PROMOTING SOCIAL SUPPORT, PARENT-CHILD COMMUNICATION, AND PHYSICAL ACTIVITY WITH MOBILE TECHNOLOGY

Danielle E. Schoffman, BA[1], Gabrielle Turner-McGrievy, PhD[2], Justin B. Moore, PhD[2], Sara Wilcox, PhD[2]

[1]University Of South Carolina, Arnold School Of Public Health, Columbia, SC; [2]University of South Carolina, Columbia, SC

PURPOSE: Mobile smartphone applications (apps) and physical activity (PA) devices offer a scalable way to deliver family obesity treatment and prevention interventions, yet little is known about the impact of these technologies on family support for PA or family preferences for app/device functions. This study tested the usability and acceptability of commercial apps and mobile monitoring devices for physical activity (PA) with parent-child dyads and examined the impact of the technologies on family communication, cohesion, and social support.METHODS: Parent-child dyads interested in improving their PA using mobile technology were recruited from the community via email listservs and word-of-mouth. Enrolled dyads (n=3) attended pre- and post-test assessments at the university, including measurement of their height and weight. Dyads completed a 4-week mobile-based program to test PA apps (selected based on prior study by research team) and PA monitoring devices (e.g., FitBit), which included brief in-person visits and remotely-delivered content. Social support for PA was measured with a previously validated scale. At post-test, dyads participated in a structured interview about their preferences for app and device features.RESULTS: Parents were female, with an average BMI of 25.5+1.4 kg/m^2; children were 10+0.3 years old (1 female, 2 male). Emerging qualitative themes included feedback that dyads enjoyed using the PA technologies but wanted progress graphs from apps and more immediate feedback from devices (e.g., readout screen), as well as increased access to their family member's data (e.g., easy to toggle between accounts). In the interview, parents reported an increased awareness of their PA levels and increased communication with their children about PA. Paired t-tests suggest children had an increase in their perception of encouragement from their parents to participate in PA (baseline 3.7+0.6; post-program 4.7+0.6; p < .0001).CONCLUSION: This is the first known study to test commercial apps and PA devices with parents and children, including exploration of family communication about PA. Given the demonstrated deficiencies of existing commercial apps and devices for PA, integration of evidence-based recommendations and pilot testing are essential for future success.

CORRESPONDING AUTHOR: Danielle E. Schoffman, BA, University Of South Carolina, Arnold School Of Public Health, Columbia, SC, 29208; schoffmd@email.sc.edu

10:15 AM-11:15 AM D070

RECRUITMENT FOR AN INTERNET FAMILY INTERVENTION PROGRAM FOR OVERWEIGHT CHILDREN

Alan Delamater, PhD[1], Sheah Rarback, MS[1], Maria Toro, BA[1], Yaray Agosto, BS[1], Mary Buller, MA[2], Rob Martin, BS[2], Herb Severson, PhD[3]

[1]University of Miami Miller School of Medicine, Miami, FL; [2]Klein Buendel, Inc., Golden, CO; [3]Oregon Research Institute, Eugene, OR

Background and Objective: Obesity in childhood is of great public health significance because it is persistent and increases risk for later health problems. Evidence-based interventions are available, but a major barrier is access to effective treatment; therefore, most overweight children do not receive family-based behavioral intervention. A key issue in dealing with this epidemic is how to provide effective treatment to the population of overweight children. Pediatricians' increased attention to this issue may provide greater access to effective treatment. We developed a web-based family intervention that pediatricians could refer families to after they diagnosed children as being overweight. The program was designed to increased awareness of the problem of obesity and associated health risks, and increase motivation, confidence, and skills of children and parents to engage in healthy lifestyle changes to reduce overweight through video models, interactive gaming, and goal-setting. We report here on the recruitment process for an RCT testing the efficacy of the web-based program.

Method: Families were recruited from six primary care pediatric practices and one pediatric endocrinology practice over a 16-month period. Eligibility included being overweight, 8-12 years-old, parents and children speaking and writing English, and having a high-speed internet connection at home. Eligible families were given a study flyer and completed pre-screening and release of information forms which were sent to the research team, who then completed phone screening.

Results: Over the recruitment period, 223 families were referred to the study. Phone screens were completed with 165 parents (74%), but 58 (26%) were unreachable despite many telephone and email attempts. Of those screened, 15 (9%) were not eligible and 23 (14%) declined participation. Thus, 127 parents (57% of all those referred, 77% of all those screened) were sent an email with the registration link, and 79 (62% of those sent the link) registered for the program. Sixty-four of these families (81%) completed baseline surveys and were randomized to participate in the trial; this study sample represented 28.7% of all families originally referred by the pediatric offices.

Conclusion: Recruitment in pediatric offices for an internet treatment study of overweight children is challenging, and many parents do not follow physician recommendations to receive treatment.

CORRESPONDING AUTHOR: Alan Delamater, PhD, University of Miami Miller School of Medicine, Miami, FL, 33136; adelamater@med.miami.edu

10:15 AM-11:15 AM D071

RELATIONSHIP QUALITY AND SHARED UNHEALTHY BEHAVIORS PREDICT BODY MASS INDEX

Jane A. Skoyen, PhD[1], Kelly E. Rentscher, M.A.[2], Emily A. Butler, PhD[2]

[1]University of Arizona, Daly City, CA; [2]University of Arizona, Tucson, AZ

PurposeThe present study investigates the connection between unhealthy behaviors in couples, relationship quality, and weight. Relationship factors influence eating, and one's immediate social context plays a particularly important role. To clarify this connection, we assessed whether self-reported relationship quality interacted with observational ratings of unhealthy behaviors in couples to predict body-mass index (BMI). MethodsForty-three committed heterosexual couples (*mean age* = 32.2, *SD* = 13.0; *mean relationship duration* = 6.2 years, *SD* = 7.2) reported on their relationship quality and participated in a laboratory session during which they discussed their health habits with their romantic partners; their height and weight was collected. The discussions were recorded and rated for evidence of shared unhealthy behaviors (SUB). We then used a series of cross-sectional dyadic models to test whether SUB and measures of relationship quality (conflict, avoidance, and love) were associated with BMI. ResultsThe interaction between gender, SUB, and conflict was significant, $F(2,32) = 4.32$, $p = 0.02$. BMI of women with high conflict was independent of SUB ($b = 2.77$, $p = 0.84$); however, for women with low conflict, higher SUB was linked to higher BMI ($b = 35.19$, $p = 0.05$). The interaction between gender, SUB, and ambivalence was also significant, $F(2,32) = 8.49$, $p = 0.001$. For women with high ambivalence, BMI was independent of SUB ($b = -.44$, $p = .97$), whereas for women with low ambivalence, higher SUB was associated with higher BMI ($b = 43.27$, $p = 0.02$). Finally, the interaction between gender, SUB, and love was significant as well, $F(2,32) = 9.85$, $p = 0.0005$. Among women with high love scores, BMI was positively associated with SUB ($b = 44.93$, $p = 0.001$), whereas for those with low love scores BMI was independent of SUB ($b = 1.26$, $p = 0.93$). ConclusionsWomen with poorer relationship quality demonstrated higher BMI regardless of sharing unhealthy behaviors with their partners; whereas the combination of good relationship quality and little shared unhealthy behavior appeared to serve a protective function for women.

CORRESPONDING AUTHOR: Jane A. Skoyen, PhD, University of Arizona, Daly City, CA, 94015; jsv@email.arizona.edu

10:15 AM-11:15 AM D072

SICKLE CELL DISEASE & OBESITY: IMPLICATIONS FOR PAIN AND LIFE-STYLE MANAGEMENT

Martin Binks, PhD, FTOS[1], Kelli Kaufman, BS[1], Mary c. Wood, LPA[2], Camela Barker, M.A., LPA[3], Rosellen Reif, MS[4], Lori A. Boyd[5], Christopher L. Edwards, PhD[6]

[1]Texas Tech University, Lubbock, TX; [2]DUKE UNIVERSITY HEALTH SYSTEM, Dept. of Psychiatry, Durham, NC; [3]B&D Behavioral Health Services, Raleigh, NC; [4]Duke University Medical Center, Cary, NC; [5]Texas Tech, Lubbock, TX; [6]Duke University Medical Center, Durham, NC

Background: Prognosis and longevity have improved for patients with Sickle Cell Disease (SCD). Consequently, chronic diseases such as obesity (OB) are now affecting this population. Pain is prevalent in SCD and our prior work suggests pain interferes with activities of daily living (ADL) in OB populations. Here, we describe psychosocial correlates, pain and their relationships with ADL in a SCD clinic sample. We hypothesized that higher BMI, increased pain, and negative psychosocial contributors would be associated with lower ADLs. Methods: We performed cross-sectional analysis of a consecutive sample of 226 African American adult (M=33.6 yrs; BMI M=26.3 kg/m^2; F=55%) SCD clinic patients according to BMI categories (18.5-24.9 normal, NW; 25-29.9, overweight, OW; >30 obese, OB; prevalence 53%, 26%, 21%, respectively). Data included a self-report psychosocial inventory; validated instruments for the assessment of psychiatric, behavioral and social functioning; measured height and weight (calculated BMI). Pearson correlation, ANOVA, and regression analyses were performed on subsets of the sample. Results: Only age was associated with BMI category (NW M=32; OW & OB M=36; p=.032). Means for psychosocial variables were: Alford Edwards Social Support Inventory (M=54.9); Cohen's Perceived Stress Scale (M=14.3) both within normal limits; Symptom checklist-90, Global Severity Index (M=57), Depression (M=56), Anxiety (M=53) all clinical range. One way ANOVA indicated OB patients had higher Short Form McGill Pain Inventory (SFMPQ) present pain index (PPI) scores than did NW (p=.033).Pearson correlation (OB only) indicated an association of Sensory Pain (SP), Affective Pain (AP) & Present Pain (PPI) with Physical ADLs (p's = .043; .002; .002) and Total ADLs (p's = .046; .036; .0001). BMI correlated with Total ADLs (p = .046). Regression analysis indicated that PPI and BMI predicted ADLs (p = .001). Conclusions: With improved prognosis for patients with SCD, better understanding factors related to lifestyle-influenced diseases such as obesity is essential to health and quality of life. Comorbid psychosocial and chronic pain issues can interfere with health goals. Focused behavioral medicine interventions to address these issues will be discussed in the context of our findings.

CORRESPONDING AUTHOR: Martin Binks, PhD, FTOS, Texas Tech University, Lubbock, TX, 79414; m.binks@ttu.edu

10:15 AM-11:15 AM D073

SOCIAL SUPPORT TO ENHANCE HEALTH PROMOTION FOR ADULTS WITH MENTAL ILLNESS: A FEASIBILITY PILOT STUDY

Kelly Aschbrenner, PhD[1], Kim Mueser, PhD[2], Allison Kinney, MSW[3], Sarah Pratt, PhD[4], Stephen Bartels, MD, MS[5]

[1]Geisel School of Medicine at Dartmouth, Nashua, NH; [2]Boston University, Boston, MA; [3]The Geisel School of Medicine at Dartmouth, Concord, NH; [4]Geisel School of Medicine at Dartmouth, Concord, NH; [5]Geisel School of Medicine at Dartmouth, Lebanon, NH

Objectives:People with serious mental illness (SMI), including schizophrenia and major mood disorders, have a life expectancy up to 25 years less than the general population. Preventable, obesity-related health conditions due to sedentary lifestyle, poor nutrition, and psychiatric medications are major causes of this disparity. Harnessing support from family and friends who could reinforce, prompt, and help monitor diet and exercise in everyday life may increase the effectiveness of health promotion interventions targeting individuals with SMI. This study directly relates to the conference theme: "Advancing the National Prevention Strategy through Behavioral Medicine Innovation," by developing and testing a novel approach to health promotion that involves increasing social support for health behavior change among overweight and obese individuals with mental illness. Methods: Participants enrolled in the In SHAPE health promotion intervention at public mental health centers were offered an additional social support component designed to increase support for diet and exercise. Seven dyads were recruited to participate in the three-month intervention. Participants met once per week with a health coach who encouraged reciprocal support for healthy eating and exercise through health promotion education, positive communication skill building, and experiential learning. Participants received free gym memberships and activity tracking devices (Fitbit) to facilitate self-monitoring. A mixed-methods interventional framework was used to assess participant satisfaction, perceived benefits and challenges, and recommendations for program modifications. Results: Participants reported high satisfaction and benefits from the program. Qualitative interviews indicated that participants wanted more hands-on learning opportunities for healthy eating, including cooking-based nutrition sessions for the whole family, and group sessions where they could interact with and learn from other families. Conclusions: Preliminary findings suggest that facilitating social support for health behavior change is feasibility among adults with SMI. Findings from this initial feasibility study will be used to inform a subsequent pilot study to examine the effectiveness of this intervention.

CORRESPONDING AUTHOR: Kelly Aschbrenner, PhD, Geisel School of Medicine at Dartmouth, Nashua, NH, 03064; kelly.aschbrenner@dartmouth.edu

10:15 AM-11:15 AM D074

SUPPORT AND COHESION IN THE ENGAGED WEIGHT LOSS STUDY

Sara A. Hoffman, B.A.[1], Elyse R. Daly, B.A.[1], Christine Pellegrini, PhD[1], H. Gene McFadden, B.A.[2], Bonnie Spring, PhD, ABPP[1]

[1]Northwestern University Feinberg School of Medicine, Chicago, IL; [2]Northwestern University, Chicago, IL

Background: Support groups show promise to increase success in weight loss interventions. Self-determination theory suggests groups promote well-being and cohesion by supporting autonomy and relatedness needs. The purpose of this study was to examine whether provision of a technology-mediated team message board to extend contact after in-person group sessions ended would help preserve group cohesion by maintaining self-perceived support given and received. It was hypothesized that perceived support and cohesion would decrease after in-person sessions ended, except when the intervention provided a mechanism for group interaction to continue. Methods: Participants were randomized to 2 experimental arms of weight loss treatment involving 8 in-person group sessions over 2 months. A standard (STND) group self-monitored diet, activity, and weight on paper; a technology-supported group (TECH) self-monitored on a smartphone app. TECH had access to a team message board that continued after treatment ended until 6 month follow-up. Questionnaires assessing perceived group cohesion and perceived support given and received were completed at 3 and 6 months. Effects were tested using general linear mixed models. Results: The sample included 30 TECH and 30 STND participants [85% female, 30% Black, age=39.4(12.3), BMI=34.8(3.0)]. A significant group*time interaction for perceived group cohesion (F=7.76; p=.007) indicated that perceived group cohesion declined significantly between months 3 and 6 (after in-person treatment ended) for STND (m=30.3) but not TECH (m=32.3). There were no significant effects on perceived support given or received. Conclusions: Consistent with hypotheses, perceived group cohesion remained stable for TECH but decreased significantly for STND, perhaps due to the team message board allowing TECH group members to interact with each other after in person treatment ended. No effects were observed on support given or received that could account for treatment differences in the maintenance of group cohesion.

CORRESPONDING AUTHOR: Sara A. Hoffman, B.A., Northwestern University Feinberg School of Medicine, Chicago, IL, 60611; sara.hoffman@northwestern.edu

10:15 AM-11:15 AM D075

THE INFLUENCE OF SOURCE AND RESPONSE ANCHORS ON JUDGMENTS OF INDIVIDUALS WITH OBESITY

James J. Rossi, M.A.[1], Maija B. Taylor, M.A.[2], Jessica E. Borushok, M.A.[2], Jacob Burmeister, M.A.[2], Nova G. Hinman, M.A.[3], Robert Carels, PhD, MBA[1]

[1]East Carolina University, Greenville, NC; [2]Bowling Green State University, Bowling Green, OH; [3]Bowling Green State University, Perrysburg, OH

Objective: Shifts in social judgments are maleable to subtle alterations in response anchors and information source. We examined the relationship between response anchors, source information and social judgment toward obese persons. Method: In a 2x2 design (N = 199), a simple manipulation of questionnaire response scale anchors were designed to relay positive or negative information about peers' beliefs or scientific research regarding certain personality traits of obese persons. Participants were randomized into one of four experimental conditions: 1) peer consensus – positive response anchors (N = 50; follow-up N = 41), 2) peer consensus – negative response anchors (N = 42; follow-up N = 36), 3) scientific research – positive response anchors (N = 53; follow-up N = 42), and 4) scientific research – negative response anchors (N = 54; follow-up N = 43). Participants were asked to estimate the percentage of obese persons who possess certain positive and negative personality traits immediately after the manipulation and at one week follow up. Participants were also presented a scenario in which they were asked whether they would hire an obese woman. Results: Results indicated that participants receiving anchors skewed towards undesirable traits estimated that higher proportions of obese individuals possessed undesirable traits immediately following the manipulation F(1,165)=2.812, p=.04 with η^2=.017 and at one week follow-up F(1, 140)=2.785, p=.05 with η^2=.020 than participants receiving anchors skewed towards desirable traits. There was a significant interaction post manipulation such that participants in the scientist/research condition with anchors skewed towards desirable traits estimated that a higher proportion of obese individuals possessed favorable traits F(1,165)=3.673, p=.03 with η^2=.022 and indicated a higher likelihood of hiring the obese individual F(1,164)=3.704, p=.03 with η^2=.022 than in the other three conditions. Discussion: Social judgments about obese individuals may be susceptible to subtle manipulation of response anchors and may be impacted by the source of information. Exposure to negative media depictions of individuals with obesity may lead people to express more negative attitudes towards obese individuals.

CORRESPONDING AUTHOR: James J. Rossi, M.A., East Carolina University, Greenville, NC, 27858; rossij14@students.ecu.edu

10:15 AM-11:15 AM D076

THE ROLE OF PARTNER SUPPORT AND RELATIONSHIP SATISFACTION IN SELF-GUIDED HEALTH BEHAVIOR CHANGE

Katelyn Gettens, B.A.[1], Erin Lenz, M.A.[2], Theodore A. Powers, PhD[3], Amy A. Gorin, PhD[1]

[1]University of Connecticut, Storrs, CT; [2]University of Connecticut, Manchester, CT; [3]University of Massachusetts Dartmouth, N Dartmouth, MA

Background: The present study examined the effects of relationship satisfaction, autonomous versus controlled motivation, and autonomy versus directive support provided by family and friends of college students participating in a 6-week, self-guided health behavior program. Methods: Participants were overweight or obese students at a large public university in the Northeast (N = 39; 18.7±1.1 years; 82.1% women, 69% White; BMI 27.4± 3.8 kg/m^2).Participants enrolled in a 6-week intervention designed to help lose or maintain a healthy weight and were instructed to set two behavior-based weight loss goals, identify a supportive partner, and track goal progress weekly via online diary. Relationship satisfaction, support style, and autonomous self-regulation were measured at baseline and 6-weeks using the Quality of Relationships Index (QRI) and the Treatment Self Regulation Questionnaire (TSRQ) respectively. Correlation and regression analyses assessed the relationship between these baseline variables, subjective goal progress and objective weight loss at 6-weeks.Results: At baseline, relationship satisfaction was positively correlated with autonomous self-regulation (r =.38, $p < .05$) and autonomy support (r=.68, $p < .01$). Regression analyses revealed that baseline confidence predicted subjective success at 6-weeks (R^2 = .17, F(1,31) = 6.4, $p < .05$). Baseline measures did not significantly predict objective weight loss.Conclusion: College students working towards health-related goals may benefit from identifying specific support partners with whom they have a strong interpersonal relationship prior to implementing behavior change. High relationship satisfaction paired with maximizing behavior change confidence prior to beginning a health-behavior change program may help individuals achieve their goals.

CORRESPONDING AUTHOR: Katelyn Gettens, B.A., University of Connecticut, Storrs, CT, 06268; katelyn.gettens@uconn.edu

10:15 AM-11:15 AM D077

TRAIT SELF-CONTROL AS A PREDICTOR OF WEIGHT LOSS AND TREATMENT ADHERENCE

Jessica E. Borushok, M.A.[1], Robert Carels, PhD, MBA[2]

[1]Bowling Green State University, Bowling Green, OH; [2]East Carolina University, Greenville, NC

Background: Obesity is a prominent health condition that affects nearly one-third of U.S. adults. Behavioral weight loss interventions consistently help obese and overweight individuals lose moderate amounts of weight, however, there is considerable variability in weight loss among participants. Research has focused on identifying specific factors related to successful weight loss and health behavior change. The current study examined the relationship between trait self-control, weight loss and health behaviors commonly associated with successful weight loss.

Method: Forty-three overweight and obese individuals (81.4%Female; mean age52.54; 93% Caucasian) participated in an 18-week behavioral weight loss program. Participants learned about basic nutrition, habit formation and environmental modification, physical activity, and how to create a caloric deficit. Participants were asked to self-monitor and report caloric intake and expenditure throughout the program.Results: There was an association between higher baseline trait self-control and lower baseline body fat percentage (p = .014). In addition, trait self-control significantly increased from pre- to post-treatment ($p < .001$) and this change in trait self-control was moderately associated with greater self-monitoring (p = .019), calories expended through physical activity (p = .05), and percent weight loss from baseline to post treatment (p = .049) and baseline to six-month follow-up (p = .052).Discussion: Trait self-control is positively associated with successful weight loss outcomes. Future research should explore factors that facilitate increases in trait self-control, such as motivation and creation of habits, and their relationship to weight loss.

CORRESPONDING AUTHOR: Jessica E. Borushok, M.A., Bowling Green State University, Bowling Green, OH, 43402; jborush@bgsu.edu

10:15 AM-11:15 AM D078

TREATMENT PRIORITIES AMONG WOMEN PRIMARY CARE PATIENTS WITH BINGE EATING

Diane L. Rosenbaum, PhD[1], Rachel E. Kimerling, PhD[2], Alyssa Pomernacki, MPH[3], Susan M. Frayne, MD, MPH[3]

[1]VA Palo Alto Health Care System, Center for Innovation to Implementation, Philadelphia, PA; [2]VA Palo Alto Health Care System, National Center for PTSD, Menlo Park, CA; [3]VA Palo Alto Health Care System, Center for Innovation to Implementation, Menlo Park, CA

Binge eating disorder (BED) is a prevalent and impairing behavioral medicine problem. Although BED is associated with deleterious complications including obesity and mental health comorbidities, little is known about treatment priorities among those affected. This study examined mental health and behavioral medicine treatment priorities for patients who screened positive for BED (BED+) compared to those without binge eating symptoms (BED-).Women primary care patients (N=473, 61% Caucasian, mean age 52) with mental health treatment needs provided data during primary care visits. Data were collected in 2012 at four VA medical centers nationally (response rate=75%). Binge eating was measured using the Patient Health Questionnaire Eating Disorder Module. Body mass index came from chart review. Treatment priorities were measured with a card sort exercise; patients reviewed 15 cards outlining mental health/behavioral medicine services and ranked up to 5 treatment priorities.Within the BED+ group, the most common treatment priorities were mood concerns (72% BED+ vs. 61% BED-), weight management (67% BED+ vs. 49% BED-), and food issues (50% BED+ vs. 23% BED-). A higher proportion of the BED+ group included food issues (χ^2=12.6, $p < .001$) and weight management (χ^2=4.1, $p < .05$) than the BED- group. Approximately 86% of the BED+ group met criteria for obesity; treatment priorities were compared for BED+ vs. BED- patients in the subsample with obesity. The proportion of patients prioritizing food issues (χ^2=5.9, $p < .05$) remained higher in the BED+ than the BED- group in the obesity subsample. There were no differences in weight management treatment prioritization in the obesity subsample. Our finding that many BED+ women subjectively recognize the importance of specialized treatment for their dysregulated eating suggests that some patients with BED may be receptive to eating-specific treatment resources despite competing demands of other physical and mental health treatment needs. Additional research is needed to better understand how best to optimize delivery of behavioral medicine services to patients with BED who express interest in engaging in treatment, and how to facilitate patient-centered care for BED+ patients who do not prioritize eating-related interventions.

CORRESPONDING AUTHOR: Diane L. Rosenbaum, PhD, VA Palo Alto Health Care System, Center for Innovation to Implementation, Philadelphia, PA, 19104; diane.rosenbaum@drexel.edu

10:15 AM-11:15 AM D079

USING THE INTEGRATIVE MODEL TO PREDICT PARENTAL MONITORING FOR SUGAR-SWEETENED BEVERAGE CONSUMPTION OF ELEMENTARY CHILDREN

Paul Branscum, PhD, RD, Alexandra Housely, MS, CHES

The University of Oklahoma, Norman, OK

Within the field of public health education there are a number of behavioral theories researchers and practitioners draw upon, however to develop one parsimonious model of the most common theories used today a workshop of theorist (including Albert Bandura and Martin Fishbein) was held, resulting in a proposed ‘Integrative Model’ (IM). Since its inception few researchers have fully operationalized its constructs, and it has never been applied to the area of obesity prevention. Although obesity has many determinants, the consumption of sugar-sweetened beverages (SSB) has gained much interest in recent years. Theory-based lifestyle interventions are greatly needed to discourage children from consuming an excessive amount of SSBs, and while many factors influence a child’s decision to consume SSBs, it is critical to understand how parental monitoring and practices are related to this behavior. The purpose of this study was to evaluate the utility of the IM for parental monitoring practices related to SSB consumption at home, and identify significant determinants for this behaviors to inform future health promotion interventions. A total of 270 parents completed a valid and reliable survey, evaluating the essential constructs of the IM. Two rounds of stepwise multiple regression were performed: In the first round, the independent variables were intentions, skills, and the physical and social environments, while the dependent variable was parental monitoring; and in the second round, the independent variables were attitudes, perceived norms (injunctive and descriptive), and perceived behavioral control, while intentions served as the dependent variable. For the first round of regression, intentions, skills, and the physical environment were found to be significant predictors of parental monitoring practices, accounting for 23.5% of the variance. For the second round of regression, attitudes, perceived behavioral control, and injunctive norms were significant predictors of intentions, accounting for 53.5% of the variance. Results suggest that the IM is an advantageous and practical theory for explaining behaviors related to parental monitoring. Further work is needed to better operationalize constructs of the IM that have not been fully explored.

CORRESPONDING AUTHOR: Paul Branscum, PhD, RD, The University of Oklahoma, Norman, OK, 73019; pbranscum@ou.edu

10:15 AM-11:15 AM D080

VARIATION IN EMOTIONAL EATING PREDICTED BY PAIN, ANXIETY SENSITIVITY, AND CATASTROPHIZING

E. Amy Janke, PhD[1], Patricia Turo, BS[1], Christina M. Hopkins, BS[1], Alesha G. Hruska, MPH, MCHES[2], Elizabeth A. Jones[3]

[1]University of the Sciences, Philadelphia, PA; [2]University of the Sciences, Newark, DE; [3]University of the Sciences, Reading, PA

Background: Emotional eating (EE) contributes to obesity, yet psychological correlates of EE are poorly explored. Self-report scales exist to assess EE, but controversy exists regarding accuracy and correlation with specific emotional eating states. Little is known about cognitive triggers for EE in response to common stressors.Aim: To examine vulnerabilities associated with EE using the presence of pain (as a naturally occurring stressor) and measures of pain catastrophizing, anxiety sensitivity, and pain related fear to predict EE as assessed by the Dutch Eating Behavior Questionnaire (DEBQ) and the Emotional Eating Survey (EES).Method: Adult participants completed an online survey (N=312) inquiring about demographics, persistent pain, eating behavior (DEBQ, EES), stress (PSS), catastrophizing (PCS), anxiety sensitivity (ASI) and pain-related fear (PASS-20). Hierarchical regressions predicted EE subscale scores. BMI and gender were entered as controls, pain and stress were entered in the second step, and catastrophizing, anxiety sensitivity, and fear in the final step.

Results: The full model significantly predicted 19% of variation in DEBQ subscales eating in response to clearly defined emotions (F(7,299)=9.8) and diffuse emotions (F(7,299)=10.0). Individual predictors BMI (β=.19), gender (β=.17), and catastrophizing (β=.18) were significant for eating in response to clearly defined emotions. For EES subscales, the full model significantly predicted 15% of variation for eating in response to anxious emotions (F(7,299)=7.7) and 22% of variation for anger/frustration [(F(7, 299)=11.7). Pain (β=.13) and anxiety sensitivity (β=.21) were significant individual predictors of eating in response to anxiety. Catastrophizing (β=.25) was the only significant individual predictor of eating in response to anger. Eating in response to depressed mood was best predicted by a more parsimonious model (F(4,304)=8.76), pain and stress were significant individual predictors (both β=.18).Conclusion: Anxiety sensitivity may increase vulnerability to EE in response to anxious emotional states. Catastrophizing may confer vulnerability to EE during times of anger and frustration. Pain may be a particular trigger for EE during periods of anxiety and depression.

CORRESPONDING AUTHOR: E. Amy Janke, PhD, University of the Sciences, Philadelphia, PA, 19104; e.janke@usciences.edu

10:15 AM-11:15 AM D081

OPERATIONALIZATION OF LATINO CULTURAL VALUES IN OBESITY INTERVENTION STUDIES

Martina Raquel. Gallagher, PhD, MSN, RN

University of Texas Health Science Center at Housotn, Houston, TX

Latino populations of the United States comprise more than 45 million people, about 15% of the national population. Despite current efforts to address obesity, Latinos, especially those of Mexican origin, experience high rates of being overweight and obese. Research shows these health conditions to be associated with diabetes, high blood pressure, high cholesterol, asthma, arthritis, and overall poor health status. Depending on the acculturation level, interventions that address obesity in Latino populations should incorporate cultural values, such as collectivism, familialism and simpatía. These cultural values may influence recruitment, retention, data collection, and study outcomes. However, there is limited knowledge on how cultural values are operationalized andincorporated in interventions that address obesity in Latinos. Objective: Using the cultural values described by Marin and Marin (1991) as the conceptual definitions, the purpose of this review is to examine the operationalization and incorporation of cultural values in interventions that address obesity in Latinos. Method: An online search using PubMed, Medline, and Scopus Literature databases will be conducted. Key word search will initially include the following: Obesity, Latinos, Physical Activity, Culture, Intervention and Diet. Research article inclusion criteria was studies: 1) were published between 2004 and 2014, 2) are in English, 3) focused on Latinos, 4) have as an outcome a body composition measure such as BMI or fat percentage; and 5) used physical activity, nutrition education, and/or behavior modification as part of the intervention. Out of 139 screened article tittles, 63 meet the inclusion criteria and pre-selected. The abstracts of the pre-selected articles and further screened to evaluate if they incorporated culturally tailored interventions. Out of the 63 abstracts, only 18 articles met this final inclusion criteria. Results: Most interventions cultural tailoring focused on familism, language and bilingual-bicultural staff. Fewer incorporated concepts such as collectivism and simpatia. None incorporated personal space, power distance time orientation and gender role. Culturally tailored interventions that address obesity in Latinos must do more in order to deliver an intervention that is truly acceptable to Latinos.

CORRESPONDING AUTHORs:

10:15 AM-11:15 AM D082

RELATIONSHIP BETWEEN SELF-RATED HEALTH AND OBJECTIVE HEALTH INDICATORS AMONG AFRICAN-AMERICANS

Irma Corral, PhD, MPH[1], Hope Landrine, PhD[2], Marla B. Hall, PhD[3], Jukelia J. Bess, BS[3]

[1]East Carolina University, Brody School of Medicine, Greenville, NC; [2]East Carolina University, Greenville, NC; [3]Brody School of Medicine, East Carolina University, Greenville, NC

Many studies ask people to rate their health on a 5-point scale that ranges from Poor to Excellent (Poor, Fair, Good, Very Good, Excellent). Racial-ethnic minorities (Latino-, Asian-, and African-Americans) are significantly more likely than Whites to rate their health as Poor/Fair, and these racial-ethnic disparities in self-rated health persist even after controlling for demographic variables. For Latinos and Asians, Poor/Fair self-rated health generally does not match objective health-status indicators such as the presence of major diseases, and instead seems to reflect a variety of cultural factors that are unrelated to health. The extent to which this also holds for African-Americans remains unclear. Hence, we investigated the relationship between self-rated health, objective health indicators, and demographics among a random, statewide sample of 2,118 African-American adults. Hierarchical logistic regression revealed that Poor/Fair self-rated health varied with income and age but not with health insurance or education. Low-income and older people were 2.2 to 3.6 (ORs) times more likely to rate their health as Poor/Fair than their higher-income and younger counterparts. After controlling for demographic variables, rating one's health as Poor/Fair was strongly related to physician-diagnosed hypertension (OR = 2.2), diabetes (OR=2.1), and heart disease (OR=2.96). These findings suggest that unlike other racial-ethnic minorities, for African-Americans, Poor/Fair self-rated health may reflect objective health status.

CORRESPONDING AUTHOR: Irma Corral, PhD, MPH, East Carolina University, Brody School of Medicine, Greenville, NC, 27834; corrali@ecu.edu

10:15 AM-11:15 AM D083

REPORTS OF INDOOR TANNING-CAUSED BURNS ON TWITTER

Andrew Seidenberg, MPH[1], Sherry L. Pagoto, PhD[2], Theodore A. Vickey, MS[3], Eleni Linos, MD[4], Mackenzie Wehner, MD[5], Alan Geller, MPH, RN[6]

[1]Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC; [2]University of Massachusetts Medical School, Worcester, MA; [3]FitWell, Carlsbad, CA; [4]UCSF School of Medicine, San Francisco, CA; [5]fake organization, Fake City, CA; [6]Department of Social and Behavioral Sciences, Harvard School of Public Health, Boston, MA

Background: Adolescent use of indoor tanning beds has reached near epidemic levels. However, few surveillance tools exist for monitoring indoor tanning-caused injuries. We characterized indoor tanning-related tweets for reports of burning.
Methods: A database of all tweets containing keyword descriptions for both indoor tanning bed use (e.g., tanning bed, indoor tanning) and erythema (e.g., burn, burnt, fried) in 2013 were acquired from a social media monitoring firm (Olytico; Dublin, Ireland). All tweets were read by a single reviewer (a second reviewer read a 5% sample to determine accuracy), and each tweet was assessed to determine whether indoor tanning-caused burn is described, as well as other details related to the burn (e.g., body part burned, severity, reports of burning multiple times).
Results: A total of 23,558 tweets in 2013 contained the combination of keywords. Of these, 16,829 (71%) described indoor tanning-caused burns. Common sites reportedly burned were buttocks (n=3456), face (n=1092), chest/breast (n=603), and eyes and eyelids (n=223). Descriptions of peeling (n=53), blistering (n=24), skin purpling (n=11), as well as inability to sleep (n=129), sit (n=98), or move (n=73) from indoor tanning-burns were detailed. A total of 507 tweets described burning >1 time from a tanning bed. Symptoms such as pain and itching associated with the burn were described in 2199 and 524 tweets, respectively. A total of 256 tweets specifically attributed the burn to new tanning bed bulbs, and 229 tweets mentioned falling asleep inside the tanning bed.
Conclusions: In 2013, an alarming number of Twitter users reported indoor tanning-caused burns, including injuries to the eyes, severe burning, and burning multiple times. Social media surveillance may provide unique insight into tanning behaviors and injuries that are not currently captured through traditional public health surveillance efforts.

CORRESPONDING AUTHOR: Andrew Seidenberg, MPH, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599; aseiden@live.unc.edu

10:15 AM-11:15 AM D084

RISK-RELATED OPERATING PRACTICES IN UV INDOOR TANNING FACILITIES ACROSS SIX U.S. CITIES

Laura J. Greathouse, B.A.[1], Nancy Asdigian, PhD[2], Joni Mayer, PhD[3], Miriam L. Dickenson, PhD[4], Lori A. Crane, PhD, MPH[5]

[1]Colorado School of Public Health, Denver, CO; [2]Colorado School of Public Health, Aurora, CO; [3]San Diego State University, San Diego, CA; [4]University of Colorado Denver, Aurora, CO; [5]Colorado School of Public Health, University of Colorado Anschutz Medical Campus, Aurora, CO

Background: The operating practices of U.V. indoor tanning facilities have the potential to increase or decrease risk to customers. This investigation explores differences in the operating practices of indoor tanning facilities located in six cities with varying state-level indoor tanning regulation and enforcement.
Methods: We selected the four zip code areas with the highest proportion of 18-24 year old Caucasians in six cities across the U.S., diverse in geography, climate, and level of state-level tanning regulation. Internet searches were used to find all U.V. tanning facilities in the selected areas, followed by telephone interviews to determine each facility's registration requirements and guidelines for session duration and frequency of tanning.
Results: Laws that govern U.V. tanning facilities varied among cities, ranging from no law in Pittsburgh, PA to the most stringent laws in Portland, OR and Austin, TX facilities. Of all U.V. tanning facilities (N = 57), 89% required some sort of registration for new customers. All six facilities that did not require registration had tanning as a secondary, not primary, business in apartment complexes, gyms, nail salons, and hair salons. Although registration processes differed among facilities, 96% required new customers to sign a waiver and risk statement before use. Fewer than half of the registration requirements included a skin assessment; only one included a medical assessment, and none assessed skin cancer history. 97% of facilities allowed customers to tan every day. In order to determine session duration, 58% of facilities used operator and customer input, yet 27% of facilities left decisions of duration completely up to the customer.
Conclusions: The lack of comprehensive registration requirements for indoor U.V. tanning is a concern to both the facility and the customer. Stricter policies are needed to ensure customers understand the risks of indoor tanning and have no prior health issues that increase the risks of indoor tanning.

CORRESPONDING AUTHOR: Laura J. Greathouse, B.A., Colorado School of Public Health, Denver, CO, 80203; laura.greathouse@ucdenver.edu

10:15 AM-11:15 AM D085

SEX DIFFERENCES IN CANCER COMMUNICATION WITH PROVIDERS: RESULTS FROM THE 2012 LIVESTRONG SURVEY

Stephanie Nutt, MA, MPA[1], Carla Bann, PhD[2], Linda Squiers, PhD[3], Sarah R. Arvey, PhD[4], Aditi Narayan, MSSW[1], Ruth Rechis, PhD[1]

[1]LIVESTRONG Foundation, Austin, TX; [2]RTI International, Research Triangle Park, NC; [3]RTI International, Olney, MD; [4]LIVESTRONG Foundaion, Austin, TX

Introduction: With improved detection and treatment, cancer survivors are living longer than ever before, resulting in survivors' greater need for information about long-term effects and follow-up care. Literature suggests that doctors are the most trusted source of health information; survivors rely on physicians to share information about follow-up care, late effects, emotional needs, and lifestyle and health recommendations. This study assessed the degree to which survivors are discussing these issues with their healthcare providers (HCPs).Methods: The LIVESTRONG Foundation conducted an online survey of cancer survivors from June to December 2012. Analyses included 4,320 cancer survivors who responded to the online survey, were U.S. residents, and had been diagnosed since 2002. Ordered logistic and linear regression models were conducted to compare communication outcomes by demographic and cancer-related factors.Results: Controlling for other factors, male survivors were significantly more likely than female survivors to have detailed discussions with their HCPs about the need for follow-up care, long-term side effects, and lifestyle or health recommendations (Table 1). No sex differences were observed for discussion of social or emotional needs. Men also expressed significantly greater confidence in discussing with their HCPs any personal problems related to their diagnoses; 51% of men vs. 43% of women reported being "very confident." Table 1. Discussions with Doctors by Sex

Characteristic	Did not discuss %	Briefly discussed %	Discussed in detail %	Adj OR (95% CI)	p-value
Need for follow-up care					
Male	3	15	82	1.82 (1.48, 2.24)	<0.001
Female	4	25	72	REF	
Long-term side effects					
Male	12	30	58	1.87 (1.58, 2.21)	<0.001
Female	22	40	38	REF	
Emotional or social needs					
Male	37	35	28	1.10 (0.93, 1.29)	0.270
Female	39	35	26	REF	
Lifestyle or health recommendations					
Male	19	40	41	1.21 (1.03, 1.43)	0.019
Female	24	42	34	REF	

REF=reference category Conclusion: Findings from this analysis suggest that men are more likely to communicate with their HCPs about important post-treatment information. In the future, HCPs should consider differences in patient sex in order to ensure that all cancer survivors receive the post-treatment information they need.

CORRESPONDING AUTHOR: Stephanie Nutt, MA, MPA, LIVESTRONG Foundation, Austin, TX, 78702; stephanie.nutt@livestrong.org

10:15 AM-11:15 AM D086

SOCIAL SUPPORT AND PRO-INFLAMMATORY CYTOKINE LEVELS IN CHRONIC FATIGUE SYNDROME

Devika R. Jutagir, M.S.[1], Daniel L. Hall, M.S.[1], Emily G. Lattie, M.S.[1], Laura C. Bouchard, M.S.[1], Michael H. Antoni, PhD[2], Dolores M. Perdomo, PhD[2], Sara J. Czaja, PhD[2], Nancy G. Klimas, MD[3]

[1]University of Miami, Coral Gables, FL; [2]University of Miami, Miami, FL; [3]Nova Southeastern University, Fort Lauderdale, FL

Objective: Levels of circulating pro-inflammatory cytokines are dysregulated in people diagnosed with Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME). Low perceived social support (SS) is associated with higher levels of these cytokines in cancer patients, yet the relationship between SS and circulating pro-inflammatory cytokines in patients with CFS/ME has not been studied. This study examines whether SS and cytokine levels are associated in patients with CFS/ME, and whether specific types of SS relate to specific cytokines. Methods: 56 men and women diagnosed with CFS/ME completed the Social Provisions Scale, which divides SS into subscales including attachment (AT), social integration (SI), reliable alliance (RA), and guidance (GD). Circulating pro-inflammatory cytokine levels were measured from blood samples. Multivariate regressions controlling for age (M=48.9 years), education (M=some college), and BMI (M=32.1 kg/m^2) were conducted to assess whether SS subscales were related to cytokine levels. Results: When controlling for covariates, SI was significantly negatively associated with IL-1α (β=-0.300, p=0.029) and marginally negatively associated with IL-2 (β=-0.239, p=0.090), and GD was significantly negatively associated with IL-1β, (β=-0.279, p=0.047). SS was not significantly associated with IL-6. Conclusions: In patients with CFS/ME, those reporting greater perceived social support revealed lower levels of pro-inflammatory cytokines. Specifically, greater receipt of guidance was associated with lower levels of circulating IL-1β, and greater social integration was associated with lower IL-1α and IL-2. However, IL-6 was not related to any type of social support, and attachment and reliable alliance were not associated with cytokine levels. Longitudinal research is necessary to assess directionality between these variables, and whether behavioral interventions could impact inflammation by increasing social support in this population.

CORRESPONDING AUTHOR: Devika R. Jutagir, M.S., University of Miami, Coral Gables, FL, 33146; djutagir@psy.miami.edu

10:15 AM-11:15 AM D087

SOMATIC SYMPTOMS AS PREDICTORS OF DEPRESSION AND ANXIETY IN REFUGEES AND TORTURE SURVIVORS

Sheau-Yan Ho, B.A.[1], Matthew Price, PhD[2], Victoria M. Baptiste, B.A.[3], Diane T. Gottlieb, PhD[1], Valerie Harder, PhD[1], Karen Fondacaro, PhD[1]

[1]University of Vermont, Burlington, VT; [2]University of Vermeont, Burlington, VT; [3]University of Vermont, Winooski, VT

The experience of psychological distress is well-established in refugees and torture survivors; however, the symptomatic presentation of distress remains unclear. Refugees and torture survivors often present with somatic distress that cannot be explained by medical evidence. There is a lack of research that explains the link between somatization and emotional distress, particularly across cultural groups. In the current study, a total of 59 adult refugees and torture survivors referred for psychotherapy services were assessed at a community clinic in Burlington, Vermont. Participants were administered the Adult Self-Report, Hopkins Symptom Checklist, and Harvard Trauma Questionnaire to assess for somatic complaints and symptoms of depression, anxiety, and posttraumatic stress disorder. Regression analyses indicated that somatization was a significant predictor of depression, anxiety, and posttraumatic stress disorder. Moreover, we found that the relation between somatic complaints and anxiety was moderated by the number of traumatic events experienced, such that somatic complaints were more strongly associated with anxiety in individuals who experienced a greater number of traumatic events. Similar findings emerged for the relation between somatic complaints and depression. Findings suggest that refugees who experience complex traumas may be at greater risk of depressive and anxiety-related distress. Results hold broader implications for the assessment and treatment of mental health problems in refugees and torture survivors. Further research and interdisciplinary work is needed in this area to address the cultural factors related to mental health and the growing need associated with the influx of refugees in the United States.

CORRESPONDING AUTHOR: Sheau-Yan Ho, B.A., University of Vermont, Burlington, VT, 05401; sho@uvm.edu

10:15 AM-11:15 AM D088

THE ABILITY TO EXPRESS EMOTION PREDICTS SYMPTOMS, SUBJECTIVE HEALTH, AND C-REACTIVE PROTEIN

Nathan S. Consedine, PhD[1], Natalie L. Tuck, BSc[2]

[1]The University of Auckland, Auckland, New Zealand; [2]University of Auckland, Auckland, New Zealand

Background: Particular patterns of regulating emotion are reliably linked to morbidity, mortality, and the success with which individuals adapt to chronic conditions. Most work has, however, measured emotion regulation in terms of self-reported traits; such data are prone to bias and may not capacitate viable interventions. The current report assessed the ability of objectively-assessed emotion regulatory skills to predict symptoms, relative health, and C-reactive protein (CRP), even when controlling for trait affect and regulatory measures.*Methods:* 80 female participants (aged 18-35 years), completed trait measures of emotion and emotion regulation before completing a short regulatory skill task involving the rapid posing of 10 emotion expressions. Two raters independently coded eight of these expressions to index expressive accuracy and strength for each emotion. *Results:* Pearson's correlations showed that greater skill in posing emotion expressions predicted higher CRP ($p < .05$), but less depression ($p < .01$) and negative affect ($p < .01$), as well as fewer symptoms ($p < .01$), greater positive affect ($p < .01$), and better subjective health ($p < .01$). Regressions controlling for exercise, diagnosis counts, depression, and trait regulatory styles showed that greater skill scores still predicted higher CRP (B=.26; $p < .05$) and fewer symptoms (B=-.16; $p < .05$), but no longer predicted subjective health.*Conclusions:* Although they are complex, these early data suggest objectively assessed regulatory skills may be an important predictor of mental and physical health outcomes. Unlike dispositional traits which are difficult to change, skills such as those involved in expressing context-appropriate emotion may be more malleable. The development of emotion regulatory skills may represent a useful target for psychosocial interventions in health contexts.

CORRESPONDING AUTHOR: Nathan S. Consedine, PhD, The University of Auckland, Auckland, 1142; n.consedine@auckland.ac.nz

10:15 AM-11:15 AM D089

UNCOVERING THE TRUTH ABOUT AFRICAN AMERICAN PERCEPTIONS OF ASTHMA

Bridgette Jones, MD[1], Carrie Vyhlidal, PhD[1], Melissa Robinson, MBA[2], Michael Brooks[3], Kathy Googin, PhD[4]

[1]University of Missouri Kansas City, Kansas City, MO; [2]Black Healthcare Coalition Kansas City, Kansas City, MO; [3]Zion Grove Missionary Baptist Church, Kansas City, MO; [4]Children's Mercy Hospitals and Clinics, University of Missouri Kansas City, Kansas City, MO

African American (AA) children are disproportionately affected by asthma (13% vs. 8% non-Hispanic whites) and experience 30% higher death rates than whites. AA misconceptions about the disease and its treatment may be contributing to observed health disparities. Working from a Community Based Participatory Research approach we partnered with an AA church and minority health focused community based organization to engage AAs in identifying novel strategies for addressing asthma. We co-developed and implemented a cross-sectional survey to simultaneously explore asthma prevalence, knowledge and beliefs and raise awareness among AAs in a large Midwestern city. Surveys were administered over 6 months to adults at community events sponsored by our partners. Descriptive data for the first 99 respondents (56% 26-35 years of age, 43% high school/GED education or less, 52% Medicare/Medicaid) are reported. Nearly half (43%) reported an asthma diagnosis, 75% have a close family member with asthma, and 59% take care of someone with asthma. General asthma knowledge was good with awareness of the genetic contribution to asthma (75%) and awareness of the symptomatology of night time cough (72%). Important misconceptions include: 33% being concerned about addiction to asthma medication, 60% who don't know or believe that inhaled steroid are dangerous, and 50% who believe children usually outgrow asthma. More than half (55%) did not view asthma as a problem for their community despite 57% indicating the need for more asthma education. Half (52%) want to learn more at church and community events. Results suggest that general asthma knowledge is good but misconceptions around standard asthma treatment and disease progression remain that may hinder adequate treatment and contribute to poorer asthma outcomes. Although there was poor recognition of the large impact of asthma in the community, the need for asthma education was recognized and community events and churches were cited as preferable venues for education.

CORRESPONDING AUTHOR: Bridgette Jones, MD, University of Missouri Kansas City, Kansas City, MO, 64108; bljones@cmh.edu

10:15 AM-11:15 AM D090

USING PRECEDE-PROCEED HEALTH BEHAVIOR THEORY TO ADDRESS HEALTH DISPARITIES IN SOUTHWEST VIRGINIA

Cody Goessl, MS, ATC[1], Susan Meacham, PhD, RD[2], Dalia Meisha

[1]Virginia Tech , Blacksburg, VA; [2]Via College of Osteopathic Medicine, Blacksburg, VA, Blacksburg, VA

Background: Previous researchers have reported in a series of publications that rural coal mining regions of central Appalachia have high mortality rates of cancers (217.2 per 100, 000, r = 0.230) and cardiovascular diseases (291.96 and 250.94 per 100,000 in mountaintop and non-mountaintop mining areas, $p < .05$ versus 228.64 per 100,000 in nonmining areas) possibly correlated to high levels of coal mining production (Esch, Hendryx and Zullig, et.al). The purpose of this study was to determine if correlations exist between chronic diseases and coal production in southwest Virginia. Virginia Department of Health death records 1960- 2012 and data on other determinants of health were obtained to identify factors contributing to mortality that fit the first phases of the public health Precede-Proceed behavior modification model. Methods: In this retrospective cohort study Virginia Department of Health death records (n=755,414) from 1960 through 2012were analyzed utilizing IBM SPSS Version 21.0. Data for each county in two Virginia Department of Health Districts in southwest Virginia were filtered from the state-level data. Chronic disease deaths were extracted from each county to show prevalence rates for cancer, diabetes, heart disease, mental illness and kidney diseases. Frequencies and percentages of each chronic disease were aggregated and reported for ranges of years (1960-1964, 1965-1968, 1969-1974, 1975-1978, 1979-1988, 1989-1998, 1999-2012). Results: For the seven coal counties where most residents lived and died, acute pericarditis and acute myocardial infarction were the leading causes of death ranging from 7.8% (1999-2012) to 23.7% (1965-1968). After 1968 in the high coal producing counties, acute myocardial infarction accounted for 23.6% (1989-1998) to 39.7% (1969-1974) of all chronic disease deaths. Conclusions: The prevalence rates of chronic diseases in coal mining communities were slightly higher than the rates observed at the state level. Coal production values have fluctuated and more recently declined over time in the seven coal counties. The Precede-Proceed model provides an opportunity to plan intervention programs addressing the complex relationships among chronic diseases and the social and environmental factors common to residents in coal dependent communities.

CORRESPONDING AUTHOR: Cody Goessl, MS, ATC, Virginia Tech, Blacksburg, VA, 24060; cgoessl@vt.edu

10:15 AM-11:15 AM D091

PHYSICAL ACTIVITY, QUALITY OF LIFE AND LIFE SATISFACTION

Susana Barradas, Ms, Carolyn Finck, PhD

Universidad de los Andes, Bogotá, Colombia

A growing body of evidence from both North America and Europe has found physical activity (PA) to be a key factor to health related quality of life (HRQoL) in the general population. These studies have showed a consistently positive association between reported PA levels and perceived HRQoL. Less common though are studies linking PA with life satisfaction (LS). Given the dearth of research in both topics from South America, the aim of this study was to assess relations between PA and perceived HRQoL and LS. Data were obtained using a cross-sectional survey of 1533 participants in the city of Bogotá. The sample was selected based on an age criteria (18 years or older). HRQoL was measured with the European Organization for Research and Treatment of Cancer 30-item core quality of life questionnaire (EORTC QLQ-C30). The mean score on the HRQoL scale was 83.6 (SD=15.7) and the median was 83.3 (range 0-100). LS was measured with Questions on Life Satisfaction Scale (FLZ). The mean score in this scale was 39.2 (SD=34.5) and the median was 27 (range -47 and160). Both results indicate higher scores than for other populations described in the literature. The International Physical Activity Questionnaire (IPAQ) was used to measure PA levels.The mean age of participants was 41.7 (SD=16.3) in a survey with 451 men and 1082 women. Regarding Body Mass Index, 1.3% of the sample is underweight, 39.6% is normal, 38.8% is overweight and 20% is obese. The mean score for general HRQL was 83.6 (SD=15.7), which indicates a good perception of overall HRQL. The mean score for LS was 39.21 (SD=34.6), which indicates good satisfaction with life as well. The mean score for moderate to vigorous PA was 158.1 minutes (SD=230.2). As expected, participants who reported higher PA levels also reported a significantly better LS perception (M=41.9, SD=35.0) in relation with participants with lower levels of PA (M=37.6, SD=34.2) (t[1532]=-2.36 $p < 0.01$). However, contrary to what was expected, there´s no statistical differences in the perception of HRQoL and PA levels (t[1532]=-1.03 p=0.30).In sum, PA level was positively associated with individuals' perceptions of LS, but no association was found between PA levels and perceptions of HRQoL. Further work is necessary to better understand the link between PA and HRQoL in this population, maybe using objective measures of PA.

CORRESPONDING AUTHOR: Susana Barradas, Ms, Universidad de los Andes, Bogotá, 1100011; sc.pataco54@uniandes.edu.co

10:15 AM-11:15 AM D092

POTENTIAL HEALTH BENEFITS OF A ZOMBIE APOCALYPSE: METAMOTIVATIONAL STATES DURING EXERCISE

Arielle Gillman, BA, Angela Bryan, PhD

University of Colorado Boulder, Boulder, CO

The goal of this study was to utilize mobile applications (apps) to manipulate individuals' motivational state during an exercise bout and observe how thinking about goals during exercise is associated with participants' affective response to exercise and ratings of perceived exertion. 28 participants completed a 30-minute treadmill run at ventilatory threshold while using one of two randomly-assigned mobile running apps; Nike+Running, a performance-monitoring app which theoretically induces a goal-oriented, "serious," low arousal state, or Zombies Run!, a virtual reality game, theoretically inducing a "playful," high arousal state and dissociation from primary exercise goals; measures were taken every five minutes. Participants in the Nike+Running condition reported decreased felt arousal over time, whereas those in the Zombies run! condition reported increased felt arousal over time ($F_{1,\ 26}$=3.4, p=.0767). Participants in the Zombies, Run! condition reported more dissociative thoughts from exercise (i.e. daydreamed more) on average than those in the Nike+Running condition ($F_{1,\ 26}$=3.76, p=.0634). At the end of the exercise bout, feeling more playful was associated with lower perceived exertion (r_{25}=-.452, p=.018). Transitioning into a more playful motivational state over time was associated with an increase in positive affect over the course of the bout (r_{25}=.614, p=.001). Decreases in RPE were associated with increases in positive affect over time (r_{25}=-.45, p=.018), as were increases in felt arousal (r_{25}=.501, p=.008). Given the increasing popularity of mobile apps that are ostensibly designed to increase exercise participation, it is important to understand the effects of these apps on established psychological predictors of exercise behavior, including motivation, goal orientation, and subjective responses to an exercise bout.

CORRESPONDING AUTHOR: Arielle Gillman, BA, University of Colorado Boulder, Boulder, CO, 80303; arielle.gillman@colorado.edu

10:15 AM-11:15 AM D093

PREDICTORS OF HEALTH BEHAVIOR INFORMATION DELIVERY PREFERENCE IN CANCER SURVIVORS

Emily C. Martin, PhD[1], Karen Basen-Engquist, PhD, MPH[2], Elizabeth J. Lyons, PhD, MPH[3], Matthew Cox, PhD[4], Cindy Carmack, PhD[1], Janice A. Blalock, PhD[5], Wendy Demark-Wahnefried, PhD, R.D.[6]

[1]MD Anderson Cancer Center, Houston, TX; [2]The University of Texas MD Anderson Cancer Center, Houston, TX; [3]University of Texas Medical Branch, Galveston, TX; [4]University of Texas M.D. Anderson Cancer Center, Houston, TX; [5]University of Texas MD Anderson Cancer Center, Houston, TX; [6]UAB School of Health Professions, Birmingham, AL

Objective: This project sought to investigate cancer survivors' preferences for health behavior intervention delivery, and examined what factors predicted acceptability of newer technology, such as smartphones, as compared to more traditional mediums of delivery.Methods: A cross-sectional survey assessing interest in health behavior interventions and preferences about intervention modality was mailed to 1,917 early stage breast, colorectal, and prostate cancer survivors in 2010. Regression models were used to predict interest in four intervention delivery modalities: clinic-based programs, telephone calls with a health counselor, computer-based programs, and smartphone-based programs. For each model, the same 16 predictors were included i.e., demographic information (list), current use and access to various forms of technology (e.g., webcam), diet, exercise, and interest in different types of behavioral interventions.Results: Responses were received from 1053 survivors (528 breast cancer, 106 colorectal cancer, and 419 prostate cancer). The percent of participants who reported being *extremely* or *very* interested in each intervention modality was: clinic-based, 16%; telephone calls with a counselor, 16%; computer-based, 26%; and smartphone-based, 8%. For regression model 1, interest in getting in shape (i.e., exercise) and healthy eating positively predicted interest in clinic-based programs (R^2 = .36). For the second model, interest in exercise, healthy eating, and weight control positively predicted interest in interventions utilizing telephone calls with a health counselor (R^2 = .31). For the third model, use of social networking sites and webcam, as well as interest in exercise and healthy eating positively predicted interest in computer-based (e.g., internet based) interventions (R^2 = .39). Finally, the fourth model showed that older survivors were less interested in health behavior interventions delivered via smartphone while use of social networking sites, use of a webcam, and interest in weight control interventions all positively predicted interest in this delivery modality (R^2 = .22).Conclusion: While survivors highly endorsed computer-based programs, preferences were differentially predicted by age, technology use, and interest in various health behaviors.

CORRESPONDING AUTHOR: Emily C. Martin, PhD, MD Anderson Cancer Center, Houston, TX, 77025; emilymar@gmail.com

10:15 AM-11:15 AM D094

QIGONG IMPROVES DEPRESSIVE SYMPTOMS, HOPE AND MENTAL FUNCTIONING IN PERSONS WITH INSOMNIA AND DEPRESSIVE DISORDERS: A RCT

Jessie SM Chan, PhDcandidate, MPH[1], Cecilia LW Chan, PhD[1], LP Yuen, BCM[2]

[1]The University of Hong Kong, Hong Kong (SAR), China, Peoples Rep; [2]International Association for Health and Yangsheng, Hong Kong, China, Hong Kong (SAR), China, Peoples Rep

Background: Sleep disturbance is a very common complaint that results in emotional distress and poor health related quality of life (HRQoL). Qigong is an ancient Chinese self-healing exercise. This study aims to investigate the effectiveness of Qigong exercise on sleep, emotional distress, hope and HRQoL in people with insomnia and depressive disorder.Methods: People with sleep complaints in the community were screened for depressive disorder by Chinese version Center for Epidemiologic Studies Depression Scale (CES-D). 157 participants who had CES-D ranged 10 – 34 without any bipolar and other psychotic diseases were randomly assigned to Qigong (n=81) and waitlist control (n=76). Intervention was eight 2.5-hour weekly Qigong lessons. Outcome measures including CES-D, Pittsburgh Sleep Quality Index (PSQI), adult trait hope scale and SF-12 for HRQoL were assessed at baseline (T0) and post-intervention (T1). Two groups at baseline were compared by independent t-test. Repeated measures analysis of covariance (ANCOVA) controlling for CES-D and hope scores at baseline were conducted to examine interaction effects of group by time.Results: All demographic characteristics were comparable between two groups (mean age = 55.5, SD=9.3). The majority of participants were female (n=122, 77.7%). At baseline, participants had severe sleep disturbance [14.0 (SD=2.9) and 12.8 (SD=3.4) for Qigong and control groups, respectively, p > .05], mild to moderate depression [22.9 (SD=6.3) and 20.1 (SD=6.4), respectively, p=.001] and poor HRQoL (PCS: 38.6 (SD=8.9) and 40.0 (SD=7.7), p>.05; MCS: 41.6 (SD=8.4) and 42.8 (SD=7.8, p>.05). It seemed that participants in Qigong group had more severe depression and less hope [49.0 (SD=11.0) and 53.4 (SD=11.8), p=.016] than control group.Controlling for CES-D and hope at baseline, repeated measure ANCOVA showed that Qigong group had significant improvements in PSQI score (F=9.2, p=.003), CES-D score (F=22.2, p < .001), hope (F=13.9, p < .001) and HRQoL (PCS: F=0.182, p=.671; MCS: F=8.1, p=.005) following Qigong intervention.Conclusion: This study showed that 8 sessions of Qigong exercise was an effective treatment for reducing sleep disturbance, emotional distress and improving hope and mental functioning in the people with insomnia and depressive disorders.

CORRESPONDING AUTHOR: Jessie SM Chan, PhDcandidate, MPH, The University of Hong Kong, Hong Kong (SAR), 852; chansm5@hku.hk

10:15 AM-11:15 AM D095

SECOND-HAND EXERCISE? ASSESSING THE EFFECTS OF SPOUSAL HEALTH BEHAVIORS ON SELF-REPORTED HEALTH

Tess Thompson, MPH[1], Joshua Jackson, PhD[2]

[1]Washington University in St. Louis, Webster Groves, MO; [2]Washington University in St. Louis, St. Louis, MO

Health behaviors such as smoking, binge drinking, and physical activity are well known to affect an individual's health. Less clear, however, are the effects of a partner's health behaviors on one's own health. We used data from married couples (N = 2,518 opposite-sex dyads) in a nationally representative Australian dataset to examine the effects of one's own and partner's health behaviors (smoking, exercise, and drinking), as well as similarity in health behaviors, on self-reported health while controlling for age, sex, relationship satisfaction, resident children, and income. Mean age of respondents was 49, 49% exercised 3+ time/week, 16% were smokers, and 56% had resident children. Average self-reported health on a 5-point scale fell between "good" and "very good," and the intraclass correlation of .28 showed that 28% of the variation in self-reported health was attributable to marital dyad. 84% of dyads were concordant in smoking status, 66% were concordant in binge drinking, and 25% were concordant in physical activity. We found significant effects for one's own physical activity level (t = 20.44, p < .05) and smoking status (t = -7.17, p < .05) on self-reported health, as well as significant effects for partner's physical activity (t = 2.99, p < .05) and smoking status (t = -2.08, p < .05). Effects for binge drinking, partner's binge drinking, and concordance in smoking, drinking, and physical activity status were not significant; similarity in health behaviors adds little to the models over and above effects of one's own and partner behaviors. These results show that, in couples, health is associated with not only one's own smoking and exercise, but also one's partner's smoking and exercise. Targeting couples in addition to individuals may be an effective and innovative prevention strategy for health behavior interventions.

CORRESPONDING AUTHOR: Tess Thompson, MPH, Washington University in St. Louis, Webster Groves, MO, 63119; tessthompson@wustl.edu

10:15 AM-11:15 AM D096

SELF-PACED EXERCISE, AFFECT, AND ADHERENCE: A MEDIATOR ANALYSIS USING EMA DATA

David M. Williams, PhD[1], Shira I. Dunsiger, PhD[2], Robert Miranda, Jr., PhD[3], Chad Gwaltney, PhD[4], Peter M. Monti, PhD[3], Jessica A. Emerson[5]

[1]Brown University School of Public Health, Providence, RI; [2]The Miriam Hospital, Providence, RI; [3]Brown University, Providence, RI; [4]Brown University, Westerly, RI; [5]Brown University, Pawtucket, RI

A recommendation for self-paced exercise may result in a more positive hedonic response (i.e., feeling good/bad) and thus better adherence to exercise programs than a moderate intensity exercise prescription. In our recent randomized pilot study, 59 otherwise healthy, low-active (exercise < 60 min/week), overweight and obese (BMI: 25.0-39.9) adults (ages 18-65) were randomly assigned to either self-paced or moderate intensity (64-76% of age-predicted maximum HR) exercise in the context of an otherwise identical six-month print-based exercise promotion program. To reduce expectancy bias, participants were blinded to the difference between study conditions (i.e., intensity recommendations). Self-paced exercise resulted in approximately 26 additional min/week of exercise and 83 additional kcals/week of exercise-related energy expenditure. In the present study, we used additional data to examine hedonic response to individual exercise sessions as a putative mediator of the effects of self-paced vs. moderate intensity on latency and duration of subsequent exercise sessions. Duration of and hedonic response to exercise sessions performed throughout the six-month program were assessed via ecological momentary assessment. Using a regression-based mediation model with bootstrapped standard errors, we estimated: (a) effects of self-paced vs. moderate intensity exercise on hedonic response to exercise (b=0.20, SE=0.28, f^2=0.02 ,p=.49); (b) effects of hedonic response to exercise on latency/duration of next exercise session (b=0.47, SE=0.25, f^2=0.04, p=0.07); and (c) indirect effects of self-paced vs. moderate intensity exercise on exercise outcomes via hedonic response to exercise (b=0.11, SE=0.06 , f^2=0.10, p=0.15). The results provide modest support for a meditational pathway linking self-paced exercise, hedonic response, and exercise adherence among overweight and obese adults; however, the small sample size is an important limitation and thus a larger study is needed.

CORRESPONDING AUTHOR: David M. Williams, PhD, Brown University School of Public Health, Providence, RI, 02912; david_m_williams@brown.edu

10:15 AM-11:15 AM D097

SIMILARITY IN PATIENT AND SPOUSE OUTCOMES FROM A SPOUSE-ASSISTED LIFESTYLE INTERVENTION

Heather A. King, PhD[1], Cynthia J. Coffman, PhD[1], Megan A. McVay, PhD[1], Amy S. Jeffreys, MStat[2], Corrine I. Voils, PhD[1]

[1]Durham Veterans Affairs Medical Center and Duke University Medical Center, Durham, NC; [2]Durham VA Medical Center, Durham, NC

Objective: Observational studies indicate spousal concordance of health behaviors such as physical activity. Less well understood is spousal concordance in response to intervention. We conducted dyadic analyses using data from a trial testing a spouse-assisted lifestyle intervention to improve patient cholesterol to investigate similarity of intervention effects on physical activity in patient and spouse pairs. Method: 255 outpatient, married veterans with elevated low-density lipoprotein cholesterol and their spouses were randomized to usual care or an intervention comprising nine monthly goal-setting telephone calls to patients and separate support planning calls to spouses. Outcomes for this analysis included frequency and duration of moderate intensity physical activity at baseline and 6- and 11-month follow-up time points. Pearson product-moment correlations were computed, at each time point and separately for intervention and usual care arms, as a dyadic index of similarity.Results: 132 couples (51.8%; 63 usual care, 69 intervention) had physical activity data from all three time points. At baseline, patient and spouse frequency and duration of moderate intensity physical activity were moderately, positively correlated in both the usual care (r=.36, p=.00; r=.26, p=.04) and intervention arms (r=.44, p=.00; r=.33, p=01). Similar results were found at 6 (r=.35, p=.00; r=.27, p=.02) and 11 months (r=.36, p=.00; r=.34, p=.00) for the intervention arm. In contrast, in the usual care group only dyad members' scores on physical activity frequency were correlated at 6 months (r=.28, p=.03), and neither frequency nor duration of physical activity were correlated between patients and spouses at 11 months. Conclusion: Lifestyle interventions involving both members of the couple may influence similarity in health behaviors.

CORRESPONDING AUTHOR: Heather A. King, PhD, Durham Veterans Affairs Medical Center and Duke University Medical Center, Durham, NC, 27705; heather.king@duke.edu

10:15 AM-11:15 AM D098

SOCIAL EXERGAMING: EFFECTS ON ACTIVITY AND SELF-EFFICACY IN OVERWEIGHT ADOLESCENTS

Staiano E. Amanda, PhD, Arwen M. Marker, BA, Robert L. Newton, Jr., PhD, Robbie Beyl, PhD, Daniel S. Hsia, MD, Peter T. Katzmarzyk, PhD

Pennington Biomedical Research Center, Baton Rouge, LA

Background

U.S. adolescent girls log 6 hours/week playing video games while most do not meet physical activity recommendations. Interactive video games that require full body motion to control gameplay ("exergames") may provide a social outlet to increase adolescent girls' physical activity and improve psychosocial cognitions towards physical activity. Methods

Forty-two overweight and obese female adolescents (64% African American, 36% White) aged 14 to 18 years were randomly assigned to a 12-week exergaming or no-treatment control condition. Treatment participants played exergames together in 60-minute bouts, 3 times per week using the Just Dance and Dance Central games played on Kinect for Xbox 360. Self-reported physical activity (days/week of at least 60 minutes/day), subjective health, and exercise self-efficacy were assessed pre- and post-study.Results

Attrition was 9% and session attendance averaged 79% in the exergaming condition. Repeated measures ANCOVA controlling for baseline weight, race, and age, revealed treatment effects for physical activity (p = 0.004), subjective health (p = 0.02), and exercise self-efficacy (p = 0.03). Participants in the exergaming group significantly increased days/week of physical activity (1.1) compared to those in the control condition (-0.7). Among participants in the exergaming condition, 89% indicated increased confidence in ability to exercise and 63% reported that exergaming helped them make more friends.Conclusions

Leveraging adolescent girls' interest in video games through dance may increase physical activity and improve psychosocial cognitions towards activity. Exergaming in a social context may particularly increase adolescents' confidence related to physical activity.

CORRESPONDING AUTHOR: Staiano E. Amanda, PhD, Pennington Biomedical Research Center, Baton Rouge, LA, 70808; amanda.staiano@pbrc.edu

CITATION POSTER
10:15 AM-11:15 AM D099

TEMPORAL SEQUENCING OF BEHAVIOR CHANGE CONSTRUCTS IN THE TRANSTHEORETICAL MODEL

Brook Harmon, PhD, RD[1], Claudio Nigg, PhD[2], Kathleen Martin Ginis, PhD[3], Robert Motl, PhD[4], Rod Dishman, PhD[5]

[1]University of Memphis, Memphis, TN; [2]University of Hawaii at Manoa, Honolulu, HI; [3]McMaster University, Hamilton, ON, Canada; [4]University of Illinois at Urbana-Champaign, Urbana, IL; [5]University of Georgia, Athens, GA

Efforts to increase physical activity are ongoing, but most adults do not currently meet guidelines. The Transtheoretical Model (TTM) is a framework used to understand the initiation and maintenance of health behaviors. Studies support the model's ability to describe the behavior change process and to develop interventions, especially through defining participants' readiness to change. However, the unknown temporal sequencing of TTM constructs undermines our understanding of behavior change. Several sequences have been proposed with differing implications for intervention design. This study aimed to identify the naturalistic sequence of TTM construct changes for physical activity. Five sequences were outlined *a priori* and tested using data collected every six months for two years. A random sample of 689 adults living in Hawaii provided baseline data (63% female; mean age=47 [SD=17]; 35% white) with 401 providing data at the last evaluation. Participants completed measures of physical activity stage of change, self-efficacy, temptations, pros and cons, and processes. Change scores were computed for each variable and linear regression was used to test each sequence. The first construct(s)' change score from baseline to 6-months and the constructs' baseline values, to account for starting point before change, were entered as independent variables. The 6-month to 12-month change score was entered for the next construct in the sequence as the dependent variable. Modeling continued in this fashion until all components of the sequence had been analyzed. At each step, R^2 and F-ratios were evaluated along with standardized beta coefficients for each predictive variable. Examination of the significant standardized beta coefficients overlaid on the tested sequences supported a cyclical model in which changes in processes lead to changes in stage, then lead to changes in self-efficacy, temptations, and pros/cons, and then back to changes in processes. These findings suggest interventions should focus on processes to help participants progress through the stages of physical activity change and, as cognitions change favorably, renewed efforts are needed to alter processes. Next steps include examining what mix of strategies is optimal for moving adults towards the maintenance stage.

CORRESPONDING AUTHOR: Brook Harmon, PhD, RD, University of Memphis, Memphis, TN, 38152; bharmon1@memphis.edu

10:15 AM-11:15 AM D100

THE IMPACT OF ACUTE EXERCISE ON STATE ANXIETY: RESULTS OF A META-ANALYSIS

Ipek Ensari, EdM[1], Tina Greenlee, MS[1], Robert Motl, PhD[2], Steven Petruzzello, PhD[1]

[1]University of Illinois Urbana-Champaign, Urbana, IL; [2]University of Illinois at Urbana-Champaign, Urbana, IL

Objective: One prominent and well-cited meta-analysis published nearly 25-years ago reported that an acute or single bout of exercise reduced state anxiety by approximately ¼ standard deviation. We conducted a meta-analysis of randomized controlled trials (RCTs) published after that meta-analysis for updating our understanding regarding the acute effects of exercise on state anxiety. Methods: We searched PubMed, EBSCOHost, Medline, PsychINFO, ERIC and ScienceDirect for RCTs of acute exercise and state anxiety as an outcome. There were 32 RCTs that met inclusion criteria and yielded data for effect size (ES) generation (Cohen's d). An overall ES was calculated using a random effects model and expressed as Hedge's g. Results: The weighted mean ES was small (Hedge's g=0.18, SE=0.06), but statistically significant ($p < 0.05$), and indicated that a single bout of exercise resulted in an improvement in state anxiety compared with control. The overall ES was heterogeneous and post-hoc, exploratory analyses using both fixed- and mixed-effects models identified several variables as moderators including sample age and health status, exercise intensity and study design ($p < 0.05$). Conclusion: The cumulative evidence from high quality studies indicates that acute bouts of exercise can yield a small reduction in state anxiety. The research is still plagued by floor-effects associated with recruiting persons with normal or lower levels of state anxiety, and this should be overcome in subsequent trials.

CORRESPONDING AUTHOR: Ipek Ensari, EdM, University of Illinois Urbana-Champaign, Urbana, IL, 61810; ensari2@illinois.edu

10:15 AM-11:15 AM D101

THE IMPACT OF GENETICS ON PHYSICAL RESILIENCE AND SUCCESSFUL AGING

Jennifer Klinedinst, PhD, Barbara Resnick, PhD, CRNP

University of Maryland, Baltimore, MD

Behaviors and genetic factors influencing successful aging are increasingly of interest. Successful aging has been conceptualized as involvement in volunteer activities, health promoting activities and physical activity. To explore the factors that influence successful aging we hypothesized that, controlling for age, gender, co-morbidities, pain and depressive symptoms, polymorphisms in five genes (*SLC6A4, BDNF, FKBP5, CRHR1* and *COMT*) would be associated with physical resilience and successful aging . The sample included 116 residents in a continuing care retirement community . Hypothesis testing was done using structural equation modeling. Two SNPs from *SLC6A4* (rs25533 and rs1042173) and age were associated with physical resilience and explained 9% of the variance. Cognitive status, age and depression were directly associated with successful aging; variance in rs25532 or rs1042173, resilience and pain were indirectly associated with successful aging through depression. Recognizing older adults at risk for low physical resilience and implementing appropriate behavioral interventions may facilitate successful aging.

CORRESPONDING AUTHOR: Barbara Resnick, PhD, CRNP, University of Maryland, Baltimore, MD, 21201; barbresnick@gmail.com

10:15 AM-11:15 AM D102

THE IMPACT OF MESSAGE CONTENT AND IMAGES IN PHYSICAL ACTIVITY PROMOTION MATERIALS

Jennifer K. Bernat, PhD[1], Stephanie Hullmann, PhD[2]

[1]Indiana University, Indianapolis, IN; [2]Indiana University School of Nursing, Indianapolis, IN

Background: One in eight women will develop breast cancer in their lifetime. The National Cancer Institute recommends that premenopausal women engage in health protective behaviors like physical activity (PA) to reduce future breast cancer risk. Research has demonstrated up to 80% overall risk reduction from PA. This information should be communicated; however, there is a paucity of research examining health promotion messaging to premenopausal women and their reactions to these messages and accompanying images.Methods: Premenopausal women were solicited for participation via social media using snowball sampling. Participants (n=123, M=21 years, range: 19-39 years) were randomized to view one of five health promotion flyers. All flyers depicted the same image but message type varied by level of risk and amount of information presented. Age, perceived breast cancer risk (PR), perceived informativeness of the flyer (PI), and thought listing data were gathered after message exposure. Qualitative data were analyzed by two independent coders.Results: ANOVA revealed differences in PI by message type ($F(4,122)=22.188$, $p < .001$) such that the low risk/low information message was less informative than the others. No differences were observed in PR by message type ($p < .05$). Nearly half the sample (40%) appraised the image on the flyer in their thought listing response. As such, differences in outcomes were examined between the two groups. After controlling for message type, image appraisal ($F=4.93$, $p=.028$) predicted PI such that those who did not discuss the image found the flyer to be more informative. There were no differences between the groups on PR after controlling for message type ($p < .05$). Chi-square analyses suggest that participants who received a high risk/low information message were less likely than expected to appraise the image ($z=-1.9$, $p=.057$). Of those who did, 66.7% had a negative opinion of the woman in the picture.Conclusions: Message content as well as accompanying images may impact PI of health promotion flyers. Those who received high risk/low information messages focused less on the image than others. Future research should continue to explore the impact of both message content and images in health promotion materials to determine the most effective combinations of message features.

CORRESPONDING AUTHOR: Jennifer K. Bernat, PhD, Indiana University, Indianapolis, IN, 46204; jbernat@iupui.edu

10:15 AM-11:15 AM D103

THE TIMED UP AND GO TEST (TUG): THE SIXTH VITAL SIGN ASSESSED IN PRIMARY CARE

Breelan Kear, MedicalStudent[1], Thomas P. Guck, PhD[1], Amy McGaha, MD, FAAFP[2]

[1]Creighton University School of Medicine, Omaha, NE; [2]Creighton University Department of Family Medicine, Omaha, NE

Physical activity measures that reliably predict health outcomes are rarely used in primary care clinics. Reasons for non-use include insufficient time, no equipment or space, or inability to interpret results. The Timed Up and Go test (TUG) may address these concerns as it is reliable and valid, and is a cost effective, safe, and time efficient way to evaluate overall functional mobility. The TUG test requires only a chair and 3 meters of walking space. Normative reference values (NRV) for the TUG test are available for individuals above 60 years old, but not for younger individuals. The first purpose of this study was to collect NRV on the TUG for 200 patients (50 per decade) ages 20-59 years old attending a routine primary care visit. The second purpose was to establish TUG's concurrent validity examining the correlations between the TUG and SF-12 physical and mental functioning scales. The third purpose was to examine the relationship between TUG and Social Economic Status (SES). NRV of TUG times by decade were 20s: M=8.57 secs., SD=1.40 secs.; 30s: M=8.56 secs., SD=1.23 secs.; 40s: M=8.86 secs., SD=1.88 secs.; 50s: M=9.90 secs., SD=2.29 secs. ANOVA showed significant difference in TUG times between decades ($F=6.579$, $p=.000$). Multiple comparisons showed significant differences between the 50 year old decade and the 20s, 30s, and 40s ($p= .001$, $p=.001$, $p=.020$, respectively. Concurrent validity of the TUG was demonstrated by individuals with slower TUG times reporting worse physical ($r=-.549$, $p < .001$) and mental functioning ($r=-.327$, $p < .001$). Slower TUG times were also related to lower SES ($r=-.273$, $p < .001$). However, SES did not account for unique variance in predicting TUG scores beyond the two SF-12 scales. The American College of Sports Medicine has called an all health care providers to assess physical activity at every visit. With the NRV collected in this study, TUG can be used as a "sixth vital sign" in busy primary care clinics to alert physicians to address patients' needs such as providing physical therapy, implementing an exercise plan, or further investigating the cause of the declining speed. TUG provides an objective measure of physical mobility that can allow physicians to track their patients' progress and alert them when interventions are not showing the desired result.

CORRESPONDING AUTHOR: Thomas P. Guck, PhD, Creighton University School of Medicine, Omaha, NE, 68102; tpguck@creighton.edu

10:15 AM-11:15 AM D104

THE WALKING DEAD: IS IMPLEMENTATION OF A ZOMBIE RUNNING GAME FEASIBLE AMONG ADULT WOMEN?

Zakkoyya H. Lewis, BS, Elizabeth J. Lyons, PhD, MPH

University of Texas Medical Branch, Galveston, TX

Introduction: A majority of adults are not meeting physical activity recommendations; this increases their risk for cardiometabolic conditions and death. Enjoyment is a strong predictor for engagement in physical activity, however it is difficult to maintain motivation. “Gamification” using technology-based tools holds promise for motivating individuals to adhere to physical activity goals. The aim of this study was to assess the feasibility of a gamified walking intervention (STEP and GO) among inactive overweight adults. Methods: Inactive overweight women (N=10) were recruited to take part in a 12-week pre-experimental trial. Participants were given an iPhone, headphones, armband, and gift cards to download music. The Zombies, Run! game application (app) was placed on the phones. Zombies, Run! is a narrative-based activity game. It offers encouragement, tracks activity and provides feedback via a choice of GPS or accelerometry. The RunKeeper app was also placed onto the phones in order for the researchers to remotely monitor activity by friending each participant. It also allowed for social networking between participants. Results: Nine participants completed the study (52.2±12.8 years old, 81.6±12.4kg, BMI 30.9±3.6 kg/m^2). There were unforeseen complications with the phones provided. Scam and collection agencies continually disrupted participants, despite blocking phone numbers (91 calls across 10 phones). The accelerometer was predominantly used by participants (n=7) while some used both accelerometry and GPS (n=4). The RunKeeper app was successful in objectively recording activity (328 of 338 recorded entries were usable) but was not utilized as a social network. Conclusions: Overall STEP and GO is feasible within this population. This study gave insight on complications within a gamified walking intervention and will inform modifications for future studies. As GPS was rarely used and phone calls were a major problem, non-cellular delivery methods (iPods, tablets) may be a better choice than smartphones in the future.

CORRESPONDING AUTHOR: Zakkoyya H. Lewis, BS, University of Texas Medical Branch, Galveston, TX, 77551; zalewisp@utmb.edu

10:15 AM-11:15 AM D105

UNDERSTANDING PHYSICAL ACTIVITY ADOPTION AMONG WOMEN: SELF-PERCEPTIONS FOLLOWING ACTIVITY LAPSES

Leah Schumacher, B.S.[1], Danielle Arigo, PhD[2], Stephanie Kerrigan, B.A.[1], Meghan L. Butryn, PhD[1]

[1]Drexel University, Philadelphia, PA; [2]The University of Scranton, Scranton, PA

The health benefits of engaging in regular physical activity (PA) are well-known, yet most women do not engage in recommended levels, and attrition from PA programs is high. When attempting to initiate regular PA, many women experience lapses (i.e., temporary “slips”) in adherence to PA goals. Self-perceptions after PA lapses could affect motivation to continue PA adoption efforts, though research on such perceptions is limited. The present study examined types of self-perceptions experienced after PA lapses and their relation to lapse frequency during the first two weeks of PA adoption. Participants were overweight women (n=12, M_{age}=45.8, M_{BMI}=32.6) enrolled in a remotely-delivered PA adoption pilot program. This program employed automated PA monitors and PA-related social networking support to address common barriers to PA (e.g., lack of motivation and/or social support). Lapse frequency and typical level of self-criticism (*not at all* to *highly*), self-forgiveness (*not at all* to *completely*), and self-regard (*very negative* to *very positive*) experienced after a lapse were assessed by self-report after the first two weeks of the program. PA was recorded with a wireless, wrist-worn PA monitor. Results showed that lapse frequency during the two-week period (M=1.9, range: 0-4) was strongly associated with average weekly minutes of aerobic activity (r=-.71, $p < .01$). Lapse frequency also was positively related to ratings of self-criticism (r=.67, p=.05), and negatively related to ratings of self-forgiveness (r=-.72, p=.02) and self-regard (r=-.83, $p < .01$), experienced after a lapse. These findings suggest that women interested in increasing PA are able to identify PA lapses and report on self-perceptions after lapses. Further, those who report more frequent lapses in the early weeks of PA adoption efforts also are likely to endorse more negative self-perceptions. PA promotion interventions may benefit from increasing attention to women’s self-perceptions after PA lapses. Future research is needed to clarify the temporal relations between self-perceptions and PA lapses, to determine if negative self-perceptions result from, or contribute to, more frequent PA lapses.

CORRESPONDING AUTHOR: Leah Schumacher, B.S., Drexel University, Philadelphia, PA, 19104; leah.schumacher1@gmail.com

10:15 AM-11:15 AM D106

USE OF FOCUS GROUP METHODOLOGY FOR THE TRANSLATION AND TRANSCREATION OF BILINGUAL PHYSICAL ACTIVITY TEXT MESSAGES

Diana Ingram, PhD, MPH[1], Susan Buchholz, PhD, RN[1], Giselle Sandi, PhD[2], Edith V. Ocampo, MS[1], Alexis Manning, MA[1]

[1]Rush University, Chicago, IL; [2]Rush UNiversity, Chicago, IL

Background: Insufficient physical activity is ranked fourth as a risk factor for mortality and contributes to risk for chronic diseases. Hispanic American adults are 30% less likely to be physically active than Non-Hispanic Whites. Intervention text messaging studies show that physical activity (PA) text messages can be effectively used to improve PA, although there is limited information available on the transcreation process of PA text messages. The ‘Text4walking’ research team conducted three focus groups to develop an initial database of English PA text messages. Using culturally appropriate pictures that depicted walking barriers and scenarios for discussion, over 170 text messages were created to encourage adults to become more physically active. Purpose: To accurately adapt PA text messages from English to Spanish and to maintain the content, cultural relevancy and the motivational impact to promote PA. Method: The English PA text messages database was translated into Spanish initially by a native English speaker who is fluent in Spanish then reviewed by a native Spanish speaker who is fluent in English. Using Columbian Spanish, the two bilingual translators considered cultural relevancy and communication style and gained consensus on each of the translated text messages. A focus group discussion conducted in Spanish was held at a church and led by two bilingual co-moderators. The translated text messages were reviewed and recommended revisions were made by the participants. Results: Eight Hispanic adults [5 women and 3 men, mean age of 40 (SD ± 6.3)] participated in the study and made multiple changes to the Spanish text messages with over 20 significant revisions, and more than 10 new text messages. Conclusion: The English PA text messages were successfully translated into Spanish using the transcreation process described. This study used a qualitative process that demonstrated the trustworthiness and cultural relevancy of the Spanish PA text messages.

CORRESPONDING AUTHOR: Diana Ingram, PhD, MPH, Rush University, Chicago, IL, 60612; diana_ingram@rush.edu

10:15 AM-11:15 AM D107

VALIDITY OF THE 7-DAY PHYSICAL ACTIVITY RECALL INTERVIEW AMONG POSTPARTUM WOMEN

Beth Lewis, PhD[1], John Sirard, PhD[2], Katie Schuver, MA[1], Dwenda Gjerdingen, MD, MS[3], Melissa Avery, PhD, CNM[1], Bess H. Marcus, PhD[4]

[1]University of Minnesota, Minneapolis, MN; [2]University of Massachusetts Amherst, Amherst, MA; [3]University of Minnesota, St. Paul, MN; [4]University of California, San Diego, La Jolla, CA

The ActiGraph is typically considered the gold standard for assessing physical activity in intervention trials. However, due to the cost and time associated with the ActiGraph, it may not be feasible in all trials. Therefore, it is important to examine the validity of brief physical activity assessment strategies. Given the sleep deprivation and increased stress among postpartum women, brief physical activity assessment strategies are needed for this population of women. The purpose of this study was to examine the validity of a telephone-based, brief version of the 7-Day Physical Activity Recall Interview among postpartum women. Women (n=130) participating in a randomized trial examining the effect of a six-month exercise intervention vs. a wellness intervention on the prevention of postpartum depression took part in the study. Participants were postpartum women (less than eight weeks postpartum at baseline) and had a personal or maternal family history of depression but were not depressed at baseline. Participants completed a modified version of the 7-Day Physical Activity Recall interview and wore the ActiGraph for seven days at six months. Seventy-five percent of the participants (n = 93) provided valid ActiGraph data (defined as providing at least four days of data). Based on the PAR, participants reported an average of 126.50 (sd = 99.99) minutes per week of moderate to vigorous intensity physical activity (MVPA) and 26.78 (sd = 51.54) minutes of vigorous intensity activity at six months. According to the ActiGraph, participants reported an average of 124.88 (sd = 83.51) minutes per week of moderate to vigorous intensity activity (MVPA) and 6.72 (sd = 18.06) minutes of vigorous intensity activity at six months. Minutes of MVPA on the PAR was related to minutes of MVPA on the ActiGraph, $\rho = .272$, $p < .01$. Additionally, vigorous intensity minutes on the PAR was related to vigorous intensity minutes on the ActiGraph, $\rho = .462$, $p < .001$. Results indicate that a telephone-based brief version of the 7-Day Physical Activity Recall Interview is a potentially valid measure of physical activity among postpartum women. The brief 7-Day Physical Activity Recall interview may be a viable option for trials with postpartum women in which use of the ActiGraph is not a feasible option for assessment.

CORRESPONDING AUTHOR: Beth Lewis, PhD, University of Minnesota, Minneapolis, MN, 55455; blewis@umn.edu

10:15 AM-11:15 AM D108

WORKING MEMORY AND INHIBITORY CONTROL PREDICT MOBILITY OUTCOMES IN MIDDLE AGED AND OLDER ADULTS

Neha Gothe, MA, MS, PhD[1], Edward McAuley, PhD[2]

[1]Wayne State University, Detroit, MI; [2]University of Illinois Urbana Champaign, Urbana, IL

Several cross-sectional and prospective studies have reported an association between cognitive performance and functional performance in late life. The purpose of this study was to determine whether baseline executive function predicted change in mobility outcomes resulting from an exercise-based randomized controlled trial. Participants (N=118, age range = 55-75, Mage=62 ± 5.59) were randomized to either an 8-week Hatha yoga or a stretching control group. Participants completed the trail making A&B, attention network, task switching and running memory span tests at baseline. Mobility measures included gait speed, 8 ft. up and go, stairs up and down and 4-square step test and were administered at baseline and after 8-weeks of the intervention. Multiple regression analyses controlling for age, intervention group and baseline mobility performance showed that the mean incongruent trials reaction time of the attention network task predicted gait speed (β = .19, p=.05), stairs up (β=.14, p=.01) and stairs down (β =.18, p=.003) performance. The running span score predicted performance on the 8 ft. up and go (β =-.18, p=.008) and the 4-square step test (β =-.17, p=.02). The estimates were in the expected direction, such that better baseline performance on the executive function measures predicted better performance on the mobility tests. Selective executive functions of inhibitory control (attention network task) and working memory (running span) performance were predictive of functional mobility. Because task switching and trail making A&B performance did not predict mobility, this may indicate a selective effect of cognition on functional performance. Given the literature associating mobility limitations with disability, these results are critical in understanding the antecedents to poor mobility function that may be attenuated by well-designed interventions to improve cognitive performance.

CORRESPONDING AUTHOR: Neha Gothe, MA, MS, PhD, Wayne State University, Detroit, MI, 48202; nehagothe@gmail.com

10:15 AM-11:15 AM D109

ATTITUDES & BELIEFS ABOUT PREGNANCY & CHILDBIRTH: THE ROLE OF ATTACHMENT STYLES IN EXPECTANT PARENTS

Geoffrey W. Corner, B.S.[1], Ann B. Tsai[1], Hannah Lyden, M.Sc.[1], Sarah Stoycos, B.A.[1], Darby Saxbe, PhD[1], Angela C. Incollingo Belsky, B.A.[2]

[1]University of Southern California, Los Angeles, CA; [2]University of Southern California, Los Angeles, , Afghanistan

Purpose: Attachment style is of paramount importance in the family context. Research has demonstrated an association between secure attachment and positive emotions about romantic relationships, better romantic relationship adjustment during pregnancy, and responsiveness as a parent. The current study contributes to the literature on attachment and health by investigating partners' attachment in couples expecting a child, examining associations between attachment styles and attitudes and beliefs about pregnancy and childbirth.Methods: Nine couples expecting their first child (n=18 expectant parents, 2.2 to 4.3 months from their due date; M=3.4, SD=0.8) completed self-report measures as part of a larger, ongoing study. Attachment style was assessed with the Experiences in Close Relationships-Revised (ECR-R) questionnaire, while emotions related to pregnancy and concerns related to childbirth were assessed with the Pregnancy Specific Anxiety Measure (PSAM) and the Pregnancy Anxiety Scale (PAS), respectively. Generalized estimating equations were used to account for intraclass correlations within responding partner dyads while estimating associations in bivariate models.Results: Anxious attachment was significantly associated with less frequently experienced positive emotions related to the pregnancy, e.g., happiness (p=.05) and feeling healthy (p=.01). On the other hand, avoidant attachment, while similarly associated with less frequent positive emotions, was also associated with often feeling negative, anxiety-related emotions (p=.02). Furthermore, insecure attachment was associated with greater concern about harm to the mother during childbirth (anxious: $p < .001$; avoidant: $p < .001$).Conclusions: These results suggest that attachment style may underlie feelings about pregnancy and worries about childbirth. There could potentially be value in considering attachment insecurity when developing supportive programs for expectant parents, with particular attention to avoidant attachment styles in services for those experiencing pregnancy-related anxiety. Extensions of this project include utilizing a larger sample as data collection progresses, exploring associations within couples, and incorporating data from perinatal and postpartum assessments.

CORRESPONDING AUTHOR: Geoffrey W. Corner, B.S., University of Southern California, Los Angeles, CA, 90027; gcorner@usc.edu

10:15 AM-11:15 AM D110

BEHAVIORAL AND PSYCHOSOCIAL RISKS AFTER PREGNANCY: ASSOCIATIONS WITH POSTPARTUM HEALTH STATUS

Lorraine Walker, EdD, MPH, Bo Xie, PhD, MS, B.Med.Sci, Bobbie Sterling, PhD, Sherry Hendrickson, PhD

University of Texas at Austin, Austin, TX

The period after pregnancy is often viewed as uneventful because maternal mortality is low in the US. Still, after pregnancy some women may demonstrate risk factors for poor health because of stress associated with increased role demands and low social support to meet demands, as well as for other reasons. These risk factors include behavioral areas (e.g., diet, physical activity, alcohol use) and psychosocial areas (depressive symptoms and poor body image). The purpose of this study was to test if these risk factors were associated with perceived health status among postpartum women, controlling for race/ethnicity, income level, perceived stress, and social support. Data are from a stratified randomized survey of mothers balanced for race/ethnicity and income level (Medicaid or private insurance) for a defined urban/rural county in Texas. The survey questionnaire included items from the Self Care Inventory, Perceived Stress Scale, and other established scales. The adjusted response rate was 32%. Survey respondents were women (mean age 31.4 y, SD = 5.4) who had, on average, given birth 9 months earlier, had 1.8 children, and were African American (n = 35), Hispanic (n = 58), or White (n = 75). Perceived health status (higher rating on a 5-point scale denoted poorer health) was significantly correlated ($p < .05$) with depressive symptoms (r = .34) and body image dissatisfaction (r = .20), and inversely correlated with diet (r = -.31), physical activity (r = -.31), and alcohol use (r = -.19). Also, perceived stress and social support were correlated with all risk factors except alcohol use. In linear regressions that controlled for the contextual influences of race/ethnicity, income level, stress, and support, only diet (beta = -.25, $p < .001$) and physical activity (beta = -.21, $p < .01$) contributed significantly to accounting for perceived health status. Perceived stress was the only contextual influence associated consistently with perceived health in regressions (betas = .32 to .28). These findings call for an increased focus on health behaviors related to diet and activity, as well as perceived stress, in the extended postpartum period (beyond the traditional 6 weeks after birth) to enhance women's health after pregnancy.

CORRESPONDING AUTHOR: Lorraine Walker, EdD, MPH, University of Texas at Austin, Austin, TX, 78701; lwalker@mail.nur.utexas.edu

10:15 AM-11:15 AM D111

CONTRASTING BEHAVIORAL CHANGES OF PRECONCEPTION SMOKERS AND DRINKERS DURING PREGNANCY

Felix Okah, MD, MS[1], Tami Gurley-Calvez, PhD[2], Jarron M. Saint Onge, PhD[3]

[1]Children's Mercy Hospitals and Clinics/University of Missouri Kansas City School of Medicine, Kansas City, MO; [2]Kansas University Medical Center, Kansas City, KS; [3]University of Kansas, Lawrence, KS

Background: Preconception (PC) drinking or smoking may continue into pregnancy (PN). Unlike smoking, most drinking is social and not due to addiction. The fetal effects of alcohol occur in the first and those of smoking in the third trimester of pregnancy. Not much is known about how PN-behavioral changes of drinkers contrast with those of smokers. We speculated that there is significantly more PC to PN (PC-PN) reduction in drinking than smoking, irrespective of pregnancy intention. Methods: This retrospective cohort study of pregnant women, 2005 to 2009, used the linked Birth Certificate and Pregnancy Risk Assessment Monitoring (PRAM) survey databases and was limited to women with information on pregnancy intention. PC-PN behavioral changes were classified as abstinence-to-abstinence (AB-AB), active-to-Quit (AC-Q), active-to-reduction (AC-R), active-to-active -same/increase (AC-ASI), and abstinence-to-initiation (AB-I). Health compromising behavioral change (HCBC) was defined as PC-PN AB-I or AC-ASI in drinking or smoking. Results: The cohort of 48,746 women comprised 84%-Intended/Wanted (I/W) and 16%-Unintended/Unwanted (U/U) pregnancies; 12%-Black, 14%-Hispanic, 58%-White; 77%-age-20-34y; and 41%-< HS education. PC smoking and drinking rates were 21% and 53%, respectively, and the corresponding behavioral changes were PC-PN AC-Q=87% v 54%; PC-PN AC-R=7% v 30%; PC-PN HCBC=3.2% v 3.7%, respectively, $p < 0.05$. I/W and U/U had similar drinking but different smoking behaviors - (PC Smoke=19% v 36%; PC-PN AC-Q=57% v 42%, $p < 0.05$). Conclusions: This study shows that twice as many women drink as smoke before pregnancy and they may recognize and want to reduce the fetal harm of their behaviors during pregnancy. Although the majority of drinkers quit, only about 50% of smokers are able to do so. Harm reduction as employed by smokers may be an indication of their level of addiction and the difficulty they experience with quitting. However, drinkers' behavioral change may come too late and smokers, as a result of their greater addiction, may persist long enough to compromise the health of their fetuses. Therefore, more emphasis ought to be placed on preconception health – assisting, in addition to advising, women of reproductive age, who intend to get pregnant, stop drinking or smoking.

CORRESPONDING AUTHOR: Felix Okah, MD, MS, Children's Mercy Hospitals and Clinics/University of Missouri Kansas City School of Medicine, Kansas City, MO, 64108; faokah@cmh.edu

10:15 AM-11:15 AM D112

EXTRAPOLATING FROM PRETERM BIRTH RESEARCH RESULTS TO IMPLICATIONS FOR DESIGN AND PRACTICE PROTOCOLS.

Regina P. Lederman, BS, MNEd, MA, PhD, FAAN

University of Texas Medical Branch, Galeston, TX

Qualitative and quantitative measures of psychosocial factors predictive of preterm birth were examined to determine implications for research design, assessment, and preventive intervention protocols. Method: Semi-structured interviews of 41 hospitalized, ethnically diverse high-risk pregnant women were conducted on seven dimensions of psychosocial adaptation to pregnancy and factors specific to hospitalization. Five themes emerged: (1) Fears: maternal/fetal trauma and loss of life; (2) Early, pronounced initiation of parental protector role; (3) Enhanced couple responsiveness and collaboration; (4) Mother-daughter devotion mobilizes maternal coping and adaptation; and (5) Trust of medical/nursing care enhances maternal confidence. In addition, self-report questionnaires were administered, including sociodemographic/behavioral risks, maternal anxiety, maternal-fetal attachment, and coping skills. For these data General Linear Modeling (GLM) was conducted to determine the effects of prenatal psychosocial adaptation, dyadic relationships, and coping on birth outcomes: Birth Weight (BW), Gestational Age (GA). GLM results showed that BW and GA were predicted by maternal anxiety concerning Preparedness for Labor and Fears about Labor: pain, helplessness, and loss of control. GLM showed other variables (parity, ethnicity, prior premature births, coping responses, and dyadic relationships) were not significant predictors of birth outcomes. Results: Assessment and screening for psychosocial predictors of preterm birth is important to conduct in early pregnancy. The most efficient predictors are anxiety measures that are pregnancy-specific and theoretically based instruments. Measures for general anxiety, coping, attachment, dyadic relationship, or psychiatric symptoms correlate with Preparedness for Labor and Fears about Labor, and these additional measures are not necessary. A thorough assessment of prenatal anxiety using a longer measure with high reliability (a=≥.95) is preferable to multiple short instruments with lower reliability. Conclusion: Assessment of prenatal anxiety in high-risk gravidas is best accomplished with fewer instruments that are theoretically grounded and have high reliability, and also can be clinically implemented for diagnostic purposes.

CORRESPONDING AUTHOR: Regina P. Lederman, BS, MNEd, MA, PhD, FAAN, University of Texas Medical Branch, Galeston, TX, 77555-1029; rlederma@utmb.edu

10:15 AM-11:15 AM D113

KNOWLEDGE PREDICTS TOTAL GESTATIONAL WEIGHT GAIN AMONG LOW INCOME WOMEN.

Tracey Ledoux, PhD, RD[1], Patrick Leung, PhD[1], Pamela D. Berens, MD[2], Patricia Van den Berg, PhD, MPH[3]

[1]University of Houston, Houston, TX; [2]University of Texas Health Science Center, Houston, TX; [3]University of Texas Medical Branch, Galveston, TX

Background: The majority of women gain too much weight during pregnancy putting them and their babies at risk for obesity, gestational diabetes, preeclampsia, and delivery complications. Pre-pregnancy obesity status compounds these risks.Hypothesis: Women who know the maternal and infant risks associated with excess adiposity during pregnancy (EADP) and gestational weight gain (GWG) recommendations will gain less weight during pregnancy than women who have less knowledge.Methods: Pregnant women across all trimesters were recruited from a prenatal clinic waiting room to complete a one-time survey. Researchers gathered total GWG data from the medical records. Surveys assessed basic demographic information, knowledge of the EADP risks posed to mothers and infants, and knowledge of GWG recommendations. A multiple regression analysis was used to test the study hypothesis.Results: 157 women had full term singleton pregnancies and complete data on all study measures. The sample consisted of predominantly African American and overweight/obese women from low socio-economic conditions. 52% of the sample exceeded GWG recommendations. After controlling for age, gestation age at the time of delivery and pre-pregnancy body mass index, knowledge of EADP risks to infants (std Beta=.31, p=.002) and knowledge of GWG recommendations (std Beta=.19, p=.016) were significantly related to total GWG [F(6, 152)=3.821, R^2=.14, p=.001]. Knowledge of EADP risks to mothers was not significantly related to total GWG (std Beta=-.18, p=.067).Conclusions: Greater knowledge of EADP risks to infants and incorrect knowledge of GWG recommendations predicted higher GWG. Future research should determine whether an educational intervention for pregnant women centered on knowledge of EADP risks and GWG recommendations would prevent excess GWG and related complications.

CORRESPONDING AUTHOR: Tracey Ledoux, PhD, RD, University of Houston, Houston, TX, 77204-6015; taledoux@uh.edu

10:15 AM-11:15 AM D114

PRE-PREGNANCY OBESITY AND OFFSPRING NEUROBEHAVIORAL DEVELOPMENT

Bernard F. Fuemmeler, PhD, MPH[1], Cathrine Hoyo, Susan Murphy, Adriana C Vidal, PhD[2], Scott H. Kollins, PhD[3]

[1]Duke University Medical Center, Durham, NC; [2]Duke University, Druham, NC; [3]Duke University, Durham, NC

Approximately 20% of all women in the United States are obese at the time of conception, and it is increasingly recognized that the prenatal environment may contribute to a range of adverse outcomes in offspring beyond those at birth. Recent evidence from pre-clinical to epidemiological studies suggests that maternal obesity may "program" offspring for a lifelong cascade of adverse outcomes, including adverse neurobehavioral effects. This study examined participants of the NEST cohort, a longitudinal birth cohort study, to determine whether pre-pregnancy BMI and gestational weight gain were associated with offspring intra-individual cognitive/behavioral factors at 3 years, using the Behavior Rating Inventory of Executive Function (BRIEF) and the Behavior Assessment System for Children (BASC) ADHD symptom domains (Attention Problems and Hyperactive-Impulsive) scales.Excluding from analysis children born less than 34 weeks gestation (i.e., born late pre-term), and controlling for parity, birthweight, child's age, mother's age, race, education, gestational weeks, smoking, mother's ADHD symptoms, and mean gestational gain (GWG), prepregnancy BMI was significantly associated with the BRIEF Global Executive Composite (GEC) (b=.43. p < .05) and related subscales including, Inhibit (b=.12), Attention Shift (b=.07), Working Memory (b.13), and Plan Organize(b=.07). Prepregnancy BMI was also associated with BASC ADHD symptoms (b=09). In a model with similar covariates examining Institute of Medicine (IOM) guidelines of gestational weight gain we found that compared to adequate weight gain, both inadequate and excess weight gain were associated with BASC ADHD symptoms (b = 1.74 and b = .90 , ps < .05). Excessive weight gain is also a risk factor for a higher BRIEF GEC score (b = 4.9, p < .05), primarily driven by inhibitory behavior problems (b=1.59, p < .05).These data are consistent with findings from other cohorts which show prepregnancy BMI and gestational weight gain to be associated with child nuerodevelopmental outcomes. Future studies are needed that employ more in-depth assessment of cognitive functioning and examination of potential biological mechanism, such as prenatal exposure to neuroinflamatory cytokines

CORRESPONDING AUTHOR: Bernard F. Fuemmeler, PhD, MPH, Duke University Medical Center, Durham, NC, 27710; bernard.fuemmeler@duke.edu

10:15 AM-11:15 AM D115

WOMEN'S PERCEPTIONS OF WEIGHT GAIN, PHYSICAL ACTIVITY, AND DIETARY GUIDELINES DURING PREGNANCY

Kara Whitaker, MPH, Sara Wilcox, PhD, Jihong Liu, Sc.D.

University of South Carolina, Columbia, SC

Background: The majority of pregnant women do not meet weight gain, physical activity (PA) or dietary guidelines. A better understanding of women's perceptions of weight and related behaviors in pregnancy is important for informing behavioral interventions. This study examined pregnant women's weight gain, PA and diet perceptions and intentions using the Theory of Planned Behavior (TPB).Methods: Women (N=189, ages 21-42 years, 82.5% White) between 20-30 weeks gestation were recruited to complete an online survey. Participants read a short description explaining current weight gain, PA, and dietary guidelines for pregnant women. Seven-point Likert scales assessed women's attitudes, subjective norms, perceived behavioral control, and intentions (TPB constructs) toward meeting the respective behavioral guidelines. Pearson correlations and linear regression models examined associations of TPB constructs with weight gain, PA, and dietary intentions.Results: Women had significantly higher scores on all TPB constructs for diet as compared to weight gain or PA. In bivariate analyses, subjective norm had the strongest correlation with weight gain intention (r=.45), while perceived behavioral control had the strongest correlation with PA (r=.62) and dietary intentions (r=.49). Effect sizes were moderate to large across behaviors with the exception of attitude/intention (r=.24) and perceived behavioral control/intention (r=.16) toward weight gain. Using linear regression, subjective norm was the only construct associated with intention to meet weight gain recommendations (Model R^2=.23). Perceived behavioral control was significantly associated with PA intention (Model R^2=.39), and all TPB constructs were associated with dietary intention (Model R^2=.29). Conclusions: Interestingly, subjective norm was significantly associated with intentions to meet weight gain and dietary guidelines. This finding is surprising as subjective norm is generally found to be a weaker predictor of intention than other constructs. Results from this study indicate that important others' may have considerable impact on women's intentions to gain an appropriate amount of weight and consume a healthy diet during pregnancy, and may need to be targeted in future interventions.

CORRESPONDING AUTHOR: Kara Whitaker, MPH, University of South Carolina, Columbia, SC, 29208; goodricm@email.sc.edu

10:15 AM-11:15 AM D116

TESTING THE FEASIBILITY OF A FAMILY BASED UNIVERSAL ADOLESCENT RISK BEHAVIOR PREVENTION STUDY IN A MEDITERRANEAN CONTEXT.

Enrique Ortega, PhD, MPH

California State University Dominguez Hills, Carson, CA

Background: Parenting based prevention efforts for youth risk behaviors have long proven effective in the US and Northern Europe. Despite this proven effectiveness there are few to no scientifically developed adolescent universal risk prevention efforts in such Mediterranean countries such as Italy. This investigation aimed to assess the feasibility and the effects of a parenting based universal prevention program in Italy.Methods: Our sample was composed by 57 (30 controls and 27 experimental group and their children (M=12.4 years; SD=0.75) living in the north-west region of Italy in the city of Turin. This study adopted a quasi-experimental design. ANCOVAs and Cohen's d coefficients were used to analyze intervention effects.Results: Findings indicated that parents in the experimental group increased their levels of comprehension of youth problems (T1: M=5.48, SD=.67 vs. T2: M=5.76, SD= .72) (Cohen's d = .92). Analyses also showed that alcohol use among youths decrease with respect to baseline measures (T1: M=2.11, SD= .74 vs. T2: M=2.05, SD= .86) (Cohen's d = .92).Conclusions: This study highlighted the feasibility and effectiveness of applied family based interventions in a Mediterranean setting. While only a pilot study, this investigation yielded notable findings that point to the need to further study often applied interventions in contexts that hold different sociocultural values than those where some programs are normed and developed.

CORRESPONDING AUTHOR: Enrique Ortega, PhD, MPH, California State University Dominguez Hills, Carson, CA, 90747; eortega@csudh.edu

10:15 AM-11:15 AM D117

THE EFFECTS OF AGGRESSIVE DRUG POLICING ON PRENATAL CARE IN STRUCTURALLY DISADVANTAGED COMMUNITIES

Robert J. Kane, PhD[1], Anne-Marie O'Brien, PhD[2]

[1]Drexel University, Philadelphia, PA; [2]Marymount University, Arlington, VA

The present study examined the effects of "aggressive" drug enforcement on prenatal care usage among pregnant mothers (n=22,008) residing in census tracts (n=181) of the District of Columbia. Drawing on urban sociological/ecological perspectives such as Social Disorganization, Code of the Street, and Institutional Anomie – and framing police drug enforcement largely as an environmental "hazard" in certain communities – the study hypothesized that aggressive drug policing (in the form of drug arrests) in communities characterized by concentrated economic resource deprivation and violence would be associated decreased prenatal care usage among resident pregnant women. Using multi-level spatial lag models (where level-1 was individual variables and level-2 was census tract measures) in combination with Geographically Weighted Regression (GWR), the study made several findings. First, while controlling for several individual characteristics, the study found that structural disadvantage and the violent crime rate independently predicted decreases in prenatal care usage. Additionally, the interaction between structural disadvantage and community violence exerted a significant (and clinically important) mediating effect on decreased prenatal care, demonstrating the importance of the combination of violence and resource deprivation on prenatal care. Finally, the GWR analysis showed that the effects of structural disadvantage and violence on prenatal care usage were conditioned by the geography of the city: in lower-crime and economically stable census tracts, drug policing had no significant effects on prenatal care usage. It was only in the regions of DC characterized by clustered disadvantage and violence that drug policing had a significant effect on prenatal care usage. These results lend further evidence to the literature finding that some health behaviors are susceptible to environmental risk and generalized resource deprivation. While statistically significant, these findings are also clinically relevant, as healthcare providers should consider social and environmental context when promoting certain health behaviors.

CORRESPONDING AUTHOR: Robert J. Kane, PhD, Drexel University, Philadelphia, PA, 19104; rjk72@drexel.edu

10:15 AM-11:15 AM D118

THE IMPACT OF HEALTH BELIEFS ON ADHERENCE TO MEDICAL ADVICE IN NONCLINICAL YOUNG ADULTS

David A. Moore, Psy.D.[1], Nataliya Zelikovsky, PhD[2], Edie Goldbacher, PhD[2], Cori E. McMahon, PsyD[3]

[1]MD Anderson Cancer Center at Cooper University Hospital, Philadelphia, PA; [2]La Salle University, Philadelphia, PA; [3]Cooper University Hospital, MD Anderson Cancer Center at Cooper, Woodbury, NJ

As the healthcare landscape changes to focus on prevention, providers must discover novel ways to stop health conditions from developing. Each year millions undergo the transition to young adulthood, a time period that has been linked to the solidification of health beliefs and behaviors when individuals begin taking more responsibility in their lives including the management of healthcare. Adherence to medical advice has been shown to be important in numerous medical populations as dire consequences may result from non-adherence. Factors such as health beliefs and mood have been shown to be related to adherence in medical populations, though they remain understudied in nonclinical young adults. This study examined whether health locus of control (Internal, Powerful Others, Chance) and beliefs about medicine predict adherence to medical advice, while controlling for mood and demographic factors in this group.

266 participants were recruited from undergraduate courses, 80.5% female and 69.9% Caucasian. Participants completed the Demographics Questionnaire, Medical Screening Questionnaire, Health Behavior Adherence Screener, Multidimensional Health Locus of Control Scale-Form A, Beliefs about Medicines Questionnaire, and The Depression Anxiety Stress Scales 21. Age (p = .04), mood (p = .05), gender (p = .03), race (p < .001), and housing status (p = .02) were significantly related to adherence and controlled for in subsequent analyses. Separate hierarchical regression analyses revealed that internal HLOC significantly predicted adherence behaviors (p < .001), whereas external chance HLOC (p = .02), specific concerns regarding medicines (p = .00) and general beliefs about the harmfulness of medicines (p =.01) significantly predicted non-adherence behaviors. Powerful others HLOC and beliefs about overuse were not significant predictors.

The results indicate that internal causal attributions and reliance on peer opinions impact health decision making in this group, not reliance on authority figures (e.g., Healthcare providers and parents). As this is a critical time point for the development of positive health behaviors, a focus of interventions should be on modifying beliefs related to harm avoidance and specific concerns about medicines rather than reinforcing the necessity of medication.

CORRESPONDING AUTHOR: David A. Moore, Psy.D., MD Anderson Cancer Center at Cooper University Hospital, Philadelphia, PA, 19107; moore-david@cooperhealth.edu

10:15 AM-11:15 AM D119

THE ROLE OF DISTRESS TOLERANCE IN PATIENT INITIATION OF ANTIVIRAL THERAPY FOR HEPATITIS C

Megan Oser, PhD[1], Gabe Gruner, LICSW[2], Chinweike Ukomado, MD, PhD[1]

[1]Brigham and Women's Hospital/Harvard Medical School, Boston, MA; [2]Brigham and Women's Hospital, Boston, MA

Distress tolerance refers to one's ability to experience and withstand unpleasant psychological states while persisting in tasks or engaging in goal-oriented actions (Zvolensky et al., 2011) and is implicated in models of psychopathology, HIV medication adherence, and substance use treatment retention (Leyro et al., 2010; Oser et al., 2013). This prospective study aimed to extend these findings to HCV patients (N = 44; 58% female) engaging in evaluation for antiviral therapy (AVT) within Hepatology specialty care to test whether poor engagement in HCV care is maintained by modifiable psychological vulnerabilities, such as distress tolerance and anxiety sensitivity. 45% of treatment-eligible patients initiated the new directly acting AVT (interferon and non-interferon) within seven months of baseline assessment. Logistic regression models were computed with patient initiation of AVT as the outcome. The primary a priori theoretical model revealed that greater perceived distress tolerance predicted greater likelihood of AVT initiation *OR* = 6.81, *p* = .03 above and beyond self-reported depression, alcohol use, alcohol craving, anxiety sensitivity, and liver disease quality of life. Empirically derived models adjusting for significant effects of previous AVT trials, logistical treatment barriers, and treatment expectancies continued to show that, of the psychological vulnerability factors, distress tolerance was the most robust predictor (*OR* = 2.09 – 10.96) of whether patients started treatment. These preliminary findings suggest that lower distress tolerance is related to decreased likelihood of engaging in HCV treatment. Given distress tolerance can be improved with cognitive-behavioral treatment approaches (Zvolensky et al., 2011), this may be a key target for future interventions with patients seeking treatment for HCV.

CORRESPONDING AUTHOR: Megan Oser, PhD, Brigham and Women's Hospital/Harvard Medical School, Boston, MA, 02115; moser1@partners.org

10:15 AM-11:15 AM D120

WHAT CAUSED YOUR CHILD'S AUTISM SPECTRUM DISORDER? A STUDY OF PARENT'S PERCEPTIONS IN TAIWAN

Lei-Shih Chen, PhD, PT, CHES[1], Jia Ye, BS[1], Shixi Zhao, BS[1], Divya Talwar, MPH, BDS[1], Chen-Hui Wang, MS[2], Tse-yang Huang, PhD[2]

[1]Texas A&M, College Station, TX; [2]National Hsinchu Universty, Hsinchu City, Taiwan

Introduction: With an increased prevalence by 425.8% from 2000 to 2009, Autism Spectrum Disorders (ASDs) have emerged as an urgent public health issue in Taiwan. Research has shown that the ASD etiology can be attributed to the interactions between genes and environment. Moreover, parental beliefs of their children's ASD causation are critical towards parent- affected child interactions, acceptance of their affected child's condition, and the selection of medical treatments. Nevertheless, Western-based studies have found that the lay public holds numerous misconceptions towards causes of autism. The purpose of this qualitative study is to explore Taiwanese parents' beliefs regarding the etiology of ASD among their affected children.Methods: The study was conducted in Taiwan and we interviewed parents with at least one child diagnosed with ASD. Parents were recruited through various ASD originations in Taiwan. All interview data were audio-taped, transcribed, and analyzed through content analysis using Nvivo.Results: Our total sample comprised of 39 parents. Over three-fourths of the participants (n=31, 79.5%) were mothers and rest (n=8, 20.5%) were fathers. The average age of our participants was 42 years. The top nine causes identified by the participants were: genetic (76.9%), problems encountered during the gestation period (53.8%), vaccination (48.7%), environmental factors (35.9%), affected child's other health conditions (30.8%), complications during the mothers' delivery (30.8%), parenting style (23.1%), parents' working environment (17.9%), and spiritual/religious beliefs (17.9%). Conclusion and Discussion: Our results indicated that parents had different perceptions regarding their child's ASD causation. Information collected from our study will help healthcare professionals to identify gaps in parents' misconceptions regarding the causative factors for ASD.

CORRESPONDING AUTHOR: Divya Talwar, MPH, BDS, Texas A&M, College Station, TX, 77840; talwar@hlkn.tamu.edu

MERITORIOUS POSTER
10:15 AM-11:15 AM D121

THE EFFECT OF PHYSICAL ACTIVITY ON DEPRESSION DURING A SMOKING CESSATION INTERVENTION

Aaron K. Haslam, M.A.[1], Hunter King[1], Joshua C. Gottlieb, M.A.[1], Michael A. Sustaíta, B.A[1], Noreen Watson, M.A.[2], Gabriella Grimaldo, B.S.[1], Muqaddas Sarwar, B.A[1], Charlene Key, PhD[2], Lee M. Cohen, PhD[1]

[1]Texas Tech University, Lubbock, TX; [2]Texas Tech University,, Lubbock, TX

Depression is associated with failure to quit smoking (Agrawal, et al. 2008). As such, interventions that address symptoms of depression may be important to improve smoking cessation rates. While acute physical activity (PA) has been shown to lessen the severity of symptoms of depression in abstinent smokers (Roberts, 2012), little research exists on the effect of PA on depression when added to standard smoking interventions (Ussher, et al., 2012). Further, no study has examined the association of PA on depressive symptoms during a smoking cessation trial using a repeated measures regression analyses. It was hypothesized that increased PA would be associated with decreased severity of depression. Participants (N = 56) enrolled in a 10-week smoking cessation intervention who attended at least 4 sessions were included in this analysis. Depression scores were regressed on PA scores using a Bayesian repeated measures regression with uninformed priors. Bayesian analyses provide the predicted probabilities of parameters given the data and provide a *highest probability density interval* (HDI), which is similar to a *confidence interval*. Severity of depression was measured using the CES-D (Radloff, 1977) and PA was measured using the IPAQ- short form, measured in METs (Booth, 2000). Data were log transformed to account for non-normality. Missing data were imputed, using multiple imputation methods. The analyses yielded a group level slope of $\beta = .03$, 95% HDI[-.03, .09], with an 85% probability that the slope was positive. These findings were not statistically significant at the 95% credibility level, however, a trend in the opposite direction than hypothesized was observed. Results from this study suggest that exercise during a smoking cessation intervention may not decrease symptoms of depression, and may increase them. This finding is in contrast to the positive effect PA has been shown to have among individuals in the general population. Future research should examine other ways to reduce depression during a smoking cessation attempt.

CORRESPONDING AUTHOR: Aaron K. Haslam, M.A., Texas Tech University, Lubbock, TX, 79409; aaron.haslam@ttu.edu

10:15 AM-11:15 AM D122

THE EFFECTS OF A DECEASED LOVED ONE TO A TOBACCO RELATED ILLNESS ON SMOKING AND EXPECTANCIES

Joshua C. Gottlieb, M.A., Aaron K. Haslam, M.A., Gabriella Grimaldo, B.S., Muqaddas Sarwar, B.A, Lee M. Cohen, PhD

Texas Tech University, Lubbock, TX

It is well known that tobacco use is related to several serious medical conditions including lung cancer, COPD, and heart disease. In fact, tobacco use remains the leading cause of preventable death in the United States (WHO, 2011), accounting for approximately 443,000 deaths annually (CDC, 2012). The purpose of the current study was to examine smoking behaviors and expectancies among individuals who reported losing a loved one to a tobacco related illness compared to those who did not. A sample of 383 college students completed a questionnaire that assessed demographic information, current smoking behaviors, and smoking expectancies (measured via the Short Form of the Smoking Consequences Questionnaire [S-SCQ; Myers et al., 2003]). Both direct and indirect effects were examined using a bias corrected bootstrap procedure. Results indicate that there was not a significant direct effect between past 30-day tobacco use and losing a loved one to a tobacco related illness (Point Estimate = .24, 95% CI = [-.27, .76], $p = .35$). Using a meditational model however, indirect effects were found between smoking expectancies and losing a loved one from a tobacco related illness (Point Estimate= .39, 95% CI = [.0004, .8]). Specifically, positive indirect effects were found for the positive reinforcement (Point Estimate = .32; 95% CI = [.09, .66]) and negative reinforcement (Point Estimate =.41 , 95% CI = [.08, .81]) factors of the S-SCQ. These results indicate that the death of a loved one to a tobacco related illness has a significant effect on individuals' expectancies towards smoking (i.e., what will happen if they smoke). Additionally, there was an indirect effect of the death of a loved one on whether the individual has smoked in the past 30 days. In addition, a negative indirect effect was found for the negative consequences factor (Point Estimate= -.07; 95% CI = [-.17, -.01]). It is possible that knowing someone who died as a result of smoking cigarettes can be a deterrent or an initiator, depending on one's expectancies. Clinicians could use this information to help shape a substance user's expectancies in an effort to reduce usage and promote cessation. Future studies will seek to examine whether this relationship exists with other substances.

CORRESPONDING AUTHOR: Joshua C. Gottlieb, M.A., Texas Tech University, Lubbock, TX, 79409; josh.gottlieb@ttu.edu

10:15 AM-11:15 AM D123

THE SUBJECTIVE IMPORTANCE OF SMOKING: AN EXPLORATORY STRUCTURAL EQUATION MODELING (ESEM) STUDY

Daniel Rodriguez, PhD[1], Chol Kuoiloi, B.S.[2], Brian Hitsman, PhD[3], Anna Veluz-Wilkins, M.A.[4], Frank Leone, MD[5], Peter Gariti, PhD[6], Robert Schnoll, PhD[7]

[1]La Salle University, Philadelphia, PA; [2]La Salle University, PA; [3]Northwestern University Feinberg School of Medicine, Chicago, IL; [4]Department of Preventive Medicine, Feinberg School of Medicine, Northwestern University, Chicago, IL; [5]Pulmonary, Allergy, & Critical Care Division, University of Pennsylvania Presbyterian Medical Center, Philadelphia, PA; [6]Department of Psychiatry, University of Pennsylvania, Philadelphia, PA; [7]University of Pennsylvania, Philadelphia, PA

Cigarette smoking is the leading cause of death and disease in the United States, accounting for nearly half a million deaths yearly. Despite these staggering numbers, it is estimated that 18% of adults aged 18 and older smoke cigarettes. Yet, nearly 70% of adult cigarette smokers reported wanting to quit, and 43% abstained from smoking ≥ one day in 2010. Thus, there is a desire to quit, although not all are successful at quitting. One factor that may influence smoking is the subjective importance of smoking (SIM) to the smoker. We designed a 15-item measure to assess smoking's subjective importance. To the measure's construct validity, we administered the SIM survey (SIMS) to a sample of 447 adult smokers (Mean age=46 years, SD=12.05), smoking 17 cigarettes/day (SD=8.36) pre quit. We employed exploratory structural equation modeling (ESEM) to analyze the data. ESEM is a structural equation modeling (SEM) method that allows researchers to combine exploratory (EFA) and confirmatory (CFA) factor analysis in one model. Unlike CFA, the ESEM model allows for items to load on more than a single factor. Like CFA, however, ESEM allows for the inclusion of predictors and outcome variables. The optimal model in the present study included two factors, one factor representing beliefs about smoking as part of the self (e.g.," cigarettes are a big part of my identity"; identity), the other representing shame associated with smoking (e.g., "smoking makes me feel bad about myself"; shame). This ESEM fit the data fairly well, $\chi2(152,349)=511.20, p < .0001$; CFI=.96; RMSEA=.05 (90%CI=.04, .06); WRMR=.96. Regarding predictor variables, general addiction was positively related to a higher identity score, although religiosity was negatively related to identity. Being female, and level of addiction were also related to higher shame scores. Having a high school education or less, and high anhedonia (inability to experience pleasure) were associated with lower shame scores. Higher smoker identity was related to higher relapse risk score, even after controlling for addiction, nicotine dependence, and demographic predictors of relapse risk. These findings suggest that the subjective importance of smoking may impact one's ability to quit smoking, likelihood to relapse, and may be a unique dimension of smoking needing further assessment.

CORRESPONDING AUTHOR: Daniel Rodriguez, PhD, La Salle University, Philadelphia, PA, 19141; rodriguezd@lasalle.edu

10:15 AM-11:15 AM D124

TOBACCO USE AND DIABETES INTERVENTION AND REFERRAL PROCESS WITH NP-PITTNET NURSE PRACTITIONERS

Betty J. Braxter, PhD, RN, CNM[1], Andrea Fischl, PhD, MPH[2], Jennifer D. Keith, MPH, CPH[3], Marlin Williams, MBA[4]

[1]University of Pittsburgh, School of Nursing, Pittsburgh, PA; [2]University of Pittsburgh School of Nursing, Pittsburgh, PA; [3]PHMC, Philadelphia, PA; [4]Health Promotion Council, Philadelphia, PA

Tobacco use and diabetes are both linked to high mortality and morbidity. The Pennsylvania Department of Health's Diabetes and Tobacco Prevention and Control Divisions have combined efforts to support a brief intervention with a referral process known as PA cAARds!, With PA cAARds!,healthcare providers are trained to utilize the *Ask, Advise, Refer* (AAR)model that encourages cross-referral of clients to diabetes self-management and tobacco cessation services.*NP-PittNet* a registered Agency for Healthcare Research and Quality (AHRQ) Practice Based Research Network (PBRN) and a vehicle for translating evidence based practice models into primary care, joined the effort to promote PA cAARds!The aims of the study were to: to 1) assess *NP-PittNet* NPs' awareness, knowledge, and utilization of PAcAARds!, and 2) explore interest and feasibility of PAcAARds! as a mobile health application for utilization in the referral process and follow-up continuity of care strategies.A mixed methods design was utilized. Subjects completed an on-line 29 item survey that assessed demographic characteristics and awareness of PA cAARds!. Qualitative data were collected across seven telephone-based focus groups exploring the utility and feasibility of a mobile health application for diabetes and tobacco cessation support.Twenty-seven NPs/NP students participated. About 30% of participants were aware of PA cAARds!, and 43% were familiar with the AAR model. Utilizing a 5 point Likert scale participants were "somewhat confident" with respect to directly helping their clients quit tobacco and manage their diabetes. Focus group themes included:need for information technology (IT) adaptable tools for both practitioners and clients; importance of reminder/check-in systems; and growing popularity of phone-based health applications. Results support continued efforts to enhance PA cAARds! referral tools, specifically to address risks associated with tobacco use and unmanaged diabetes, and to promote NPs' knowledge and awareness. To increase the effectiveness of the PA cAARds! program, nurse practitioners and practitioner students recommended the use of information technology that included an IT application.

CORRESPONDING AUTHOR: Betty J. Braxter, PhD, RN, CNM, University of Pittsburgh, School of Nursing, Pittsburgh, PA, 15260; bjbst32@pitt.edu

10:15 AM-11:15 AM D125

TOBACCO USE INITIATION AFTER 8.5 WEEKS OF FORCED ABSTINENCE FOLLOWING USAF BASIC MILITARY TRAINING

Brittany Linde, PhD[1], Christin Pasker, MA[2], Rebecca Krukowski, PhD[3], Tina Boothe, BA[2], Robert Klesges, PhD[3], Ann Hryshko-Mullen, PhD[4], G. Wayne Talcott, PhD[2]

[1]University of Tennessee Health Science Center, San Antonio, TX; [2]University of Tennessee Health Science Center, Lackland AFB, TX; [3]University of Tennessee Health Science Center, Memphis, TN; [4]Wilford Hall Ambulatory Surgical Center, Lackland AFB, TX

Tobacco usage, including smoking and smokeless tobacco products, has been identified as a major public health concern since the 1950s and is of particular concern to the U.S. military. Forced abstinence from all nicotine and tobacco containing products (TNCPs) during Air Force Basic Military Training (BMT) has been shown to reduce smoking rates among those who used prior to joining the military by approximately 18% at one-year follow-up. Unfortunately, although there is substantial cessation at one-year, many Airmen choose to start using TNCPs, with more Airmen using TNCPs at one year after BMT. In a sample of 1,463 Airmen who reported that they used TNCPs at one year follow-up after BMT, 75.7% said they initiated use during Technical Training (i.e. skills training that begins immediately after BMT). To our knowledge, there has been no research thus far evaluating why Airmen initiate TNCP use after BMT. We conducted 13 focus groups (from April 2014 to August 2014) consisting of between 2 to 12 volunteer US Air Force technical trainees (N = 85; 74 users prior to BMT, and 9 never users who initiated during Technical Training). These Airmen were 18-30 years old, were mostly male (i.e. 83.5%) and were stationed at Joint Base San Antonio- Lackland/Ft. Sam Houston for their Technical Training. Airmen were asked a series of open questions and their answers were recorded by multiple researchers. A thematic content analysis was conducted to identify themes that emerged from the data. TNCP use was attributed to the following themes: 1) returning to old habits, 2) freedom, 3) stress/relaxation, 4) peer influence/social environment, and 5) leadership mentality. Interestingly, TNCP initiators and re-initiators reported similar themes in their reasons for use. Findings from this study have implications for future research which may seek to address these reasons for initiation. The views expressed are those of the authors and do not reflect the official views or policy of the Department of Defense or its Components.

CORRESPONDING AUTHOR: Brittany Linde, PhD, University of Tennessee Health Science Center, San Antonio, TX, 78230; blinde@uthsc.edu

10:15 AM-11:15 AM D126

UP IN SMOKE: KNOWLEDGE AND PERCEPTIONS OF CONSTITUENTS IN CIGARETTE SMOKE

Jennifer Morgan, MPH[1], Kathryn Moracco, PhD, MPH[2], Jennifer Mendel, MPH[3], Randall Teal, MA[4], Seth M. Noar, PhD[5], Kurt M. Ribisl, PhD[2], Noel Brewer, PhD[6]

[1]UNC- Chapel Hill, Chapel Hill, NC; [2]UNC Gillings School of Global Public Health, Chapel Hill, NC; [3]Gillings School of Global Public Health, Chapel Hill, NC; [4]UNC's Lineberger Comprehensive Cancer Center, Chapel Hill, NC; [5]UNC Chapel Hill, Chapel Hill, NC; [6]University of North Carolina at Chapel Hill, Chapel Hill, NC

INTRODUCTION Tobacco products and cigarette smoke contain more than 5,000 constituents, many of which are toxic. Smoking is the main source of toxic chemical exposure and chemically-caused disease in humans, but awareness of most cigarette smoke constituents remains low. METHODS We conducted 6 focus groups with 40 adult smokers (n=25) and nonsmokers (n=15) in order to explore what they knew about cigarette smoke constituents in general, their perceptions about specific constituents, and what they would like to know about these constituents. Audio recordings were transcribed verbatim and then coded for emergent themes by 4 independent readers. RESULTS Smokers and non-smokers both knew cigarette smoke has chemicals, but they did not have a clear sense of what or how many are in cigarette smoke. Most participants indicated that they thought the tobacco companies put most of the chemicals into the tobacco during the manufacturing process. Almost all participants recognized nicotine and carbon monoxide as being in cigarette smoke. Though most participants had heard of formaldehyde and ammonia, many fewer realized that they were in cigarette smoke. When constituents were unfamiliar, participants often compared them to words or chemicals that they knew or that sounded similar. Participants had differing beliefs about which constituents most and least discouraged them from smoking. Some participants noted it was the ones they were more familiar with that discouraged them from wanting to smoke, while others said they experienced more discouragement from unfamiliar constituents. CONCLUSION Smokers and non-smokers had limited knowledge about constituents in cigarette smoke, and they incorrectly believed that most harmful constituents were added to tobacco. This research can help tobacco prevention and control researchers design more effective messages about the harms of smoking.

CORRESPONDING AUTHOR: Jennifer Morgan, MPH, UNC- Chapel Hill, Chapel Hill, NC, 27516; morganjc@email.unc.edu

10:15 AM-11:15 AM D127

AN IMPLEMENTATION OF CONTINGENCY FEATURES TO DELIVER RANDOM EMA SURVEYS IN A SMARTPHONE APPLICATION

Erik Iverson, MS[1], Jared Sieling, MS[1], Jon Moon, PhD[1], Tiffany Glynn, BS[2], Nancy Barnett, PhD[2]

[1]MEI Research, Edina, MN; [2]Brown University, Providence, RI

Ecological momentary assessment (EMA) records cognitions, affective experiences, and behaviors proximal to when they occur. For this study we developed a smartphone EMA app to investigate cognitive and affective processes relating alcohol use and sexual behaviors among adults at risk for sexually transmitted infection. The app captured alcohol use, sexual activity, and putative mediators by asking participants to self-identify these events and by delivering six surveys per day on a randomized schedule. Upon finishing an alcoholic drink, participants were prompted to submit a brief report through the app.

Two "context contingency" features were created to assess alcohol consumption while minimizing participant burden. The contingencies developed (1) suppressed the random surveys for 3 h after reporting alcohol consumption to ensure that random surveys, which are designed to measure processes outside of drinking episodes, were not delivered during a drinking episode, and (2) delivered follow-up messages every 30 min after the start or end of an alcoholic drink, requesting that the participant indicate whether he/she had finished or started another drink, respectively. These follow-up messages were designed to facilitate the accurate reporting of alcohol drinks.

Over the two-week study period, participants (n=13) were eligible for 1,092 random surveys (13 subjects x 14 days x 6 per day), of which 85 (8%) were withheld due to recent, self-reports of drinking. All but one participant had at least one survey withheld. The mean number of withheld surveys was 6.5 – about one every other day. Participants self-reported starting 149 drinks, and finishing 147. Of the drink finish reports, 37% were provided after a prompt from a follow-up message. For all messages, including those asking whether a new drink was started, participants responded to 180 out of 355 (51%).

Automated follow-up messaging for drinking episodes collected timely alcoholic drink reports, minimizing participant recall bias. Contingency features for EMA reduced participant burden by blocking prompts that were inappropriate for participants who had answered already, were refractory to further surveys or unable to respond. When used in an EMA application, these features may facilitate better remote measurement of alcohol use.

CORRESPONDING AUTHOR: Jon Moon, PhD, MEI Research, Edina, MN, 55436; jmoon@meinergy.com

10:15 AM-11:15 AM D128

DIFFERENTIAL EFFECTS OF PROBLEM DRINKER POSSIBLE SELF AND PROBLEM DRINKER SELF-SCHEMA IN ADOLESCENTS

Chia-Kuei Lee, PhD[1], Karen F. Stein, PhD[1], Colleen Corte, PhD[2]

[1]University of Rochester, Rochester, NY; [2]University of Illinois at Chicago, Chicago, IL

Although self-cognitions, both current (self-schema) and future-oriented (possible self), related to alcohol predict alcohol-use behaviors, how the self-schema and possible self function together and their related strength on regulating adolescent alcohol-use behaviors are unknown. Identifying the unique effect of self-schema and possible self on behaviors would contribute to the implications of alcohol-use intervention in adolescents. In this study, the effects of both self-schema and possible self as a problem drinker were examined simultaneously on the trajectory of alcohol consumption and alcohol problems among adolescents during the transition to high school. Secondary analysis of data from a one-year longitudinal study designed to investigate relationship of self-cognitions on health behaviors among 8th graders was used. Outcomes were the level of alcohol consumption and degree of alcohol problems over time (from 8th to 9th grade). The predictors were a self-schema as a problem drinker and a possible self as a problem drinker in 8th grade. Known family, parent, and peer determinants as well as gender were covariates. Generalized estimating equation models showed that controlling for known determinants, having a current conception of the self as a problem drinker (problem drinker *self-schema)* in 8th grade predicted higher level of alcohol consumption from 8th to 9th grade. Whereas, having a future conception of the self as a problem drinker (expected problem drinker *possible self*) in 8th grade predicted higher degree of alcohol problems across 8th to 9th grade. Both level of alcohol consumption and degree of alcohol problems increased significantly from 8th to 9th grade for all adolescents. Findings suggest that the current and future-oriented self-cognitions related to problem drinking play different roles in regulating alcohol-use behaviors over time in adolescence. Consequently, both the current and future oriented self-cognitions should be targeted in alcohol prevention and intervention programs for adolescents.

CORRESPONDING AUTHOR: Chia-Kuei Lee, PhD, University of Rochester, Rochester, NY, 14642; chia-kuei_lee@urmc.rochester.edu

10:15 AM-11:15 AM D129

GYM BAG PRIZE DRAWS: USING BEHAVIORAL INCENTIVES TO PROMOTE EXERCISE COMPLIANCE IN WOMEN WITH COCAINE DEPENDENCE

Leila Z. Islam, PhD[1], Dace Svikis, PhD[2]

[1]University of Maryland School of Medicine, Baltimore, MD; [2]Virginia Commonwealth University, Richmond, VA

To date, low rates of patient compliance have made it impractical to study whether regular exercise can contribute to positive outcomes in women with substance use disorders (SUD). One robust strategy for promoting and maintaining behavior change is contingency management (CM). CM has been used successfully to reinforce drug abstinence, treatment attendance, and other pro-social behaviors. CM delivers incentives (prizes) contingent upon target behaviors, though can be expensive. To reduce costs, CM is often delivered with an escalating variable-ratio schedule (Petry et al., 2005). As a Stage Ib behavioral therapies development project (Rounsaville et al., 2001), the primary aim of the present study was to test the use of behavioral incentives (BI) to promote regular physical activity in a residential SUD treatment setting with cocaine-dependent women. The target was physical activity, which was objectively defined at two levels: 30 minutes of treadmill walking at any pace and treadmill walking at moderate intensity. Specifically, a pilot RCT compared rates of physical activity over a six-week study period in a sample of $N = 17$ women with Cocaine Dependence. $N = 10$ were randomized to BI group and $n = 7$ were placed in the control (C) group. All participants completed baseline assessment, attended a 45-minute health and fitness education class, and were scheduled in exercise sessions three days/week. Those randomized to BI, however, were eligible three days/week, to receive incentives for meeting the target behavior(s). Follow-up assessment occurred at study midpoint and end, and 4-weeks post-discharge from the residential program. The primary outcome variables (percentage of sessions completed and total time spent in scheduled sessions) were used for effect size estimations, which were then used to perform power analyses so that sample size calculations could be estimated for the design of a Stage II RCT. A significant Group effect demonstrated that the BI group spent a significantly greater number of total minutes in scheduled exercise sessions than the C group. This study provides benchmark data on the utility of BI for promoting physical activity for women with cocaine dependence. These promising findings support the use of BI procedures to promote exercise compliance, which will ultimately allow scientists to better develop SUD programs that directly utilize the mental and physical health benefits of physical activity.

CORRESPONDING AUTHOR: Leila Z. Islam, PhD, University of Maryland School of Medicine, Baltimore, MD, 21230; islamlz@vcu.edu

10:15 AM-11:15 AM D130

INJUNCTIVE NORMS REGARDING COGNITIVE ENHACING PRESCRIPTION DRUG USE AMONG EUROPEAN STUDENTS

Claudia R. Pischke[1], Stefanie Maria. Helmer[2], John McAlaney[3], Bridgette M. Bewick[4], Yildiz Akvardar, MD, PhD[5], Olga Orosova[6], Ferdinand Salonna[7], Christiane Stock[8], Robert Dempsey[9], Rafael Mikolajczyk[10]

[1]Leibniz Institute for Prevention Research and Epidemiology, Bremen, Germany; [2]Leibniz-Institute for Prevention Research and Epidemiology, Bremen, Germany; [3]University Bournemouth, Bournmouth, United Kingdom; [4]University Leeds, Leeds, United Kingdom; [5]Marmara University School of Medicine, Istanbul, Turkey; [6]P. J. Safarik University Kosicé, Kosicé, Slovakia; [7]Palacky University of Olomouc, Olomouc, Czech Republic; [8]University of Southern Denmark, Esbjerg, Denmark; [9]Staffordshire University, Staffordshire, United Kingdom; [10]Helmholtz Centre for Infection Research, Braunschweig, Germany

The nonmedical use of prescription medicines (NMUPM) to improve academic performance is well-documented among U.S. American college student populations. To date, only a few studies have examined NMUPM and attitudes towards use in European students. The aims of this investigation were to describe the prevalence of NMUPM among university and college students in seven European countries and to evaluate whether perceptions of peer approval of NMUPM (i.e., injunctive norms) is associated with the personal attitude towards NMUPM. An E.U.-funded study (Project SNIPE) was conducted in Belgium, Denmark, Germany, Slovak Republic, Spain, UK, and Turkey in 2012. In a web-based questionnaire, 4,482 students (71% female) were asked about their personal NMUPM and attitude towards NMUPM and perceived peer use and peer attitude towards NMUPM. Across countries, 6% reported NMUPM at least once in their life (range: Denmark: 2%-U.K.: 11%) and 24% approved of it. Nine percent of all students thought that the majority of their peers approved less of NMUPM than themselves, 53% that their peers equally approved and 39% that their peers approved more of NMUPM. The perception that the majority of peers approved of NMUPM was significantly associated with higher odds for personal approval of NMUPM [4.03 (95% CI: 3.35-4.84)]. To conclude, perceptions of peer approval of NMUPM play a role in personal attitude towards the use of such medicines that thought to enhance academic performance. Interventions to prevent NMUPM should address the important role of injunctive norms among European college populations.

CORRESPONDING AUTHOR: Claudia R. Pischke, Leibniz Institute for Prevention Research and Epidemiology, Bremen, 28359; pischke@bips.uni-bremen.de

10:15 AM-11:15 AM D131

MALADAPTIVE RESPONSES TO CHRONIC PAIN MAY PREDICT OPIOID USE AMONG INDIVIDUALS RECEIVING METHADONE MAINTENANCE THERAPY

Courtney Borsuk, M.S.[1], Kristen D. Rosen, MPH[2]

[1]University of Texas at San Antonio, San Antonio, TX; [2]The University of Texas Health at San Antonio, San Antonio, TX

Background. Among individuals receiving methadone maintenance therapy (MMT) for an opioid use disorder (OUD) approximately 40% will present with a chronic pain condition. Chronic pain is defined as acute, non-malignant pain, lasting greater than 3 months. For many individuals, these co-occurring conditions can adversely affect treatment outcomes. Indeed, evidence suggests chronic pain problems are among the primary reasons for continued opioid use among patients receiving MMT. However, it is not well understood how chronic pain factors contribute to continued opioid use. The current study examined chronic pain-related psychological flexibility (e.g., pain willingness, mindfulness, and pain-related anxiety) in relation to continued opioid use among individuals receiving MMT. Methods. Study participants were recruited from a community outpatient MMT clinic. Interested individuals completed a brief pre-screen interview to identify individuals with a chronic pain condition. Those who were eligible and willing to provide consent were enrolled. Participants completed an assessment battery facilitated by an experienced interviewer. Assessments included psychological flexibility measures (MAAS, PAAS, AAQ), measure of illicit opioid use (TLFB), pain scale (BPI), and demographic information. Results. The sample was 51% female. Mean age was 40 years old, and 84% of participants were Hispanic. Participants' mean pain severity was 7(2.0) on a 1-10 scale. Mean functional impairment was 7(2.1). Overall, 54 participants reported illicit opioid analgesic or heroin use within the past 30 days. With regard to chronic pain characteristics (i.e., severity and functional interference), there were no differences between those who continued to use versus those who did not report use. Low pain willingness, low mindfulness, and high pain-related anxiety, however, were significantly associated with continued misuse, compared to individuals who reported no illicit opioid use.Conclusion/Significance. Our findings suggest maladaptive responses to chronic pain may play a role in maintaining OUDs. These findings may have implications for the delivery of future therapies aimed at integrating treatment for these co-occurring conditions.

CORRESPONDING AUTHOR: Courtney Borsuk, M.S., University of Texas at San Antonio, San Antonio, TX, 78204; csborsuk@gmail.com

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MORE OFTEN MAY BE BETTER: ANNUAL VS REPEATED SUBSTANCE USE SCREENING IN PRIMARY CARE

Beth A. Bailey, PhD, Timothy Urbin, PhD, Thomas Bishop, PsyD, Michael Floyd, EdD

East Tennessee State University, Johnson City, TN

Identification of patients using drugs or alcohol at risk levels is a primary care challenge. The SBIRT (Screening, Brief Intervention, and Referral to Treatment) model increases identification of substance use among patients, and current SBIRT guidelines recommend brief prescreening of all patients annually. The primary study purpose was to examine whether repeat brief substance use prescreening would lead to additional use disclosure over annual prescreening. Adult patients at 3 family medicine practices were asked the 2 SBIRT prescreening questions (any instance of binge drinking in last year; any instance of recreational drug use/prescription drug misuse in last year) during triage at every clinic visit. A total of 7,342 patients were prescreened, 5,483 who had one or more subsequent visits over the next 12 months. Of those with multiple visits, 86% prescreened negative initially (507 patients positive for risky alcohol and/or drug use). However, an additional 251 patients (5% of all patients; 33% of all eventual positive prescreens) prescreened positive at a subsequent visit after prescreening negative initially. Those who initially reported no substance use did not differ significantly from those who reported use at the first screen in age, race, depression, or other health behaviors. However, female patients were more likely to initially report no use than males (38% vs 28%, χ^2=7.85, p=.003). In addition, recreational drug users were more likely to report no substance use at the initial prescreen than alcohol abusers (42% vs 30%, χ^2=25.64, p < .001), and those who initially reported no risky alcohol use were less likely to need treatment than those who reported alcohol use initially (16% vs 28%, χ^2=14.20, p=.003). One third of patients positive for risky levels of substance use were not initially identified and no specific profile of this group emerged. Further research is needed to determine if those who report substance use only at subsequent visits are actually using substances initially but denying use, or if episodic changes in use account for subsequent positive prescreens. With minimal additional time expenditure, prescreening primary care patients for substance use at every visit may substantially increase the number of patients identified who may benefit from substance use education and treatment.

CORRESPONDING AUTHOR: Beth A. Bailey, PhD, East Tennessee State University, Johnson City, TN, 37614; nordstro@etsu.edu

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PROJECT REACH OUT RESULTS: WHO DO FIREFIGHTERS TRY TO HELP?

Victoria A. Torres, BA[1], Suzy B. Gulliver, PhD[2], Michelle L. Pennington, BA[2], Samantha Synett, BA[2]

[1]Baylor Scott & White, Waco, TX; [2]Baylor Scott and White, Waco, TX

Firefighters face extraordinary stress in the line of duty, and the consequences of stress may be compounded by high rates of alcohol and tobacco in this professional group. Yet firefighters are often unwilling to address behavioral health issues through formal treatment. In 2012, we developed two brief group trainings for firefighters to learn how to identify behavioral health problems in peers, and how to best get identified peers to treatment. The project compared a live training to a videotaped training, with a video-delivered knowledge-only comparison group. Results from the main study are under review, and showed that fireighters in the video condition and the live condition had similar rates of intervening in the three month follow-up period, but that the success of the interventions was better in the video condition, which has good implications for the dissemination of the low-cost video to fire service in general. Here we report additional analyses of the intervention results. 153 participants completed the study.Overall, the sample reported a total of 163 interventions in the three month follow-up. Family and marital issues were the primary reason given for the intervention at 29.4%, but alcohol and drug interventions were not significantly less frequent. (26.4% of interventions were coded for alcohol and drug problems). Depression was identified as the target problem in 16.5% of the interventions. Additional analyses are being conducted, and the utility of peer outreach in firefighting populations is discussed.

CORRESPONDING AUTHOR: Victoria A. Torres, BAinPsychology, Baylor Scott & White, Waco, TX, 76706; vitorres@sw.org

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REVIEW OF ALCOHOL AND SUBSTANCE USE PREVENTION PROGRAMS FOR YOUTH IN HAWAI‘I AND PACIFIC ISLANDS

Claudio Nigg, PhD, Zoe Durand, MPH, Angelie Cook, BS, Minami Konishi, MPH

University of Hawaii at Manoa, Honolulu, HI

Issues: Alcohol and substance use in Hawai‘i and the Pacific Islands has been a continuing problem for the past decade. Adolescent use is of particular concern, with 25% of high school students in Hawaii identifying as current drinkers in 2013. Native Hawaiians and Pacific Islanders are at increased risk of early onset drinking compared to other ethnic groups.Approach: A systematic review was performed to identify recent literature on interventions targeting youth for alcohol and substance use prevention in Hawai‘i or the Pacific Islands and examine the approaches, efficacy, and outcomes of these interventions.Key findings: Interventions in Hawai‘i commonly focus on building cultural pride, integrating traditional values, and involving the family and community. There is a scarcity of published results, but there is evidence that positive family values and discipline and strong ethnic pride were protective.Implications: More research is needed on the effectiveness and impact of current interventions in Hawai‘i and the state of alcohol use in the Pacific. Special focus should be addressed towards the vulnerable populations of Native Hawaiian and Pacific Islander youths.Conclusion: Culturally-tailored, community-centered approaches to intervention are needed. Future interventions should publish about their results and experiences in order to build evidence in the field and base planning.

CORRESPONDING AUTHOR: Claudio Nigg, PhD, University of Hawaii at Manoa, Honolulu, HI, 96822; cnigg@hawaii.edu

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SELF-EFFICACY IN MARIJUANA TREATMENT OUTCOME: COPING SKILLS AS MEDIATORS

Mark D. Litt, PhD

University of Connecticut Health Center, Farmington, CT

Objective. The primary aim of this study was to compare evaluate the factors responsible for improving outcomes in marijuana treatment.*Method*. Marijuana dependent patients from three marijuana treatment trials (N = 905) and assigned to one of several 9-week cognitive-behavioral treatments were evaluated in terms of self-efficacy, coping, drinking and drug use, and psychiatric symptomatology. Linear and logistic regressions and linear mixed models analyses were conducted to determine the strongest first order predictors of outcomes, both at specific time points and over time. Outcomes included proportion days abstinent (PDA), total abstinence, and marijuana problems scale (MPS) scores. Baseline levels of all variables were controlled in all analyses. Tests of mediation were then conducted to determine what factors if any might mediate outcomes. *Results*. Both single time-point analyses and linear mixed models of outcomes over time indicated that the strongest predictors of all outcomes was self-efficacy at posttreatment (controlling for pretreatment self-efficacy), accounting for between 20 and 30 percent of the variance in treatment outcomes. Tests of mediation further indicated that effects of self-efficacy were significantly accounted for by increases in coping skills. Other potential mediators (e.g., drop in alcohol use) did not account for the effects of self-efficacy.*Conclusions*. Marijuana treatment significantly improved drug use outcomes over three separate studies. The most important predictor of treatment success in our datasets was self-efficacy. Self-efficacy is a strong predictor of outcomes in many domains, but the means by which self-efficacy alters behavior have not been clear. The present results suggest that one pathway by which self-efficacy influences behavior is through the development of coping skills over time.

CORRESPONDING AUTHOR: Mark D. Litt, PhD, University of Connecticut Health Center, Farmington, CT, 06030; Litt@uchc.edu

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THE IMPACT OF DEPRESSION AND ANXIETY ON PAIN IN THE OPIOID ADDICTION POPULATION

Kellianne Alexander[1], Amy Wachholtz, PhD, MDiv, MS[2]

[1]University of Massachusetts Medical School, Weymouth, MA; [2]University of Massachusetts Medical School, Worcester, MA

The goal of the present study was to examine the impact of depression and anxiety on comorbid opioid addiction and chronic pain with regards to acute pain tolerance, sensitivity, and perception. It was hypothesized that there would be significantly more individuals on opioid maintenance for addiction diagnosed with either depression and/or anxiety. Secondly it was hypothesized that those diagnosed with depression or anxiety with co-morbid opioid addiction and chronic pain would have a significant difference in pain response regarding acute pain tolerance, perception, and sensitivity. 120 participants were included; 60 on an opioid agonist for addiction; 60 were not currently on an opioid agonist. Participants completed the HADS assessment and pain pressor task. Within the opioid addiction population there was no significant difference in pain tolerance regardless of mental health status. Participants with depression rated the pain stimulus as more painful ($p = 0.05$) while those with anxiety showed greater pain sensitivity ($p = 0.05$). Understanding the differences in pain responses in the opioid addiction population can help create a more targeted treatment.

CORRESPONDING AUTHOR: Kellianne Alexander, University of Massachusetts Medical School, Weymouth, MA, 02189; kellianne.alexand001@gmail.com

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REMOTE BRIEF INTERVENTION AND REFERRAL TO TREATMENT (R-BIRT): DESIGN, FEASIBILITY, AND ACCEPTABILITY

Edwin Boudreaux, PhD[1], Brianna Haskins, MS[2], Edward Bernstein, MD[3], Douglas Ziedonis, MD, MPH[1], Grant Grissom, PhD[4]

[1]University of Massachusetts Medical School, Worcester, MA; [2]University of Massachusetts Medical School, Athol, MA; [3]Boston University School of Medicine, Boston, MA; [4]Polaris Health Directions, Inc., Langhorne, PA

Objective: To design, create an alpha prototype, and test a telehealth model to deliver real-time brief interventions and referral to treatment (BIRT) for alcohol use/abuse in the emergency department (ED). Methods: Core design principles: (1) assess alcohol and drug use independently and as comorbid, (2) accommodate a range of severity, (3) software to facilitate fidelity to BIRT best practices, (4) use phone/video for scalability, (5) flexible implementation models. Primary models: (1) Warm Handoff: clinician contacts R-BIRT and hands the phone/video to the patient, (2) Patient Direct: clinician provides a phone/video to the patient with instructions and R-BIRT phone number, (3) Electronic Referral: clinician sends the patient's information electronically to R-BIRT and the patient receives a call the next day. Alcohol/drug users were enrolled (total n=50) to test the R-BIRT. Feasibility was measured by the rate of eligible patients willing to consent and the percentage of completed consultations. Acceptability was assessed using a satisfaction scale ranging from "Very Poor" to "Excellent." Results: 10 patients were enrolled per model and 10 into a Patient Choice condition. 10 (100%) chose Electronic Referral. Due to a low rate of completion with Electronic Referral, 10 patients were enrolled into a Modified Patient Choice condition wherein the first two models were offered and Electronic Referral was offered if those were declined. This strategy raised the completion rate to 90%. Of the 453 patients considered, 130 (29%) were eligible due to risky alcohol/drug use and 55 (42%) were enrolled. 100% of Warm Handoff and Patient Direct model participants and 90% of Modified Patient Choice completed the consultation, compared with 10% of Patient Choice and 0% of Electronic Referral. Of the 18 clinician satisfaction ratings obtained, 15 (83%) rated satisfaction as Good/Excellent. The 29 patients who completed a consultation provided predominately "Excellent" ratings. Conclusion: This study exhibits the feasibility and acceptability of the R-BIRT service model among clinicians and patients in the ED. Furthermore, patients enrolled into a model wherein the consultation was completed during the ED visit were much more likely to actually receive the intervention.

CORRESPONDING AUTHORs: Edwin Boudreaux, PhD, University of Massachusetts Medical School, Worcester, MA, 01655; edwin.boudreaux@umassmed.edu; Brianna Haskins, MS, University of Massachusetts Medical School, Athol, MA, 01331; brianna.haskins@umassmed.edu; Edward Bernstein, MD, Boston University School of Medicine, Boston, MA, 02118; ebernste@bu.edu; Douglas Ziedonis, MD, MPH, University of Massachusetts Medical School, Worcester, MA, 01655; douglas.ziedonis@umassmemorial.org; Grant Grissom, PhD, Polaris Health Directions, Inc., Langhorne, PA, 19047; grant@polarishealth.com

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THE ALTRUISTIC KIDNEY DONOR

Wendy Balliet, PhD[1], Abby Kazley, PhD[1], Jennifer Correll, PhD[1], Emily Johnson, MHA[1], Nicole Marlow, PhD, MSPH[2], Kenneth Chavin, MD, PHD[1], Prabhaker Baliga, MD[1]

[1]Medical University of South Carolina, Charleston, SC; [2]Univeristy of Florida, Gainesville, FL

Kidney transplantation as a treatment for end-stage-renal disease (ESRD), improves both survival and the quality of life of recipients compared to long term dialysis. However, worldwide there is a significant scarcity of living directed and deceased kidney donors, resulting in significant time on transplant waitlist. Non-directed, or altruistic, living kidney donation is a growing type of donation defined as a living person's offer to donate an organ to anyone on the transplant cadaveric wait list. Despite concerns raised by some transplant centers about ulterior motives of altruistic donors as well as discrepancy among policies and attitudes about non-directed donation across transplant centers, there are only a few studies that examine the experiences of non-directed living kidney donors. The present study attempted to better understand the intentions and experiences of altruistic kidney donors using qualitative interviews in a focus group format. Two separate focus groups were conducted with people who contacted an academic medical center in the southeast inquiring about kidney donation. Qualitative analysis revealed eight major themes from the focus groups: 1) motivation to donate (to help those in need, opportunity to save a life, to have a significant impact on life of others) 2) minimize perceived risk (small risks for large rewards) 3) target patient recipient (donate to someone who will take care of their body and lead a healthy lifestyle) 4) change in lifestyle (decrease ibuprofen and alcohol use) 5) source of initial donation knowledge (social media stories) 6) history of altruistic acts (desire to donate is congruent with other helping behaviors and values) 7) donation chain (donating one kidney can positively affect many) and 8) family and friend response (privacy in decision making). Results suggest that altruistic kidney donors have a resolve to help others to improve their quality of life that is largely aligned with their values. As kidney donation remains at a critical shortage, unwillingness to consider altruistic living donors due to beliefs of ill-motivations appears superfluous and future directions should call for the need for standard best practice of care in altruistic kidney donation evaluations across transplant centers.

CORRESPONDING AUTHOR: Wendy Balliet, PhD, Medical University of South Carolina, Charleston, SC, 29425; ballietw@musc.edu