Wednesday
April 27, 2011
12:00 PM–2:45 PM

Seminar 01 12:00 PM–2:45 PM 1000

INTRODUCTION TO THE MULTIPHASE OPTIMIZATION STRATEGY (MOST) FOR BUILDING MORE EFFECTIVE BEHAVIORAL INTERVENTIONS

Linda M. Collins, PhD

Penn State, State College, PA.

The majority of behavioral interventions in use today have been evaluated as a treatment package using a two-group randomized controlled trial (RCT). This approach is an excellent way to determine whether an intervention is effective. However, the treatment package approach is less helpful at providing empirical information that can be used to improve the intervention's effectiveness. In this seminar an innovative methodological framework for building more effective behavioral interventions, the Multiphase Optimization Strategy (MOST), will be presented. MOST is based on ideas inspired by engineering methods, which stress careful management of research resources and ongoing improvement of products. A comprehensive strategy, MOST includes a series of steps devoted to establishing the conceptual foundation of an intervention; gathering empirical information on individual intervention components via experiments designed for efficiency and conservation of research resources; making decisions based on the results of the experiments to develop the intervention; and evaluating the intervention via a RCT. Using MOST it is possible to engineer an intervention targeting a particular effect size, level of cost-effectiveness, or any other criterion.

This seminar will provide an introduction to MOST. Ongoing intervention development studies using the MOST approach will be used as illustrative examples. A substantial amount of time will be devoted to experimental design, which is an important tool in MOST. In particular, factorial experiments and fractional factorial experiments will be discussed. Time will be reserved for open discussion of how the concepts presented can be applied in the research of seminar attendees. Attendees will be given a handout with the Power Point slides and a list of articles containing additional information.

Attendees may also be interested in "Getting SMART about developing individualized sequences of health interventions" presented by Drs. Murphy and Almirall, which will build on the information on experimental design presented here.

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Seminar 02 12:00 PM–2:45 PM 1001

USING THE INTERNET TO TRANSLATE EVIDENCE-BASED INTERVENTIONS AND SELF-MANAGEMENT INFORMATION FOR CANCER PATIENTS: LESSONS FROM THE FIELD

Anna M. McDaniel, PhD,[1,2] Christine Newlon, PhD(c),[2] Katherine Schilling, EdD,[3] Kim Wagler-Ziner, PhD,[1,4] Barbara Given, PhD[5] and Charles W. Given, PhD[6]

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Cancer patients, survivors, and their families have significant needs for 1) information about diagnosis and treatment, 2) help with symptom management, 3) communication and coordination of care, and 4) prevention and surveillance of further problems. Provision of cancer-related information helps patients and their families to accept their diagnosis, improve symptom management and treatment compliance, and reduce anxiety and uncertainty, thus increasing overall quality of life. Our research team has designed a web portal to serve as the application architecture for online access to evidence-based cancer information and interactive interventions. In this seminar, we will share the results of our research and discuss implications for practice.

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Seminar 03 12:00 PM–2:45 PM 1002

MIND-BODY SKILLS TRAINING FOR RESILIENCE AND STRESS MANAGEMENT: THEORETICAL FOUNDATIONS, CLINICAL EVIDENCE AND PUBLIC HEALTH APPLICATIONS

Matthew J. Fritts, MPH, E-RYT, Mona O. Bingham, PhD, RN and Katherine Smith, MPH

Samueli Institute, Alexandria, VA.

This seminar will present the theoretical foundations, state of the science, and practical applications of a novel approach to stress management based on self-care and skills training in evidence-based mind-body practices (MBP). Stress is a major facilitator of multiple chronic diseases that are costly in pain and suffering, and also in dollars and lost productivity. The current social, political and economic climate is ripe for a paradigm shift—from a disease treatment model to a health promoting model based on cultivating wellness and proactive disease prevention. Self-care with MBP is a cornerstone of this paradigm.

Presenters will review the physiology of stress and resilience, the theory of MBP, and physiologic and cognitive/affective mechanisms of action. Through experiential activities and structured dialogue, participants will experience 3 types of MBP and explore feasibility and clinical applications of MBP as adjunctive treatments for stress-related illness. They will use the Optimal Healing Environments framework to describe the relevance of MBP to "inner environments" (such as cultivating meaning, intention and spiritual beliefs) and outer environments (such as healing spaces and relationships).

Finally, presenters will summarize the evidence base supporting use of MBP for prevention and treatment of stress-related disease. They will describe their current efforts to synthesize and translate this evidence into clinical practice guidelines, existing federal and state public health programs, and health policy efforts that leverage implementation of the wellness and health promotion sections of the Patient Protection and Affordable Care Act.

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Seminar 04 12:00 PM–2:45 PM 1003

RECRUITING, TRAINING, AND EVALUATING PEER SUPPORTERS: THE PEERS FOR PROGRESS NETWORK

Guadalupe X. Ayala, PhD, MPH,[1] Andrea Cherrington, MD, MPH[2] and Tricia S. Tang, PhD[3]

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Peer support is an evidence-based approach for chronic disease prevention and control. However, models of peer support differ on important dimensions including how peer supporters are identified, whether they are paid or volunteer, and how peer support is delivered and tracked. With a background of common core functions of peer support (assistance in daily behavior, social/emotional support, linkage to clinical care, ongoing support), this seminar will teach participants how to design feasible and effective peer support programs through key tasks of identifying, recruiting, training, and tracking peer supporters. Instructors will draw on their experiences with multi-ethnic populations and programs based in communities and health centers in Alabama, California, and Michigan as part of Peers for Progress, an international program of the American Academy of Family Physicians Foundation to promote peer support in prevention and health care. Participants will learn about varied methods for identifying, recruiting, and selecting peer supporters and how these might differ based on cultural and contextual factors, including payment/incentive structure. Participants will receive examples of training materials and discuss how these materials were conceptualized from both a theoretical and practical perspective. Participants will also learn varied approaches to evaluating training outcomes, including methods to assess intervention fidelity during implementation. Concepts and strategies will be reinforced through case examples, simulations, and a hands-on exercise.

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Seminar 05 12:00 PM–2:45 PM 1004

ACCEPTANCE AND COMMITMENT THERAPY FOR HEALTH RELATED PROBLEMS

Maria Karekla, PhD

Psychology, University of Cyprus, Nicosia, Cyprus.

This seminar will cover the application of Acceptance and Commitment Therapy (ACT) for individuals with a variety of health related problems (e.g. smoking, cancer, diabetes etc). ACT is based on the view that most psychological difficulties and suffering are a result of experiential avoidance and fusion with literal thinking getting in the way of value guided action and living. ACT teaches clients how to connect with their values, become more accepting of the world within (thoughts, memories, experiences, sensations etc) and move towards valued action and change in their lives. Concepts will be illustrated using live demonstrations, experiential exercises (acceptance, mindfulness, defusion), metaphors, and worksheets. This workshop is designed to teach basic skills needed to explore ACT as an assessment model and intervention method. It will be both didactic and experiential and will balance an understanding of the model with a personal connection with the issues raised in ACT, and with skill development.

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Wednesday
April 27, 2011
3:15 PM–6:00 PM

Seminar 06 3:15 PM–6:00 PM 1005

GETTING SMART ABOUT DEVELOPING INDIVIDUALIZED SEQUENCES OF HEALTH INTERVENTIONS

Susan A. Murphy, PhD[2,1] and Daniel Almirall, PhD[1]

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The effective management of a wide variety of chronic health disorders often requires individualized, sequential decision making, whereby treatment is dynamically adapted over time based on a patient's changing course. Adaptive health interventions operationalize individualized, sequential, decision making via a sequence of decision rules that specify whether, how, for whom, and when to alter the intensity, type, or delivery of psychosocial, behavioral, and/or pharmacological treatments at critical decision points in the management of chronic disorders. Adaptive health interventions can be used to develop or supplement clinical treatment guidelines; and they inform the evidence-base for treating chronic health disorders. In this seminar, we present a novel experimental design—sequential multiple assignment randomized trials, or SMART—intended specifically for the purpose of developing and optimizing adaptive health interventions.

Specifically, we will discuss why adaptive health interventions are important; introduce SMART designs; contrast SMARTs with other experimental approaches; discuss SMART design principles, including common choices for primary and secondary aims; and acquaint the audience with data-analytic approaches for developing optimized adaptive health interventions that are accordant with these primary and secondary aims. Illustrative examples will be drawn from studies using SMART designs that have been completed or are currently in the field. Participants will be encouraged to share experiences and ideas from their own research as a way to connect with the material. Attendees of this seminar may also be interested in attending the seminar titled an "Introduction to the Multiphase Optimization Strategy (MOST) for Building More Effective Behavioral Interventions" presented by Dr. Linda M. Collins. The SMART experimental design is one of a variety of study designs that can be used under MOST to build more effective behavioral interventions.

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Seminar 07 3:15 PM–6:00 PM 1006

SOCIAL MEDIA MARKETING AND HEALTH BEHAVIOURS: INDUSTRY STRATEGIES, CONSUMER BEHAVIOURS, AND PUBLIC HEALTH RESPONSES

W. Doug Evans, PhD,[1] Colin McLeod, PhD[2] and Samantha L. Thomas, PhD[3]

[1]Department of Prevention and Community Health, George Washington University, Washington, DC; [2]Australian Centre for Retail Studies, Monash University, Melbourne, VIC, Australia and [3]Consumer Health Research Group (CHaRGe), Monash University, Melbourne, VIC, Australia.

Public health focuses attention on the link between industry messaging in mainstream media sources (t.v., print) and health outcomes, and uses these spaces in health communication strategies. However social media (internet, mobile technology) will soon become the dominant messaging spaces for industry to influence consumer behaviour.

What does this mean for public health agencies who wish to counter, and respond to these messaging tactics? How are consumers are engaging and acting upon a competing range of messages in social media spaces? Can public health effectively utilize these new technologies to develop more effective health promotion and prevention messaging strategies? Or does the answer lie in public/private collaboration? This interactive seminar offers unique insights into the theory behind the social media communication strategies of private industry and public health agencies, including how social media is defined and measured, and how social media is used to ‘push messages’ to the public. We review the current evidence about social media impacts on health behaviours, exploring which types of social media are most likely to be utilized by different subgroups, and the socio-cultural factors that may impact on the ways in which groups respond to messaging tactics.

Finally we provide a practical case example of how social media may be used by health practitioners as a communication tool to change health behaviour and promote health care. Text4baby utilises Mobile Health technology (mHealth) to improve maternal and child health behavioral outcomes such as increased Medicaid-sponsored care utilization, reduced smoking during pregnancy, taking pre-natal vitamins, improved nutrition and related behaviours. In this session, we will examine the intervention strategy, theoretical assumptions underlying it, and early results from an evaluation of its behavioral outcomes.

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Seminar 08 3:15 PM–6:00 PM 1007

GENE-ENVIRONMENT INTERPLAY IN HEALTH BEHAVIOR: FROM MECHANISMS TO TRANSLATION

Colleen McBride, PhD,[1] Ruth Ottman, PhD,[2] Mariana Figueiro, PhD,[3] Angela Bryan, PhD[4] and Kay Wanke, PhD, MPH[5]

[1]Social and Behavioral Research Branch, National Institutes of Health, Bethesda, MD; [2]Columbia University Mailman School of Public Health, New York, NY; [3]Rensselaer Polytechnic Institute, Troy, NY; [4]The University of New Mexico, Albuquerque, NM and [5]Office of Behavioral and Social Sciences Research, National Institutes of Health, Bethesda, MD.

Significant investment in the science of genetic and genomic discovery has occurred over the last decade. However, we are just beginning to make inroads into the science of gene-environment interplay when studying the complex causes of common diseases, particularly within the field of behavioral medicine. We also have few examples to guide us in anticipating the translational promise of basic research in gene-environment interaction (GxE). To engage the research imagination of behavioral medicine researchers, leaders in the field of GxE will outline basic concepts and provide examples of the potential for translation of results from basic research to interventions in behavioral medicine. This Seminar will first lay the methodological foundation for the study of gene-environment interplay by defining GxE, outlining the models for the pathways through which GxE operates, and describing study designs to detect it. We will then discuss emerging technology and its promise to advance our measurement of the environment within GxE research and to improve the delivery of interventions. Describing new in-field, real-time sensors that continuously measure personal exposure to rest, activity, and circadian light and darkness, we will discuss the utility of advanced measurement strategies for both basic research and translational applications. The seminar will close by highlighting the promise of personalized medicine through individualizing interventions to genotype. We will discuss the genetic and biological mechanisms that explain differential psychological and physiological responses to exercise, and discuss how models of behavior can build on these findings to enable the design, implementation, and evaluation of interventions to improve health behavior.

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Seminar 09 3:15 PM–6:00 PM 1008

USING EMPIRICAL BINOMIAL HIERARCHICAL BAYESIAN MODELING (EBHBM) TO DETERMINE WHETHER A BEHAVIORAL INTERVENTION WORKS WELL FOR SOME PARTICIPANT GROUPS BUT LESS SO FOR OTHERS

Yuelin Li, PhD

Psychiatry and Behavioral Sciences, Memorial Sloan-Kettering Cancer Center, New York, NY.

Behavioral medicine intervention trials often recruit participants from multiple disease clusters or from different geographical sites but randomize them individually to the intervention conditions. EBHBM is a useful tool in testing moderation of treatment effect by disease/site clusters.

With minimal mathematics, we first go over the basics in EBHBM modeling. Basics of Bayesian analysis using Gibbs Sampling is also covered using primarily graphs. Next, a step-by-step tutorial covers how to fit EBHBM using the open-source statistical packages R and OpenBUGS. Finally, basic diagnostics of convergence in Gibbs Sampling are summarized. Further readings are provided.

The example dataset comes from a smoking cessation trial. Smokers newly diagnosed with cancer and scheduled for surgery were recruited from 7 oncology clinics and randomized individually into the Scheduled Reduced Smoking intervention (SRS, N=96) prompted by a handheld computer or Standard Care (SC, N=89). All patients received NRT and counseling. EBHBM used biochemically verified 24-hour point abstinence rates to estimate the difference between the SRS and SC quit rates across disease clusters. The step-by-step tutorial covers how to use EBHBM to estimate the probability that SRS is more efficacious than SC: highest in Colorectal (88%), followed by Breast (85%), Urology (71%), and Gyn (68%). By contrast, SRS was less efficacious for Gastric (28%), Thoracic (33%), and Head & Neck (15%).

The overall goal of this seminar is to make EBHBM immediately usable to a behavioral scientist. To facilitate this, the dataset and WinBUGS syntax will be available on the instructor's website at http://idecide.mskcc.org. Participants are encouraged to try them before we meet.

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Seminar 10 3:15 PM–6:00 PM 1009

CHANGING BEHAVIOR IN OLDER ADULTS:USING RESEARCH TO IMPACT POLICY

Barbara Resnick, PhD CRNP,[1] Senaida Fernandez, PhD,[2] Elizabeth Galik, PhD,[1] Marianne Shaughnessy, PhD, CRNP,[1] Kathleen Michael, PhD,[1] EunShim Nahm, PhD,[1] Patricia Heyn, PhD,[3] Matthew Buman, PhD[4] and Jennifer Pharaoh, Esq[5]

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Behavior change can be strongly influenced through policy. Thus we have a critical need to influence policy to optimize health of older adults through behavior change initiatives across settings, locally and nationally. The purpose of this seminar is to present some current research findings and their potential utility for influencing policy, to describe the ways in which our messages can be disseminated and to address where we need to go and how we have to get there to influence policy makers. The first section of our seminar includes a group of papers demonstrating effective health behavior interventions with policy implications delineated. The second section provides examples of how to disseminate our findings to continue messaging to persistently advocate for the health of older adults. Specifically we will describe the use of older adults as the disseminators of policy messages and the use of evidence to advocate for policy initiatives around training as well as access to services. The third section of our seminar, provided by a nationally recognized lawyer and political advocate with expertise in health care, particularly as it relates to older adults, will address how we move from our findings to next steps for influencing policy makers. Specifically, the process of identifying “the ask”, getting to the table, using our local and national impact as members of a larger organization, and being attuned to appropriate timing of our messages will be reviewed. Participants of this seminar will gain new insight into the translation of research into policy as well as network with others who may be doing similar research and have similar policy related interests and agendas.

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Seminar 11 3:15 PM–6:00 PM 1010

CLINICAL SEMINAR IN BEHAVIORAL ACTIVATION TREATMENT FOR DEPRESSION WITH A CO-MORBID HEALTH CONDITION

Sherry Pagoto, PhD,[1] Kristin Schneider, PhD,[1] Jessica Magidson, MA[2] and Matthew Whited, PhD[1]

[1]Medicine, University of Massachusetts Medical School, Worcester, MA and [2]Department of Psychology, University of Maryland, College Park, MD.

Depression is co-morbid with many health conditions, including type 2 diabetes, HIV/AIDS, CVD, obesity, smoking, and substance abuse. Depression is associated with treatment nonadherence, poor self-care, and unhealthy lifestyle behaviors. Brief Behavioral Activation Treatment for Depression (BATD) is an evidence-based therapy for depression that is uniquely suited for use in medical settings, given its straightforward, time efficient nature, and ease of application to co-morbid health conditions. BATD is based on reinforcement theory and specifically targets contextual factors that affect behavior using principles of the matching law. Matching law suggests that depression persists because reinforcement for healthy behavior is low, and/or depressed behavior produces a relatively high rate of reinforcement. BATD is designed to increase exposure to positive consequences of healthy behavior, thereby increasing the likelihood of such behavior and reducing the likelihood of future depressed behavior. BATD has been applied to health conditions that are often co-morbid with depression such as obesity, type 2 diabetes, HIV/AIDS, smoking, and substance abuse. The purpose of this clinical seminar is to provide instruction on how to administer BATD in the context of a co-morbid health condition for the purpose of reducing depressive symptomatology, as well as increasing healthy behaviors (e.g., healthy diet, physical activity, and medical adherence) and decreasing unhealthy behaviors (e.g., smoking, overeating, alcohol use). We will teach the basic principles of BATD, briefly review the efficacy literature, provide session-by-session instructions, and outline strategies for adapting BATD for application to a wide variety of co-morbid conditions with practical recommendations on addressing barriers, including treatment resistance, and integrating BATD into other treatments. Participants will receive a treatment manual and reference list. All skill levels are welcome.

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Wednesday
April 27, 2011
6:30 PM–8:00 PM

Poster Session A A-001

BARRIERS TO PROSTATE CANCER SCREENING IN AN AT-RISK POPULATION

Erin W. Ulloa, PhD[1,2] and Amy K. Silberbogen, PhD[1,2]

[1]VA Boston Healthcare System, Jamaica Plain, MA and [2]School of Medicine, Boston University, Boston, MA.

Research suggests that veterans with PTSD may be less likely to engage in preventative health behaviors or follow medical recommendations. This suggests that veterans with PTSD may be particularly vulnerable to delayed detection of prostate cancer. The relationship between PTSD and prostate cancer screening behaviors and perceptions has been largely unexplored. Using the Health Belief Model as a framework, this study examined the impact of PTSD symptoms and other variables on prostate cancer screening behavior and intentions in a national sample of veterans via online data collection. A total of 461 men responded to the online solicitation; of these, 405 (87.85%) were eligible for participation (mean age=60.27 years, range 41–89). Results indicated that men who had never had a digital rectal exam reported significantly higher PCL scores (M=57.71, SD=22.87) than those who had (M=46.76, SD=20.41), t(329)=2.14, $p<.05$. The same pattern was observed for prostate specific antigen (PSA) testing, such that men who had never had a PSA reported greater PTSD symptoms (M=53.88, SD=22.77) than those who had (M=46.07, SD=20.41), t(285)=2.012, $p<.05$. Additionally, men without a regular doctor or private health insurance and those who receive VA care had higher PCL scores (all $p<.01$). Hierarchical linear regression analyses indicated that the PCL was a significant predictor of reported barriers to prostate cancer screening after accounting for demographics and indicators of access to medical care, ($\beta=.16$, t=2.83, $p<.01$). The overall model accounted for 15% of the variance in perceived barriers, F(313)=6.55, $p<.001$. These findings support the hypothesis that symptoms of PTSD interfere with receipt of cancer screening tests. The manner in which PTSD symptoms interact with health beliefs to affect screening behaviors will be explored. Implications will be discussed in the contexts of clinical intervention and avenues for future research.

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A-002

A COMPARISON OF ATTITUDES TOWARD CANCER CLINICAL TRIAL PARTICIPATION BETWEEN ADOLESCENTS AND YOUNG ADULTS WITH LEUKEMIA AND LYMPHOMA AND COLLEGE STUDENTS

Erin E. Kent, PhD,[1,2] Michael J. Montoya, PhD,[2] Leonard S. Sender, MD,[2,3] Rebecca A. Morris, MSG, MPH,[3] Argyrios Ziogas, PhD[2] and Hoda Anton-Culver, PhD[2]

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Adolescents and young adults (AYAs) with cancer (ages 15–39 at diagnosis) have the lowest cancer clinical trial accrual rates of any other age group. Accrual rates are estimated to be 10–20% for 15–19 year olds, less than 2% for 20–29 year olds and less than 4% for 30–39 year olds.
No studies to date have examined attitudes toward clinical trial participation in this age range to determine predictors of refusal to enroll if offered participation. The current study assessed attitudes toward participation using Schuber's (2008) Attitudes toward Clinical Trials Cancer Treatment Scale in 103 AYA cancer survivors and 607 college students. After analysis, two subscales—Personal Benefits (PB) and Personal Barriers/Safety (PBS)—were retained. Only 18 of the survivors reported ever having been offered participation in a cancer clinical trial, and only eight of the 18 actually participated. Having been offered participation on a clinical trial predicted more positive attitudes toward the safety of trials ($P=0.03$) but not personal benefits ($P=0.84$). A curvilinear relationship between self-reported social class and the PBS was suggestive ($P=0.02$), with more positive attitudes evident in the lowest and highest social classes. On the PBS subscale, survivors had more positive feelings ($\text{mean}=4.57$, $SD=1.22$) than college students ($\text{mean}=4.19$, $SD=0.79$; $t=-3.13$, $P<0.001$). On the PB subscale, however, survivors had more negative attitudes ($\text{mean}=3.60$, $SD=1.37$) than the college students surveyed ($\text{mean}=4.39$, $SD=0.90$; $t=5.76$, $P<0.001$). Findings suggest the need for improved patient-centered education about the importance of cancer clinical trials directed toward AYAs, both cancer survivors and not, in conjunction with more clinical trial enrollment opportunity and availability.

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A-003

RELATIONSHIPS BETWEEN EXERCISE DURING BREAST CANCER TREATMENT AND SIDE EFFECTS AT 6-MONTHS POST-TREATMENT

Lisa K. Sprod, PhD, Luke J. Peppone, PhD, Katie A. Devine, PhD, Michelle C. Janelsins, PhD, Charles E. Heckler, PhD, Gary R. Morrow, PhD, MS and Karen M. Mustian, PhD, MPH

University of Rochester, Rochester, NY.

Background: Exercise is a promising behavioral intervention for the reduction of many side effects of cancer treatment. However, determining the effects of exercise during cancer treatments on long-term side effect management is necessary.
Methods: A nationwide sample of newly diagnosed breast cancer patients ($n=391$) who received chemotherapy and/or radiation reported, within 2 wks of treatment completion, if they used exercise (EX) or did not use exercise (NOEX) since their cancer diagnosis. Participants completed a symptom inventory assessing pain, fatigue, nausea, sleep problems, feelings of depression, shortness of breath (SOB), memory, weight loss, hair loss, concentration, hot flashes, and skin problems, at 6 mo post treatment. Patients rated symptoms at their worst during the previous 5 days from 0 = not present to 10 = as bad as you can imagine. Spearman's rho test was used to examine the association between exercise during treatment and side effects at 6 mo post treatment. One-way ANOVAs were used to compare symptom severity at 6 mo post treatment between EX and NOEX during treatment with means presented.
Results: 52% reported EX during treatment. Spearman's rho revealed a positive association between side effect severity at 6 mo post treatment and not participating in exercise during treatment for pain ($r=.139$, $p=.01$), fatigue ($r=.113$, $p=.04$), feelings of depression ($r=.139$, $p=.01$), and SOB ($r=.132$, $p=.02$). Patients who exercised during treatment reported significantly less pain ($EX=1.2$, $NOEX=1.9$, $p=.01$), fatigue ($EX=3.08$, $NOEX=3.73$, $p=.03$), feelings of depression ($EX=2.15$, $NOEX=2.79$, $p=.03$), SOB ($EX=1.03$, $NOEX=1.54$, $p=.02$), and weight loss ($EX=0.50$, $NOEX=0.94$, $p=.04$) at 6 mo post treatment.
Conclusions: The positive effects of exercising during breast cancer treatment on side effect severity may last up to 6 mo post treatment. More research is needed to determine the amount of exercise that is most beneficial for long-term side effect management.

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A-004

YOCAS® YOGA SIGNIFICANTLY IMPROVES SLEEP QUALITY (SQ) AND CIRCADIAN RHYTHM IN 410 CANCER SURVIVORS

Karen Mustian, PhD, MPH, O. Palesh, PhD, L. Sprod, PhD, M. Janelsins, PhD, L. Peppone, PhD, C. Heckler, PhD and G. Morrow, PhD

University of Rochester Medical Center, Rochester, NY.

Preliminary research suggests yoga can have a positive influence on SQ and circadian rhythm, but this is not confirmed in cases of impaired SQ among cancer survivors. This 2-arm, nationwide, multi-site, phase III, randomized, controlled, clinical trial compared the influence of a 4-week (wk) yoga intervention (2 x's/wk; 75 min./session) to standard care on SQ and circadian rhythm among 410 cancer survivors ($\text{mean age}=54$; 96% female; 75% breast; 2-24 months post-adjuvant treatment) from 9 Community Clinical Oncology Programs in the U.S. The yoga intervention utilized the Yoga for Cancer Survivors (YOCAS®) program consisting of pranayama (breathing exercises), 18 gentle Hatha and Restorative yoga asanas (postures) and meditation. SQ and circadian rhythm were assessed pre- and post-intervention. Global SQ (GSQ), subjective SQ (SSQ), sleep latency (SL), sleep time (ST), sleep efficiency (SE), sleep disturbances (SD), use of sleep medication (USM), and daytime dysfunction (DD) were assessed via patient self-report using the Pittsburg Sleep Quality Index (PSQI). Wake after sleep onset (WASO), SL, ST, SE and circadian rhythm were measured objectively using actigraphy. ANCOVAs, controlling for baseline, revealed significant differences ($p<0.05$) in mean level of GSQ, DD and USM between groups post-intervention, with the yoga group reporting better GSQ, and less DD and USM on the PSQI. ANCOVAs, controlling for baseline, also revealed significant differences ($p<0.05$) in mean level of SE and WASO between groups post-intervention, with the yoga group demonstrating better SE and less WASO, using actigraphy. A two-oscillator, ultradian model with 12 and 24 hour cycles fit the circadian rhythm better than a single-oscillator, 24 hour model and demonstrated significant rhythm differences between groups post-intervention ($p<0.05$). ANCOVAs showed a lower 24-hour amplitude and a delayed 12-hour acrophase in the yoga group (all $p<0.05$). These data confirm that yoga improves SQ and favorably alters circadian rhythm among cancer survivors. Funded by NCI grants U10CA37420 & K07CA120025.

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A-005

SLEEP DISTURBANCES AND IMMUNE SYSTEM DYSREGULATION IN ADVANCED CANCER

Jennifer L. Steel, PhD,[1,2] David A. Geller, MD,[1] T Clark Gamblin, MD,[1] Kevin Kim, PhD,[3] Sonia Brar, MD,[1] Kapil Chopra, MD,[5] Michael Antoni, PhD,[4] Wallis Marsh, MD[1] and Allan Tsung, MD[1]

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Objective: The present study will examine the relationship between sleep and immunity in patients with advanced hepatobiliary cancer while covarying for other cancer-related symptoms that may influence immunity.
Methods: Eighty participants diagnosed with hepatobiliary carcinoma were prospectively administered a battery of instruments to measure pain, depression, sleep, fatigue and serum levels of cytokines at 2- and 4-months follow-up. Descriptive statistics, Mann-Whitney U and Kruskal Wallis tests, and cross-lagged panel analyses were performed to test the aims.
Results: Of the 80 patients (71% male, $\text{mean age}=62$ years; $SD=12$), 40% reported insomnia and 21% reported sleeping 6 or fewer hours 3 or more nights per week. Using Kruskal-Wallis, depression and insomnia were found to be significantly related ($p=0.001$). Using cross-lagged panel analyses, insomnia at baseline predicted greater depressive symptoms at 2-months follow-up ($p=0.02$). Fatigue was negatively associated with amount of sleep [$r=-0.29$, $p=.02$] and positively related with insomnia [$r=0.395$, $p=.001$]. After adjusting for fatigue and depression, less than 6 hours of sleep per night was positively associated with abnormal levels of IL-5 [$p=0.006$] and G-CSF [$p=0.04$].
Conclusion: Interleukin-5 and G-CSF are important in the differentiation of B cells and eosinophils as well as the differentiation of neutrophils, respectively. Further research is warranted to understand the role of sleep and immunity on health outcomes in patients with advanced cancer.

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A-006

TREATING INSOMNIA IN CANCER SURVIVORS THROUGH HYPNOSIS RECORDINGS AVAILABLE ON THE WEB

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Insomnia is a significant problem in cancer populations, affecting roughly 30% of survivors. Although pharmacotherapy can be effective, it fails to treat the underlying condition and may interact negatively with other medications. Given this, alternative treatments for insomnia may be desirable for cancer survivors. The aim of this pilot study was to investigate whether delivering hypnosis recordings via the web was a feasible and potentially efficacious method to improve sleep, fatigue, mood, and quality-of-life (QOL) in cancer survivors. As part of a larger study, 28 participants were randomized to either a 4-week web available hypnosis intervention ($n=14$) or a wait-list control ($n=14$). At baseline, participants completed an online battery assessing fatigue, mood, and QOL, as well as 10 days of daily online sleep diaries. The intervention provided instructions and four 20-minute recordings, which participants could either download or listen to online. Hypnosis participants were asked to practice hypnosis for 4 weeks and keep daily hypnosis diaries to track usage. After the 4 week period, participants repeated the baseline battery of measures and completed 10 additional sleep diaries. Effect sizes indicated a small hypnosis treatment effect for the following variables: sleep (Sleep Onset Latency $d=.36$; Sleep Efficiency $d=.35$; Total Sleep Time $d=.29$;); fatigue (Multidimension Fatigue Symptom Inventory-SF $d=.31$;); mood (Hospital Anxiety and Depression Scale (HADS) Total $d=.28$; HADS Depression $d=.27$; HADS Anxiety $d=.22$;) and QOL (SF-12 Physical $d=.28$; SF-12 Mental $d=.43$); however, no significant Group x Time interactions were found for these variables. Although this study was not powered to detect significant Group X Time interactions, the small hypnosis treatment effects add support to the idea of using of hypnosis to improve sleep in a cancer population, even when very simply delivered through recordings made available on the web.

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A-007

DISPARITIES IN UPTAKE OF AN ORGANIZED NATIONAL COLORECTAL CANCER SCREENING PROGRAM: RESULTS FROM THE FIRST 2.6 MILLION INVITATIONS IN ENGLAND

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Organized cancer screening programs such as the UK Colorectal Cancer (CRC) Screening Program with no financial costs to the individual should reduce disparities. However, socioeconomic (SES) differences in uptake were observed during the pilot of the current program. The aim of this study was to identify the extent of disparities in uptake by SES, ethnic diversity, gender and age in the first 28 months of the current program. Between October 2006 and January 2009, over 2.6 million adults aged 60–69 yrs were mailed a first FOBt kit. Uptake was defined as return of a test kit within 13 weeks. We used multivariate regression analysis to examine variation by area-level SES, ethnicity, gender and age. Uptake was 54%, but showed a linear gradient across quintiles of deprivation, ranging from 35% in the most deprived quintile to 61% in the least deprived. Multivariate analyses confirmed a significant and independent effect of deprivation, with stronger effects in women and older people. The most ethnically diverse areas also had significantly lower uptake (38%) than other areas (52%–58%) independent of other social and demographic variables. Ethnic disparities were more pronounced in men but equivalent across age groups. More women than men returned a kit (56% vs. 51%). Uptake increased with age in men (49% at 60–64 yrs; 53% at 65–69 yrs) but not women (57% vs. 56%). Overall results were encouraging, but action is needed to address the striking gradient by area-level SES and the low uptake in the most ethnically diverse areas to avoid widening inequalities in cancer mortality.

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A-008

PREFERENCES FOR INVASIVE AND NON-INVASIVE COLORECTAL CANCER SCREENING TESTS: USING A STRUCTURED GROUP DISCUSSION TO ELICIT IN-DEPTH COMMENTARY AND INDIVIDUAL PREFERENCES

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Uptake of colorectal cancer (CRC) screening is low in most countries highlighting the need to understand decision making processes and preferences for different test options. Patients at increased risk of CRC prefer invasive tests such as Colonoscopy (CC) because of its greater sensitivity in detecting CRC compared with the non-invasive alternative of CT Colonography (CTC). Less is known about this preference when the tests aim to screen people at average risk of CRC. The present study used a group discussion to enable participants to explore, clarify and justify: a) priorities for different test attributes; b)information needs; c)ability and willingness to make trade offs, and d)individual preferences. We conducted 6 groups with a total of 30 adults (mean age=55 yrs) in which participants were presented with information on sensitivity/specificity, risks, outcomes and practical issues of the two tests. We recorded and fed back preferences (without identifying individuals) using audience response technology and used a thematic framework to analyze discussion. Most participants (75%) initially preferred CTC. Preferences became balanced following information about superior sensitivity of CC but this shift was not as dramatic as observed in a diagnostic context and nearly half of the sample still cited an overall preference for CTC. Participants often described the interference of CC associated with preparation and sedation as an infringement on their autonomy and freedom. Discussion of health benefits associated with the tests extended beyond sensitivity and included the ability to spot extra-colonic illness. Participants expressed difficulty and conflict when discussing information about the trade off between maximizing the sensitivity of CTC and the associated increase in (potentially unnecessary) follow-up exams. The study used a group setting for in-depth discussion about two CRC screening tests and found several test attributes which deserve attention in future studies of public preferences for these technologies.

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A-010

SYMPTOM CORRELATES OF INTEREST IN COUNSELING AND COMPLEMENTARY MEDICINE IN AN UNDERSERVED ETHNIC MINORITY ONCOLOGY POPULATION

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PURPOSE: This study explores factors associated with interest in counseling and complementary medicine among an underserved ethnically-diverse oncology population.
METHODS: 333 cancer patients awaiting oncology clinic appointments completed a survey on physical and emotional symptoms, and interest in psychosocial support.
RESULTS: Mean sample age was 57.8±12.5, and the sample was 71% female. Surveys were filled out by 86% in English and 14% in Spanish. The population was 36% African American, 37% Hispanic, and 22% white. Cancer diagnoses were 21% breast, 17% gynecologic, 14% hematologic, and 48% other/unspecified. Over 40% reported moderate to severe fatigue and disturbed sleep, while >25% reported moderate to severe problems with pain, decreased sexual interest, distress, sadness, dry mouth, appetite loss, drowsiness, and numbness. Under 10% of patients reported currently receiving counseling while 20% endorsed interest in counseling. Only 12% reported knowing about complementary medicine services and 42% wanted to learn more. Hispanics were twice as likely to be receiving counseling (19%) while African Americans were most interested in counseling (25%; $p<0.05$). Spanish speakers and younger patients were more likely to be receiving or interested in psychosocial services ($p<0.05$). Interest in speaking to a counselor was correlated with greater number of moderate to severe emotional and physical symptoms (p’s<0.001) whereas interest in complementary medicine was correlated with emotional symptoms alone ($p<0.05$).
CONCLUSION: Findings show a high level of physical and emotional symptoms and wide interest in psychosocial programs, and a significant relationship between symptoms and interest in support. Interest in psychosocial services was highest among ethnic minority patients and younger patients.
IMPLICATIONS: Findings indicate significant interest in and need for counseling and complementary medicine programs in an urban ethnic minority population. In targeting patients needing psychosocial care, providers should use culturally competent means to assess the emotional and physical burden of disease.

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A-011

YOU'VE GOT MAIL: PREFERRED METHOD OF CONTACT AMONG PARTICIPANTS IN A COLON CANCER SCREENING STUDY FOR AFRICAN-AMERICANS

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Title: You've Got Mail: Preferred Method of Contact among Participants in a Colon Cancer Screening Study for African-Americans
Introduction: Research studies aiming to increase colorectal cancer (CRC) screening are underway, and many include African-American participants. Difficulties in delivering research-related contacts to this group of participants have been reported. Resultantly, full participation in research may be limited.
Objective: To assess access to and preference for methods of contact among participants in a study designed to increase CRC screening among African-Americans.
Methods: As part of a larger, randomized controlled intervention trial, we administered a baseline phone survey to 132 African-American primary care patients ages 50 to 79. The survey elicited demographic characteristics, information on access to various communication channels (i.e., Internet, email and cell phone), and preferred communication channels for receiving study information. Frequencies of responses were computed.
Results: Respondents were: female (73%); 50–59 years of age (62%); < high school education (57%), and married (24%). Access to communication channels included: Internet (60%), email (55%), cell phone (77%), and text messaging (78%). Participant preference for receipt of study information included: regular mail (86%), voicemail (67%), protected Internet website (43%), e-mail (41%), and text message (23%).
Discussion: In addition to regular mail and telephone, study participants reported access to other communication channels. Importantly, a substantial proportion of individuals were receptive to receiving study information via the Internet and email. Relatively few preferred receiving study information through text messaging.
Conclusions/Recommendations: These findings suggest that multiple communication channels should be considered in the development of strategies to maximize interactions with and the delivery of interventions to African-American study participants.

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A-012

USE OF THE INTERNET FOR HEALTH AND CANCER INFORMATION SEEKING IN PUERTO RICO

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The Health Information National Trends Survey (HINTS), developed by the U.S. National Cancer Institute (NCI), provides surveillance of the nation's investment in cancer communication through tracking the effects of the evolving communication environment on cancer-related knowledge, attitudes and behavior. The University of Puerto Rico Comprehensive Cancer Center and the Department of Health in Puerto Rico, Puerto Rico Behavioral Risk Factors Surveillance System implemented a Spanish version of HINTS in Puerto Rico in 2009. We examined differences in information seeking among respondents who use the Internet and those who do not. Data were collected through Random Digit Dialing, Computer Assisted Telephone Interview ($n=639$). A stratified sampling frame representing eight geographic regions in Puerto Rico was employed. SUDAAN was used to analyze the data to account for the complex survey design. Frequencies, crosstabulation with Chi-square, and logistic regression analyses were conducted. Nearly 1/3 of respondents (32.7%) indicated that they use the Internet or World Wide Web. While 59.6% of respondents who used the Web had ever sought health information, only 20% of those who do not use the Web had ever sought health information. A similar pattern was observed for cancer information , wherein 47.2% of respondents who use the Web had ever sought cancer information compared to 18.8% of those who do not use the Web. Results of separate logistic regression models controlling for sociodemographic characteristics demonstrated that individuals who use the Web were over 5 times as likely to have sought health information ($OR=5.11$, $p<.001$) and over twice as likely to have sought cancer information ($OR=2.5$, $p<.05$). Our results shine a spotlight on the critical role of the Internet in affording access to health information and contribute to the evidence base for cancer control planning on in Puerto Rico.

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A-013

UNDERSTANDING THE IMPACT OF BEING CLOSE TO SOMEONE WITH CANCER UPON PERSONAL PERCEPTIONS AND BEHAVIOR: DEVELOPMENT AND INITIAL VALIDATION OF THE CONNECTION TO THE EXPERIENCE OF CANCER SCALE (CONNECS)

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Studies show that being close to someone with cancer can have profound effects on one's beliefs about cancer, perceptions of personal risk, and medical decision making. While a number of qualitative studies have addressed various aspects of being indirectly connected to the cancer experience, quantification of this construct is lacking. The purpose of this study is to describe the development and psychometric testing of a set of items intended to measure connection to the cancer experience through a close friend or relative with the disease. Ten items were developed to assess the following aspects of connectedness to the cancer experience: emotional closeness to the affected person, perceived similarity, and level of shared experience. Of 2524 women interviewed from the Henry Ford Health System in the Detroit, Michigan metropolitan area, 2200 women reported being close to someone with cancer and answered questions about their experience of cancer related to that person. To conduct exploratory and confirmatory factor analyses (EFA; CFA), the sample was split into two samples using the random sample function in SPSS. Sample 1 ($n=1089$) was used for EFA to reveal the underlying structure of the connection items in the sample as a whole and for 2 groups: those reporting about a relative versus friend. Item analyses including assessment of internal consistency reliability were also conducted. Sample 2 ($n=1111$) was used for CFA, including a test of the factorial invariance of the instrument.
Results provide initial support for the use of a quantitative measure of individuals' connection to the cancer experience through close friends and relatives. CONNECS has utility in assessing this connection and will be useful in future work on cancer risk communication and medical decision making.

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A-014

BARRIERS TO CERVICAL CANCER SCREENING AMONG WOMEN WHO HAVE BEEN ABUSED: AN EXPLORATORY STUDY

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Little is known about whether women who have been abused take part in cervical screening, despite the fact that they have been identified as a group at increased risk of cervical cancer. This study aimed to identify the barriers to cervical screening among women who have been abused.
A link to a short survey was placed on the website of a British charity providing support and information for people who have been abused. The survey included demographic questions and asked women about their screening history, perceived barriers to participation, and suggestions for improvements to the screening service. 110 women aged 20–64 years with a history of abuse completed the survey over a 2 month period. Their mean age was 35 (SD: 9.9). 92% had been sexually abused. 77% had taken part in cervical screening but only 54% had been screened within the last 5 years. The main barriers to screening that emerged were: 1) emotional responses to screening, including stigma and anxiety; 2) impact of abuse, including feelings of vulnerability and violation; 3) characteristics of the test itself, including pain and intrusiveness; and 4) past screening experiences, including inability to complete the test due to distress or flashbacks, and a lack of sensitivity from health professionals. Women had a variety of suggestions for improving screening, including developing ways to make it easier for them to disclose their abuse, longer appointments to give time for discussion prior to the test, sensitivity and acknowledgement of their distress by the screener, and the use of self-testing, or the option to insert the speculum themselves.
This study shows that although some women who have been abused attend for cervical screening, they often report experiencing extreme distress, and others are under- or un-screened. Further research is needed to see whether the findings hold true in a more representative sample, and to develop ways to improve screening access for this vulnerable group of women.

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A-015

PARENTAL REGRET AND HUMAN PAPILLOMAVIRUS (HPV) VACCINATION FOR ADOLESCENT GIRLS

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Purpose: We assessed the relationship between HPV vaccination status of adolescent girls and parents' anticipated regret in the event that daughters were: 1) unvaccinated and contracted an HPV infection that could lead to cervical cancer; 2) unvaccinated and contracted genital warts; and 3) vaccinated and initiated sexual activity at an early age.
Methods: Parents (n=229) with 11–15 year old daughters participated in this prospective study through 18 schools in Auckland, New Zealand. Participants chose to complete the research questionnaire online (n=121), or request a hard-copy by mail. We compared parents who did not intend to vaccinate daughters within 12 months (n=72) to parents who intended to do so (n=87), and to parents whose daughters had initiated HPV vaccination (n=63). The three regret variables were assessed on a four-point ordinal scale and modeled separately as main independent variables using multinomial logistic regression, which adjusted for girls' age and socio-economic status of students in participating schools.
Results and Conclusion: Compared to parents with no intention to vaccinate daughters within 12 months, parents who intended to do so reported greater levels of regret in the event that daughters were unvaccinated and developed cervical cancer (OR=3.75; 95% CI=2.24–6.26), or contracted genital warts (OR=3.71; 95% CI=2.26–6.09). Furthermore, parents whose daughters had initiated vaccination reported significantly higher levels of regret in the event that daughters were unvaccinated and developed cervical cancer (OR=6.22; 95% CI=2.83–13.70), or contracted genital warts (OR=4.81; 95% CI=2.56–9.04). However, parental regret if vaccinated daughters had early sexual activity was unrelated to HPV vaccination status. We conclude that parents who presently support HPV vaccination are highly motivated by inaction regret.

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A-016

CALCULATED IGNORANCE: AVOIDING RISK INFORMATION ABOUT BREAST CANCER

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Although acquiring personal health information can provide numerous benefits, people sometimes avoid such information, preferring to remain ignorant. Such avoidance is particularly problematic if there is a narrow window of opportunity when people can use the information to address an unwanted health outcome. A series of studies examined the role of perceived control, coping resources, and anticipated regret in women's decision to avoid information about their breast cancer risk. In each study women completed a health inventory that included risk factors for breast cancer. Participants were then offered an opportunity to learn their lifetime risk for breast cancer, which was based on their responses to health inventory. The primary DV was whether participated opted to learn or avoid learning their lifetime breast cancer risk.
Results: Women were more likely to avoid learning their breast cancer risk after reading about controllable predictors of breast than after reading about uncontrollable predictors of breast cancer. In addition, across studies, women who opted to avoid learning their breast cancer risk reported fewer coping resources than did women who opted to seek. In addition, avoiders anticipated greater regret than did seekers over seeking breast cancer risk information, whereas seekers anticipated greater regret than did avoiders over avoiding breast cancer risk information. Finally, women in no information condition who did not read about predictors of breast cancer responded almost identically to women who read about uncontrollable predictors of breast cancer. This finding is crucially important because it suggests that the ambient perception of women in our sample is to view breast as relatively uncontrollable. It further suggests an intervention to reduce avoidance of threatening health information that entails prompting people to think about controllable causes of the threatening outcome.

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A-017

ASSOCIATIONS BETWEEN CANCER SCREENING AND OTHER HEALTH BEHAVIORS: RESULTS FROM AN ACS NATIONAL SURVEY

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Understanding how health behaviors co-vary in the population can provide insight to develop potent interventions that target multiple outcomes. This study examined associations between colon, breast, and prostate cancer screening and key health behaviors (smoking, fruit and vegetable [F&V] consumption, television [TV] viewing, and physical activity [PA]) in a US national sample. A consumer panel survey was mailed to 12,000 households in 2001; 6,739 were returned. Those who met ACS age recommendations for screening (>50 years for colon and prostate, >40 years for breast) and had complete data were included in the analyses (Ns= 1,523 men and women for CC, 1,456 women for BC, and 676 men for PC). Logistic regression models were fitted to the data controlling for age, gender, marital status, education level, and employment status. Screening rates were 69%, 93%, 78% for colon, breast, and prostate, respectively. Rates for smoking (18%), eating <5 F&V/day (19%), watching >14 hrs of TV/wk (45%), and not meeting PA guidelines (81%) were similar to national averages. For colon cancer, screening not associated with any of the health behaviors; further analyses revealed, however, screening was negatively associated with nights/week eating dinner while watching TV (OR= 0.95, CI: 0.91–0.99). For breast cancer, screening was negatively associated with being a smoker (OR=0.58, CI: 0.37–0.90). For prostate cancer, screening was positively associated with TV viewing (OR=1.01, CI: 1.01–1.03). In general, health behaviors were inconsistently and only modestly associated with cancer screening. Television viewing may provide educational or motivational opportunities for intervention for certain types of cancer. For example, the positive relationship between TV viewing and prostate cancer screening may be due in part to the increasing presence of prostate-related mass media campaigns. More research is needed to understand how to capitalize on single-behavior interventions as a potentially efficient means for multiple health behavior change.

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A-018

IMPROVED PHYSICAL FUNCTION AND QUALITY OF LIFE AMONG CANCER SURVIVORS PARTICIPATING IN A COMMUNITY-BASED "LIVING STRONG LIVING WELL" PROGRAM

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Evidence-based physical activity (PA) programs delivered in community settings are needed to improve cancer rehabilitation outcomes. Living Strong Living Well (LSLW) is a small-group strength and fitness training program designed to improve physical function and quality of life in deconditioned cancer survivors. The LSLW fitness program is delivered in local YMCAs at no cost to participants. We evaluated changes in rated physical and psychological measures (fitness, vitality, stress, and fatigue) at the end of the program (12–16 weeks), and longer-term changes (6- and 12-month follow-up) in these measures in a subgroup of participants. We also evaluated objective strength outcomes (using FitLinxx computerized data collection) at 8 and 16 weeks following program initiation in a subgroup of participants. Among 550 cancer survivors who completed the LSLW program from 2002 to 2008 (78% women; 59.4±11.8 yrs [range: 29–86], 51% previously treated for breast and 11% for prostate cancer; 17 other cancer-related illnesses represented), paired-sample analyses revealed significant improvements in rated fitness, vitality, perceived stress, and fatigue at the end of the program (Ps<.0001). Among the subset with longer-term follow-up through 12 months (n=171), all improvements were maintained (Ps <.0001). For objective strength outcomes, paired-sample analyses revealed significant improvements in chest presses, leg presses, seated row, and total weight lifted after 8 (n=128, Ps<.0001) and 16 weeks (n=74, Ps<.0001) of program participation. There is growing evidence that cancer survivor PA programs can provide physical and psychological benefits during the rehabilitation period. LSLW program has been disseminated to additional YMCAs and provides a potential practice/dissemination model in community settings. Future community-based intervention studies with more rigorous study designs are needed to advance the field.

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A-019

MEASURING CANCER-RELATED STIGMA

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Sociological analyses identify cancer as a stigmatized condition but there may be variation between different cancer sites. Qualitative studies find that lung cancer patients feel highly stigmatized because of the link with smoking, while the stigma of breast cancer appears to be lower. However, there have been few quantitative studies, perhaps because of the complexity of the concept and the lack of psychometric measures. Conceptualizations of stigma in other illnesses identify many different components. In this research we developed and validated a multidimensional measure of cancer-related stigma and tested the prediction that stigma would be higher in lung cancer and lower in breast cancer.

A pool of 92 items covering different aspects of stigma was drawn from the literature. Data were collected online from 462 students and 238 members of a market research panel. Principal components analysis revealed 8 scales, which, based on the highest loading items, were labeled: Severity, Personal Responsibility, Fear, Pity, Awkwardness, Avoidance, Health Policy, and Financial Regulation. Internal (α=0.73–0.92) and test-retest (r=0.61–0.88, p <.001) reliability were good. Greater experience of cancer was associated with lower stigmatization (p<.05); supporting construct validity. Stigma scores were higher among younger or male participants and in the non-student sample (p <.05). In a second study participants (n=2119) were randomized to complete the stigma scale for lung, bowel, breast, cervical, or skin cancer. Scores varied across cancer types for all scales (p<.01), with lung cancer scoring highest and breast cancer lower, though not different from cervical cancer. Differences between sites were largest for the severity and personal responsibility scales.

Differences between cancers were more pronounced on some stigma dimensions than others, which has implications for operationalizing stigma in the cancer context. A validated measure of stigma makes it possible to compare across studies and samples, to investigate potential determinants, to examine associations with screening participation and help-seeking, and to evaluate initiatives to reduce stigmatization.

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A-020

GENDER AND SPOUSE EFFECTS IN THE EMOTIONAL ADJUSTMENT OF FEMALE AND MALE CANCER PATIENTS

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Spouses often have an important influence on patients' emotional adjustment to cancer. The effects of spouses may also differ by patient and spouse sex. We examined the role of marital satisfaction and perceived coping self-efficacy in the emotional adjustment of male prostate cancer (PCA) patients and female breast cancer (BRCA) patients.

72 BRCA patients and 42 PCA patients reported on their marital satisfaction, coping self-efficacy, and emotional adjustment to cancer. Spouses reported their perceptions of patients' coping self-efficacy.

Separate models for men and women were constructed using SEM. For female patients ($\chi2(1)$=.22, p=.64, CFI=1.00, RMSEA<.001), marital satisfaction was positively related to husbands' (but not self) perceptions of coping self-efficacy. Further, self and husband perceptions of coping self-efficacy were positively related to women's emotional adjustment. For male patients ($\chi2(1)$ =.48, p=.49, CFI=1.00, RMSEA<.001), marital satisfaction showed a marginally significant relationship to wives' (but not self) perceptions of coping self-efficacy. Further, wives' (but not self) judgments of coping self-efficacy were positively related to patients' emotional adjustment.

The effect of patients' marital satisfaction on coping self-efficacy was similar for male and female cancer patients. In both cases, the more satisfied patients were with their marital relationship, the more their spouses perceived them as being able to cope. However, the effect of coping self-efficacy on adjustment to cancer differed for male and female patients. For women with BRCA, how well they and their husbands' believe they can cope with cancer is related to their adjustment. In contrast, for men with PCA, their beliefs about how well they can cope did not predict their adjustment, suggesting that wives' perceptions may be more influential than the men's perceptions in determining adjustment. Clinically, these findings highlight the importance of gender and spouse effects on patients' adjustment to cancer.

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A-021

ADULT ATTACHMENT STYLE IN BREAST CANCER PATIENTS AND ITS ASSOCIATION WITH CHANGES IN EMOTION REGULATION STRATEGIES FOLLOWING CANCER SUPPORT GROUPS

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Despite the wealth of research demonstrating the psychological and psychosocial benefits of group interventions for breast cancer (BC) patients, there is a scarcity of studies identifying patient variables that may contribute to changes in emotion regulation strategies. This study examined the effects of adult attachment styles in women with BC randomized to one of two types of breast cancer support groups: Supportive Expressive Therapy (SET) or Community Cancer Groups. We examined the moderating effects of four attachment styles on change in emotion regulation strategies following the treatment. Repressive defensiveness was measured with the Weinberger Adjustment Inventory (WAI) and emotional self-efficacy with the Stanford Emotional Self-Efficacy Scale-Cancer (SESES-C) scales. Sixty six women diagnosed with primary BC who were 32 years of age and older (M=52.53; SD=9.41) completed this study. Hierarchical multiple regressions revealed that at baseline higher avoidant attachment was significantly associated with lower emotional self-efficacy (β=−.47, p=.01). Specific adult attachment styles moderated the effects of treatment on change in emotion regulation strategies: more secure and most initially depressed women showed greatest increase in emotional self-efficacy following SET group treatment (β=−.32, p=.03), while less securely attached women who were depressed decreased in self-efficacy following community support groups. Both avoidant and anxious-avoidant attachments appeared as non-specific predictors of decrease in repressive-defensiveness, (β=−.36, p=.00) and (β=−.26, p=.05) across two treatment models. These results highlight the importance of examining individual differences with regard to improving emotion regulation strategies to decrease distress associated with cancer diagnosis.

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A-022

INTEREST IN SNP TESTING FOR CANCER RISK: IMPACT OF NUMERACY AND PERCEIVED RISK

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Genetic testing for single nucleotide polymorphisms (SNPs) related to risk of common diseases such as cancer is now available through direct-to-consumer companies. The expectation is that this information may serve to better inform the public about future disease risks and potentially motivate lifestyle modification and screening decisions. Currently, little is known about the public's understanding of this complex, numeric-based information related to predictive risk. We investigated relationships among numeracy, perceived cancer risk and interest in SNP testing for risk related to colon cancer. We recruited a diverse sample of 150 patients from primary care (34% African American, 52% White, 14% other; 50.3% female) to complete a written survey that assessed demographics (age, sex, education), numeracy, perceived risk (absolute, comparative, and numeric) and understanding of and interest in SNP testing for SNPs related to colon cancer risk. We calculated numeracy using a four-item scale that assessed facility with basic proportions and probabilities to create three categories: low, average and high numeracy. Most participants (42%) were average-numerate and although numeracy was unrelated to age, race or gender, lower numeracy was related to lower levels of education (X22= 22.6, p<.001). Higher numeracy was related to greater perceived risk across all three perceived risk variables: absolute (F(143)=3.9, p=.02), comparative (F(142)=5.2, p=.007) and numeric (F(134)=6.15, p=.003). As expected, high numeracy predicted better comprehension of SNP-based risk information (F(150)= 13.2, p=.001). Low-numerate individuals were less interested in SNP testing compared to average-numerate individuals (OR=0.28, 95% CI= 0.12–0.84), and perceived risk was unrelated to interest in SNP testing. As commercial interests and empirically-supported translational research efforts continue to identify and apply genomic information, efforts to explore how to communicate complex SNP-based test results are needed. Tailoring educational materials to an individual's level of numeracy and education may help promote more informed decision-making about personalized medicine.

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A-023

SURVIVOR: A WORD WORTH A THOUSAND PICTURES

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Public discourse about cancer often involves casual references to “survivors.” According to the National Cancer Institute, survivorship encompasses the physical and psychological issues of cancer from the point of diagnosis to the end of life (National Cancer Institute, n. d.). This term is not without controversy, however. Arguments against this term include the idea that individuals would like to put cancer in the past, that some persons believe they are cured, and others see survivor as an undesirable brand or label (Kolata, 2004). At the same time, many individuals who are considered to be “cancer-free” do not feel comfortable being described as “having cancer.” Others choose to use the term because they find it empowering (Park, Zlateva, & Blank, 2009). Recent studies have found high levels of survivor identity in participants.

As part of a qualitative study on meaning making involving semi-structured interviews with individuals who had been diagnosed with cancer, participants were asked to reflect on the term survivor. The final sample of this study consisted of 10 individuals who were currently undergoing or recently completed treatment for cancer. Participants described a range of responses to the word survivor. Participants felt uncomfortable using the term to describe themselves because they were unsure out their outcome. “I want to feel something permanent… ‘survivor’ in survivorship means that it’s still there to me. So, um, I’m still pink ribbonless.”

Another set of responses described latching on to the term survivor as a way of feeling stronger and moving forward: “One of the things that she said that struck me is that… I’m a cancer survivor now, from the day I was diagnosed with cancer, every day forward I’m a survivor, so… that’s what it means to me, I guess, is that I’m a survivor every day.” Other participants described using survivor after meeting others who adopted the term.

Findings reflect the discussion in the small but growing literature on cancer survivor identity. The strong emotional and semantic associations with this term indicate that researchers and clinicians should attend to the choice of language. The word choice reflects identity and is not simply a descriptive term. Further implications will be discussed.

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A-024

DISTRESS AND EMOTIONAL WELL-BEING IN BREAST CANCER PATIENTS PRIOR TO RADIOTHERAPY: AN EXPECTANCY-BASED MODEL

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Background: Radiotherapy is an effective treatment for breast cancer potentially improving the survival rate of the more than 192,000 American women diagnosed with breast cancer each year. Although medically beneficial, radiotherapy can be distressing for patients. Understanding predictors of the distress experienced in anticipation of radiotherapy would facilitate the ability to intervene with this distress as soon as possible. The present study tested an expectancy-based model for explaining distress and EWB in breast cancer patients prior to radiotherapy.

Methods: Women affected by breast cancer (N=106) were recruited at radiation oncology practices. Participants completed questionnaires prior to commencing radiotherapy. A structural equation model was used to test the proposed expectancy-based model. This model included paths from all of the predictors, Optimism (Life Orientation Test-Revised; LOT-R), Pessimism (LOT-R), Response Expectancies (VAS items), medical, and demographic variables to each of the two outcome variables, Emotional Well-being (EWB; Functional Assessment of Cancer Therapy-Emotional Well-being Subscale), and Distress (Profile of Mood States-Short Version).

Results: The expectancy-based model represented a good fit to the data accounting for 65% of the variance in EWB and 69% in Distress. Significant predictors of emotional upset (i.e., higher Distress, lower EWB) were Pessimism, Response Expectancies, Latina ethnicity, cancer stage, and having had a mastectomy.

Conclusions: Variables included in the expectancy-based model explained a large portion of emotional upset experienced prior to radiotherapy for breast cancer and are important to consider when aiming to reduce distress and improve EWB in this context.

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A-025

THE ROLE OF ATTACHMENT STYLE IN POSTTRAUMATIC GROWTH IN CANCER SURVIVORS

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No published research has examined the relationship of attachment style and posttraumatic growth (PTG). This cross-sectional study investigated attachment style, coping strategies, social support, and PTG in cancer survivors. 54 participants (M age=52.8) completed measures of these factors in addition to demographics and disease-related items. Correlation analyses revealed relationships between secure attachment and the use of constructive coping strategies ($r=.38$, $p=.005$) and the use of support as a coping strategy ($r=.31$, $p=.021$), but secure attachment was unrelated to perceived support. Avoidant attachment was negatively related to support as a coping strategy ($r=-.35$, $p=.009$) and perceived support ($r=-.48$, $p<.001$) but was unrelated to constructive coping strategies. Avoidant attachment, support as a coping strategy, and perceived support were unrelated to PTG; however, secure attachment ($r=.37$, $p=.006$) and constructive coping ($r=.42$, $p=.001$) were both associated with PTG. Regression analyses revealed that secure attachment accounted for an initial 13.8% of the variance in PTG, and constructive coping significantly accounted for an additional 9.4%. Secure attachment was no longer significant ($\beta=.25$, $p=.068$) after adding constructive coping, suggesting mediation. When demographic and disease-related variables were included in the model, number of children living at home ($\beta=.33$, $p=.017$), importance of religion/spirituality ($\beta=.34$, $p=.026$), time since diagnosis ($\beta=.27$, $p=.045$), and constructive coping ($\beta=.26$, $p=.048$) were significant contributors to PTG. These finding suggest that secure attachment in adulthood may be related to PTG in cancer survivors, but there may be a mechanism to growth at work. Securely attached adults are more likely to use constructive coping strategies as one pathway to higher levels of PTG. However, children living at home, importance of religion/spirituality, and time since diagnosis also appear to be important factors.

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A-026

FEAR OF RECURRENCE IN BLADDER CANCER PATIENTS: PRELIMINARY VALIDATION OF AN EXISTING MEASURE IN A NEW POPULATION

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Introduction and Objective: Fear of recurrence (FOR) has been gaining increased attention in psychosocial cancer research and clinical care. We report initial validation in nonmuscle-invasive bladder cancer (NMIBC) patients of a FOR instrument previously used with prostate cancer and leukemia patients.

Methods: Study participants (N=117) were drawn from a large private hospital, Veterans Affairs hospital, and from the internet. Measures included general (EORTC QLQ-C30 v. 3) and disease-specific (EORTC BLS-24) health-related quality of life (HRQOL); psychological distress (Brief Symptom Index [BSI-18], Impact of Events Scale [IES]); and the 5-item FOR measure from the CaPSURE™ study. Based on Lee-Jones et al's extension of the Commonsense Model to fear of recurrence, we used correlations and analysis of variance to examine hypothesized relationships between FOR and other variables.

Results: The Cronbach coefficient alpha of the FOR scale was 0.80, indicating good internal consistency. Based on Leventhal’s Common Sense Model of Illness Representations, we hypothesized FOR would be significantly related to measures of psychological distress, HRQOL, and disease-specific symptoms. The FOR scale showed good convergent validity as FOR was significantly correlated with HRQOL (range: −0.25 to −0.60); disease-specific symptoms (0.35); future concerns about treatment (0.65); BSI-18 (0.61); and IES (0.62). The scale also showed good discriminant validity as there were no significant relationships between FOR and gender, age, general symptoms, relationship status, education, ethnicity.

Conclusions: The CaPSURE™ Fear of Recurrence scale is a valid and reliable measure in nonmuscle-invasive bladder cancer patients, a group with substantial psychological burden related to concerns about disease progression and recurrence. Further validation work is needed to establish responsiveness to change and validity in ethnically diverse populations.

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A-027

TREATMENT-RELATED DIFFERENCES IN CANCER WORRY AMONG BREAST CANCER SURVIVORS

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Many cancer survivors worry they may experience a disease recurrence. Little is known, however, about factors that may contribute to this worry. The aims of this study were to determine if the level of cancer worry in breast cancer survivors at three year follow-up differed by treatment exposure and, if so, examine possible mechanisms. We hypothesized patients treated with chemotherapy would report more cancer worry than patients treated with radiotherapy and this difference would be explained by the presence of more residual symptoms and greater perceived risk for recurrence. Women with stage 0-II breast cancer treated with chemotherapy (+/− radiation) ($n=95$) or radiation only ($n=102$) were assessed three years post-treatment. Participants completed self-report measures of cancer worry, fatigue, symptom burden, and perceived risk of recurrence. Mediation was tested using Baron and Kenny criteria. As hypothesized, those treated with chemotherapy reported significantly more cancer worry than those treated with radiation only. An exploration of possible mediators indicated fatigue was the only variable related to both treatment exposure ($p=.02$) and cancer worry ($p<.001$). After controlling for fatigue, the relationship between treatment and cancer worry was no longer significant ($p=.06$). The Sobel test was significant ($p=.03$), providing additional support for mediation. In sum, three years post-treatment, breast cancer survivors who received chemotherapy were more worried about cancer recurrence than those who received radiation only. This difference appears to be attributable to greater fatigue in patients treated with chemotherapy, which may serve as a reminder of their disease. Future research should investigate whether addressing post-treatment fatigue results in reductions in cancer worry among breast cancer survivors. Funded by NCI R01CA82822

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A-028

CHARACTERISTICS AND CORRELATES OF SLEEP PROBLEMS IN CANCER PATIENTS PRIOR TO CHEMOTHERAPY

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Few studies of sleep problems in cancer patients have focused on the period just before chemotherapy starts. Understanding sleep problems in this period is important since early intervention has the potential to reduce the severity and chronicity of these problems. The present study sought to characterize sleep problems in this period and examine their relationship to demographic, clinical, and lifestyle factors. This study also sought to examine the relationships between sleep and fatigue, depression, and physical and mental well-being. Patients ($N=288$) with breast cancer (32%), lung cancer (32%), or other cancers (36%) about to begin chemotherapy completed self-report measures assessing demographic and lifestyle characteristics, sleep, fatigue, depression, and quality of life. Twenty-six percent of patients rated their sleep quality as fairly or very bad. Poorer overall sleep was significantly ($p<.05$) associated with less education, more medical comorbidities, previous radiotherapy, less physical activity, and current tobacco use; however, these variables accounted for only 7% of variability in sleep problems. After controlling for depression and fatigue, sleep problems explained significant variability in physical well-being ($p=.02$), but not mental well-being ($p=.27$). Findings demonstrate that sleep problems are common before the start of chemotherapy and contribute to poorer physical well-being. Future research should seek to examine the contribution of a broader range of factors including prior sleep problems and current living and sleeping arrangements. Funded by ACS RSGPB-05-243-01 CPPB

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A-029

SOCIAL SUPPORT AND QUALITY OF LIFE OF CANCER SURVIVORS: DIFFERENTIAL EFFECTS OF HAVING A CAREGIVER

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The stress-buffering effect of social support (SS) has been well-documented. Yet little is known about how the source of SS and presence of a caregiver influence cancer survivors' quality of life (QoL). This study examined the unique contribution of SS on cancer survivors' QoL, and how this relationship varies based on whether they have a caregiver. Participants were 3,856 survivors (59% female; mean age 59 yrs; 87% Caucasian; 71% married) of the 10 most incident cancer sites who completed a baseline survey in a population-based, longitudinal study of QoL. Caregiver status (had caregiver, did not have caregiver) and perceived SS (Multidimensional Scale of Perceived Social Support) from family, friends, and a significant other were predictors. QoL outcomes were mental and physical functioning (MOS SF-36), mood disturbance (POMS-SF), life satisfaction (SLDS-C), and spirituality (FACIT-Sp). Survivors' medical/demographic characteristics were covariates. Hierarchical general linear modeling analyses revealed that after controlling for covariates, caregiver status did not significantly predict survivors' QoL. Greater family support was related to better mental functioning ($p<.001$), less mood disturbance ($p<.001$), higher life satisfaction ($p<.001$), and higher spirituality ($p<.001$). More support from a significant other was associated with a higher level of spirituality ($p<.05$). Greater support from friends was significantly related to all QoL outcomes ($ps<.001$). Significant interactions emerged between caregiver status and source of SS on survivors' spiritual well-being. Among survivors with a caregiver, support received from friends was related to higher spirituality ($p<.001$). For survivors without a caregiver, support received from a significant other was associated with higher spirituality ($p<.001$). Study findings are consistent with the stress-buffering hypothesis and confirm the positive relationship between SS and QoL outcomes. The effect of SS on spirituality differed by cancer survivors with or without help through their cancer experience. These observed patterns may help inform the development of SS programs for cancer survivors.

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A-030

WHEN DO HEMATOPOIETIC CELL TRANSPLANT (HCT) PATIENTS FEEL A NEED FOR MENTAL HEALTH SERVICES (MHS), AND WHY?

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In recognition that transitory, latent, or long-term psychological problems are experienced by a significant portion of HCT patients, joint EBMT/CIBMTR/ASBMT recommendations called for "a high level of vigilance for psychological symptoms" in long-term HCT survivors. However, little is known about patients' perspectives on their own need for MHS. With the overall aim of informing improved quality of MHS for HCT patients, objectives of this study were to identify perceived need (PN) for MHS and its determinants among HCT patients through the transplant trajectory. Recruited via websites frequented by HCT patients, a cross-sectional nation-wide US sample completed an online survey. This is a preliminary report on a subset of 360 predominantly female (57.8‰), well educated ($m=16$ years), middle aged ($m=52.5$ years), autologous (61.1‰) graft recipients. In three hierarchical multiple regression analyses, we regressed PN during (days 0–90), shortly after (days 91–730), and long after transplant (>730 days) onto demographic variables and graft source in the first block; psychiatric diagnosis pre-transplant and retrospectively rated PN pre-transplant in the second block; and social support and social constraint relative to the primary support person in the third block. The three models accounted for 30–40‰ of the variance in PN ($p<.001$). PN pre-transplant accounted for the most variance in PN in the other three time periods ($\beta=.38$, .26, and .25, respectively), followed by social constraint ($\beta=.17$, .15, and .19, respectively). Social support negatively predicted PN shortly after ($\beta=-.14$) and long after ($\beta=-.31$), but not during transplant. These findings suggest an empirically guided approach to allocating resources for follow-up MHS throughout the recovery period via identifying patients who perceived a need for MHS pre-HCT. Results also suggest that quality of support from the patient's primary caregiver declines with time, and comprehensive patient care plans should consider proactively addressing communication patterns that elicit social constraint within this key relationship.

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A-031

OPTIMISM AND SOCIAL SUPPORT IN INDIVIDUALS NEWLY DIAGNOSED WITH LUNG CANCER: RELATIONSHIPS TO COGNITIVE REPRESENTATIONS OF ILLNESS

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Purpose: Research linking positive psychological concepts to cancer adjustment and quality of life has intensified in recent years. Little of this inquiry has focused on lung cancer samples, and less is known about relationships of optimism, a disposition to expect positive outcomes, and social resources to cognitive representations of illness(CRI), learned mental models that guide illness responses and cancer adaptation. Therefore, the study purpose was to examine relationships among optimism, social support, and developing CRI domains.
Design: Repeated measures design.
Sample: Convenience sample of 42 individuals (age 64±11, range 37–83 years) with suspected early stage lung cancer were tested at diagnosis and again 3–4 weeks post-operatively.
Measures: Life Orientation Test-Revised(LOT-R); Personal Resources Questionnaire(PRQ); Illness Perception Questionnaire-Revised measuring CRI domains (symptoms, cause attributions, timeline, consequences, coherence, cyclical nature, control, emotional representations).
Analysis: Descriptives; correlation/regression analyses.
Results: Mean LOT-R (15.95±3.96, range 6–24); PRQ (86.45±12.54, range 46–105). Significant relationships: Time 1. Optimism: time cycle, r=−.36; treatment control, r=.42(p<.05). Social Support: personal control, r=.60; treatment control, r=.35(p<.05). Time2. Optimism: time cycle, r=.52; treatment control, r=.43; personal control, r=.44; consequences, r=−.34; illness coherence, r=.44; emotional representations, r=−.37 (p<.05). Social Support: personal control, r=.32(p<.05). Multiple regression showed that optimism (β=.37) predicted perceived personal control following surgery accounting for 24% of the variance.
Implications: Optimism, but not social support, was related to multiple CRI domains 3–4 weeks following surgery suggesting an adaptive role in the development of cognitive structures that facilitate positive adjustment over time. Further research focusing on supportive factors that promote cognitive adaptation is needed for individuals with lung cancer who carry a positive long-term prognosis.
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A-032

DIFFERENCES IN HEALTH STATUS AND HEALTH BEHAVIORS AMONG MULTIPLE CANCER SURVIVORS, SINGLE CANCER SURVIVORS, AND NON-CANCER CONTROLS: A NATIONAL, POPULATION-BASED STUDY

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Research suggests a cancer diagnosis can significantly impact one's health status and health behaviors. It is not unreasonable to think that changes due to cancer, both negative and positive, could be compounded with each new cancer diagnosis. Since multiple cancer survivors account for 8–16% of cancer survivors in the US, their survivorship experience is an issue of public health relevance. This study employed population-based estimates from the 2009 national, population-based Behavioral Risk Factor Surveillance System to identify differences in the health status and health behaviors of multiple cancer survivors (MCS), single cancer survivors (SCS), and non-cancer controls (CON). Standardized outcome measures were used. Cancer survivors were identified by self-report. ANCOVA and binomial logistic regression analyses were conducted, adjusting for age, sex, race, marital status, education, and BMI. The sample (n=404525) included 8734 MCS, 47562 SCS, and 348229 CON. MCS reported poorer physical and mental health status than SCS and CON on all measures (all ps<.001). MCS reported worse overall health (effect size (ES)=.23), more physical (ES=.25) and mental (ES=.09) distress, greater activity limitations (ES=.15), more sleep problems (ES=.10), less life satisfaction (ES=.06), and greater likelihood of disability (odds ratio (OR)=1.49) than SCS. MCS differed from both SCS and CON on 3 of 10 health behavior indices (all ps<.01). Compared to SCS, MCS were less likely to have recently consumed alcohol (OR=0.93), but they also ate fewer fruits/vegetables (ES=.04), were more likely to avoid moderate and vigorous physical activity (OR=1.09), and were more likely to smoke cigarettes (OR=1.14). In most cases, the group differences between MCS and CON were greater in magnitude than those between MCS and SCS. In conclusion, MCS fare worse than SCS and CON on measures of health status, and there is some evidence that MCS have unhealthier lifestyles than SCS and CON, controlling for relevant demographic variables.

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A-033

PHYSICAL ACTIVITY PROMOTION PRACTICES OF ONCOLOGY NURSES IN THE UNITED STATES

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Purpose: Physical activity promotion for cancer survivors may be effectively provided by oncology nurses given their unique role in patient care and education. Yet, very little is known about the physical activity promotion practices of oncology nurses. The aim of this study was to document physical activity promotion practices of oncology nurses and to examine oncology nurses' perceived benefits of physical activity for cancer survivors and barriers to physical activity promotion.
Methods: Oncology nurses throughout the United States responded to an internet-based survey.
Results: A total of 274 oncology nurses responded to the survey. Oncology nurses gave physical activity recommendations to 65.7% and 66.9%, respectively, of on- and post-treatment survivors. The majority of oncology nurses inquired about physical activity on at least some office visits (74.9%). The most commonly cited barriers to physical activity promotion were "lack of time" and that "patients are not interested". Oncology nurses rated all of the possible perceived benefits of physical activity very favorably, with the exception of "reducing risk of recurrence". "Unsure what to recommend" and "unsure that physical activity is safe" were the strongest correlates of physical activity promotion.
Conclusions: Some oncology nurses report not providing physical activity recommendations or inquiring about physical activity levels of their patients. Feeling unsure about what to recommend and the safety of physical activity for cancer survivors may influence physical activity promotion along with the other barriers and benefits examined. Dissemination of educational materials to oncology nurses that provide information about the role of physical activity for cancer survival outcomes and the kinds of physical activity to recommend is needed.

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A-035

PREDICTORS OF ADHERENCE TO LOW-SALT DIET AMONG HEART FAILURE PATIENTS

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Low-salt diet adherence among heart failure (HF) patients is inadequate and a likely cause of frequent morbidity. Poor adherence to one's HF medication regimen has been related to demographic, medical/functional (e.g., ejection fraction, number of prescribed medications), and psychosocial/personality (e.g., social support, depression, hostility) variables. Additionally, theories of behavior change suggest that beliefs about medicines may help explain adherence behavior, though little is known about how beliefs affect other health behaviors such as diet. The purpose of this study was to examine whether psychosocial factors previously related to HF medication adherence such as depression, social support, hostility, and beliefs about medicines (measured by the Beliefs about Medicines Questionnaire) relate to self-reported low-salt diet adherence in an ethnically-diverse HF sample of 105 individuals (65 men, mean age=57). Low-salt diet adherence was represented by a latent variable composed of five low salt diet adherence measures. Using structural equation modeling, better adherence to a low-salt diet was related to believing medicines are necessary (despite concerns about their adverse effects) [β=−0.31, SE=0.12, p=0.01]. Higher age, lower income, and fewer co-morbid illnesses also were related to better low salt diet adherence; however, depression, social support, and hostility were not related. Fit indices were acceptable for all models. Combining these results with previously-reported findings, it can be concluded that demographic and medical variables and certain beliefs about medicines influence a key dietary behavior in persons with HF, while other factors such as depression—previously related to medication adherence in this population—did not relate to low salt diet adherence. Together these results can inform behavioral and psychosocial screening when health care practitioners address adherence issues with HF patients.

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A-036

PROMOTING ANTIHYPERTENSIVE DIETARY CHANGE THROUGH A TAILORED BEHAVIORAL INTERVENTION: A RANDOMIZED CONTROLLED TRIAL (RCT)

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Tailored interventions based on the transtheoretical model (TTM) are effective in producing behavioral changes in patients with chronic conditions. Stage of change (SOC), a major TTM construct, assesses patients' readiness to change behavior and can be used in managing chronic conditions such as hypertension. The Dietary Approaches to Stop Hypertension (DASH) diet, the most effective antihypertensive diet, targets multiple nutritional components and therefore can be difficult for patients to follow. While previous research demonstrated the importance of changing single dietary components, such as limiting fats or increasing fruit and vegetable consumption, few have assessed the ability of an intervention targeting multiple diet changes simultaneously. We evaluated the effects of tailored and non-tailored behavioral interventions on DASH SOC among veterans with uncontrolled hypertension enrolled in a 6-month RCT. DASH SOC was determined by self-report and randomization was stratified by DASH SOC ensuring that participants in pre-preparation, preparation and post-preparation SOCs at baseline were randomized equally to each arm. The 3 study arms were: a) tailored stage-matched intervention (SMI) to improve DASH adherence via TTM, b) non-tailored health education intervention (HEI), or c) usual care (UC) with no intervention. Comparisons between groups were by Wilcoxon tests. We enrolled and randomized 533 participants. At baseline, 40% of SMI, 41% of HEI, and 39% of UC had later SOC defined as action or maintenance (p>.05). At the 6 month follow-up, 55% of SMI, 46% of HEI, and 43% of UC had later SOC, SMI was more effective in advancing dietary stage of change in comparison to UC (p<.010) and probably HEI (p=.059). These results suggest that tailored interventions based on TTM can successfully improve SOC for complex dietary recommendations requiring multiple behavioral changes.

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A-037

EFFECTS OF ESTROGEN AND NALTREXONE ON CARDIOVASCULAR REACTIVITY IN POST-MENOPAUSAL WOMEN

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Studies have shown sex-related differences in the stress response, observable at the behavioral, neuroendocrine and cardiovascular levels. The role of estrogen in control of blood pressure has not been fully explored, but there is evidence to suggest that estrogen may influence the interaction between endogenous opioids and autonomic control of the circulatory response to stress. We examined the effects of naltrexone, an opioid antagonist, and estrogen on cardiovascular reactivity to stress during a mental arithmetic test in post-menopausal women. Forty-one postmenopausal women who were not currently taking hormone replacement therapy (HRT) were randomized to groups who received either estrogen only (n=13), estrogen plus progesterone (n=13), or hormone placebo for three months. After three months, participants completed a mental arithmetic task after administration of .7 mg/kg oral naltrexone or a placebo tablet. Systolic blood pressure (SBP), diastolic blood pressure, (DBP), mean arterial pressure (MAP) and heart rate (HR) were measured at rest and during the arithmetic stressor. Results showed that stress produced significant increases in SBP, DBP, MAP, and HR (all ps<.001). This was true regardless of HRT group or drug condition. Because there were no effects of progesterone on cardiovascular variables, women in the estrogen only and estrogen plus progesterone groups were combined into one HRT group. Interestingly, there was an HRT group by opioid blockade interaction on SBP reactivity scores (F(1,38)=4.36, p<.05,). This interaction revealed that women on HRT with intact opioid receptors showed increased SBP stress reactivity, relative to all other groups. Therefore, HRT increases SBP reactivity only when opioid receptors are intact. This is consistent with some studies of premenopausal women, suggesting that estrogens may engender an opioid-mediated increase in SBP reactivity. These results may explain reported sex differences in stress reactivity and opioid effects in premenopausal women.

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A-038

ASSOCIATION OF SOCIAL-ENVIRONMENTAL FACTORS WITH HYPERTENSION STATUS IN UNDERSERVED AFRICAN AMERICANS

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African Americans have the highest rates of hypertension (HTN) in the U.S. The purpose of this study was to assess whether HTN status (normotensive, n=197; HTN stage 1, n=9; HTN stage 2, n=32) of African American adults participating in the Positive Action for Today's Health (PATH) trial was associated differentially with social-environmental factors. The PATH trial is evaluating the efficacy of a 24-month police-patrolled walking plus social marketing (SM) intervention on increasing physical activity in underserved (low income, high crime) African American communities. In three communities matched demographically, 434 African American adults were enrolled and a subsample of these were included in this study (N=327). Automated baseline BP values were obtained with Dinamap equipment using a standardized protocol. Individual's frequency of neighborhood social interaction, and perceptions of neighborhood satisfaction and collective efficacy were obtained via Neighborhood Social Life, Neighborhood Satisfaction, and Collective Efficacy measures, respectively. The hypothesis that the stage 2 HTN group would have lower ratings for positive social-environmental factors was tested using ANCOVA with age and BMI covariates. Results indicated a significant effect with the stage 2 HTN group having lower neighborhood satisfaction ratings than stage 1 (p=.035, partial η2 =.02). Additionally, age and waist circumference (cm) differed for normotensive (Mage=47.5; Mwaist=93.6) and stage 2 HTN (Mage=55.7; Mwaist=100.2) groups, and self-reported walking (mets/day) was highest for normtensives (Mwalk =39.4), and was higher for stage 1 HTN (Mwalk=34.3) versus stage 2 HTN (Mwalk=30.3) groups. Results suggest that HTN status is associated with social-environmental community and neighborhood factors, and that it is important to account for their role in HTN public policy prevention efforts. Future research exploring potential causal relations among these factors is warranted.

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A-039

ASSESSMENT OF TREATMENT ASSIGNMENT BLINDING IN AN RCT OF A BEHAVIORAL INTERVENTION FOR BLOOD PRESSURE CONTROL

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Blinding of research staff (who conduct outcome assessments) to treatment assignment is critical to minimize bias and improve internal validity in randomized controlled trials (RCTs). Since blinding is more difficult in behavioral intervention RCTs in comparison to pharmacological studies, more effort is needed. Despite this, few behavioral RCTs assess and report the success in maintaining blinding to treatment assignment. We examined the degree to which blinding of treatment assignment worked in outcome assessors in a RCT of a behavioral intervention to improve blood pressure (BP) control. Following a baseline visit, participants with uncontrolled BP were randomized to 1 of 3 arms: Stage Matched Intervention (SMI) of 6 monthly tailored phone calls based on the Transtheoretical Model; Health Education Intervention (HEI) of 6 monthly calls where non-tailored information about BP treatment recommendations was provided; and Usual Care (UC), with no counseling. Phone interventions were by counselors, while the baseline and 6-month visits were conducted by research assistants (RAs) blinded to treatment assignment. Participants returned for a follow-up visit at 6 months for assessment of BP and adherence. Following this visit, the RAs were asked to guess the treatment arm of each participant. Chi square and Kappa tests compared the RAs' guesses to actual treatment assignment. Of the 304 participants who had this assessment, 103 were in SMI, 103 were in HEI and 98 were in UC. The RAs' guesses were as follows: 82 SMI, 85 HEI, 137 UC. Chi square test showed that it was easier to guess the treatment assignment in UC (p<.0068), while the kappa coefficient was 0.139, denoting weak agreement between the true and guessed treatment assignments. In this randomized trial with attention to blinding, since UC was the only non-call arm, it may have been easier to guess this than the other arms. However, the RAs were no more likely to guess the 2 phone call arms correctly than would be expected by chance.

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A-040

LONELINESS AND RISK FACTORS FOR CARDIOVASCULAR DISEASE: A PROSPECTIVE EXAMINATION

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Social isolation is known to influence morbidity and mortality at a rate comparable to obesity or smoking (Berkman & Syme, 1979; House et al., 1988), but the mechanisms are unclear. It may be loneliness—perceived social isolation—that leads to health problems (Cacioppo et al., 2002). There is evidence that loneliness is related to risk factors for cardiovascular disease, such as diabetes (Hanestad et al., 1991; Sarkadi & Rosenqvist, 2001), high blood pressure (Hawkley et al., 2006; 2010), and obesity (Lauder et al., 2006). Still, support for a prospective relationship between loneliness and later illness is limited, and many studies have been conducted only on healthy samples.

The aim of the present study was to determine whether loneliness would predict presence of diabetes, hypertension, and cholesterolemia more than 15 years later in a sample of U.S. adults. Participants were 12686 respondents in the National Longitudinal Study of Youth (Female=6283; Mean Age at Baseline=31.63 years). Consistent with Cacioppo et al. (2010), loneliness was measured using the “I felt lonely” item from the CES-D in 1992. Disease status at follow-up was designated based on whether the participant was taking medicine to control blood glucose (BG; n=648), blood pressure (BP; n=1754), cholesterol (n=977), or taking statins specifically (n=396) in 2008.

Results indicated reported loneliness in 1992 predicted use of BG ($\beta=.04$, $p<.001$) and BP medication ($\beta=.03$, $p<.001$) 16 years later. Loneliness alone did not predict use of statins. When controlling for sex, age, BMI, and depression, loneliness continued to predict use of BP ($\beta=.016$, $p<.05$) but not BG medicine, and became a predictor of statin use ($\beta=.07$, $p<.05$). Only use of cholesterol medication was not predicted by loneliness.

The present findings suggest a distinctive relationship between loneliness in early adulthood and later presence of hypertension and, to a lesser extent, diabetes and cholesterolemia. Such results support and extend Hawkley et al. (2006; 2010). Limitations and practical implications will be discussed.

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A-041

THE PROSPECTIVE ASSOCIATION BETWEEN LIFE SATISFACTION AND CORONARY HEART DISEASE: SATISFACTION WITH SPECIFIC LIFE DOMAINS MATTERS

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BACKGROUND: Psychological factors like depression and social isolation have been linked with poor physical health and, more specifically, increased risk of cardiovascular diseases such as coronary heart disease (CHD). However, most research regarding this association has focused on the detrimental effects of ill-being rather than the protective effects of well-being. Although increasing evidence suggests that well-being is related to reduced risk of CHD independently of ill-being, it is still unclear what specific aspects of well-being are especially relevant for cardiovascular health. The present research investigates how one facet of well-being—namely, satisfaction across a variety of life domains (e.g., job or relationship satisfaction)—is prospectively associated with CHD.

METHODS: Between 1991 and 1994, coronary risk factors and domain satisfactions (marital/love relationship, leisure time activities, standard of living, job, family life, sex life, and self) were assessed among approximately 7,000 healthy men and women from the Whitehall II Cohort. Incident CHD (fatal CHD, first nonfatal myocardial infarction, or first definite angina) was tracked during 5 person-years of follow-up.

RESULTS: A composite variable of satisfaction across all seven life domains was associated with reduced risk of CHD in multivariate models (hazard ratio=0.88, 95% confidence interval=0.78 to 1.00). These associations were only weakly attenuated when accounting for ill-being. In addition, satisfaction with one’s job, family, sex life, and self were individually associated with CHD with comparable effects.

CONCLUSIONS: Life satisfaction was associated with a modest but consistent reduced risk of CHD after controlling for cardiovascular risk factors and ill-being. Notably, being satisfied with one’s job, family, sex life, and self seemed to be driving this association. Measures of domain satisfaction may be particularly relevant to CHD because they provide a nuanced assessment of an individual’s functioning within critical life domains, rather than tapping general feelings of well-being.

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A-043

MINDFULNESS AND HEALTH BEHAVIORS AND OUTCOMES IN TEENS WITH TYPE 1 DIABETES

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Dispositional mindfulness reflects an individual’s tendency to engage in non-judgmental present-moment awareness. Research has shown that higher levels of dispositional mindfulness can predict positive outcomes and better coping in many health contexts due to decreased levels of perceived stress and more non-judgemental awareness of internal and external sensations. Our goal was to explore if this may also be the case for late teens with type 1 diabetes. Diabetes self-care involves many behaviors that may be facilitated by a higher level of awareness of physical and mental states. Participants with type 1 diabetes (n=36, mean age 20, 64% female) completed measures of dispositional mindfulness, health behaviors, and psychological and physical health outcomes as part of a larger longitudinal study.

Higher dispositional mindfulness was associated with lower levels of depressive symptoms ($r=-.60$, $p<.001$), lower perceived stress ($r=-.53$, $p<.001$), and fewer physical symptoms ($r=-.39$, $p=.02$), providing evidence for a link between dispositional mindfulness and physical and mental health. More mindful teens also engaged in less binge drinking ($r=-.34$, $p=.04$) and reported fewer personal problems with alcohol ($r=-.44$, $p=.01$), indicating less engagement in unhealthy behaviors. However, higher dispositional mindfulness predicted less frequent rather than more frequent blood glucose testing on the previous day ($r=-.44$, $p=.01$). To understand this relation, we explored how testing frequency was related to health outcomes. More frequent testing marginally predicted more depressive symptoms ($r=.32$, $p=.06$), more perceived stress ($r=.31$, $p=.06$), and more physical symptoms ($r=.32$, $p=.06$). In this case, it appears that more frequent testing was an indicator of diabetes problems. Thus, more mindful people may have tested less frequently because they were having fewer problems, and dispositional mindfulness may be an additional factor to consider when exploring health behaviors and outcomes in teens with type 1diabetes.

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A-044

DEPRESSION, DIABETES DISTRESS AND MEDICATION ADHERENCE IN TYPE 2 DIABETES

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Background: Diabetes-specific distress (DD) has been distinguished from depression and suggested to be more closely associated with treatment nonadherence in type 2 diabetes (T2DM). We examined the relationships between these variables in adults taking oral medication for T2DM.

Methods: Baseline data were collected during screening for an intervention study for depression and diabetes treatment nonadherence. Clinicians rated depression severity with the Montgomery-Asberg Depression Rating Scale (MADRS) and diagnosed Major Depressive Disorder (MDD) with the Mini-International Neuropsychiatric Interview. The Diabetes Distress Scale measured DD and provided a cutoff for high DD. Validated self-ratings of one-week diabetes medication adherence used both qualitative (very poor-excellent) and percentage scales (0–100%).

Results: Participants (N=139, 46% female, 81% white, mean age=56 [SD=10]) had an average of 14 years (SD=3) of education and 58% qualified for MDD. MADRS and DD scores were significantly related ($r=.35$, $p<.001$) but shared only 12% of their variance. Patients with MDD had a two-fold increased odds of high DD as compared to those without MDD (OR=2.05, 95%CI: 1.02, 4.10; $p=.04$); 52% of MDD patients reported high DD and 68% of those with high DD qualified for MDD. For every one standard deviation increase in MADRS severity, there was nearly a two-fold increase in odds of high DD (OR=1.88, 95%CI: 1.29, 2.74, $p=.001$). Higher MADRS ($r=-.25$, $p=.003$; $r=-.21$, $p=.015$) and DD scores ($r=-.26$, $p=.002$; $r=-.20$, $p=.021$) were significantly associated with medication non-adherence for qualitative and percentage ratings, respectively; they were equivalently related to nonadherence in multivariate analyses. MDD was not associated with adherence.

Conclusions: There is substantial overlap between MDD, depression severity, and diabetes distress. Intervention approaches that take this into account may be more successful in improving diabetes treatment adherence outcomes than those that simply target amelioration of MDD.

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A-045

FOLLOW-UP OF DEPRESSIVE SYMPTOMOLOGY IN A CLINIC SAMPLE OF ADULTS WITH DIABETES

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Depression in people with diabetes is associated with poor metabolic control, complications and increased health care costs. Despite recommendations for depression screening in medical settings, follow-up is infrequent. Little is known about depressive symptomology (Sx) stability in diabetes clinic samples. This study examined stability of depressive Sx in 123 adults receiving ongoing outpatient diabetes care (52 % female, 96% Caucasian, 77% type 2). Patients who had completed the CES-D in a clinic study in the previous 6 to 18 months (n=329) were re-contacted by mail and invited to participate in a follow-up (FU) (response rate= 37%). FU participants were older (58 vs 51 years), in better metabolic control (HbA1 7.6 vs 8.2) and had lower CES-D baseline (BL) scores (M=8.13 vs 11.63) than non participants. They did not differ by gender. M months from BL to FU=12.94 (SD= 3.71). Stability in Depressive Sx (BL to FU) was examined using the standard CES-D cutoff of >16. The majority of participants (76%) did not change depressive Sx status (69.1% stayed below the cutoff, 7.4% stayed above the cutoff); 5.9% moved from above the cutoff at BL to below at FU; 17% moved from below at BL to above at FU. Demographic characteristics did not differ between the 4 stability groups. Participants who were above cutoff at both BL and FU had significantly lower social support satisfaction scores at BL relative to the other stability groups [F(3,46)=12.96, $p<.001$]. Those who were below CESD cutoff at both BL and FU had lower perceived stress scores at BL relative to the other groups [F(3,61)=14.73, $p<.001$]. Despite this sample having lower BL depressive Sx relative to patients who did not complete the FU, some participants had persistently elevated CES-D scores and others reported an increase in Sx over time. Findings suggest that long-term follow-up of depression in diabetes clinic samples should not be overlooked. Individuals with low social support may be more likely to present with Sx of depression and to maintain them over time; low stress may offer protective benefits.

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A-046

PATIENT RACE, PROVIDER ENCOURAGEMENT OF ONLINE SERVICES, AND SHARED MEDICAL RECORD USE

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Background: Previous studies have documented racial disparities in the health information technology use. We sought to examine if provider encouragement of using online services influenced racial differences in shared medical record use.
Methods: We examined survey data from a sample of diabetes patients at Group Health Cooperative. The survey was stratified by previous use of online services and assessed patient perceptions of care. Primary measures were patient race and provider encouragement of accessing online services in the past year.
Results: Examining web use by patient race, 63% (245) of whites had used online services 2 or more times on separate occasions in the past 2 years, compared to 34% (29) of blacks, 35% (28) of Asians, and 59% (41) of those of another race/ethnicity ($p<0.001$). In addition, 76% of respondents stated that their provider had encouraged them to use online services, which was significantly related to being a web user (64% (271) of those sometimes/usually/ always encouraged were users, compared to 33% (44) of those never encouraged, $p<0.001$), but encouragement did not differ by patient race (p=0.88). In a fully adjusted model controlling for age, sex, education, self-reported health, and provider communication, blacks (OR= 0.23; 95% CI: 0.12,0.47) and Asians (OR=0.35; 95% CI: 0.17,0.69) remained significantly less likely than whites to be web users, and those who were encouraged to use online services remained significantly more likely to be web users than those not encouraged (OR=2.72; 95% CI: 1.57,4.72).
Conclusions: While provider encouragement was significantly associated with a patient being an active user of online services, it did not eliminate racial disparities in web use. In addition, there were no differences in provider encouragement of using online services by patient race. Patient-provider interaction could be important for increasing online services use to provide more continuity of care in between office visits, and there is a need to address race differences in web use during health care delivery redesign.

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A-047

AUTONOMY SUPPORT AND POOR GLYCEMIC CONTROL: THE GROUP HEALTH PATHWAYS STUDY

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Background: Glycemic control is the cornerstone of diabetes management, yet many patients have inadequate control based on hemoglobin A1c (HbA1c). Our objective was to investigate patients' assessment of autonomy support in relation to glycemic control in a large managed care diabetic population.
Methods: We analyzed baseline data of the Pathways survey (62% response rate) among individuals with diabetes receiving care at Group Health Cooperative, a large, fully integrated healthcare delivery system in Seattle, WA (n=4,100). Poor glycemic control was defined as an HbA1c$>$8.5%, and the primary exposure of autonomy support was assessed with the Health Care Climate Questionnaire (HCCQ), a 6-item scale measuring patient perceptions of care, such as feeling their physician encourages questions or has confidence in their ability to make health-related changes.
Results: Poor glycemic control was present in 25% of respondents, and was associated with race/ethnicity (37% (n=122) of black respondents, 26% (n=93) of Asian respondents, and 30% (n=56) of other race/ethnicity respondents vs. 23% (n =740) of white respondents) and diabetes severity (41% (n=524) of those on insulin vs. 18% (n=519) of those not, and 32% (n=317) of those with complications vs. 23% (n=700) without). In a fully adjusted model accounting for disease severity and demographics, those who scored at or below the 1st decile on HCCQ (i.e., those with the least autonomy support from their provider) had significantly higher odds of poor glycemic control (OR=1.27, 95% CI: 1.01,1.59).
Conclusions: Patient-provider collaboration measured by autonomy support was associated with glycemic control, suggesting that provider support may empower patients to improve their diabetes control. How these factors interplay in patient self-care and self-efficacy, as well as by race/ethnicity, are additional aspects that should be examined for potential impact on improving diabetes outcomes.

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A-048

USING TELEHEALTH TO PROMOTE DIABETES MANAGEMENT IN VETERANS

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The prevalence of both type 2 diabetes and mental disorders is higher among veterans than the general population. The presence of mental disorders confers elevated risk for medical concerns. Patients with PTSD, for example, are more likely to have diabetes, elevated lipids and other medical issues. Co-morbid psychiatric conditions also impact self care and compliance with medical regimens. Given the importance of regimen adherence to the successful management of diabetes, the high co-morbidity between diabetes and mental disorders is of concern. Telephone technology provides a means for the provision of treatment to this high-risk population, who may have limited access to or comfort with in-person health care. Study aims were to evaluate the impact of a telephone intervention designed to enhance diabetes self care on psychological distress and diabetic treatment adherence and to evaluate study feasibility. Twenty veterans with diabetes and PTSD (mean age=55.90) received an initial assessment interview, 8 weekly motivational telephone calls, and a final assessment. Of these 20 participants, 5 were female and 11 were minority group members. Although the intervention focused on education, support and goal setting specific to diabetes management, results revealed significant decreases in self-reported PTSD and depression. Participants also reported significant improvement in diabetes-related self care variables including diet, exercise and foot care and evidenced a statistical trend toward lower weight. Results revealed high levels of compliance with telephone calls and satisfaction levels comparable to face-to-face contact. Means, standard deviations, and t-scores will be reported. The current study demonstrates the efficacy of a brief telehealth intervention focused on diabetes care in reducing psychological distress and in improving patient self-management and compliance. In addition, these results demonstrate the importance of attention to both physical and mental health in the management of diabetes.

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A-049

USING THE INTERNET TO ASSESS AND REDUCE RISK OF HYPOGLYCEMIA-RELATED DRIVING MISHAPS IN PEOPLE WITH TYPE 1 DIABETES

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Hypoglycemia can adversely affect driving performance of people with Type 1 diabetes (T1DM). However, only a subgroup of T1DM drivers are at an increased risk of experiencing hypoglycemia-related driving mishaps (HRDM) and we have reliable means to identify these T1DM patients. Using this information in our ongoing NIH funded study, we have created an Internet intervention (Diabetes-Driving.com) to reduce the risk of HRDM in high risk T1DM participants (Ps).
This presentation focuses on the development and design of the DiabetesDriving.com, and may be useful to investigators considering Internet intervention research. Our multidisciplinary research team has pioneered the development and validation of health-related Internet interventions. DiabetesDriving.com is an automated, interactive, individually tailored internet program that includes 5 Cores (Tool Kit, General Risk, Prevention, Detection and Treatment, and Review, Reflect, and Relapse Prevention) to help T1DM patients understand and reduce their driving-related risks. Cores are enhanced with features, including goal-setting exercises, symptom checklists, animations, audio notes, and quizzes. Automated emails are used to encourage adherence. The program also includes innovative components such as online informed consent and fully automated data collection.
In all, 480 T1DM participants (Ps) will be recruited. Each Ps risk of HRDM will be assessed before being placed into one of 4 groups: low risk controls, high risk controls, high risk Ps who get the internet intervention, and high risk Ps who will get both the intervention and motivational interviewing sessions. Clinical and psychological outcomes will be assessed at Pre, Post (intervention), and 1 and 2 year Follow-ups. Ps will also complete Monthly Driving Diaries relating to their diabetes and driving. Frequent assessments will allow us to capture the low incidence events such as driving mishaps with greater accuracy. Preliminary baseline data will be available in April, 2011.

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A-050

CLINIC ATTENDANCE AND HEALTH OUTCOMES OF YOUTH WITH TYPE 2 DIABETES

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The incidence of type 2 diabetes in youth has increased dramatically in recent years, but relatively little is known about factors affecting health outcomes for this patient population. This study examined clinic attendance in relation to health outcomes, focusing on glycemic control (HbA1c) and standardized body mass index (zBMI) in a sample of 79 youth seen from 2004–2010. A retrospective chart review was conducted and electronic records of clinic attendance obtained, including appointments kept as well as missed appointments ("no-shows"). Mean age (SD) of the study sample was 13.6 (2.1) years; 68.4% were female; 58.5% were Black, and 32% were Hispanic. Ten percent were indigent, 50% had Medicaid, and 40% had commercial health insurance. An observation interval was created for each patient, taking into account when they would turn 18 or move to another city or clinic. The mean observation interval was 3.2 (1.5) years. Patients had a mean of 1.68 (0.9) visits/year; 77.2% of patients no-showed at least once. During the follow-up, 26.6% became 18 years of age and were transferred to adult care; 6.3% moved to another area and/or clinic; 22.8% were still being followed; and 44.3% dropped out from the clinic, i.e., they did not show for scheduled appointments for at least one year, no additional appointments were made, they could not be reached, and they had not transferred to another clinic to our knowledge. Ten patients were seen only once, and 80% of these dropped out after their first visit. Mean initial HbA1c and zBMI were 8.2 (2.4)% and 2.3 (0.5), respectively. There was no relationship between number of clinic visits and health outcomes over time. However, patients who no-showed had higher mean HbA1c than those who kept their scheduled appointments (8.3 vs. 7.4%, p<.02), and were more likely to be lower income (i.e., have Medicaid) (p<.004). These findings indicate that many young patients with type 2 diabetes do not show for scheduled clinic visits and/or drop out of medical care. Because these patients are at increased risk for glycemic control problems, new strategies are needed to keep them engaged with medical care.

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A-051

BMI CHANGE TRAJECTORIES BEFORE DIABETES DIAGNOSIS: A 14-YEAR INVESTIGATION OF U.S. MIDDLE-AGED ADULTS

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Background. Diabetes is related to overweight or weight gain, both of which are common in midlife. Whether adults eventually develop diabetes have distinct weight change patterns before their diabetes diagnosis is unknown. If distinct weight change patterns can be identified, early interventions may modify diabetes risk and deter the full development of diabetes.
Objectives. We investigated BMI trajectories for middle-aged adults who did and did not develop diabetes over 14 years to identify if unique BMI change patterns exist for those who developed diabetes. Methods. Our analysis included 8,696 respondents from the nationally representative Health and Retirement Study who were aged 51–61 years and did not report having diabetes at baseline in 1992. We recorded BMI biennially from 1992 to 2006 and used only values before diabetes diagnosis. Multilevel modeling analysis estimated BMI trajectories as a function of year before diagnosis of diabetes.
Results. One in six adults (n=1,462) developed diabetes during the 14 years. In the diabetes model, the main effect of diabetes (βdiabetes=2.337, SE=0.160, p<.001) suggests that mean BMI at baseline was higher in adults who developed diabetes; the main effect of time (βtime=0.174, SE=0.016, p<.001) suggests that general adults without diabetes from midlife to older age tended to gain weight. However, the positive diabetes by linear time effect (βdiabetes*time=0.482, SE=0.053, p<.001) and the negative diabetes by quadratic time effect (βdiabetes*time*time=−0.052, SE=0.007, p<.001) suggest that BMI increased with time more rapidly in adults developed diabetes than in those who did not until a few years before diagnosis. For the four years before diabetes diagnosis, those who developed diabetes stopped gaining weight, but those who did not develop diabetes continued to gain weight.
Conclusions. This study confirms that long-term weight gain is a significant predictor for diabetes. Physicians should track adults who accumulate weight for many years and then stabilize their weight during midlife for signs of pre-diabetes.

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A-052

A1C PREDICTS DEPRESSIVE SYMPTOMS OVER TIME IN PEOPLE WITH TYPE I DIABETES: A GROWTH CURVE ANALYSIS

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Hemoglobin A1c (A1c), a measure of blood glucose over time, is associated with depressive symptoms in people with diabetes. Evidence also indicates that depression may be an antecedent or a consequence of poor glycemic control. Yet most studies have been cross-sectional and do not provide information about temporal sequence. This study examined whether A1c predicts change in depressive symptoms over time in a large longitudinal sample using multilevel modeling. The sample included 1,441 people with type 1 diabetes (ages 13–39) enrolled in the Diabetes Control and Complications Trial and followed for six years. A1c was collected quarterly and self-reported depressive symptoms were assessed annually with the Symptom Checklist-90 Revised. Several models were run including an unconditional model, a model predicting change in depressive symptoms over time, and a model that added clinical and demographic predictors. The next model retained only the significant predictors of baseline depressive symptoms and the change in depressive symptoms. The final model added A1c as a predictor of change in depressive symptoms over time. In the final model, patients who were smoking at baseline, had higher BMIs, and older patients had higher baseline depressive symptomatology (ps <.05). However, higher baseline BMI and age predicted a decrease in depressive symptoms over time (ps<.05). After controlling for demographic and clinical factors, greater mean A1c across study participation significantly predicted an increase in depressive symptoms over time (p<.01). Potential mechanisms for this relationship include decreased self-efficacy resulting from ineffective control of blood glucose levels and increased medical complications that lead to poorer quality of life. This study improves upon the existing literature by examining a large longitudinal sample and is one of the first to employ multilevel modeling in this sample, which enables the simultaneous examination of differences at baseline and differences in rates of change over time.

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A-054

INCORPORATING INSTRUCTIONAL DESIGN PROCESS INTO THE DEVELOPMENT OF INTERNET INTERVENTIONS

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Internet and information communication technologies have the potential to deliver highly interactive and tailored health interventions. Behavior-focused Internet interventions go beyond education and information needs to address behavioral skills practice and mastery, offering opportunities for feedback and reinforcement, and leading to behavior change, symptom improvement, and improved health-related quality of life.

Although many Internet interventions have been created, there is little information in the literature on the design and development of these programs. However, there is a rich related literature in the field of instructional design (ID). Ritterband et al (2009) presented a Model for Internet Interventions, and highlighted a multitude of design related areas within the website component, yet, little discussion was offered as to how these areas should be best addressed when creating an Internet intervention. Using ID process models has been shown to increase the effectiveness of face-to-face interventions, and we believe an ID framework can provide significant guidance to practitioners developing Internet interventions.

This presentation provides design and development strategies for incorporating an ID process model in the creation of Internet interventions. ID models prescribe a systematic method for assessing the needs of users to determine gaps in desired outcomes and current knowledge and behaviors; to prioritize needs of users, taking into account their prior knowledge; to set measurable learning objectives or performance requirements; to assess users in authentic and meaningful ways; and to use cycles of formative evaluation to ensure that the intervention meets the needs of all stakeholders. The ID process should be considered as an integral part of the creation of Internet interventions. It provides a framework for the design and development of the intervention and helps assure effective learning outcomes.

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A-056

THE ROLE OF DISEASE KNOWLEDGE IN HIV CARE

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Poor knowledge of disease has been associated with disease progression, reduced cognitive functioning, and more negative attitudes towards health care among HIV positive patients. However, the relationship of disease knowledge to adherence to care has been little studied. We therefore assessed the relationship of HIV disease knowledge with appointment adherence among an urban sample of patients attending a county hospital clinic.

Participants (n=209) were primarily African American (83%), very low income (87%), and aged 47 on average. Just over half of the sample was women (53%). Patients had been diagnosed with HIV an average of 12 months and had been in HIV care for 11 months on average; 50% had received an AIDS diagnosis. Participan ts were grouped into those who could report their HIV viral load value versus those who could not (27% could not report VL). Individuals unable to report their viral load had been diagnosed more recently (F=6.34, p=.01), had greater elapsed time since last viral load assessment (F=10.61, p=.001), had lower scores on a composite measure of global neurocognitive functioning (F=5.60, p=.02), and had missed more health care appointments over the previous 7 months (F=8.27, p=.005). Attitudes toward HIV care providers were unrelated to HIV viral load knowledge. Analysis of variance indicated that time since last viral load assessment (F=4.49, p=.035) and knowledge of one's viral load (F=9.12, p=.003) were significantly related to missed medical appointments when adjusting for time since HIV diagnosis and cognitive status.

Study results suggest that patients who do not know their HIV viral load may be at risk for poor appointment adherence. Naturally, those who do not attend medical appointments may lack this knowledge because HIV care providers cannot provide such information to the patient if he or she missed their appointment. Further research is needed to determine the reason for the lack of knowledge (forgetting, poor comprehension of meaning of value) so that acquisition of treatment-related knowledge can be addressed early in care.

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A-057

HOW DO PSYCHIATRIC DIAGNOSES IMPACT HIV-RELATED HEALTH OUTCOMES AMONG INDIVIDUALS ENGAGED IN CARE?

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Background: As individuals are living longer with HIV infection, management of psychiatric disorders has been increasingly incorporated into comprehensive care practices. Psychiatric disorders have been documented to commonly occur among populations with HIV.

Methods: This study was conducted to assess the impact of psychiatric disorders on HIV-related care and health outcomes. Individuals were recruited during regularly scheduled clinic visits to participate in diagnostic interviews conducted between April and August 2009 by trained lay interviewers.

Results: Of 202 participants who completed the interviews, the majority were male (69%) and African American (72%). About half completed < a high school education (48%) and were unemployed (48%). Most were currently receiving HIV therapy (78%) and 78% of those had achieved virologic suppression. The most prevalent diagnoses included major depressive, generalized anxiety, agoraphobia, and antisocial personality disorders. Alcohol and cocaine/crack abuse and dependence were the most common substance use disorders. Current receipt of HIV therapy was less common among those diagnosed with generalized anxiety disorder ($p<0.05$). Agoraphobia was the only disorder associated with unsuppressed viral load ($p<0.05$). Individuals who were diagnosed with major depressive episode, PTSD, alcohol abuse, agoraphobia, and pain disorder were more often prescribed anti-depressants ($p<0.05$ for all).

Conclusions: While individuals may be living with psychiatric disorders, there seems to have little effect on HIV-related disease. The management of psychiatric disorders is commonly relied upon by anti-depressant prescriptions in primary care settings. These findings suggest there may be limited care provided for psychiatric disorders where anti-depressants may be both under- and over-utilized for the management of disorders and symptoms.

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A-058

DISCLOSURE OF HIV POSITIVE SEROSTATUS AS A FUNCTION OF ATTITUDES AND INTERNALIZED HIV STIGMA IN LATINOS ON THE US-MEXICO BORDER

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Disclosure of HIV serostatus has implications for overall psychological and physical well-being. Surprisingly, there is scant research on attitudes towards HIV disclosure in predicting disclosure. We view attitudes as associations between the attitude-object (the act of disclosing) and evaluations of that object (good-bad). A more elaborate social-cognitive model allows us to view disclosure attitudes as either cognitively-driven (e.g., disclosing would be wise or foolish) or emotionally-driven (e.g., disclosing would be humiliating or comforting). We reclassified reasons for disclosure as either emotionally driven attitudes (catharsis), or cognitively driven attitudes (duty to inform, educate others about HIV). Secondarily, we investigated the effect of HIV-related stigma, which has been hypothesized to affect disclosure by increasing the perception of negative consequences (e.g. rejection). We sampled 168 HIV+ individuals on HAART at an out patient clinic and computed correlations between the rates of disclosure to specific targets and both affective and cognitive attitudes to determine which relationship was stronger (emotion or cognition). All correlations were statistically significant and positive; however, for all targets cognitive attitudes were more strongly correlated with disclosure than affective attitudes (using Steiger's Z test, all ps<.01). We also tested a mediation model and found the relationship between internalized HIV-related stigma and disclosure mediated by attitudes toward disclosure (Sobel Z=2.45, p <.01). Our mediation model suggests that HIV-related stigma may inhibit disclosure by the construction or strengthening of a negative attitude towards disclosure. Also, despite evidence that disclosure may occur for some groups (e.g., intimate partner) for emotional reasons related to catharsis or emotional relief, our data suggest that cognitive appraisals (e.g., duty to inform) are more strongly related to disclosure rates to all targets.

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A-059

RECONCEPTUALIZING ATTITUDES TOWARDS PEOPLE LIVING WITH HIV AND THEIR EFFECT ON HIV-RELATED STIGMA

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One of the most widely used strategies for eradicating HIV-related stigma is correcting false beliefs and increasing HIV knowledge. However, this strategy assumes that emotional and cognitive attitudinal components are manipulated through the same cognitive restructuring method. While there is often close correspondence between how one thinks and feels, data suggest this is not always the case. We propose that HIV-related stigma is simply one form of negative attitude toward people living with HIV/AIDS. We addressed emotions and cognitions about HIV/AIDS and high-risk groups in a holistic framework, treating certain forms of stigma as "affectively driven attitudes," and beliefs as "cognitively driven attitudes."We refer to "enacted stigma" as the behavioral consequence of a negative attitude. Participants (N=230) completed an attitude scale comprising 40 items from all relevant areas: fear of contagion, social policy, beliefs, and judgments, general affect, and general cognition. Half of participants received a version referring generally to men, women and people with HIV/AIDS and the other half referring to a highly stigmatized group (e.g., HIV+ gay men). The "double stigma" phenomenon was observed, with more negative responses to items about "gay men" and "drug users," t=6.09, p<.001. A latent path model indicated that HIV knowledge had a direct effect on attitudes (ts<−2.92, p<.05), which had a direct effect on enacted stigma (ts>9.72, p<.05). Knowledge did not have a direct effect on enacted stigma (ts>−1.26, NS), but did have an indirect effect through attitudes, demonstrating a mediating role of attitudes in both models. While it is often assumed that lack of HIV knowledge, and sometimes lack of associated HIV testing or experiences with people living with HIV/AIDS, predicts enacted stigma, we demonstrated that lower levels of knowledge predicted a more negative attitude and, in turn, greater levels of enacted stigma, thus explicating the path from HIV knowledge to HIV-related stigma.

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A-060

PATIENT-PROVIDER RELATIONSHIP SATISFACTION AND PERCEPTION OF ILLNESS WITH HIV INFECTION

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Background: The patient-provider relationship can be important in one's perception and response to chronic illness. Satisfaction with the healthcare provider (HCP) and perceived control over one's illness can foster more active participation in care favorably impacting patient outcomes. Enhancing HCP interpersonal and interprofessional skills may be useful in influencing a patient's perception of their illness providing a platform to optimize more active participation and self-management of care.
Purpose: To examine satisfaction with HCP relationship and perception of illness in persons living with HIV.
Design: Descriptive longitudinal survey.
Sample: Participants (N=121) conveniently sampled from HIV-related health-care agencies in OH and PA were predominantly Black (70%) non-Hispanic (97%) males (70%; mean age 44.5 [+/−8.36]).
Measures: Satisfaction with Healthcare Provider Relationship Response Scale and Perception of Illness Visual Analog Scale.
Analysis: Participant satisfaction with their HCP relationship remained relatively high (8.4–8.95/10). They reported that HIV infection had a moderately-high major effect on their life (.66–.71/1.0). Participants perceived there was much they personally could do to control their HIV infection (.77–.84/1.0). Their perception about the overall ability to control their illness significantly improved over time (F [time]=3.05;p=.017). There were significant positive correlations between satisfaction with HCP relationship and perception of individual (r=.22–.48, p<.001) and overall control (r=.29–.36,p<.001).
Conclusions: Perception about one's overall ability to control their illness increased over time. Significant correlations were noted between being satisfied with the HCP relationship and perception of being able to control one's HIV infection. Despite study limitations, these findings suggest the importance of satisfaction with the HCP and more perceived ability to exert control over their illness. Future research needs to consider the patient-provider interaction as a potential tool to increase self-management of HIV infection.

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A-061

RELATIONSHIP TYPE, TRAUMA EXPOSURE, AND SEXUAL RISK BEHAVIORS IN HIV-POSITIVE MEN WHO HAVE SEX WITH MEN

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Unprotected anal intercourse (UAI) is common in same-sex male relationships, and same-sex male partners are the source of infection in over half of newly diagnosed cases of HIV (Sullivan, 2009). It is unclear how factors such as trauma exposure and coping style are related to sexual risk behavior in casual and primary sexual partnerships of HIV-positive men. The current cross sectional study examined predictors of UAI in casual and primary same-sex male relationships, incorporating measures of trauma exposure, trauma symptoms, coping style, and sexual risk behavior among 132 HIV-positive men who have sex with men (MSM).
Participants completed measures of trauma exposure (THQ), trauma symptoms (IES-R), coping strategies (Brief COPE), and sexual risk behavior SERBAS). Hierarchical regression analyses were used to predict UAI with casual and primary partners. Age, race, and education were entered in the first block, trauma exposure in the second and PTSD symptomatology, avoidance and active coping strategies in the third. Results indicated that completing more years of education (β=.25, p<.05), and having experienced sexual assault or abuse (β=.61, p<.01) were positively associated with UAI with casual partners. Use of active coping was negatively associated with UAI with casual partners (β=−.25, p <.05)and the final model significantly predicted variance in UAI with casual partners (R2=.32, p<.001). However, no variables were associated with UAI with primary partners (all p>.05), and the total model did not predict a significant amount of variance (R2=.03, p>.05).
Despite high rates of sexual risk behavior with primary partners, most HIV prevention studies have looked specifically at variables predicting sexual risk with casual partners and have neglected models that predict high-risk behaviors among primary partners. Future research should examine risk in the primary relationships of HIV-positive men.

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A-062

COLLEGE WOMEN'S EASE IN SUGGESTING AND USING CONDOMS WITH SEXUAL PARTNERS

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Background/Purpose: More than one million people are living with HIV in the United States (CDC, 2008). New HIV infections continue at far too high a level, with African American women, at great risk for contracting the infection. Condom use during sexual activity is consistently regarded as an essential practice to prevent women from becoming infected with HIV. However, greater understanding of women's condom use is gravely needed. The present study explores college women's reported sexual practices, particularly their condom use and ease in suggesting condom use with their sexual partner(s).
Methodology: Data for this study was drawn from a larger randomized trial designed to increase knowledge, testing, and safer sex practices among college students. Participants in the current study included 81 women (age range=18–41). Approximately, 64% (N=52) identified themselves as African American; 36% (N=29) identified as White. During the pre-intervention phase of the larger study, participants responded to several questionnaires that included items about their comfort in using condoms and suggesting condom use with their sexual partners. Analyses were conducted with these factors.
Results: Data analyses revealed that college women are using condoms to protect themselves against HIV. A moderate but significant relationship was found between the women's reported ease in suggesting condom use with a partner and their condom use during vaginal intercourse (r=.338; p=.007). Interestingly, African American women (M=9.65) reported greater ease in suggesting condom use to a new partner than did their White counterparts (M=8.86); p=.001.
Conclusion/Recommendations: These findings are significant as they offer a starting point for understanding factors that influence women's sexual decision-making and practices. Closing the gap between reported ease and actual condom use is important, especially in initiatives that target African American women. At the same time, attention must be given to increasing all (college) women's comfort in negotiating their sexual relations.

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A-063

ACTIVE SUBSTANCE USE AND SATISFACTION WITH RELATIONSHIPS, SOCIAL SUPPORT AMONG HIV-INFECTED MINORITY WOMEN IN SUBSTANCE USE TREATMENT

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Background: African American (AA) and Latina women living in the US are disproportionately affected by HIV. Among HIV+ individuals, substance use (SU) has been linked to negative physical and psychological health. Satisfaction with relationships and social support (SS), however, has been found to be protective against SU. Little research has explored this relationship among HIV+minority women-a group faced with unique challenges due to race, ethnicity, and gender.
Methods: Cross-sectional data came from a sample of 38 HIV+ AA and Latina women with a history of IV drug use in SU treatment in Boston, MA. The study sought to (1) describe the rates of SU and (2) explore the link between SU and satisfaction with relationships and SS. Measures of satisfaction were based on ratings of interpersonal relationships (love, friends, and relatives) and for overall SS. The ASI-Lite was used to measure SU. Frequencies and independent samples t-tests were run for each substance category and for overall use.
Results: The most frequently endorsed substances were cocaine (32%) and cannabis (21%); while alcohol use (11%) and intoxication (3%) were less frequent. Results indicate that in an overall comparison of those who used illicit substances in the past month to those who did not, there were no significant differences in satisfaction with relationships and SS across all four measures (t(36)=−0.24,p=0.81; t(36)=0.48,p=0.63; t(36)=−0.26, p=0.80; t(36)=1.40,p=0.17). However, tests of this relationship by specific substances revealed a significant difference for cannabis. Those who used cannabis reported significantly lower satisfaction with overall SS (t(36)=2.51, p=0.02). Conclusion: Findings indicate that satisfaction with relationships and SS, as measured here, may not be the most salient factor impacting SU for HIV+ minority women in SU treatment. Future research may benefit from exploring socio-demographic factors that may mediate the impact of relationship and SS satisfaction on SU in this population.
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Citation Poster Meritorious Paper

A-064

THE RELATIONSHIP BETWEEN LIFE MEANING AND HIV DISEASE PROGRESSION (CD4 CELLS AND HIV-1 VIRAL LOAD) OVER 4-YEARS

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Background: Although some psychosocial factors have been related to slower disease progression over time, life meaning has not been examined by itself. The purpose of this study was to examine the predictive relationship between life meaning at baseline and biological markers of disease progression over 4 years of follow-up.
Methods: HIV-seropositive participants (n=174) were recruited for a longitudinal natural history study of HIV/AIDS. At baseline, participants completed comprehensive psychological assessments which included an interview asking questions about the participant's background, current activities, and current handling of stressors. At the end of the interview, the interviewer assessed life meaning by rating four items (such as participant engages in meaningful activities). Blood was drawn for CD4 and HIV-1 viral load every six months for 4 years. Mixed Level Modeling (HLM) was used to model changes in CD4 cell number and HIV-1 Viral Load in which antiretroviral medications were entered as Level 1 time dependent covariates (at each assessment time point). Level 2 covariates included age, gender, race, and socioeconomic status (education level) and initial disease status (CD4/VL cell at study entry).
Results: Baseline meaning significantly predicted a greater rate of decrease in VLlog (γ=−1.63 x 10−3, t (167)=−2.28, p=.02) and showed a trend for predicting a faster increase in CD4 (γ=.23, t (167)=1.63, p=.10) over 4 years.
Conclusions: This is the first study of which we are aware to relate baseline levels of life meaning to better control of Viral load in patients living with HIV. These results hold even controlling for ART (at every timepoint), initial disease stage and background characteristics at study entry. This extends our previous work relating depression, hopelessness and avoidant coping to accelerated disease progression.

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A-066

STEP UP! RESULTS FROM A MULTIPLE RISK FACTOR INTERVENTION PILOT TRIAL

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Most interventions to promote health and reduce disease risk focus on a single behavioral risk factor, even though most chronic disease is caused by more than one behavioral risk factor. Multiple risk factor (MRF) interventions are needed, but many questions remain about how best to design and implement these programs, or if the public or health care organizations will find them acceptable. We conducted a series of research activities to assess the feasibility and acceptability of a phone-based MRF counseling program targeting depression, smoking, and physical activity concurrently. The research included a randomized pilot trial (n=52), interviews with key health plan decision makers n=7), and interviews with potentially eligible health plan members not enrolled in the pilot RCT (n=50). All activities were conducted at Group Health, a large non-profit health care organization. The results demonstrated that the program was both feasible and acceptable. 65% of health plan members stated they would be interested in the program if it were available to them. Health plan decision makers raised pragmatic cautions about the dissemination potential of the program, but supported the program concept and pointed to a growing demand for similar programs from employers. RCT participants also found the program acceptable. 67% of those eligible enrolled and 56% took at least 10 of 12 calls. Promising preliminary trends were also observed for changes in mean depression scores (−0.68 vs. −0.32, p=0.09), the percent with a clinically significant (50%) reduction in depression symptoms (52% vs. 13%, p=0.008), the proportion making a quit attempt (83% vs. 65%, p=ns), the proportion walking for exercise(1.13 days vs. 0.74 days, p=ns), and minutes of weekly physical activity (70 min vs. 38 min. moderate PA, p=ns; 121 min. vs. 96 min., p=ns). The study was not powered to detect statistically significant changes. Important lessons learned from these activities will be presented and their implications for offering similar MRF programs will be discussed.

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A-067

A RANDOMIZED TRIAL TESTING A CHRONIC CARE MODEL TO REDUCE CARDIOVASCULAR RISK IN PATIENTS WITH BIPOLAR DISORDER

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Persons with bipolar disorder are at greater risk for medical morbidity than the general population. Cardiovascular disease (CVD) is the leading cause of premature morbidity and mortality for persons with bipolar disorder. Poor integration of care between mental health and medical providers, psychiatric symptoms and health behaviors exacerbate this disparity. We present the rationale and baseline findings of the Self-Management Addressing Heart Risk Trial (SMAHRT), a randomized controlled trial testing the efficacy of a behavioral intervention to reduce CVD risk factors among VA patients with bipolar disorder and CVD risk factors. This study seeks to determine whether a manualized Chronic Care Model (CCM) behavior change intervention compared to enhanced usual care improves control of intermediate physiological measures of CVD risk for Veterans with bipolar disorder. The SMAHRT intervention consists of four 2-hr psychoeducational sessions on behavior change focused on managing symptoms and CVD risk followed by monthly telephone follow-ups and coordinated care. Usual care participants receive wellness newsletters but no CCM care. The mean age of participants (N=118) was 53.8 (SD=9.9), 83% male, and 95% Caucasian. Baseline CVD risk factors were prevalent including overweight (BMI≥25; 91%), hyperlipidemia (83.8%), hypertension (69.8%), type 2 diabetes (25.4%), and Framingham Risk Score≥10% (70%). Correlations between physical and psychiatric symptoms and quality of life and function will be discussed. Findings from this study will inform our long-term objective of testing a larger-scale version of a CCM to improve health outcomes for persons with bipolar and other mental disorders through improved health behaviors and coordinated care.

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A-068

MINORITY STATUS AS A MODERATOR OF EMOTIONAL EXPRESSIVITY AND ANXIETY SYMPTOMATOLOGY

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Anxiety disorders have been reported to affect up to 10 percent of adults in the United States at some point in their lives (Lepine, 2002). Although much research has investigated factors that put individuals at risk for anxiety disorders, few studies have attempted to address how cultural minority status may affect anxiety disoders. Of the studies available, cultural minority status has been associated with increased psychopathology (Cardemil & battle, 2003; Szalacha et al., 2003) and specifically, anxiety (Organista & Munoz, 1996). It has also been proposed that emotional expressivity, which is a a general trait signifying outward emotional expression, is associated with anxiety (Watson et al., 1984) and general health outcomes (Kring, Smith, & Neale, 1994). The current study investigated the role of culture and ethnicity in the relation to emotional expressivity and anxiety. The sample consisted of 385 college-going women (age M=22.4, SD=4.5) from diverse ethnic backgrounds with Caucasian 31%, Asian 26%, Hispanic 20%, African American 17%, and Other 6% from the Houston area. As predicted, preliminary ANOVA analyses indicated that there were no ethnic differences in anxiety levels, F (4, 380)= 1.92, n.s., while there were significant ethnic differences in emotional expressivity levels, F (4, 380)=3.17, p<.05. Subsequently, a moderator model was tested out, and emotional expressivity was found to significantly predict anxiety, $\beta=-.2$, R2=.04, p<.001. A main effect was also found for minority status, $\beta=-.12$, R2=.04, p<.05. More importantly, minority status was found to interact with emotional expressivity to predict anxiety, $\beta=.18$, R2=.05, p<.05. Findings of this study suggest that although ethnicity may not be a predictor of anxiety symptomatology, minority status, emotional expressivity as well as their interaction may be useful predictors. Implications of this study are discussed in terms of targeting emotional regulation as a treatment component for anxiety disorders, especially in minority populations.

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A-069

INVESTIGATING ASSOCIATIONS BETWEEN MEDIA USE AND DEPRESSION USING ECOLOGICAL MOMENTARY ASSESSMENT

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Background: Media exposure has been associated with major depressive disorder (MDD) in adolescents. However, it is not currently known what particular types of media exposure are most associated with MDD in this population. Furthermore, prior studies have relied on media self-report rather than real-time collection of data. The purpose of this study was to investigate associations between media exposure and MDD using real-time data collection with Ecological Momentary Assessment (EMA).

Methods: Mental health diagnoses were determined by a psychiatric professional. Participants were contacted 60 times by cellular telephone. During those assessments, participants were asked about their use of 5 types of media: movies/television; music/audio; Internet; video games; and non-electronic media (magazines, newspapers, or books). Multivariable regression models assessed associations between media exposures and MDD while controlling for demographic variables.

Results: Of the 106 participants, 63% were female and mean age was 12.7 (SD= 2.7). Over half (57%) were classified as having no psychiatric disorder and 43% had MDD. In multivariable models controlling for age, gender and race, increasing audio exposure was significantly associated with having MDD (OR=1.80 for each increasing quartile of exposure, 95% CI=1.14, 2.82; Ptrend=.01), and use of print media was significantly inversely associated with having MDD (OR=0.52 for each increasing quartile of use, 95% CI=0.32, 0.85; Ptrend=.009). However, other media exposures were not significantly associated with presence of MDD.

Conclusions: EMA is a valuable method for collecting data assessing adolescent media exposure. Those with MDD may find comfort with passive media exposure (such as music) but have difficulty with more active tasks (such as reading). It is also possible that exposure to violence, depressed characters, and/or other negative messages pervasive in popular music may influence development of MDD.

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A-070

GREEK LANGUAGE VALIDATION OF THE PATIENT HEALTH QUESTIONNAIRE (PHQ)

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Lack of validated measures creates obstacles for psychology research progress. This problem is especially acute in smaller countries, where psychology research is in its budding stages.

Primary Care Evaluation of Mental Disorders (PRIME-MD) Patient Health Questionnaire (PHQ) is a cost-effective and psychometrically sound (Spitzer et al., 1999) instrument which is used for the diagnosis of specific psychiatric disorders according to the established diagnostic criteria. Unfortunately, despite its potential utility, PHQ has not been validated or used with Greek language populations.

The aim of this study is to conduct a PHQ validation in 520 Greek native-language participants in Cyprus. In the original PHQ validation studies (Diez-Quevedo el al., 2001) measure's diagnosis was compared to that of a clinician-administered structured interview. However, in this study appropriate self-report measures were identified based on the convergence between the diagnostic specifications of these measures and PHQ diagnoses. The identified measures and translated PHQ were used for data collection. Socio-demographic data was also gathered.

Currently, the project is in its final stages of data collection (deadline December, 2010). Preliminary results, based on the first 150 questionnaires collected suggest PHQ sub-scales have high internal consistency (e.g. Cronbach's alpha coefficient of .81 on Somatization, .83 on Depression, and .7 on Panic Disorder). Overall, PHQ sub-scales correlate moderately with other diagnostic measures used e.g. depression diagnosis [r=.43, p<.001], panic disorder diagnosis [r=.5, p<.001].

Upon completion of data collection, reliability and validity of the PHQ and its factor structure will be further investigated using factor analysis techniques. Item and correlation analyses will be confirmed. Strength and weaknesses of PHQ sub-scales and the employed validation method will be discussed.

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A-071

RELATIONSHIP OF GLOBAL AND CONTINGENT SELF-ESTEEM TO EATING DISORDERS RISK BEHAVIORS AND WEIGHT MANAGEMENT PRACTICES AMONG HISPANIC COLLEGE STUDENTS

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Up to 25% of college age women may be at risk for developing an eating disorder in their lifetimes (Low et al., 2006) and self-esteem may play an important role in the risk of eating disorder risk behaviors (Koch, 2006). This study specifically assessed the relationship of global and contingent self-esteem to eating disorders risk behaviors and weight management practices in a sample of 287 predominantly Hispanic (85%) college students. Students completed several self-esteem instruments (Rosenberg Self-Esteem Scale, Kernis and Paradise Contingent Self-Esteem Scale, Body Esteem Scale for Adolescents and Adults, Body Weight Contingency of Self-Worth Scale, and the Appearance subscale of Crocker's Contingency of Self-Worth Scale) as well as measures of eating disorders risk behaviors and typical weight management practices. Results indicated consistent correlations between the self-esteem measures and risk behaviors with global self-esteem relating negatively to such behaviors and various forms of contingent self-esteem positively relating to such behaviors. Regression analyses controlling for BMI, age, and gender showed that low body esteem and high body weight contingency of self-worth made unique contributions to the prediction of most risk behaviors. The results suggest that interventions target specific constructs, such as body esteem and body weight contingency of self-worth, over more global constructs, such as general self-esteem and contingent self-esteem.

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A-072

IS TOUCH IMPORTANT FOR WELL-BEING? RELATIONS BETWEEN PHYSICAL CONTACT, DEPRESSION, PLEASANT AFFECT, AND NEGATIVE AFFECT

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Research indicates that physical contact is crucial to healthy early development of neonates; however, the question remains as to the importance of physical contact in health and well-being in adulthood. The purpose of this study was to examine the relationship between frequency and satisfaction of physical contact and psychological well-being. Online surveys were administered to 233 undergraduates (mean age=19.9, N=71 males). Measures included the newly developed 20-item Personal Affection & Touch Scale (PATS) that measures frequency, satisfaction, and comfort with touch, the Beck Depression Inventory II (BDI), and a revised version of the Profile of Mood States (POMS-R). Controlling for age, race, and gender, results indicated frequency of physical contact with a romantic partner was not significantly related to measures of well-being. However, when additionally controlling for presence of a romantic partner, non-romantic touch was found to be significantly related to POMS-R measured pleasant affect, with individuals who engaged in more physical contact reporting higher pleasant affect ($b=-.18$, $p<.001$) and lower levels of depression ($b=.09$, $p=.01$) Touch aversion (not liking touch) was not related to depression, but desiring more touch was ($b=.18$, $p<.001$). Because gender had such a powerful main effect on these findings, interactions were tested, but none were significant. However, when men and women were analyzed separately, only women displayed the three aforementioned relationships ($b_{\mathrm{PLEAS}}=-.23$, $p<.001$; $b_{\mathrm{DEP}}=.11$, $p=.02$; $b_{\mathrm{DESIRE}}=.23$, $p<.001$, respectively). Lastly, individuals who were uncomfortable with touch had more negative affect ($b=.11$, $p=.03$). Overall, this data suggests that day-to-day physical contact with friends is associated with well-being, and perhaps in a stronger sense than receiving that physical contact from a partner. Data collection is still ongoing.

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A-073

MINDFULNESS, SELF-REGULATION AND WELLBEING

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The purpose of this study was investigate whether dispositional mindfulness (the tendency to be mindful in general daily life) accounts for variance in psychological symptoms and well-being after accounting for the influence of dispositional self-control (the tendency to be self-disciplined, reliable, hardworking, etc). Several self report measures were administered in an online survey (N=199) assessing mindfulness, self control, psychological wellbeing, depression and anxiety, perfectionism, disordered eating, and alcohol use. Mindfulness was found to account for a significant portion of variance over and above self control in predicting levels of psychological wellbeing and depression and anxiety. This finding suggest that, although self-control contributes to healthy psychological functioning, mindfulness may further enhance wellbeing. The mediation and moderation analysis was only significant in predicting depression and anxiety from an interaction between mindfulness and self-control. Moderation analyses suggested that mindfulness may serve as a protective factor in that those high in self-control and high in mindfulness exhibited lower levels of depression and anxiety in comparison to those high in self control and low in mindfulness. This finding supports the theory that mindfulness may counteract a tendency toward self-criticism and lack of self-acceptance in persons who are highly self-disciplined and hardworking. Future studies should examine the physiological and psychological differences between a mindfulness-based form of self control and other forms.

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A-075

STATISTICAL POWER CHARACTERISTICS OF THE INTENT-TO-TREAT DESIGN

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Intent-to-treat is frequently employed in randomized clinical trials and clinic-based interventions in many areas of public health and behavioral medicine research, especially in the addictive behaviors. The main purpose of intent-to-treat is to protect against bias due to missing outcome data. Typically this is done by assuming that all participants lost to follow-up are treatment failures. While the practice is widespread and conventional, it has been criticized in recent years for several reasons. The likelihood that all dropouts are actually treatment failures is very low, especially for population-based trials. Further, the imputation of an arbitrary value for all missing data violates the underlying assumptions of commonly used statistical techniques, and ignores the availability of new statistical procedures that can appropriately model missingness without restrictive data assumptions. Intent-to-treat has been defended as an appropriately conservative procedure that guards against the conclusion of successful treatment outcomes in the presence of significant attrition. The procedure appears to be conservative since it typically reduces treatment-control outcome differences, thus reducing the probability of statistically significant results. However, while commonly assumed, this outcome is not guaranteed. In fact, even relatively small differences in treatment-control attrition rates and baseline sample sizes can result in an apparently larger effect size. Even when the effect size is not increased, the increased sample size from the addition of formerly lost subjects can more than offset the reduced effect size, resulting in a greater, not lesser, likelihood of statistical significance. These situations are illustrated with the results of two randomized clinical trials as well as with hypothetical data. Replacing intent-to-treat with more modern data analytic strategies is encouraged.

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A-076

THEORY TESTING AND THE NULL HYPOTHESIS SIGNIFICANCE TEST PARADIGM: WHAT WOULD EINSTEIN DO?

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Research in behavioral medicine shares with psychology and the behavioral sciences a reliance on null hypothesis significance testing (NHST) as the principle means for evaluating evidence in support of theoretical predictions. Critics of this approach have emphasized the use of alternative procedures, such as greater use of confidence intervals, effect sizes, and meta-analysis. While these approaches represent significant advances over NHST, they do not go far enough, especially with respect to theory testing. The problem is not our analytical procedures but our theoretical models. This can be illustrated with a simple example using one of the most famous experiments of the twentieth century: the confirmation of Einstein's General Theory of Relativity using data collected by Sir Arthur Eddington during the total solar eclipse expedition of 29 May 1919. Eddington's experiment was designed to assess the bending of light in the presence of a massive gravitational field. The study results were compared to the predictions made by the theories of Newton and Einstein. The data from the expedition's two observation sites are analyzed according to the usual NHST procedures. Were the results statistically significant? What were the effect sizes? Are these even the right questions? The analytical approach used by Eddington will be shown. This approach relies on simple significance testing but can accomplish a great deal due to the power of the theoretical models employed, both of which make specific predictions concerning the study results. The goal is to show that the data support the predictions of one model while simultaneously rejecting the predictions of the alternative model. This concurrent dual use of significance testing has no real counterpart in the behavioral sciences. However, it is possible to move towards this goal using presently available techniques and theoretical models. A modest first approximation of how this might be done will be illustrated using data from studies on decision-making across multiple health behaviors.

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A-077

DEVELOPMENT AND EVALUATION OF AN ADAPTATION SCALE: USE IN SIX STUDIES ON LIVING WITH OR BEING AT RISK FOR A GENETIC CONDITION

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We introduce a new scale for assessing adaptation to a genetic condition or risk. Living with a genetic condition or risk generates a health threat that affected individuals and relatives come to cope with. Adaptation refers to the process of coming to terms with the health threat and the observable outcomes of that process. Definitions and measures of adaptation and synonyms like “adjustment” and “acceptance” vary widely in the literature. We have published a more succinct definition of the concept and identified the need for an adaptation scale using existing theoretical models. Our scale includes intrapersonal and interpersonal outcomes of the process that are evidence-based. We identified four primary domains of adaptation: outcomes of coping responses, self-esteem, social integration, and spiritual/existential meaning. Using items from the PROMIS “positive outcomes of illness” item bank, we built a scale considering available content validity and item response psychometrics. The scale has five items each in of four domains that are summed to depict overall adaptation, with four sub-scale scores. The scale has been used in six studies of adaptation to: Huntington disease ($n=191$), a child with pervasive developmental disorder ($n=324$), neurofibromatosis ($n=482$), a child with Down syndrome ($n=546$), XXY syndrome ($n=249$), and a child with Rhett syndrome ($n=400$). The Cronbach alpha measures of reliability exceed 0.8 in each study and a confirmatory factor analysis suggests that all but five items converge on four domains, as designed. New items will be added to replace the five taking into account content validity and further item response psychometric data.

The scale is intended to facilitate comparisons across conditions and to further understanding of the relationships among related concepts, including quality of life and well-being.

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A-079

HEALTHIER OPTIONS AT SCHOOL CONCESSION STANDS

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Background: High-school sporting events are major social gatherings. Parent-run concession stands at these events raise money for after-school activities and athletics. Since concessions are exempted from Iowa school nutrition standards, many stands only sell fast, profitable food, such as candy, hot dogs and popcorn. To increase availability of healthier foods and to identify profitable and sustainable changes, we introduced new foods to these stands. There are no published concession stand interventions.

Methods: Pilot Intervention. Using CBPR principles, researchers and parent group members added new foods to the stand including pickles, carrots, soft pretzels, granola bars, trail mix, apples, grilled chicken sandwiches, and string cheese. The popcorn oil was changed from coconut to canola oil and the nacho cheese was replaced with transfat-free cheese. Students and parents were surveyed pre and post-intervention. Total servings of each food sold was calculated using annotated expense receipts to obtain the total amount of each product purchased by the group and then adjusted to account for pre-season inventory, post-season remaining items and items discarded. Expenses and revenue were compared to the past 3 years.

Results: 301 students completed surveys pre-intervention and 314 post-intervention. 57.5% of students said offering healthy foods at concession stands was important. Student overall satisfaction was unchanged and satisfaction with healthy foods improved from 52% to 59% (p 0.04). Students felt the variety of foods improved (66% good or better to 84%, $p<0.001$). Post-intervention 42% of students reported trying new products and would try them again. During the fall football season, new healthier items made up 11% of items sold and new or altered items made up 38.4% of items sold. Income and profits remained steady.

Conclusion: Concessions stands can make significant changes and retain profits and maintain or improve customer satisfaction. Modifications to improve the nutritional value of existing items may be the most successful initially.

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A-080

CONCORDANCE OF DIETARY INTAKE AND QUALITY BETWEEN CHILDREN WITH TYPE-1 DIABETES (T1D) AND THEIR PARENTS

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Previous research has revealed moderate resemblance of parents’ dietary intake with that of their children. However, this relationship has not been explicitly examined in families of youth with type 1 diabetes (T1D), for whom dietary management presents unique challenges. This study examined concordance of dietary intake and quality in families of children with T1D ($n=259$). Child dietary intake was assessed using 3-day food records (aged 8–18 years), and parent intake was assessed using a food frequency questionnaire. Intake variables included servings of fruit, vegetables and produce (fruit and vegetables, combined). Nutrient Rich Foods 9.3 scores (NRF) were used to assess diet quality. The proportions of parents and children consuming at least 1 daily serving of fruit, vegetables and produce were compared using proportion equality tests. Concordance of parent-child intake and quality were examined using Spearman rank analysis, adjusting for child age, household income, parent education, and sex of parent and child. Parents were more likely to report consuming at least 1 daily serving of fruit than children (47.5% v. 36.7%, $p=0.01$). There were no differences in consumption of at least 1 daily serving of vegetables (56.4% v. 58.7%, $p=0.6$) or produce (55.1% v. 52.9%, $p=0.6$). Spearman rank analysis revealed moderate and significant correlations between parent-child intakes of fruit ($r=0.21$, $p=0.001$), vegetables ($r=0.16$, $p=0.01$) and produce ($r=0.26$, $p<0.0001$), as well as NRF scores ($r=0.28$, $p<0.0001$), after adjusting for covariates. These results suggest child dietary intake and quality may benefit from interventions targeting that of both parents and children.

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A-081

AN APPLE A DAY? MOTIVES FOR DAILY FRUIT AND VEGETABLE CONSUMPTION

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Despite the health benefits of fruit and vegetable consumption, many U.S. adults fail to consume recommended amounts of fruits/vegetables. Fruit/vegetable consumption in college students is poor, likely due to limited availability of fruits and vegetables and generally worse health practices in this age group. The purpose of the present study was to examine college students’ ($N=48$) fruit/vegetable consumption and their reasons for eating or not eating them, using daily reports over 14 days. Predictions were based on a novel theoretical perspective known as motivational flexibility, which posits that possessing multiple, flexible motives for a behavior influences the likelihood of the behavior. We examined whether consumption was associated with the number of reasons cited and how frequently across days the most important reason for consuming fruits/vegetables changed. Results confirm that college students do not receive the recommended daily servings of fruits and vegetables, with poor availability being a commonly cited reason for lack of consumption. Students reported consuming fruits/vegetables if they were already part of their meal, with health promotion being another frequent reason. Analyses conducted using hierarchical linear modeling showed that having more reasons for eating fruit was associated with less consumption when the most important reason each day changed with at least moderate frequency. Similar trends were found for vegetable consumption, though results were not statistically significant. Findings indicate that possessing more reasons for consuming vegetables and especially fruits may negatively affect these health behaviors when the guiding reason for consumption varies from day-to-day. Results also suggest that people’s reasons for a behavior may be more flexible for some behaviors than others and that people may perceive fruits and vegetables differently. Study findings have conceptual implications for the motivational flexibility paradigm. Also, college campuses might do well to include fruits and vegetables into every meal, since students frequently report consuming them when they are part of meals.

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A-082

OUTCOME EXPECTATIONS AND THEIR ASSOCIATION WITH USE OF DIET-RELATED BEHAVIORAL STRATEGIES AND REPORTED DIETARY INTAKE

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Self-efficacy and outcome expectations are believed to be important correlates of actual behavior. Interventions are designed to enhance these beliefs in hopes of influencing behaviors such as dietary intake. However, outcome expectations in the context of dietary behavior have not been studied extensively. This study utilized data from two community-based surveys of rural adults conducted one year apart ($n=384$) to examine the baseline and longitudinal association between outcome expectations and use of specific diet-related behavioral strategies as well as actual dietary intake. The mean age of participants was 56, 59% were women, and 58% had more than a high school degree. At baseline, the outcome expectations scale score was significantly and positively correlated with all six diet strategy scales (all $p<.0001$, except one $p=.001$), with the lowest correlation to portion control ($r=.17$) and the highest to cognitive strategies ($r=.46$). Outcome expectations were less strongly and consistently associated with dietary intake measures. Models then examined changes in outcome expectations over time and their association with changes in strategy use and intake. Of the six models examining strategy use, two were statistically significant (self-monitoring and social interactions; $p<.05$), and one was marginally so (cognitive strategies, $p=.06$). All such models were significant in a previous, parallel study of self-efficacy. All betas were non-significant ($p>.05$) in models examining dietary intake, as was true in the self-efficacy study. Results suggest that outcome expectations are more strongly associated with strategy use than with dietary intake and that self-efficacy is more strongly associated with dietary behavior than outcome expectations. In the face of limited time and resources, program planners may want to prioritize activities that address self-efficacy over outcome expectations in nutrition interventions.

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A-084

COMPARISON OF MEDICAL AND PHARMACY COSTS IN ADULTS WITH EXTREME OBESITY WITH AND WITHOUT BARIATRIC SURGERY

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The Office of Group Benefits (OGB) is a managed medical insurance program in Louisiana. In 2003, OGB commissioned a small study of weight loss surgery (WLS). A total of 911 members (BMI>40 kg/m2) were initially screened for surgery, however, only 40 members were selected. All surgeries occurred in 2004. The present study examined subcategories of medical and pharmaceutical costs of WLS after four years. Abstracted subcategories for medical claims were: all office visits, ER visits, lab/pathology, PT and OT, sleep facility, and other medical services. The categories for pharmacy were: antidiabetic, antihypertensive, dyslipidemic, psychotropic, and other drugs. Costs were compared across 2 groups: the 911 members who initially qualified for study screening but were not selected (e.g., non-surgery group), versus the 39 who underwent WLS. Costs were summarized as average dollar amount per person across 4 fiscal years; 2004–2008.

The non-surgery group had significantly higher pharmacy claims across all subcategories in all fiscal years (all $ps<0.01$). In year 2004–2005, the non-surgical group had significantly higher medical claims compared to the WLS group for all office visits, lab/pathology, and PT/OT (all $ps<0.001$); however, the WLS group had higher claims for ER visits, sleep facility, and other medical services (all $ps<0.001$). The inflated cost per person for other medical services in year 2004–2005 is secondary to the cost of the surgery for the WLS group. The WLS group had significantly higher claims again in 2005–2006 for other medical services ($p<0.001$); however in subsequent years, the WLS group was significantly less (all $ps<0.001$). This suggests that the cost of the surgery was beginning to be recouped. Additional cost estimates related to all subcategories will be presented.

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A-085

NUTRITION KNOWLEDGE OF LOW INCOME PARENTS OF OBESE CHILDREN

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Background: One third of U.S. children are obese or overweight. Minorities and low income groups are disproportionately affected. Parents of obese children need a good knowledge of basic nutrition as a step toward improving food delivery habits for children.

Aim: In an ARRA grant, we measured nutrition knowledge of low income adults caring for obese children with a novel evaluation method.

Method: Adults were recruited in 3 pediatric offices. Participants (mostly parents) oversaw >50% of non-school food consumption for a Medicaid-insured obese child age 2–11. Nutrition Knowledge (NK) was tested using a printed grid on which traditional food groups were displayed in columns and 3 general nutrition categories [Whoa (low nutrition, high calories), Slow (good nutrition, moderate calories), Go (good nutrition, low calories); (WSG)] were displayed in rows. Staff briefly explained food groups and WSG categories and demonstrated use of the grid. Adults placed 21 stickers showing common foods in the cell that "best describes the food's group and category." Kruskal-Wallis one way analysis of variance tested if percentage of correct responses was related to adult characteristics.

Results: 97 adults (median age 31 years; 77% Black; 74% income <\$25 K/year; 72% obese) completed NK assessment. On average, participants selected the correct food group for 85% of foods (range: 14–100%) and the correct WSG category for 67% of foods (range: 29–95%). On average, fewer than 50% of Slow foods were identified as such; most were identified as Go foods. Black and lower income adults were significantly more likely to misidentify WSG categories (both $p=.02$).

Conclusion: A diverse sample of low income adults was more able to accurately identify traditional food groups than foods' nutritional status. Black and lower income adults had more difficulty identifying nutritional status than other participants. Interventions to improve adult food delivery habits for obese children most at risk should emphasize a more global understanding of nutritional value as well as identification of food groups.

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A-086

CHANGING HEALTH BEHAVIORS: A CASE STUDY EXPLORING FAMILIES' PARTICIPATION IN A COMMUNITY-BASED FAMILY-CENTERED HEALTHY LIFESTYLE INTERVENTION FOR OVERWEIGHT/OBESE CHILDREN

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Family-centered interventions have often been suggested as the most effective way to change the health behaviors of children. Regular attendance to family-centered interventions has been limited and there have been minimal studies evaluating reasons for drop out in this setting.

This case study explored factors related to families' level of participation in a 12-week CBFC-HLI developed for overweight/obese minority and low-income families in a Midwestern city. Purposeful sampling was used to complete interviews with parents and children who had participated in at least one session of a CBFC-HLI. Questions were developed by examining previous literature and immersion crystallization was used to explore themes from the data.

The two major factors impacting regular participation was transportation and active external support. Those that didn't complete the program failed to do so for reasons related to transportation. Active external support allowed families who completed the program to make more changes together as a family.

This study demonstrated the importance of transportation and active external support to ensure regular participation in CBFC-HLI's developed for minority and low-income families. Recommendations for future CBFC-HLI's include: 1) offer programs at locations within a safe walking distance from a bus stop, 2) find funding for transportation through Medicare/Medicaid, 3) encourage carpooling with other program participants, and 4) help families identify other sources of support in the community.

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A-087

DIFFERENCES IN THE BUILT ENVIRONMENT AND IN RATES OF OBESITY IN AN URBAN CITY

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Rates of obesity in urban cities with underserved, minority populations are high. Factors in the built environment such as walkability, safety, and fast food restaurants have been associated with physical activity and caloric intake, both of which have been associated with rising obesity rates. The goal of this study was to assess the walkability of two neighborhoods with similar socioeconomic status but different rates of obesity in Hartford, CT, the second poorest medium sized (17 square miles) city in the US with a population of 121, 578 and 14 defined neighborhoods. Body Mass Index (BMI) screening was conducted at 14 of the 25 elementary schools in 2008–2009. 42% of children were either overweight (BMI% 85th–95th%), or obese (BMI% >95th%). The percentage of children with a BMI% >85th% varied by neighborhood even when controlling for age ($p=0.03$) and ethnicity ($p=0.02$). Two neighborhoods with the highest (N1, 46.5%) and lowest (N2, 38.8%) rates were selected for further study. There were no differences in socioeconomic status (SES) between N1 and N2, (average household income $24,205 vs $23,417), or in the % of families living in poverty (34% vs 32%). N1 had a predominant Hispanic population while N2 had a predominant African American population. The built environment in N1 and N2 was assessed using the Irvine Minnesota Inventory completed by independent observers. N1 with the higher obesity rate had decreased walkability (fewer walk lights ($p=0.06$), more single family homes ($p=0.04$), fewer strip malls ($p=0.007$), more steep segments ($p=0.005$), and more garages ($p=0.03$)) but better environmental aesthetics ($p=0.05$), more sidewalk shade ($p=0.02$) and tiled pedestrian road surfaces ($p=0.03$). In conclusion, within an urban city with a high overall rate of obese children, there are neighborhood differences in rates of obesity and in walkability not accounted for by SES. These differences highlight specific areas that can be targeted to improve walkability and potentially reduce already high rates of obesity.

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A-088

FAMILY NUTRITION AND PHYSICAL ACTIVITY ENVIRONMENTS PREDICT CHILD HEALTH BEHAVIORS

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Social learning, specifically within a familial context, has been proposed as an important contributor to childhood obesity through its effects on child physical activity and eating behavior. As part of a state-wide evaluation of childhood obesity legislation, surveys that included questions about family and child health behaviors were sent to student-parent dyads in grades 5, 7, and 9. To explore the relationship between parent nutrition and physical activity behaviors and those of their children, student responses on several questions were compared to parent responses on the same items and to the Family Nutrition and Physical Activity (FNPA) screening tool. Several behaviors among students and parents were correlated at the .01 significance level. The number of changes being made to increase physical activity among student and parent respondents was associated, $r=.295$, as was the number of days they were active for at least 30 minutes per day over the past week, $r=.231$. These same variables among students were associated with familial activity, as measured by the FNPA, $r=.316$ and $r=.184$, respectively. Significant associations also were found with regard to healthy eating behaviors, though of a smaller magnitude. These relations also are reflected in health indicators, as child BMI was associated with FNPA, $r=-.23$, such that higher BMI was related to poorer family health environments. Although these correlations are modest, they do indicate that the family environment influences students' health behaviors, and they represent a potentially viable intervention point for health psychologists.

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A-089

PHYSICAL AND SOCIAL CONTEXTS OF EATING AND DRINKING EPISODES IN US ADULTS

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Dietary change interventions often cite situational or contextual factors as important to behavior change. This study seeks to inform dietary and obesity prevention efforts by describing eating episodes occurring within physical and social contexts (who you are with and where) in a population sample of US adults. The 2006–2008 American Time Use Survey provide data for this study. A total of 65,351 episodes of primary eating and drinking for 21,305 adults were included in the analysis. Episodes were measured as reported occasions of eating and drinking as a primary activity throughout a day. Physical contexts include: home/yard, workplace, restaurant/bar/retail, and other place. Social context was measured include: alone, immediate family, extended family, friends/colleagues, and multiple categories. Probabilities of eating episodes occurring within physical and social contexts were tested using predicted margins in multinomial logistic regression models. Results found women had a greater probability of reporting eating episodes at home/yard and appeared to be slightly more social eaters, eating with family, extended family, and multiple categories ($p<0.01$). With greater age, the probability of episodes occurring alone increased, while younger age had a greater probability of eating with friends/colleagues/others and more episodes occurring in restaurant/bar/retail contexts ($p<0.01$). Non-Hispanic Blacks reported the greatest probability of eating episodes alone and in the home/yard ($p<0.01$). Probability of eating episodes occurring outside of the home/yard was greater among overweight and obese ($p<0.01$). Episodes of eating alone were greater between 11 PM–4:49 AM and with family and extended family between 4 PM–9:59 PM ($p<0.01$). Study findings highlight particular contexts where eating and drinking episodes occur, particularly in the home/yard environment and with family as well as key demographic subgroups and times of day that future dietary change interventions may want to consider in the design to promote positive behavior change.

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A-090

MEASURES OF THE HOME ENVIRONMENT RELATED TO CHILDHOOD OBESITY: A SYSTEMATIC REVIEW

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The purpose of this systematic review was to examine the reliability and validity of tools developed to assess home environmental factors that could influence childhood obesity. Manuscripts published between January 1998–May 2010 were searched and those that reported on a measure of the home environment related to child eating, physical activity, or weight and provided at least one indicator of reliability or validity were included. We searched the following databases: MEDLINE, PYSCLIT, CINAHL, ERIC, and PsychINFO and identified 49 manuscripts, 12 of which did not meet the inclusion criteria described above. Of the 37 papers reviewed, 59% discussed some aspect of parenting specific to food, feeding style and food socialization. Thirty-two percent of the manuscripts measured food availability and accessibility, 11% measured physical activity availability, 5% measured media availability, 8% focus on parenting related to physical activity and 11% focus on parenting related to screen time. Internal consistency was the most consistently reported indicator of reliability (70%) followed by test-retest reliability (35%), and inter-rater reliability (16%). Only 5% reported on all three reliability indicators. Predictive and factorial validity were reported for 54% and 35% of the measures, respectively. However, convergent (8%) and criteria (11%) validity were rarely reported and no study provided all indicators of validity. When considering the findings of studies that reported reliability and validity, the data support the conclusion that the measures have adequate reliability, but that evidence of validity is more equivocal. Some measures did demonstrate strong reliability and validity, however, these were typically brief narrowly focused measures inadequate to fully describe the home environment related to obesity. This review of literature indicates that there is a need to develop comprehensive measures of home environmental factors that relate to eating, physical activity, and weight, and to complete rigorous reliability and validity testing on those measures.

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A-091

VALIDATION OF A SURVEY INSTRUMENT ASSESSING PHYSICAL AND SOCIAL COMPONENTS OF THE HOME ENVIRONMENT RELATED TO CHILDHOOD OBESITY

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The home environment has been highlighted as a critical context for childhood obesity treatment and prevention. While a number of survey instruments exist that examine different aspects of the home environment there is current no validated tool available that integrates home environmental factors that could influence childhood obesity. This paper describes the development and validation of a measure that is appropriate for low-income audiences and assesses the home environment as it relates to childhood obesity. An initial survey with over 200 items drawn from 37 previously published surveys on home environmental variables was reviewed by a panel of 4 experts in the field. Each provided ratings of content relevance and provided suggestions for possible additions. The survey was then reviewed by members of the target audience (n=10) for readability and understandability. The final survey was 181-items with 19 standardized subscales (i.e., 0–1) contributing to the final score with higher scores indicated a healthier home. The survey was administered to parents of children 5–17 years of age (n=150) in a pediatric clinic serving primarily Medicaid-eligible families with a subsample designated to assess test-retest (n=48) and inter-rater reliability (n=43). The average household income of participants was<$20,000/year and 48% were Black. The subscales had adequate to excellent internal consistency (α=0.67–0.92), adequate test-retest reliability (r=0.73–0.97), and adequate inter-rater reliability (r=0.42–0.92). The total score was significantly correlated with a screening tool of the home environment (p<0.01, r=0.37) and negatively related to child BMI percentile (p<0.05, r=−0.21). With the majority of the subscales, there were significant correlations with the theoretically expected behavioral outcomes (physical activity, nutrition, screen time, or weight outcome, p's<0.05). The results support the initial reliability and validity of this comprehensive measure of the home environment as it relates to childhood obesity in low income families.

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A-092

CHANGES AT FAST-FOOD RESTAURANTS IN RESPONSE TO THE 2010 SANTA CLARA COUNTY, CA TOY ORDINANCE

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Marketing of unhealthful foods and beverages using toys and other incentives may contribute to eating patterns that lead to obesity. In August 2010, Santa Clara County, CA became the first US jurisdiction to implement an ordinance that only allows toys and other incentives to be given to children at restaurants if the meal, food, or beverage is "healthy" based on predefined nutritional criteria. We examined pre- vs. post-phase response to the ordinance at ordinance-affected fast-food restaurants (n=only 4 affected) compared to matched, unaffected control restaurants using the Children's Menu Assessment tool (CMA) and other direct observations before and soon after the ordinance went into effect. The CMA measures availability of healthy options on children's menus and degree of healthful environment within restaurants. There were no significant differences between affected and control restaurant CMA scores at baseline. CMA scores at 3 of 4 affected restaurants improved modestly from pre- to post-ordinance (1.0±4.8 vs. 2.5±4.0 (mean ± SD), respectively; within group t test *p*=.10); there was no change at unaffected restaurants (1.9±5.4 (mean ± SD) at pre- and post-phases) [*p*=.076 for time by affected/control restaurant interaction]. Direct observation revealed compliance to the ordinance varied. Restaurant modifications in response to the ordinance included removal of posters advertising toys, selling toys separately at additional cost, and offering toys with menu items that met nutritional criteria while more prominently highlighting these items on the menu. The ordinance appears to have positively influenced restaurant menus and environments in this sample. A similar ordinance is being considered in San Francisco. Data are forthcoming on child food choice from pre- and post-surveys collected in this sample from 539 adults with children at affected and control restaurants.

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A-093

RESULTS OF A PILOT MOTHERS IN MOTION PROGRAM

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Objective: This paper describes the initial results of a pilot Mothers In Motion (P-MIM) program.
Methods: 129 overweight and obese African American (AA) and white mothers who were 18–34 years old were randomized to an intervention or control group. The 10-week intervention delivered theory-based, culturally-sensitive intervention messages via a combination of DVD and peer support group teleconferences (PSGTs). The DVD featured AA and white overweight/obese mothers who participated in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The PSGTs were led by WIC educators. Both intervention and control groups received usual WIC care. Data were collected via telephone interviews and finger stick at 3 time points: baseline and 2- and 8-month post intervention. The primary outcome was body weight. Secondary outcomes included fat, fruits and vegetable intakes, physical activity, perceived stress, positive and negative feelings, and blood glucose. Although the pilot study's sample size was small, treatment effects across 2- and 8-month post intervention were examined via general linear mixed model.
Results: Significant fixed effects were found in blood glucose (time effect), fruit and vegetable intake (treatment effect and treatment by time effect) and perceived stress (time effect). No significant treatment, time, and treatment by time effects were found in body weight, fat intake, physical activity, positive feelings, and negative feelings. No significant effect sizes were found in primary and secondary outcome variables at two time points of post intervention assessment. However, changes in body weight and blood glucose showed apparent trends consistent with the study's objectives.
Conclusions and implications: The P-MIM showed promise for preventing weight gain in low-income overweight and obese women. A larger randomized controlled trial is warranted to determine the effectiveness of this intervention.

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A-094

SOCIOTROPIC COGNITION, DEPRESSED MOOD, AND EATING DISORDERED BEHAVIOR IN YOUNG ADULTS

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Objective: Sociotropic cognition is a mindset characterized by a strong need for social approval and fear of interpersonal rejection that has been associated with depression and health risk behavior in women. Findings for sociotropic cognition and eating disordered behaviors are limited and have not been reported in men. The purpose of this study was to assess the influence of sociotropic cognition and depressed mood on eating-related behaviors in men and women.
Method: Participants were N=361 undergraduates. Data were collected anonymously in group sessions. Measures included the Sociotropic Cognition Scale (Imber, 1990), CES-D (Radloff, 1977), Paffenbarger Physical Activity Questionnaire (Paffenbarger et al., 1978), Body Shape Questionnaire (Cooper et al., 1987), and the Eating Disorder Examination-Questionnaire (Fairburn & Beglin, 1994).
Results: Hierarchical regression was used to assess the relationship between SCS and EDE-Q scores. After controlling for BMI, SCS predicted higher global EDE-Q score (β=.29, t(349)=6.07***), dietary restraint (β=.23, t(351)=4.61***), shape concern (β=.30, t(351)=6.34***), eating concern (β=.27, t(350)=5.40***), weight concern (β=.27, t(351)=5.63***), and emotional eating (β=.29, t(351)=5.73***). SCS also predicted body shape dissatisfaction (F(3,345)=94.62***) and whether participants had BSQ scores in the clinical range (OR=1.10, X2(1)=14.97***). For women, SCS predicted higher rates of physical activity (β=.45, t(24)=2.37*). After controlling for BMI and SCS scores, CES-D scores predicted body shape dissatisfaction (β=.10, t(345)=2.02*) and emotional eating (β=.26, t(346)=4.80***). Note. *p<.05, **p<.01, ***p<.001.
Conclusions: Sociotropic cognition appears to be an important predictor of body shape dissatisfaction and eating disordered behaviors in a non-clinical sample, whereas depressed mood was less relevant to eating behaviors. Individuals high in sociotropic cognition may engage in eating disordered behavior in response to fears of social evaluation (e.g., body shape and weight).

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A-095

BEHAVIOR MODIFICATION FOR ALL: IDENTIFYING CHARACTERISTICS AND NEEDS OF INDIVIDUALS WITH BMI$\geq$50 SEEKING BEHAVIORAL WEIGHT LOSS

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Background: Despite rapid growth in prevalence, there is a dearth of literature on super obesity (BMI$\geq$50). It is addressed most often in bariatric surgery literature, yet many will not undergo bariatric surgery. Public health emphasizes behavior change leading to modest weight loss and health improvement. This study compared eating behaviors, depression, and physical function in those with BMI$\geq$50 relative to less severe obesity. This will help determine whether behavioral interventions should be modified for super obesity.
Method: 172 individuals (69% female; M Age=46) seeking residential behavioral obesity treatment participated in the study by providing pre-treatment weight, height, Eating Behavior Inventory, Disinhibition Scale (Eating Inventory), Questionnaire of Eating and Weight Patterns-Revised, Beck Depression Inventory, and Impact of Weight on Quality of Life-Lite. Measures were completed again at 4-week post-treatment. BMI categories included BMI 30–40 (42%), 40–50 (38%), and$\geq$50 (19%).
Results: Individuals with BMI$\geq$50 did not differ from less obese individuals on eating patterns, including presence of BED (p's=ns). They demonstrated significantly lower physical functioning, assessed by VO2 max ($F=24.9$, $p<.001$) and the Physical Function scale of IWQOL-Lite ($F=31.9$, $p<.001$), as well as greater depressive symptoms ($F=5.6$, $p=.004$). Post-treatment improvements were similar between groups.
Conclusion: Results for depression and physical function were consistent with previous reports on Class III obesity. Interestingly, eating patterns were similar across obesity levels, suggesting that dietary aspects of behavioral treatment may not require significant modification. Physical activity components likely need modification to address functional impairments and poor fitness levels. Finally, behavioral treatments may need greater focus on depression, self-esteem, and coping with weight-related stigma contributing to these issues.

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A-096

AMBIVALENT FOOD ATTITUDES ARE RELATED TO WORSE SELF-REPORTED HEALTH

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Food-related attitudes are important given chronic, frequent exposure to food-related stimuli and an ongoing necessity to make food-related choices. We tested a previously unexamined conceptual question: Are food-related ambivalent attitudes related to worse health, and is the relationship distinct from that of positive or negative attitudes alone? Using hierarchical linear regressions, we tested these competing models by determining whether food ambivalence (calculated from separate positive and negative scales for 13 food items) or the main effects of positive and negative food attitudes were associated with self-reported health, measured by the SF-36 in 162 university students. Controlling for BMI, neuroticism, eating disordered symptoms and dietary restraint, positive food attitudes were related to better general health ($\beta=6.82$, $p<.01$) and negative attitudes to worse general health ($\beta=-4.3$, $p<.03$). Independent of positive and negative food attitudes, food ambivalence was associated with worse health ($\beta=-5.52$, $p<.05$). Interestingly, independent of positive and negative food attitudes, for men but not for women high levels of food ambivalence was associated with worse general health ($\beta=-7.14$, $p<.02$), lower physical functioning ($\beta=-5.16$, $p<.03$), and more role limitations due to physical health ($\beta=-14.26$, $p<.01$) than was low levels of ambivalence. Men reported less dietary restraint than women ($t(149)=3.47$, $p<.01$) but equal degrees of food ambivalence ($t(160)=1.01$, $p<.31$), suggesting that food ambivalence may occur and be related to health outside the context of dietary restraint. Finally, participants reporting higher food ambivalence tended to report higher food-related stress ($\beta=.32$, $p<.06$). In conclusion, ambivalent attitudes may be related to worse health. Future research should examine the mechanisms and emotional correlates underlying these associations (e.g., increased physiological arousal when making food-related choices). Additionally, if food attitudes, independent of dieting or BMI, are related to health they may be an important intervention target.

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A-097

SELF-OBJECTIFICATION, BODY IMAGE, DISORDERED EATING, AND WEIGHT BIAS AMONG TREATMENT-SEEKING MEN AND WOMEN

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Background: Self-objectification (SO), valuing one's body for appearance rather than performance, can result in negative consequences. Research has primarily examined SO in normal-weight women, a limitation given obesity rates in the U.S. and the susceptibility men may have to this way of viewing their bodies. Because of pressure to conform to an appearance-based thin ideal, overweight/obese individuals are at risk of experiencing weight-based stigma and internalization of negative beliefs. This investigation examined relationships among SO, body image, weight bias, and disordered eating in participants in a behavioral weight loss program (BWLP).
Methods: Fifty-three overweight/obese adults (Mean BMI=37.3, SD=6.6) participated. Participants were predominately Caucasian (88.5%) and female (77.4%). The data was collected as part of a study investigating a stepped-care approach to weight loss. Participants were measured pre and post treatment on the variables of interest.
Results: Despite equivalent levels of reported SO between genders pre-BWLP, results indicated that SO differentially impacted men and women. SO predicted internalized weight bias for all, $F(1, 44)=20.89$, $p<.001$; however, for men, SO indirectly predicted body dissatisfaction, lowered eating self-efficacy, and disordered eating. For women, SO directly predicted body dissatisfaction, lowered eating self-efficacy, disordered eating, and indirectly predicted depression. Following the BWLP, no relationships between SO and other variables of interest changed; however, higher levels of SO at the start of the BWLP was associated with less body fat lost over the intervention for both genders, $F (1, 31)=7.57$, $p=.01$.
Conclusion: SO is associated with differential outcomes for men and women, and is consistent over time. Without interventions directed at changing ways of viewing one's body, continued negative outcomes may result. BWLPs that use interventions to change the way participants view their bodies from appearance-based to performance-based may see favorable outcomes.

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A-098

EXPLORING THE FACTORS THAT INFLUENCE CHILD AND ADOLESCENT WEIGHT CONCERN

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Background: Weight concerns among adolescents and young adults are quite prevalent, and recently these concerns have become more prevalent among children.
Purpose: To identify the factors associated with child/adolescent weight concern and determine if weight concern is associated with specific actions to improve diet and increase physical activity.
Methodology: A stratified random sample of 840 students in grades 5, 7, and 9 were interviewed in conjunction with a multi-year evaluation of West Virginia' childhood obesity legislation. Interviews addressed child/adolescent physical activity, nutrition, BMI, perception of weight, and school assessment of BMI. Logistic regression and chi-square analyses were used to analyze the data.
Results: Child gender, weight status, perception of weight, and grade level were found to be significant predictors of weight concern. Students who reported concern regarding their weight were more likely to change their eating habits to become healthier, go on a diet, and skip meals or snacks than were students who unconcerned about their weight (all $ps<.05$). In addition, significantly more unconcerned students reported meeting the weekly physical activity guidelines (60 minutes per day per week) than did concerned students ($p<.05$).
Conclusion: Child and adolescent weight concern is associated with both healthy and unhealthy weight control behaviors.

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A-099

QUALITY OF LIFE OF POST-BARIATRIC SURGERY PATIENTS VS. CONTROLS ENROLLED IN A SUBSTANCE ABUSE TREATMENT PROGRAM

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Quality of life (QOL) among post-bariatric surgery patients is high, approximating that of healthy controls by one year post-surgery. Evidence from our laboratory, however, suggests that post-bariatric patients are over-represented in substance abuse treatment programs (Saules et al., in press). We hypothesized that QOL of post-bariatric surgery patients admitted to substance abuse treatment would be relatively poor, overall, and significantly worse than that of other substance abuse treatment patients. The sample included 35 post-bariatric patients and 48 controls, all recruited from an inpatient substance abuse treatment program. Bariatric patients' weight loss approximated that reported in the literature, with bariatric patients reporting a maximum pre-surgical BMI of 52.7±10.7 and a mean current BMI of 31.9±7.8. Participants completed the WHOQOL-BREF, which assesses QOL in four domains: physical, psychological, social, and environmental. Post-bariatric substance abuse patients had significantly lower psychological QOL compared to non-bariatric controls (10.5±2.4 vs. 11.9±3.4, $p<.05$). Groups differed on current BMI, but psychological QOL was not related to BMI. Bariatric cases did not differ significantly from controls on PHQ anxiety ($p=.15$) or depression ($p=.052$) scale scores, but they reported significantly greater impairment from such psychological symptoms, t 80)=3.04, $p<.01$. Bariatric cases were also much more likely to have histories of physical(74% vs. 28%, $p<.01$), emotional (75% vs. 41%, $p<.05$), and sexual abuse (65% vs. 25%, $p<.01$). Results suggest that post-bariatric patients who experience post-surgical substance use disorders of the magnitude warranting inpatient treatment have low overall QOL, and in the psychological domain, it is lower than that experienced by other substance abuse patients. Future research should evaluate whether a history of physical, emotional, and/or sexual abuse elevates risk for development of substance use disorders after bariatric surgery.

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PROTECTIVE FACTORS AGAINST BURNOUT IN MEDICAL STUDENTS

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Medical student burnout is associated with dropping out and suicidal ideation. Protective factors against burnout have not been examined using standard measures of spirituality (Dyrbye, et al., 2009; Eckleberry-Hunt, et al., 2009). An anonymous survey including the DSE (Daily Spiritual Experiences), FACIT-SP, HADS, brief COPE, Satisfaction with Life scale, and a Burnout Survey was sent via email to medical students at a northeastern medical school; 259/469 (55%) completed it. A Pearson-r correlation showed significant inverse correlations between HADS anxiety, and FACIT-SP (−.52;p<.000) and DSE(−.107;p<.05). An inverse correlation between HADS depression, and FACIT-SP (−.518;p<.000) and DSE(−.141;p<.01) also emerged. There was a correlation between Satisfaction with Life Scale, and FACIT-SP (.533;p<.000) and DSE(.122;p<.05) and an inverse correlation between the Burnout survey, and FACIT(−.621;p<.000) and DSE(−.144;p<.01). A regression with demographics (Step 1), psychological status (Step 2), and satisfaction and maladaptive coping (Step 3), burnout remained significant predicted by both FACIT-SP (p<.000) and DSE (p<.05). We conclude that spirituality is a protective factor against burnout in medical students.

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PREDICTORS OF INTEREST AND USE OF BEHAVIORAL MEDICINE SERVICES IN PRIMARY CARE

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This study aimed to evaluate predictors of interest and use of behavioral medicine services for diet, weight loss, smoking cessation and pain management among primary care patients. Patients received questionnaires one week following an outpatient appointment in internal medicine and indicated interest in health/lifestyle interventions, smoking cessation and pain management on a list of possible counseling services. Self-rated health, pain, and depression and anxiety were assessed by self-report. Follow-up questionnaires were mailed one year later to assess attendance in the questioned services. Participants included 658 primary care outpatients. Average age was 51.05 (SD=15.46). The sample was 70.1% female and 61.4% White. Average BMI was 28.7 (SD=7.51), 16% reported smoking "every day" or "some of the time", and 49% reported average daily pain>3 on a 10 point scale. 61.2% of time 1 participants completed time 2 questionnaires. At baseline, 56.8% of overweight participants were interested in health/lifestyle counseling, 55.3% of smokers were interested in smoking cessation, and 33.8% of participants with average daily pain ratings >3 were interested in pain management counseling. In multivariate logistic regression models, female gender and higher BMI were associated with interest in health/lifestyle counseling; everyday smoking and higher anxiety were associated with interest in smoking cessation; greater pain ratings were associated with interest in pain management. At follow-up, 7.6% of overweight participants attended health/lifestyle counseling, 6.7% of smokers attended smoking cessation counseling and 6.6% of participants with pain attended pain management counseling. Interest at time 1 was the only predictor of attendance in these counseling services. Results indicate interest in behavioral medicine services is high but reported attendance is low even among patients at an urban academic medical center. Identifying patients interested in behavioral medicine treatments may help facilitate services for those with readiness to engage in health behavior change.

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A PRELIMINARY EXAMINATION OF SELF-MANAGEMENT IN CHILDREN WITH A FOOD ALLERGY

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RATIONALE: Acquiring self-management (SM) skills is a critical part of the transition to adulthood for children with a special health care need. Little is known about SM and whether it is associated with medical or psychosocial outcomes for children with a food allergy.

METHODS: Caregivers (N=454) of food-allergic children were surveyed during meetings of the Food Allergy & Anaphylaxis Network (FAAN) in Las Vegas, Chicago, Baltimore and New York. Self-management was assessed by asking parents to rate on a Likert scale their child's ability to identify an allergic reaction and their adherence to dietary restrictions. Demographic data, characteristics of the food allergy, and use of mental health services were also assessed. Based on prior research showing the SM may begin as early as 9, addition analyses were conducted for younger (below 9) and older (9 or above) children.

RESULTS: Chronbach's alpha of the SM scale was 0.80. As expected, parents reported that the degree to which children assume self-management correlated with the child's age (r=0.72, p<0.01). Controlling for the child's age, the degree to which parents reported that their child's care was self-managed, was associated with the degree to which parents sought mental health services for the family, F=5.33, p=0.02 (2.03 +/− 0.81 vs. 1.54 +/− 0.54). Also controlling for age, an ANOVA showed that for younger children (N=255), F=6.22, p=0.01, SM was higher among those who had used Epinephrine due to an allergic reaction than those who did not, (1.45 +/− 0.89 vs. 1.21 +/− 0.82).

CONCLUSIONS: We found that when children have more responsibility over their care, they are more likely to receive mental health services and for younger children, to suffer an adverse event. Although limited by a cross-sectional design, these findings offer a starting point for suggesting areas of additional investigation and signaling a substantial need to study shifts in health care management, as perhaps the transition to self-managed care is challenging especially for younger children who have a food allergy.

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A-105

FRACTAL DIMENSION OF MUSIC PREDICTS THE FRACTAL DIMENSION OF EEG—IMPLICATION FOR MUSIC THERAPY

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OBJECTIVE: Despite the widely accepted view on the therapeutic effects of music, the mathematical characteristics of the effective music therapy has yet to be explored. The present study investigated the association between fractal dimension of the sound waves of music and the fractal dimension of electroencephalogram (EEG) in order to examine whether the music fractal dimension predicts the EEG fractal dimension.
METHOD: Fourteen healthy adult subjects (4 males and 10 females) listened to 8 pieces of 2-minute-long computer generated music with varying degrees of fractal dimensions in random order. Their eight-channel-EEGs based on International 10–20 Method were measured at Frontal Lobe (F3, F4, F,7, & F8) and at Temporal Lobe (T3, T4, T5, & T6) in order to address the music's effects on emotional states and sound processing functions.
ANALYSES: Each music piece was divided into four segments (30 seconds each). Fractal dimensions (regularization dimension) were computed for each music segment and for the corresponding EEG signals. Association mining (using the Apriori algorithm) was performed on the fractal dimension dataset to examine the associations between the fractal dimension of music and the fractal dimension of resulting EEGs. A minimum confidence value of 0.70 was used as a widely used acceptable rule for association mining.
RESULTS & DISCUSSION: Female subjects demonstrated the strongest association between music fractal dimensions in the range of [2.447–2.546] and EEG fractal dimensions at T4 and T6 in the range of [>=1.854] and [>= 1.864] (confidence levels of .94 or higher). Strong association discovered in females is an implication that the further research into the association between the fractal dimension of the sound stimuli and the fractal dimension of the EEG at right temporal lobe will give us a new insight into the selection of effective music in the context of music therapy as a form of alternative medicine.

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DIFFERENCES IN SELF-RATED HEALTH TRAJECTORIES AMONG ELDERLY JAPANESE PEOPLE: USING MIXTURE MODELS

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The aim of this study is to examine the differences in self-rated health patterns and its factors among elderly Japanese people. So-called 'Longer life but worsening health hypothesis', which was derived from 'compression of morbidity', explains the differences in the trajectories in worsening health between the rich and the poor and between males and females, some death in their early life, and the other can enjoy a longer life, though at the end of life, they worsen their health. To examine the individual trajectories in health, panel data is needed in the strict sense, though cross-sectional data is sometime applied. Therefore mixture models for estimating developmental trajectories using SAS PROC TRAJ was applied to the panel data.
This study employed the National Survey of the Japanese Elderly, from wave I (1987) to wave IV (1996) , which was conducted by Michigan University and Tokyo Metropolitan Institute of Gerontology. The independent variable was a set of dummy variable of self-rated health and age was used time dependent covariate. Education and gender are used to identify the factors for the group division.
The results of this analysis are as follow; 1) Dividing into two groups was adequate in this analysis through the goodness of fit tests. 2) Those groups showed quite different trajectories. one trajectory showed very high health and its rapid decline with age, and another drew low health. 3)gender was significant for the group division, but education was not.
These results show that, on the one hand, females tend to enjoy good health, but at the end of life, their health declines dramatically, on the other side, males are obliged to experience in bad shape. This seems to consistent with the 'compression of morbidity' theory. And the reason why education was not significant to divide the groups might is the years of schooling dose not vary adequately.

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WOMEN'S GENDER SCHEMAS AND SCRIPTS FOR OBSTETRICIAN GYNECOLOGISTS

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The current picture of women's healthcare in the US includes limited availability of reproductive services for women. One overlooked factor that may be exacerbating the OB-GYN shortage is a decline in men entering the field. Indeed, the American College of Obstetrics and Gynecology's (ACOG) membership report shows that the percentage of men in the field of OB-GYN has greatly dropped (ACOG, 2009a). The problem of sex imbalance may be occurring because men are being discouraged from entering the field (Lyon, 1997). This could be in part because of concerns that women are not interested in seeing a male OB-GYN. Results of studies that examine sex preference in choice of OB-GYN providers support that women exhibit a preference for a female OB GYN provider approximately 50% of the time. (Mavis, Vasilenko, Schnuth, Marshall, & Jeffs, 2005;) A process that may account for women's preference for a female OB-GYN is their gender role schema. Gender role schemas may influence what women expect from OBGYNs of a specific sex, and therefore influence preference. For instance, if a woman expects a female OB-GYN to be more compassionate than a male she may prefer a female . The current study sought to investigate the content of women's schemas for both male and female OB-GYNs. A total of 96 college women were randomly assigned to describe the characteristics of male or female OB-GYN and describe what happens during a typical visit to his or her office. Both the list of provider characteristics and scripts regarding visits were coded by trained raters. Results supported that women were more likely to describe male OB-GYNs as "awkward,"X2 (1)=11.2, p<.001, and female OB-GYNs as "easy to talk to,"X2 (1)=7.2, p<.005, and "knowledgeable,"X2 (1)=6.8, p<.005. Additionally, women were more likely to report the "use of a chaperone,"X2 (1)=7.0, p<.005, and "making small talk," X2 (1)=4.6, p<.005, during visits with male OB-GYNs. Results supported that women held more positive schemas for female OB-GYNs and that male providers were regarded more negatively. This suggests that schemas for male and female OB-GYN providers may play an important role in affecting gender preferences.

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THE EFFECTS OF RECEIVING MOTIVATIONALLY-TAILORED FEEDBACK ON FAMILY NUTRITION AND PHYSICAL ACTIVITY

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This study evaluated the initial feasibility, efficacy, and acceptability of a single emailing of motivationally-tailored feedback (TF) to promote healthy nutrition and physical activity (PA) for parents and children (6–11 years old). Parents (N=132; age=36.27[5.76]; BMI=27.02[7.01]; 80.4% Caucasian; 96.9% mothers) were recruited from 32 states and randomly assigned to TF (n=61) or control group (n=71). Baseline and 4-wk follow-up data (n=100) were collected online and analyzed using a series of 2x2 (TimexCondition) mixed model ANOVAs.
Nutrition: Child vegetable intake increased across groups over time, F(1,57)=6.44, p=.01, η2=.101. Examining follow-up data revealed TF parents were more likely than CG parents to report making nutritional changes, χ2(3)=15.14, p=.002. (i.e., increasing their fruit [p=.02] and decreasing their fat [p=.004] intake and their child's caloric [p=.006] intake).
Sedentary Behavior: Across groups over time, children, F(1,93)=5.59, p=.02, η2=.057, and parents, F(1,94)=4.89, p=.03, η2=.049, decreased TV time. Computer and video game time did not change.
PA: Across groups over time, children, F(1,93)=6.90, p=.01, η2=.069, and parents, F(1,94)=58.03,p<.001, η2=.382, increased number of active days.
Conclusions: Results indicate that a one-time tailored mailing can influence nutrition behavior, but not PA. Process data indicated that tailored feedback was perceived as relevant to TF families, influential, and as a useful tool that could be used in the future. However, study participation alone (i.e., completing nutrition and PA measures) may prompt behavior change. In sum, using an online motivationally-tailored feedback program is a viable delivery method for parent-based interventions, but modifications are necessary to improve feasibility and efficacy, particularly for PA. Limitations, challenges, and future directions will be discussed.

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ETHNIC DIFFERENCES IN HEALTH PROMOTION MESSAGES IN POPULAR MAGAZINES

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The expansion of media has contributed to the attention given to public service announcements (PSAs) delivered via electronic sources. However, Kreuter and MacCrue (2004) suggested that for PSAs to be effective, the target audience must have access to the channel through which health communication is being delivered. For some minority groups, access to communication technology is often limited, and print media may provide a more accessible and effective way to deliver health promoting PSAs(HP-PSAs) (Kreuter&MacCrue, 2004). Given the potential value of print media to promote health among the underserved, the present study explores differences in the amount of HP-PSAs in popular print media (magazines) across three race/ethnic groups. In this study, we compared the frequency and categories of HP-PSAs in magazines with Caucasian(CA) (Cosmo, Glamour, Vogue, Sports Ill., Esquire, People), African-American(AA) (Essence, Ebony), and Hispanic(HA) audiences (Cosmo en Español, People en Español).

One issue per month was coded for each magazine between the years 2007 and 2009. One-way AVOVAs with Tukey post-hocs revealed differences in frequency of HP-PSAs across race/ethnic audience. There were more HP-PSAs in HA(n=38, M=.53 per issue) and AA magazines (n=53, M=.74 per issue) than in CA magazines (n=42, M=.11 per issue; Brown-Forsythe(2,153.13)=10.07, p<.001). Furthermore, there were more HP-PSAs in magazines targeting females (n=180, M=.40 per issue) and those targeting both males and females (n=108, M=.48 per issue) than in magazines targeting males (n=72, M=.13 per issue; Brown-Forsythe(2,256.67)=6.22, p<.05). The type of illnesses presented in PSAs also differed across magazines (The most common HP-PSAs: CA=cancer and heart disease, AA=breast cancer, HA=immunodeficiency.)

Differences across magazines in terms of HP-PSAs may suggest the differential targeting of certain health organizations to various populations. The finding that HA and AA magazines had more HP-PSAs has potential benefits for minority populations.

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AWARENESS AND KNOWLEDGE OF OSTEOPOROSIS IN VIETNAMESE WOMEN

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Asian women are at particular risk of osteoporosis. We examined osteoporosis knowledge and awareness in Vietnamese women. Women (N=217) attending a healthcare facility in Da Nang, Vietnam were surveyed regarding demographics; lifestyle information; gynecologic history; osteoporosis awareness; family history of osteoporosis; interest in osteoporosis education; and knowledge. A 30-item knowledge instrument addressing the definition, causes, signs/symptoms, risk factors, diagnosis, treatment, complications, prognosis, and prevention of osteoporosis was developed. Responses (agree, disagree, unsure) were coded "1" (correct) or "0" (incorrect/unsure) and summed. Cronbach's α=.89; the instrument explained 60% of the variance in knowledge scores. Women had a mean age of 35±15 yrs (range 13–76; mdn=30). A majority (82%) had heard of osteoporosis, primarily through television (38%), newspaper (31%), and personal physicians (11%). Awareness was associated with education (P<.001), occupation (P<.0001), being premenopausal (P<.0001), and having a family member with osteoporosis (P<.05). On average, women answered 49% of the knowledge items correctly (range 0–26; mdn=15). Menopausal status and age were unassociated with total scores, however age was inversely associated with knowing the definition (P<.01) and risk factors for osteoporosis (P<.05). Knowledge scores were higher among women reporting osteoporosis in the family (P<.05), nurses (vs. other vocations) (P<.05) and women with≥high school education (P<.001). Few women reported lifestyle risk factors for osteoporosis, i.e. smoking, alcohol intake, and poor nutrition, although dairy (calcium) consumption was infrequent; 77% of women performed weight-bearing exercise≥ 3 days per week and ovarian disease was uncommon. More than 90% of women were interested in an education program. Vietnamese women are aware of osteoporosis yet would benefit from education targeting prevention and treatment of the disease.

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THE STABILITY OF STRESSORS EXPERIENCED IN HEMODIALYSIS

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End-Stage Renal Disease (ESRD) has been referred to as a "living stress laboratory" due to side effects and stressful life events that occur as a result of ESRD and dialysis treatment (Belar & Tovian, 2002). Individuals with ESRD receiving hemodialysis (HD) treatment experience a number of physical (i.e., fatigue) and psychosocial (i.e. uncertainity about future) stressors.

The Hemodialysis Stressor Scale (HSS: Baldree et al, 1982) was developed to measure the severity of dialysis-specific stressors. It is a self-report measure composed of 32 items, on a 4-point Likert severity scale. The HSS has robust psychometric properties (Murphy et al, 1985), but the only published test-retest analysis was a two-week comparison.

The purpose of this study was to measure the test-retest reliability of the HSS over a three month timespan. The presentation will also compare top-ranked stressors across past and current studies, focusing on the impact of treatment advances over time. Forty participants currently receiving HD treatment provided informed consent and successfully completed two administrations of the HSS. The participants were ethnically diverse and were sampled from two dialysis clinics.

The three-month test-retest reliability correlation was robust (R=0.919, p<0.05. The total HSS score remained consistent between Time I (X=33, S.D.=19.16) and Time 2 (X=33, S.D.=17.50). The top 5 reported stressors at Time I (in rank-order) were: (1) Limitation on physical activity; (2) Limitation on fluid intake; (3) Feeling tired; (4) Limitation of food; (5) Decrease in social life. At Time 2, the rank list of stressors changed, most notably with an elevated severity ranking for: (1) Limitation of fluid intake and (3.5) Limits on time and place for vacation, likely due to the change to warmer weather.

This study's results suggest that HD-specific stressors are very stable. Given that elevated HD stressors are positively related to symptoms of depression and distress, this is a finding with significant implications (e.g., Otto et al, 1997).

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HPV VACCINE UPTAKE AND ACCEPTABILITY FOR ADOLESCENT MALES

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BACKGROUND: In 2009, the United States approved quadrivalent HPV vaccine for use in males ages 9–26 years, but data on uptake do not exist. We determined HPV vaccine uptake among adolescent males and its acceptability to parents and their sons.

METHODS: A national sample of parents of adolescent males ages 11–17 years (n=547) and their sons (n=421) completed our online surveys during summer 2010. A majority of parents were less than 45 years of age (61%), non-Hispanic white (67%), female (54%), and had some college education (56%). Sons' mean age was 14 years old. Analyses used multivariate logistic regression.

RESULTS: Few parents (2%) indicated their sons had received any doses of HPV vaccine. Among parents of unvaccinated sons, 43% were willing to get their sons free HPV vaccine. Parents were more willing to get their sons free HPV vaccine if they reported higher levels of perceived HPV vaccine effectiveness (OR=1.70, 95% CI: 1.36–2.12) or anticipated regret if they didn't get their sons vaccinated and they later developed an HPV infection (OR=2.02, 95% CI: 1.60–2.56). Vaccine acceptability was also modest among unvaccinated sons, with only 29% willing to get vaccinated. Sons were more willing to get vaccinated if they reported higher perceived likelihood of getting HPV-related disease (OR=1.99, 95% CI: 1.37–2.87). Sons were less willing if they anticipated more embarrassment about getting vaccinated and having their friends find out (OR=0.70, 95% CI: 0.56–0.87).

CONCLUSIONS: Despite permissive national recommendations for vaccinating adolescent males against HPV, vaccine uptake nearly a year later was nonexistent. Furthermore, vaccine acceptability was low among both parents and sons. Our results highlight factors that may affect the HPV vaccination decisions of parents and their sons.

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THE IMPACT OF CONFLICTING MEDICATION INFORMATION ON PATIENTS' TRUST OF INFORMATION SOURCES

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Background. Chronic disease patients often obtain medication information from multiple sources, e.g. physicians and the Internet. Obtaining information from more than one source increases patients' chances of encountering conflicting information. To date, no research has explored whether conflicting medication information influences patients' trust in sources. This study examined whether arthritis patients who receive conflicting information about medication from 14 sources have decreased trust in those sources.

Methods. Arthritis patients (n=170) completed a 45-minute online survey for the INFORM Study. Patients reported demographics, completed a 6-item conflicting medication information measure (α=.75), and rated trust levels (4=a lot, 3=some, 2=a little, 1=not at all) for 14 sources of arthritis medication information, including health professionals, media sources, written materials, and the Internet. Independent samples t-tests determined whether patients who received conflicting information from a specific source trusted that source less than patients who did not receive conflicting information from that source.

Results. Patients trusted doctors (M=3.57, SD=.70) and pharmacists (M= 3.45, SD=.68) the most and podcasts (M=1.57, SD=.77) and newsletters (M=2.16, SD=.88) the least. Patients who received conflicting medication information from their physicians (t=−3.57, p<.0001) and pharmacists (t= −2.17, p=.031) trusted those sources significantly less than patients who did not receive conflicting information from those sources. There were no significant differences for the other 12 information sources, e.g. nurses, Internet, and spouse.

Conclusions. Given that trust in the patient-provider relationship is associated with health outcomes including medication adherence, our finding that conflicting information is associated with decreased trust in physicians and pharmacists warrants further study (e.g. whether trust mediates the relationship between conflicting information and medication adherence).

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A-114

FACTORS AFFECTING ASTHMA PSYCHOMORBIDITY, CONTROL, AND ILLNESS-RELATED QUALITY OF LIFE: WHAT IS THE INTERACTION?

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Asthma is a chronic inflammatory disorder of the airways, of unknown etiology and growing prevalence (GINA, 2009). Appropriate asthma management can control the disorder and enable patients to enjoy a good quality of life (WHO, 2007).Yet, many asthma patients are unable to maintain asthma control (Rabe et al., 2003) for various reasons, including psychological ones (Feldman et al., 2005).

This study examined the prevalence of psychomorbidity, and its interaction with asthma control difficulties and asthma-related quality of life in a sample of 200 asthma patients in Cyprus. Asthma diagnoses and severity were established by medical chart reviews. Psychomorbidity was evaluated using the Patient Health Questionnaire (Spitzer, 1999).

Additionally, the impact of asthma-specific (e.g. asthma knowledge), health-specific (e.g. smoking history) and socio-demographic (e.g. perceived poverty) factors was examined as prior research literature suggests these may significantly impact asthma control and asthma-related quality of life.

Currently, the present study is in its final stages of data collection (to conclude December 2010). The results will offer valuable insights into the mechanisms and factors which affect asthma control, quality of life, and psychomorbidity. In doing so, the present study will contribute to the improved understanding of asthma patients' experiences, essential to guide medical and psychological interventions.

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A-115

MEASURING ALEXITHYMIA IN INFLAMMATORY BOWEL DISEASE: THE CASE FOR SOMATIC UNCERTAINTY AS AN INDEPENDENT FOURTH FACTOR

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Although primarily focused on a maladaptive inability to identify emotions in oneself and others, one facet of alexithymia is the tendency to misinterpret bodily sensations as having physical rather than emotional causes. However, in patients with physical symptoms due to chronic illness there is the potential for multiple interpretations when measuring this aspect of alexithymia. For instance, among people with inflammatory bowel disease (IBD), bodily sensations may indicate a relapse of symptoms and the disability that comes with them. Thus, attributing bodily sensations to physical causes may indicate disease-related vigilance rather than alexithymia. Focusing on patients with IBD (n=90), this cross-sectional study examined the psychometric properties and correlates of the Toronto Alexithymia Scale (TAS-20) (Bagby, Parker, & Taylor, 1994)—the most popular measure of alexithymia. We focused on the DIF subscale, which measures the ability to recognize emotions and to distinguish them from bodily sensations. It includes items tapping into uncertainty about bodily symptoms (somatic DIF items) and uncertainty about emotional symptoms (emotional DIF items). Results showed that somatic DIF items formed their own factor in an exploratory factor analysis and were less frequently endorsed than emotional DIF items. Multiple regression analyses controlling for potential confounds revealed that higher scores on the somatic DIF items predicted worse physical quality of life (Ware & Sherbourne, 1992) (β=−.29, p=.006) whereas higher scores on the emotional DIF items predicted worse emotional quality of life (β=−.36, p=.001). Given the relapsing and remitting nature of IBD, these findings likely reflect patients' association of bodily sensations with IBD rather than emotional deficits typically considered to indicate alexithymia. We discuss the implications of these findings in terms of measurement of alexithymia and clinical management of IBD patients.

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THE FEASIBILITY AND EFFECTIVENESS OF GROUP MEDICAL VISITS TO PREVENT EXCESSIVE GESTATIONAL WEIGHT GAIN

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To improve birth outcomes for both mothers and infants the Institute of Medicine recommends that class I obese (BMI 30–34.9) women should limit gestational weight gain (GWG) to 11–20 pounds. This paper describes a systems-based approach that was used to integrate evidence-based group dynamics and group-medical visits as a method to reduce excessive GWG in low-income and obese women. The systems-based approach included representation from research and practice organizations to inform intervention structure, content, and study design. The resultant project purpose was to determine the feasibility and effectiveness of the intervention when compared to current standard care using a mixed methods approach. Fourteen obese women were recruited at their first prenatal appointment and randomized to receive standard care (n=8) or group dynamics-based group medical visits (n=6). GWG data were taken every 4 weeks for the 24 week intervention. Mean GWG at every time point was greater than that of the intervention group with a small to moderate effect size (ES=.26, .47) at 4 and 20 weeks, respectively. A large effect size (ES=.89, .94, .77, 1.3) was seen at 8, 12, 16, and 24 weeks. However, only the difference at 24 weeks was significant (p<.05). Structured interviews with intervention participants suggested that feeling like part of a group with other members who had similar goals was a key component of intervention effectiveness. However, themes derived from clinical staff and the program participants suggested that both would prefer weight management classes and doctor's appointment to be completed during separate visits. Further, clinical staff indicated that a group visit took longer per patient than individual visits and this method sometimes made the visits feel interrupted. The results from this pilot study are promising as it relates to the group dynamics strategies delivered during the visits, but suggest that combining these with a medical visit may not be ideal.

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A-118

EVALUATION OF A RELATIONAL SYMPTOM MANAGEMENT PROGRAM FOR FIBROMYALGIA PATIENTS

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Fibromyalgia Syndrome (FMS) is a disease that has an unknown etiology, which manifests itself throughout the body with symptoms of pain and fatigue. The ramifications of the disease have been found to greatly affect both patients and their family members. The unknown etiology has led to treatment challenges that have otherwise been found frustrating to the medical discipline as well as the patients. The HOPE program is a relational treatment program for FMS patients and their families whose purpose was to address FMS and its effects on the patient and their family by utilizing systemic and biopsychosocialspiritual frameworks.

The treatment program ran for a period of 10-weeks for each family. Nine experts; rheumatologist, psychiatrist, exercise physiologist, marriage and family therapist, chaplain, occupational therapist, and a psychologist each facilitated the groups focusing on the familial effects and benefits to treatment. Each expert facilitated and engaged in conversation with the participants for approximately an hour each week. A multimethod design was used to collect data, followed by a case study analysis of the findings and an evaluation of the program. Three scales were used to collect quantitative data: the Family Adaptability and Cohesion Evaluation Scales IV (FACES IV), Fibromyalgia Impact Questionnaire (FIQ), and Spiritual well-being scale FACIT-sp. Qualitative questions as well as a focus group were used for the qualitative analysis and program evaluation. Both modes of inquiry lent themselves to findings that favor the importance of a relational treatment modality for FMS patients. As a result of the program it was found that FMS symptoms were decreased, patients and family members began to work collaboratively, and families began to heal from the effects of the disease. Additionally, it was found that including family members in treatment of FMS was beneficial.

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A-119

CLINICAL UTILITY OF DIFFERENTIATING AMONG HIGH, MEDIUM AND LOW CHRONIC PAIN ACCEPTANCE SUBGROUPS

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Over 50 million Americans are affected by chronic pain (CP) conditions. Previous findings have shown that among high (Hi), medium (Med) and low (Lo) CP Acceptance subgroups, those with higher Acceptance demonstrate lower levels of anxiety, depression, and perceived disability. Interventions targeting CP Acceptance have been associated with adaptive behavioral and functional outcomes, including reduced number of medical visits, school and work absences. We recruited CP patients via online CP support groups. The total sample (N=255; Mean age=45, SD =10.9) was primarily female (85.9%), Caucasian (90.4%), married/partnered (54.4%), and well educated (M=14.9 years, SD=2.4), with an average income between $30 k and $40 k. Most common pain locations were lower limbs (n=117) and lower back (n=110). Participants completed demographic items, Chronic Pain Acceptance Questionnaire (CPAQ) [Active Engagement (AE) and Pain Willingness (PW)] and Multidimensional Pain Inventory items on Pain Interference, Negative Mood and Pain Severity scales. CPAQ Hi, Med and Lo groups were formed based on AE and PW scores. Overall differences (controlling for Pain Severity) were observed by AE [F(4,280)=8.576; p<.001] and PW [F(4,276)=3.678; p=.006] group. Univariate analyses suggest that both the Hi AE and PW groups reported lower pain-related interference in ability to engage in and plan daily, social and work-related activities and the least anxiety, irritability and negative mood. Conversely, both the Lo AE and PW groups reported the most pain-related interference in perceived ability to engage in work, social and daily activities due to pain, and lower rates of satisfaction experienced from these activities, including family. Irritability, anxiety and overall negative mood scores were the highest within the Lo AE and PW groups. Although these findings are based on web-based support group participants, CP Acceptance-based interventions, tailored by Hi, Med, Lo group, may foster maximally adaptive behavioral and cognitive outcomes in key functional domains among CP patients.

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A-120

ADVERSE CHILDHOOD EXPERIENCES, PERCEPTIONS OF HEALTH, AND PAIN IN ADULT TWINS

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Physical or sexual abuse in childhood is linked with adverse health outcomes in adults. Pain levels, which are also linked to abuse, can play a role in adult health outcomes. Few studies, have examined the effects of indirect adverse childhood events such as parental substance abuse or domestic violence in the home. This study examined the effects of adverse childhood experiences (ACE) on perceptions of health in adulthood to determine whether associations differed based on levels of current pain intensity. We collected data from 180 female twins from the community-based University of Washington Twin Registry. Participants completed questionnaires including the Adverse Childhood Experiences Questionnaire, McGill Pain Questionnaire-Short Form, the SF-36, and the Modified Somatic Perceptions Questionnaire. Mixed effects regression modeling examined the effects of ACE on indices of health perception, and the moderating effect of pain intensity while accounting for age and correlated twin data. The average participant was 29 years old (SD=10); 86% were White, 59% were single, and 51% had a college degree or higher. ACE significantly predicted general health ($\beta=-2.76$, p=.008) and mental health functioning ($\beta=-2.15$, p=.05). McGill pain intensity scores moderated the relationship between ACE and perception of physical health functioning ($\beta=-6.75$, p=0.03) and somatic perceptions ($\beta=-2.43$, p=.02). Specifically, individuals with greater pain intensity and increased ACE perceived lower physical health functioning. Individuals with lower pain intensity and increased ACE perceived more somatic symptoms. These findings suggest that assessing for childhood adversity—beyond direct abuse—may be important in comprehensive assessment and treatment of health conditions. Future research can examine mechanisms that link adverse childhood events with perceptions of health in adulthood.

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A-121

COLD PAIN SENSITIVITY IN POSTTRAUMATIC STRESS DISORDER AND OTHER ANXIETY DISORDERS

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Posttraumatic stress disorder (PTSD) and other anxiety disorders are associated with chronic pain. However, preliminary research suggests that patients with PTSD and other anxiety disorders differ in their response to experimental pain. This study examined experimental pain sensitivity in PTSD, other anxiety disorders, and control participants. Those with chronic pain of 6 months or greater were excluded. Study groups were recruited from clinical and community settings and consisted of 44 participants with PTSD, 33 with other anxiety disorders, and 43 non-anxious controls. A phone interview with validated instruments determined group placement. Participants underwent a cold pressor task by placing their non-dominant forearm in a cold water bath of 1–2°C. Pain sensitivity was assessed by time in seconds to threshold (when pain is felt) and tolerance (when pain is no longer tolerable), and self-reported pain intensity ratings at baseline, threshold, and tolerance. Participants were on average 40 years old (SD=13.5); about half were male and 62% were White. Analysis of variance tested for significant differences in pain sensitivity by group. Participants with PTSD took significantly longer to reach tolerance from threshold (M=54.5 s) than those with other anxiety disorders (M=27.0 s) while the difference from controls was not significant. After accounting for baseline pain ratings, PTSD participants had significantly lower pain ratings at threshold compared to anxiety and controls groups as well as significantly lower pain ratings at tolerance compared to control participants. These findings provide further evidence for hyposensitivity to pain in PTSD, even when not comorbid with chronic pain. Future research can examine the mechanisms that link PTSD, other anxiety disorders, and pain sensitivity.

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HIGH, MEDIUM, AND LOW CHRONIC PAIN ACCEPTANCE SUBGROUP DIFFERENCES IN POSITIVE AND NEGATIVE AFFECT, PERCEIVED DISABILITY AND HEALTHCARE UTILIZATION

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Chronic pain (CP) is a leading healthcare concern that affects roughly 50 million people and costs over $70 billion annually. Negative affect and perceived disability are associated with negative outcomes, increased pain intensity and poorer overall function. Recent findings have shown high (Hi), medium (Med), and low (Lo) subgroups of CP acceptance to be associated with differential levels of patient outcomes. We recruited CP patients via online CP support groups. The total sample ($N=255$; Mean age=45, $SD=10.9$) was primarily female (85.9%), Caucasian (90.4%), married/partnered (54.4%), and well educated ($M=14.9$ years, $SD=2.4$), with an average income between $30 k and $40 k. Most common pain locations were lower limbs ($n=117$) and lower back ($n=110$). Participants provided demographic information and completed the Chronic Pain Acceptance Questionnaire (CPAQ), Healthcare Utilization (HCU), Positive and Negative Affect Scale (PANAS), and Pain Disability Index (PDI). Three (Hi, Med and Lo) groups were formed based on CPAQ scores. There were differences overall by CPAQ group when controlling for age and education [MANCOVA $F(8,262)=8.663$; $p<.001$]. Specifically, positive affect was higher in the Hi group, with highest ratings on Interested, Enthusiastic, Determined, and Attentive. Conversely, negative affect was higher in the Lo group, with highest ratings on Distressed, Upset, Scared, and Irritable. Additionally, perceived disability scores were higher for the Lo group. Notably, the Lo group rated themselves as more disabled in Home Responsibilities, Recreation, Social Activity, Occupation, and Self Care categories of the PDI (all p's$<.001$). Although not significant, there was also a trend of higher healthcare utilization in the Lo group. Behavioral interventions focused on increased CP acceptance may help to reduce negative affect and perceived disability, thus enhancing active engagement in more adaptive activities and decreasing healthcare over-utilization.

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A-123

PAIN ACCEPTANCE MODERATES THE RELATIONSHIP BETWEEN PAIN INTENSITY AND PAIN AND SELF-SCHEMA ENMESHMENT IN FIBROMYALGIA PATIENTS

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The pain associated with Fibromyalgia Syndrome (FMS) can be life altering for those who suffer from the condition. Changes in lifestyle and activity level that result from this pain are thought to be related to a phenomenon in which one's self-schema and one's pain schema become intertwined in a process termed schema enmeshment. Schema-enmeshment is thought to result in emotional distress which may negatively impact the patient and trajectory of the physical condition. The aim of the present research was to examine factors such as pain intensity and acceptance of pain as statistical predictors of schema enmeshment in a sample of 34 women with FMS. Measures included self-report of current pain intensity and average pain intensity, the Chronic Pain Acceptance Questionnaire (CPAQ) and schema-enmeshment was assessed by the Pictorial Representation of Self and Illness Measure (PRISM). Regression indicated current pain intensity and pain acceptance emerged as statistically significant independent predictors of outcomes on the PRISM; average pain for the past week was not a significant predictor. When pain acceptance was added into the model, pain intensity no longer significantly contributed to the outcomes in schema enmeshment. The role of acceptance as a moderator of the pain intensity/schema enmeshment relationship was tested and confirmed. The interaction of pain acceptance and pain intensity was significant, indicating that for those who are greater in pain acceptance, schema enmeshment is greater when current pain level is higher, but when pain level is low schema-enmeshment is not as prominent. For those individuals who cannot accept their pain, schema enmeshment of pain and self is present regardless of current pain level. This research provides a clear direction for clinical interventions such as Acceptance and Commitment Therapy that aim to enhance acceptance of pain as a means to increase quality of life. Future research should address the impact of these types of interventions on schema-enmeshment.

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Meritorious Poster

A-125

PHYSICAL ACTIVITY PREDICTS CARDIOVASCULAR RECOVERY FROM ACUTE PSYCHOLOGICAL STRESSORS

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The cross-stressor adaptation theory predicts improved cardiovascular recovery after both physiological and psychological stressors. This study examined the influence of regular exercise on cardiovascular recovery from the star-tracing and cold pressor stress tasks to test this theory. In both regular exercise and star-tracing, participants experience psychological demands such as the need for dexterity and concentration. In contrast, the experience of physical pain during exercise is less severe compared to participants experiencing the cold pressor task, which may decrease the likelihood of cross-over effects.

An analysis was conducted on data from a larger stress reactivity study ($n=137$). Blood pressure measurements were taken as participants completed a baseline period, a star-tracer task (psychological stressor), a cold pressor task (physiological stressor) and recovery periods after each stressor. Participants completed several questions about their exercise habits as well as their exercise over the past week; data was coded to obtain a measure of their total KCAL expenditure per week.

After statistically accounting for the influences of baseline cardiovascular function, reactivity (for the respective task: star-tracer task or cold pressor), age, and sex, regression analysis indicated that total KCAL expenditure per week predicted both average systolic blood pressure [$\beta=-.064$, $t(130)=-2.40$, $p=.02$] and average mean arterial pressure [$\beta=-.11$, $t(130)=-2.55$, $p=.01$] during the first recovery period (after psychological stress task). Analyses revealed no significant effects of KCAL expenditure per week on blood pressure recovery from the physiological stress task ($p>.45$).

These results illustrated that an increased expenditure of calories the week prior to laboratory stress decreased SBP and MAP during star-tracer recovery. Improved cardiovascular recovery, which the cross-stressor adaptation theory predicts, was not present when the physiological stressor followed the psychological stressor. These findings suggest the cross-stressor adaptation theory predicts improved recovery only for stress tasks that are closely associated with the demands of exercise.

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A-126

ACCULTURATION AFFECTS THE ASSOCIATION BETWEEN PHYSICAL ACTIVITY AND CHRONIC DISEASE INFLAMMATORY MARKERS AMONG HISPANICS

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Observational and exercise training studies report associations between physical activity (PA) and chronic low-grade inflammation. Recent findings suggest differential association across ethnic groups where the inverse relationship between PA and inflammation is stronger in White and Black adults than in Hispanics. Little is known about Hispanics living on the US/Mexico border where the prevalence of obesity and diabetes, risk factors for inflammation, is nearly double the US prevalence. We examined data from a cohort of Hispanic adults living in south Texas along the Mexico border to investigate the association between acculturation, PA and inflammatory markers. The sample included 370 participants (69.2% female) with complete data (TNF-α, IL6, IL8, Leptin, Resistin, Adiponectin, and C-reactive protein). The mean age was 44.5 years (±16.0), 30.4% were overweight, 51.8% obese, and 65.7% were born in Mexico. Only 23.8% met national guidelines for PA participation (mean PA minutes$=127.4\pm288.4$), and most had high affiliation with Spanish (88.7%). Regression models adjusting for age, gender and BMI indicated that PA was only significantly associated with CRP. Interestingly, when we controlled for acculturation, PA was also significant in the TNF-α model. Resistin values were significantly lower for participants with a high affiliation with Spanish than those with high affiliation with English or equally with both languages. These results are similar to NHANES data where the relationship between PA and inflammation was not strong in Hispanics; however, both NHANES and our data were free-living adults, whereas the majority of the evidence is from exercise training studies. Lower Resistin values in participants with lower acculturation may be due to a protective biological effect for individuals living in neighborhoods that resemble Mexican areas. This study is one of the first to show the differential effect of PA on inflammation depending on acculturation in a Hispanic border population.

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A-127

WELLNESS PERCEPTIONS AMONG FAITH LEADERS ARE DENOMINATION DEPENDENT

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Background: The effectiveness of faith-based health and wellness interventions is moderated by the attitudes, perceptions and participation of key leaders within faith-based organizations.
Purpose: It is important to understand how wellness is perceived among leaders of different denominations to develop socially and culturally relevant physical activity and wellness interventions.
Methods: We used an online open-ended survey question to qualitatively examine faith leaders' perceptions of the link among health, spirituality and religion; and the appropriateness of church-sponsored wellness programs. Responses were coded independently by two researchers using thematic analysis.
Results: Respondents ($n=412$) were primarily male (73%) and affiliated with the following denominations: Methodist (41%), Lutheran (20%), Baptist (12%), Catholic (14%), Other/Non-denominational (8%), and Church of Christ (5%). Among those citing a strong link between physical and spiritual health, Church of Christ (63%) and Methodist (48%) leaders frequently stated that physical and spiritual health was interdependent, emphasizing a holistic philosophy towards wellness. Baptists (52%) and Lutherans (30%) often stated that caring for the body was supported by their faith as an act of good stewardship of what God had given them and enabled them to better serve others. Leaders from Other/Non-denominational (15%) stated that promoting physical health was a religious duty and part of the mission of their church, compared with Church of Christ leaders (26%) that frequently stated promoting physical health, while not devoid of value, was not part of their church's mission.
Conclusions: The results indicate that perceptions about the link among health, spirituality and religion vary by denomination. Future faith-based interventions should be developed and implemented with consideration for denomination as a socially and culturally relevant factor.

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ORGANIZATIONAL FACTORS INFLUENCE HEALTH AND WELLNESS PROGRAMMING WITHIN FAITH-BASED ORGANIZATIONS

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Background: The majority of the United States population is affiliated with faith-based organizations (FBO) and attends events or services regularly. Health and wellness programming (HWP) within FBOs have great potential for reach, though the factors influencing faith-based HWP are not well understood.
Purpose: To examine organizational influences on HWP within FBOs.
Methods: A convenience sample of faith-leaders ($N=789$) completed an online survey assessing individual demographics (age, sex, race/ethnicity, years serving FBO),FBO demographics (denomination, size, location), perceptions of parental organization support, and HWP within their church. Pearson correlations and one-way ANOVAs were conducted to examine the relationship among demographics, perceptions, organizational factors and HWP. Multivariate regression modeling was conducted to predict variance in HWP at FBOs.
Results: Respondents were primarily White (93%), male (72%), middle aged (53.2±12.1 yrs), and reported Methodist (42.5%) or Lutheran (20.2%) affiliations. On average, 4.8±3 HWPs were offered within their church over the past 12 months. Larger FBOs offered more HWPs than smaller FBOs. FBOs in rural counties offered fewer HWP than their urban or non-metro counterparts. Moderately diverse FBOs (50–90% White) offered more HWPs than non-diverse (90% + White) or very diverse (<50% White). Perceived parent organization support and number of years the faith leader had been serving the FBO were positively related to HWP ($ps<0.01$). Methodist and Lutheran denominations offered the most HWP ($F=2.54$, $df=5$, $p=0.03$). Regression analyses accounted for 23% of the variance in HWP ($F=19.8$, $df=6$, $p<0.001$), with size, denomination, parent organization support, and years of faith leader service as significant correlates ($ps<0.05$).
Conclusion: To achieve a greater reach for health promotion, future interventions should consider some of the organizational influences on HWP to develop a tailored approach to improving health and health behaviors.

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A SOCIAL ECOLOGICAL PERSPECTIVE FOR PREDICTING PHYSICAL ACTIVITY OUTCOMES: A STRUCTURAL EQUATION MODEL

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A social ecological perspective advocates a multi-faceted model for predicting behavioral outcomes. These multiple layers of influence include societal/community factors, as well as interpersonal and intrapersonal factors. This project utilized a large public-use data set to assess the validity of using the social ecological model for predicting physical activity within a structural equation modeling (SEM) framework. The National Longitudinal Study of Adolescent Health (Add Health) data set includes a nationally representative sample, including individuals who were adolescents in the United Stated during the 1994–1995 school year. This project analyzed the public use data from waves I (1994–1995), II (1996), & III (2001–2002). Total sample size (n) included 2,591 individuals, with 53.29% being female, and 76.76% identifying themselves as Caucasian. The following constructs were included in the model: neighborhood acceptability, parental social support, positive and negative affect, and level of physical activity. For the measurement model an asymptotically distribution free discrepancy function was used with maximum likelihood estimation due to the non-normality of the data. The following indices for the measurement model indicated a good fit: Chi-Square=167.27 ($df=80$), RMSEA=0.019, and NFI=0.99. Indices for the full model also indicated a good fit: Chi-Square=163.09 ($df=79$), RMSEA=0.018, and NFI=0.99. Both environment and parental social support were found to have a significant effect on PA behaviors, and significant relationships to positive and negative affect. However, neither positive nor negative affect had a direct effect on PA behaviors. While these findings support a social ecological viewpoint in understanding PA outcome behaviors, we discuss possible causes for the disassociation with the intrapersonal factors.

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INCREASING PHYSICAL ACTIVITY IN MULTIPLE SCLEROSIS: REPLICATING INTERNET INTERVENTION EFFECTS USING OBJECTIVE AND SELF-REPORT OUTCOMES

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Background: Our previous research indicates that an Internet intervention was effective for increasing self-reported physical activity in persons with multiple sclerosis (MS).
Objectives: The present study examined the efficacy of the same Internet intervention in persons with MS using both objective and self-report measures of physical activity.
Methods: Participants ($N=21$) wore an accelerometer around the waist for seven days and then completed the International Physical Activity Questionnaire (IPAQ) and Godin Lesiure-Time Exercise Questionnaire (GLTEQ) before and after receiving the 12-week Internet intervention.
Results: The Internet intervention resulted in moderate increases in accelerometer activity counts ($d=0.68$) and steps counts ($d=0.60$), and this was paralleled by small increases in IPAQ ($d=0.43$) and GLTEQ ($d=0.34$) scores. The number of weeks that persons logged-in was correlated with change in accelerometer activity counts ($r=.42$) and step counts ($r=.37$), but not change in IPAQ ($r=.10$) or GLTEQ ($r=-.08$) scores.
Conclusions: The novel contribution of this study was the observation that an Internet intervention was efficacious for increasing physical activity in persons with MS using both objective and self-report measures.

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MODIFIABLE CORRELATES AND CONSEQUENCES OF SELF-ESTEEM IN PERSONS WITH MULTIPLE SCLEROSIS

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Background: Very little is known about the antecedents and consequences of self-esteem in persons with multiple sclerosis (MS). An exploration of the factors associated with self-esteem in persons with MS may provide important information about approaches for improving the health and well-being of this population.
Objective: The present study identified potentially modifiable correlates and the consequences of self-esteem in a sample of inactive persons with MS.
Methods: Participants (N=46) wore an Actigraph accelerometer for seven days and then completed a battery of questionnaires, as part of the baseline assessment for an ongoing randomized controlled trial in persons with MS. The questionnaire battery included the Rosenberg Self-Esteem Scale (RSE) as a measure of global self-esteem, the Multiple Sclerosis Impact Scale (MSIS) as a measure of the physical and psychological domains of health related quality of life, and the Social Provisions Scale (SPS) as a measure of social support. The data were analyzed using bivariate correlation and multiple linear regression in SPSS 17.0.
Results: Bivariate correlation analysis indicated that average daily step counts (r=.29, p=.024) and social support (r=.34, p=.01) were significantly correlated with self-esteem. Multiple linear regression analysis indicated that only social support was a significant predictor of self-esteem scores (β=.289, p=.025); pedometer steps approached significance as a predictor of self-esteem (β=.227, p=.061). Bivariate correlation analysis further indicated significant negative associations between self-esteem and physical (r=−.39, p=.004) and psychological (r=−.51, p=.00) domains of health related quality of life.
Conclusions: Social support and physical activity represent possible modifiable targets of interventions for increasing self-esteem in persons with MS, and this might have implications for improving physical and psychological health related quality of life in this population.

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PHYSICAL ACTIVITY IN YOUNG ADULTS: A SIGNAL DETECTION ANALYSIS OF HEALTH INFORMATION NATIONAL TRENDS SURVEY 2007 DATA

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Many young adults are insufficiently active to achieve the health benefits of regular physical activity (PA). This study examined distinct subgroups of young adults that vary in their likelihood of not meeting PA recommendations using signal detection methodology. Participants (n=1619) were young adults, 18–39y, drawn from the nationally representative Health Information National Trends Survey 2007. Overall, 62% were not meeting PA recommendations. The sample was randomly split and signal detection analysis was conducted on the exploratory half to identify subgroups and higher-order interactions among sociodemographic and communication variables that predicted engaging in <150 minutes of moderate-intensity activity/week. Rates of insufficient PA among subgroups were compared with similarly defined subgroups in the validation sample. Among the nine subgroups identified, frequency of not meeting recommendations ranged from 31%–90%. Predictors of insufficient PA were general health, BMI, health-related Internet use, trust in information sources, and perceived cancer risk. The subgroup with the highest proportion of individuals not meeting recommendations (90%) were young adults in poor-good health with BMI≥ 30.8, while the subgroup with the next highest rate (83%) included individuals in poor-good health with BMI<27.9 who perceived their cancer risk to be very low-moderate and had not communicated with a doctor via Internet. The subgroup with the lowest rate of insufficient PA (31%) comprised those in very good/excellent health who used a website to help with diet, weight or PA and had no/little trust in health information on television. Rates of not meeting recommendations were comparable between the exploratory and validation samples when stratified by subgroup (p= 0.56). Signal detection analysis is useful for exploring subgroups that are insufficiently active. Study findings suggest potential intervention communication channels and may inform the development of targeted interventions for young adults.

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WEEKDAY AND WEEKEND PATTERNS OF PHYSICAL ACTIVITY IN OLDER ADULTS

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Current guidelines for assessing physical activity in free-living adults recommend measuring both weekday and weekend energy expenditure. There has been debate, however, whether these guidelines are appropriate for retirement-age adults. As these individuals may have decreased variability in physical activity between weekdays and weekends, measuring both times may be unnecessarily burdensome for both the participant and researchers in terms of cost and time. We addressed this issue by comparing intra-individual variability in physical activity over weekdays and weekends in older (age≥65) and younger (age<65) adults. Sensewear WMS armband accelerometers were used to measure both weekday and weekend physical activity and to calculate energy expenditure in a sample of 171 obese adults (mean age=52.7; mean BMI=36.1; 69.9% female). No significant differences were found between older and younger adults' variation in activity by weekday/weekend, p=.171. Follow-up analyses showed that the mean change in energy expenditure was similar by group (older adults experienced a mean decrease in energy expenditure of 93 kcal/day on weekends compared to weekdays while younger adults experienced a decrease of 114 kcal/day), and both had similar correlations between weekday and weekend energy expenditure (rs=.85 and .82 for older and younger adults, respectively). Taken together, these results suggest that older, retirement-age adults experience a similar weekly pattern of energy expenditure as younger adults, including a significant decrease in calories expended on weekends compared to weekdays. Researchers measuring physical activity in older adults should continue to assess energy expenditure on both weekdays and weekends.
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EXAMINATION OF CYCLING PERCEPTIONS AT AN URBAN COLLEGE CAMPUS

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Second only to walking, cycling is a preferred method of active commuting. Employees (faculty/staff; n=197) and students (n=263) from a large urban university participated in an online study related to cycling behavior and perceptions. Perceptions of cycling were assessed using existing measures (Gatersleben & Appleton, 2007; Rissel & Bauman, unpublished). Controlling for distance from home to campus, results of a 2x2 (sex x school affiliation) MANCOVA revealed significant main effects of sex, F(6, 450)=7.21, p<.0001, $\eta 2$=.088, and University affiliation, F(6, 450)=4.70, p<.0001, $\eta 2$=.059. Despite similar rates of cycling behavior between sexes, women endorsed more negative views of cycling (e.g., "It is very frustrating sharing the road with cyclists"; p<.0001) and greater concern about cycling-related hygiene (i.e., showering at school/work, appearance after cycling); p<.0001). Additionally, men reported greater self-identification with cycling behaviors (p<.0001). Employees were more likely to endorse greater safety concern (p=.022), but also more pro-cycling attitudes (p=.006) than students. Students reported more concern about cycling-related hygiene (p=.002) and negative perceptions of cycling (p=.012) than employees. These data were reexamined by including only those participants who could reasonably cycle to campus (i.e., living <10 miles from campus). Results supported the previously reported main effect of sex, F(6,289)=5.00, p<.0001, $\eta 2$=.094. Although the main effect of University affiliation was no longer significant in the model (p=.121), examination of univariate analyses revealed significant differences related to hygiene concerns (p=.017), negative perceptions of cycling (p=.023), and pro-cycling attitudes (p=.025). Overall, the current results demonstrate a need to tailor cycling promotion campaigns on college campuses according to sex and University affiliation. Results also highlight the importance of targeting employees and students who live within a "bikeable" distance.

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EFFECTS AND MEDIATORS OF A SOCIAL COHESION INTERVENTION TO INCREASE PHYSICAL ACTIVITY AND IMPROVE DIETARY HABITS IN WOMEN OF COLOR: HEALTH IS POWER

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Physical inactivity and poor dietary habits (DH) are vexing problems among minorities, with women of color most vulnerable to obesity and related behaviors. The purpose of Health Is Power (HIP) was to determine the effects of a 6-month group cohesion physical activity (PA) or DH intervention and determine whether the effect of the intervention was mediated by changes in group task or social cohesion and expected associated changes in social support, self-efficacy, and motivational readiness. African American and Hispanic or Latina women (311 in Houston; 99 in Austin; M=44.4 yrs; M BMI=34.0 kg/m2) were randomized to ethnically matched, identical interventions promoting PA or DH and were assessed on the IPAQ long form, the NCI fruit and vegetable (FV) and fat screeners, the PA Group Environment Questionnaire and a 7-day accelerometer protocol. The direct and mediated effects of the intervention on these outcomes were evaluated using path analysis and a mediational chain model controlling for baseline values, ethnicity, income, education, and attendance as covariates. Paired samples t-tests showed that IPAQ PA and FV consumption increased and fat consumption decreased significantly following the 6-month intervention (ps<.001). The PA intervention increased task cohesion, which led to hypothesized increases in psychosocial factors. Improved motivational readiness led to increased IPAQ PA scores (p=.016). While improvements in other psychosocial factors were related to behavior changes (ps<.05), these effects were unrelated to intervention type. HIP had beneficial effects and improved the quality of life of participants, regardless of ethnicity. Group cohesion interventions may provide some benefit for improving health habits in women of color. Funded by NIH 1R01CA109403.

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IS THERE A CURVILINEAR RELATIONSHIP BETWEEN EMOTION-FOCUSED COPING AND EXERCISE?

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Excessive exercising can be maladaptive, and studies relate compulsive exercising to a number of traits and attitudes, such as neuroticism. The effect of emotion-focused coping, a tendency to fixate on the emotional aspect of a situation, on a number of health-related outcomes has been widely studied. The authors of the present study predicted a curvilinear relationship between emotion-focused coping and exercise behavior. It was hypothesized that individuals with low and high levels of emotion-focused coping would engage in more frequent and longer exercise activities than those with moderate levels. Furthermore, it was hypothesized that neuroticism would strengthen this relationship. Participants were older adults with osteoarthritis (OA), which is marked by chronic pain and stress. A general linear model tested emotion-focused coping styles, exercise frequency, exercise duration, and neuroticism, while controlling for family income and problem-focused coping style. Emotion-focused coping did not have the hypothesized curvilinear relationship with exercise frequency (F(1,239)=.002, p=.965) or exercise duration (F(1,239)=.386, p=.535). Neuroticism did not significantly moderate a linear relationship between emotion-focused coping and either duration (F(1,239)=.310, p=.578) or frequency (F(1,239)=.179, p=.681) of exercising. Neuroticism did not significantly affect the relationship between emotion-focused coping and exercise frequency (F(1,239)=1.763, p=.186) or between emotion-focused coping and duration (F(1,239)=1.738, p=.189). However, there was a tendency for individuals with moderate levels of emotion-focused coping style to exercise longer and more frequently than those who had lower and higher levels of emotion-focused coping and for this relationship to be weakened as a function of neuroticism. Thus the results do not confirm the hypothesis, but are not inconsistent with it. Future research is needed to identify moderators that significantly affect the relationship between emotion-focused coping and exercise behavior.

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DEVELOPMENT OF AN EXERCISE INTERVENTION FOR COMORBID DIABETES AND DEPRESSION:INITIAL RESULTS AND LESSONS LEARNED

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Type 2 diabetes mellitus (T2DM) is a significant problem affecting 7.8% of adults. Depression is often comorbid with T2DM and associated with poor glycemic control. Exercise is recommended to improve glycemic control, is an effective depression treatment and thus could be a parsimonious treatment for depression and glycemic control. We aimed to develop a group exercise intervention for women with comorbid depression and T2DM that integrates strategies from an efficacious therapy, behavioral activation (BA), to improve depression, glycemic control and exercise maintenance. We used a variety of strategies to assist with intervention refinement including conducting a pre-pilot of the intervention that:1)varied the structure and format of groups 2)exposed participants to different exercises 3) piloted intervention materials and 4)enabled the PI to co-lead groups and train the leader. Key informant interviews were conducted.
Results of the 4-week pre-pilot (n=5) showed that BDI depression scores decreased from 25.4 at baseline to 6.2 (t=6.5,p<.01). Exercise enjoyment increased from 88.0 to 100.8, although the increase was not significant, likely due to low power (t=−1.65,p=.17). Attendance was 82% and treatment acceptability was high (mean of 31 items rated on a 1–5 scale, where 5=very satisfied, was 4.7). While the intervention, as developed, reduced depression and was acceptable, participant feedback helped refine the intervention. Key lessons included: participants preferred longer visits over a longer period of time and wanted more time to develop their skills with each exercise activity, participants were unaware of and interested in basic exercise knowledge and BA strategies were beneficial, but needed more integration into groups. Use of aforementioned treatment development strategies is recommended for novel interventions as investigator instincts and experiences may differ from participant preferences on intervention components.

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GREAT EXPECTATIONS AND FALSE DAWNS: CAN PLACEBOS BE USED TO ENHANCE PHYSICAL HEALTH AMONG ADOLESCENTS?

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It has been proposed that the well-known health benefits associated with exercise can be explained by the placebo effect, and that greater effort should be given to convince people that their current behaviors have desirable health consequences (Crum & Langer, 2007). The overall purpose of this study was to test the 'mind-set matters' hypothesis presented by Crum and Langer with adolescents. The study involved a four-week randomized controlled trial with 348 Grade 9 adolescents, from four high schools, taking part in either a placebo-intervention condition (n=188) or a control condition (n=160). Participants in the placebo-intervention condition were informed that what they are already doing in school physical education lessons fulfills current recommendations for an active lifestyle. Participants in the control condition were not given this information. Four weeks after the intervention, and contrary to the findings reported by Crum and Langer with female hotel workers, adolescents in the placebo-intervention condition did not demonstrate significant changes in physiological health-related measures (including weight p=.81,η2=.00; BMI p=.23,η2=.00; %body fat p=.10, η2=.01; resting HR p=.35,η2=.00; Mean Arterial Pressure p=.427,η2=.00). Subgroup analyses based on those identified as 'overweight' (cf. Cole et al, 2000) revealed comparable effects to those found for the main sample (weight p=.67, η2=.00; BMI p=.64,η2=.00; %body fat p=.39,η2=.01; resting HR p=.57,η2=.01; Mean Arterial Pressure p=.33,η2=.03). The findings question the external validity of the mind-set matters hypothesis with adolescents, and suggest that simply encouraging adolescents to believe that they are healthy may not enable them to actually become healthy.

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EXPERIENTIAL VERSUS GENETIC ACCOUNTS OF INACTIVITY: IMPLICATIONS FOR INACTIVE PARTICIPANTS' SELF-EFFICACY BELIEFS AND INTENTIONS TO EXERCISE

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The purpose of this study was to examine the effect of deterministic media reports, linking genetics to inactivity, in relation to inactive people's social cognitions concerning physical activity involvement. Sixty three inactive university students were randomly allocated to one of three conditions (C=control, GP=genetically-primed, EP=experientially-primed) and completed measures of instrumental attitudes, self-efficacy, and exercise intentions. One week later participants in the two experimental conditions (GP,EP) were provided with a bogus newspaper report that either reflected a genetic or experiential basis for inactivity. Shortly afterwards, participants in all three conditions completed the same measures as at pre-test. A series of ANCOVAs were conducted to examine the effects of the interventions in relation to each dependent measure at Time 2, after controlling for Time 1 scores as a covariate. The results revealed that for self-efficacy there was a significant intervention effect, $\eta 2=.198$, p=.001, with participants in the E condition reporting significantly higher levels of self-efficacy than those in either the GP (p=.001) or C (p=.002) conditions. There was no difference between the GP and C conditions (p=.846) for self-efficacy. For exercise intentions there was a significant intervention effect, $\eta 2=.123$, p=.018, with participants in the EP condition reporting significantly greater intentions to exercise than those in either the GP (p=.041) or control (p=.006) conditions. There was no difference between the GP and C conditions (p=.358) for intentions. Finally, there was no intervention effect for instrumental (p=.081) attitudes. Taken together, the results suggest that reports of genetic determinism within the media may result in inferior health-related social cognitions among inactive populations, when compared to more experiential accounts.

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PREDICTORS AND OUTCOMES OF PHYSICAL INACTIVITY OVER TIME IN TYPE 2 DIABETES

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Increasing physical activity improves glucose control and cardiovascular (CV) risk in patients with type 2 diabetes (T2DM). We analyzed data from the Detection of Ischemia in Asymptomatic Diabetics (DIAD) Study in order to identify factors that predict physical inactivity (PI) and the association of PI with CV events (cardiac death, acute coronary syndrome and revascularization). Men and women with T2DM (n=974) age 50 to 75 without a baseline diagnosis of coronary artery disease (CAD) were followed over 5 years from 14 North American sites. Baseline assessment of sociodemographic, diabetes-related and CV risk factors was conducted. Physical activity (PA) levels (hours/weekly) were assessed at 6-month intervals and were later dichotomized ('none'/'any'). The mean age was 61±6.6 years; 45% (n=441) were women and 14% (n=132) were Black. The average diabetes duration was 8.4±7.1 years, the mean HbA1c was 7.0±1.5%, and insulin was used by 22% (n=212). The mean hours of PA at baseline were 3.9±5.3 hours. At baseline 24% (n=236) had no PA; this increased (p<.001) to 33% (n=318) at 5 years. In all 974 subjects, level of education (OR=0.91; 95% CI=0.87, 0.94), baseline PA (OR=3.3; 95% CI=2.37, 4.55), HbA1c (OR=1.14; 95% CI=1.03, 1.25) and BMI (OR=1.05; 95% CI=1.02, 1.07) predicted PI at 5 years. In men, additional predictors included the presence of peripheral neuropathy (OR=1.54; 95% CI=1.02, 2.32) and HDL concentration (OR=1.02; 95% CI=1.002, 1.04). In women, Black ethnicity (OR=1.73; 95% CI=1.01, 2.97) and waist circumference (OR=1.06; 95% CI=1.02, 1.09) also predicted PI at 5 years. The CV event rate was 8.4% (n=94) and those with PI at baseline were 1.6 (95% CI=1.03, 2.5; p=.04) times more likely to experience a CV event. Individuals with T2DM at high-risk of PI over time can be identified by assessing baseline risk factors. Given the known benefits of PA on both glycemic control and CV risk and the ability of PI to predict CV events, these patients may benefit from focused interventions to increase their PA.

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FEELING STATE RESPONSES TO SELF-SELECTED AND IMPOSED-LOAD BOUTS OF RESISTANCE EXERCISE

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There is mounting evidence that, when compared to imposed-intensity exercise, acute aerobic exercise performed at a self-selected (SS) intensity is rated as being more pleasant and subsequently fosters greater motivation for regular exercise participation. However, no research to date has directly addressed either of these contentions with resistance exercise (RE). The purpose of this investigation was to examine the feeling state (FS) responses to SS and imposed-load bouts of acute RE. Differences in proxy measures of motivation to participate in SS and imposed-load RE were also examined. Twenty-one (M age=23 years) recreationally-trained women completed acute bouts of RE using loads of 40% of one repetition maximum (1RM), 70% of 1RM, and a self-selected (SS) load. RE consisted of 3 sets of 10 repetitions of 4 different strength training exercises. FS were assessed prior to, during, and following each RE condition. Self-efficacy and intention for regular participation in RE using each load during the next month were also assessed post-exercise. Results of repeated measures ANOVA analyses revealed significant increases positive FS (p<0.05) and reductions in fatigue (p<0.01) following each RE condition. Univariate analyses also revealed that the SS condition was associated with the highest ratings of self-efficacy and intention for future RE participation (p<0.05). The present results suggest that SS and imposed load bouts of RE are associated with similar post-exercise improvements in FS. However, despite experiencing similar post-exercise FS benefits, women reported greater self-efficacy and intention to participate in RE using a SS load. The differences in proxy measures of motivation for future RE participation has valuable practical implications for RE prescription and the design of interventions promoting the maintenance of RE participation in women.

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LONGITUDINAL RELATIONSHIP OF SELF EFFICACY AND EXERCISE FOLLOWING CARDIAC EVENTS

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Self efficacy (SE) for exercise following cardiac rehabilitation (CR) has been shown to decrease as patients leave the structured CR environment. Exercise in the year following CR has also been shown to decrease. Most of what is known about the relationship between SE and exercise has been learned from cross sectional research. It is unclear how the decrease in SE predicts the decrease in exercise across time. In this study we sought to determine how changes in SE and exercise vary together during the year following a cardiac event. As part of a larger prospective longitudinal intervention study, subjects completing CR (n=386) used heart rate monitors for 12 months to measure exercise frequency (# sessions per month). SE was measured four times across the 12 months using the Adherence Self Efficacy scale (McAuley, 1999). Unconditional latent trajectory models (LTMs) were used to estimate initial levels and trajectories of both SE and exercise. Decreasing trajectories for both SE and exercise were confirmed and variance in both SE and exercise trajectories was significant. A single parallel processes LTM was created to estimate initial SE and the change in SE as predictors of the initial level and change in exercise across time. Results showed that baseline levels of SE predicted baseline levels of exercise (.63, p<.01) as well as the slope of exercise (−.029, p<.01). The slope of SE predicted the slope of exercise (.030, p<.01). These relationships held when controlling for age and gender and the effects of the intervention. These findings indicate that following completion of a 12-week CR program, those individuals with higher SE also have higher levels of exercise, and those with higher SE have a slower rate of decline in exercise over the following year. Also, the change in SE across time is positively related to exercise across time. Thus, including strategies for SE enhancement during CR programs is important to increase and maintain long term exercise in cardiac patients. Measurement of SE at completion of CR also can be useful to identify persons at risk for low exercise maintenance.

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OVERCOMING VS. PREVENTING BARRIERS: DIFFERENTIAL EFFECTS OF PLANNING ON PHYSICAL ACTIVITY

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Changing behavior by planning has shown medium to large effects on goal attainment (Gollwitzer & Sheeran, 2006). Understanding the effects of different planning strategies might explain variability in interventions to increase physical activity (e.g., Sniehotta et al., 2005, 2006; Stadler et al., 2009; Sullivan & Rothman, 2008). The present 3-month longitudinal study investigated the effects of two planning strategies on physical activity.
The study randomly assigned 74 young adults to reactive planning (i.e., react when barriers occur), proactive planning (i.e., prevent barriers from occurring) or information control groups. For six days following the planning intervention, participants wore accelerometers recording their number of steps. Data analysis was performed using mixed-effects models controlling for baseline, accelerometer wearing time, and participants' height and weight.
Physical activity at baseline did not differ between groups. Following the intervention, proactive planning increased the number of steps compared to baseline (10291 vs. 9869 steps/day), while reactive planning and receiving information did not (8990 vs. 10188, and 8900 vs. 9582 steps/day, respectively), and increased physical activity compared to reactive planning and receiving information, F(2, 299)=3.944, p=.02. Three months following the intervention, participants in reactive and proactive planning groups engaged in more physical activities (11.08 and 10.57 activities/month, respectively) than participants in the control group (6.46 activities/month), F(2, 51)=9.702, p<.001.
The present study provided evidence for the important role of self-regulatory strategies to increase and maintain physical activity: Proactive planning increased physical activity immediately following the intervention, and both reactive and proactive planning increased and maintained physical activity in the long run compared to receiving information only. More follow-up data is needed to determine long-term effects of planning on physical activity. Further research should investigate the effects of combining reactive and proactive planning on maintaining physical activity.

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IMPACTS OF PHYSICAL ACTIVITY ON GLOBAL QUALITY OF LIFE AMONG ADULTS: MEDIATIONAL AND CHANGE MODELS

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Investigators have documented that the benefits of engaging in physical activity on global assessments of quality of life (QOL) are mediated by changes in psychosocial parameters and health-related judgments of QOL. However, this work has been primarily conducted in older adults. The present study sought to examine these relationships and changes over time in a sample of 288 adults (M age=43.4 yrs., 213 females, 75 males) over the course of a 4-month educational physical activity intervention. Participants completed measures of physical activity, barriers self-efficacy, SF-36, and global QOL at baseline and 16 weeks. Panel model analysis in a covariance framework was used to examine paths at baseline as well as relationship among change at 16 weeks and resulted in a good model fit ($\chi2$ (df=28)=66.3, p<.01; RMSEA<.07; CFI>.95; SRMR=.06). Analyses indicated that physical activity level (β=.27, p<.05) was significantly related to self-efficacy. Self-efficacy was significantly related to mental (β=.29, p<.05) and physical (β=.27, p<.05) health status. However, only mental health status (β=.42, p<.05) was significantly related to global QOL. Overall the model explained 20% of the variance in global QOL. Similar patterns were observed for changes in the variables after controlling for stability coefficients and the model explained 67% of the variance in changes in global QOL over 16 weeks. Results support previous work in the area and extend the findings into an adult population. However, the relationships between physical health status and global QOL were not significant in this relatively healthy sample of adults suggesting age differentiation in contributors to global QOL assessment.

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SELF-EFFICACY AND MOBILITY PREDICT FUNCTIONAL LIMITATIONS IN OLDER WOMEN

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Aging is associated with declines is physical functioning which may result in disability and limit one's ability to live independently. Functional performance, self-efficacy (SE), and physical activity (PA) have been consistently shown to be related to functional limitations in older adults. Determining whether these factors predict functional limitations may be useful to identify high risk individuals and use as targets in interventions to reduce the risk or delay the onset of disability. Additionally, little research has been conducted to determine how different types of SE are related to functional limitations. To explore these questions, we prospectively examined the effects of PA, SE for walking (SEW), gait SE (GSE), and functional performance measures (8 foot up-and-go, obstacle walk and 7 meter walk) at baseline on perceived functional limitations 15 months later in a sample of older women (M age=70.9; 75.4% white).
Hierarchical multiple regression analyses were conducted to examine the independent contribution of each predictor variable on perceived functional limitations. Overall, the model was significant (F (6,171)=37.58, *p*=.00) and explained 55.4% of the variance in functional limitations at follow-up. GSE (β=.25), SEW (β=.30) and performance on the 8 foot-up-and-go test (β=−.32) at baseline significantly (*p*<0.05) predicted perceived functional limitations at follow-up. PA and performance on the 7 meter walk and the obstacle walk did not significantly predict perceived functional limitations at follow-up. These results are consistent with the literature suggesting SE and functional performance are related to perceived functional limitations. They also suggest different types of SE may independently predict perceived functional limitations which may have implications for interventions. Future studies should explore these relationships in other samples and determine how these factors can best be targeted in interventions to reduce the risk of functional limitations.
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BODY IMAGE SATISFACTION DURING PREGNANCY: CONSIDERING ETHNIC DIFFERENCES

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Previous research has linked body image dissatistfaction to disordered eating patterns,negative health behaviors, and depression (Debraganza, 2010, Johnson & Wardle, 2005). Pregnancy is a pertinent time to examine body image satisfaction (BIS) in women due to the significant body changes that occur during this time. Literature on prenatal BIS has found that it remains stable during pregnancy. Women with poor BIS prior to pregnancy continue to have poor BIS during pregnancy. Women with pre-existing body concerns are at a greater risk of impaired well-being during pregnancy (Duncombe, et al 2008). A major limitation of previous BIS research is the lack of focus on ethnic differences. Women from different ethnic backgrounds may vary in BIS. For instance, studies indicate that Black females do not tend to conform to the thin ideal or dieting behaviors typical of White females (Frisby, 2004). This study examines ethnic differences in BIS among women in their third trimester of pregnancy. We hypothesized that Black women would report higher BIS than White women. Sixty-seven women (30 Black, 27 White) aged 18–43 in their third trimester of pregnancy completed a self-report questionnaire assessing 6 different dimensions of BIS (BAQ, Ben Tovim & Walker, 1991). Analyses revealed Black women reported significantly higher total BIS (mean=153.4) than White women (mean=144.9) (t=2.314, df=55, p=.01 , one-tailed, d=.59). An exploratory follow-up examination of the six dimensions of BIS indicated Black women were more likely to feel strong and fit (mean=16.9) compared to White women (mean=14.8) (t=2.298, df=55, p=.01, one-tailed, d=.63). Black women were more likely to feel satisfied with lower body (mean=14.5) than White women (mean=12.3) (t=3.140, df=55, p<01, one-tailed, d=.82). Finally, Black women were more satisfied with their body size (mean=46.9) than White women (mean=42.1) (t=, df=55, p<.05, one-tailed, d=.56). The hypothesis was supported. These findings, can aid developing culturally sensitive treatment protocols and preventative therapies for pregnant women.

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EFFECT OF STRESS ON DIETARY QUALITY DURING THE 1ST TRIMESTER IN LOW-INCOME PREGNANT WOMEN

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Dietary quality during pregnancy has a profound effect on pregnancy outcomes and women in low-income households are more likely to have poor dietary quality. Poor dietary quality in the 1st trimester can adversely affect birth outcomes regardless of maternal nutritional status in the 2nd and 3 rd trimesters. Minimal research exists that assesses factors that may adversely affect dietary quality low-income women during the critical 1st trimester. The aim of this study was to identify the influence of stress, depression, social support, and eating habits on dietary quality during the crucial first trimester of pregnancy using a descriptive design in a clinic-based sample of low-income women (N=93). Women were, on average, 25 years old and 9 weeks pregnant. Most were unmarried (72%), uninsured (45%), and Hispanic (45%). Women in the upper quartile for stress had significantly lower dietary quality (t=3.9), intakes of grains (t=2.9), folate (t=2.1), calcium (t=2.1) but higher percent of calories from fat (t=−2.3), were more depressed (t=−5.0), had less partner support (t=3.1), and skipped more meals (t=−3.9) than women in the lower quartiles. Dietary quality was positively related to support from others (r=.22) and nutritional knowledge (r=.24) but negatively related depression (r=−.32), meal skipping (r=−.38), inadequate food preparation (r=−.26), and episodic stress (r=−.32). Meal skipping, support from others, and nutritional knowledge explained 20 % of the variance in dietary quality with meal skipping accounting for 10% (F=6.5, df=3, 78, p=.001). Health professionals should assess low-income women for depression, presence of stressors, meal skipping, frequency of food preparations and overall dietary quality during the crucial 1st trimester. This assessment may identify women needing more intensive dietary intervention at a time when they may be more receptive to nutritional advice designed to improve dietary quality during rest of the pregnancy which may lead to positive pregnancy outcomes.

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EATING AT FAST FOOD RESTAURANTS AND DIETARY QUALITY DURING THE 1ST TRIMESTER IN LOW-INCOME PREGNANT WOMEN

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Low-income pregnant women are more likely to have poor dietary quality that may increase their risk for adverse birth outcomes than their wealthier counterparts. Frequent fast food consumption contributes to poor dietary quality but little is known about fast food consumption and its impact on the dietary quality in the 1st trimester. The research questions for this study are: 1) What are differences in food and nutrient intake and 2) What are the differences in contextual factors between low-income pregnant women with high and low frequency of fast food consumption? An observational design was used in a sample of women who completed study questionnaires and completed 3 non-consecutive 24-hour dietary recalls. Women (N=93) were on average 25 years old and 9 weeks pregnant. Most were uninsured/underinsured (84%) and Hispanic (45%). Research question 1. Significant differences in food and nutrient intake were noted between low-income pregnant women with high and low frequency of fast food consumption. Women who had a higher consumption of fast foods ate more gravies/sauces, (t=−2.4) and lower intakes of calcium (t=2.7) and folate (t=2.6) than women with lower consumption of fast foods. Although most women did not meet recommended the intake of multiple nutrients important for positive pregnancy outcomes (iron and zinc), women with high frequency of fast food consumption tended to have lower intakes of these nutrients but higher intake of calories (2200 kcal/day vs 2117 kcal/day) and percent of calories from fat (34% vs. 32%) than women with less frequent fast food consumption. Research question 2. Low-income pregnant women with high frequency of fast food consumption were significantly more overweight (BMI 28.3 vs 25.2;t=−2.2), stressed (t=−2.0) and had poorer eating habits (t=−4.3) than women with low fast food frequency consumption. Low-income women in their 1st trimester should have their dietary intake carefully reviewed and be assessed for stress and eating habits that may place them at risk for excessive gestational weight gain and other adverse pregnancy outcomes.

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BLOOD DONATION KNOWLEDGE AND BEHAVIOR IN AN AFRICAN AMERICAN SAMPLE

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Our nation's blood supply derives from volunteer blood donors. Among blood donors (5% of eligible population actually donate), the majority are White (80%), and within the minority subset only 7% are African American (AA). The need for blood donation is even greater for African Americans given higher prevalence of good matches for chronically transfused patients with Sickle Cell Disease (SCD). SCD patients need blood transfusions with strict antigen matches or immune rejection can lead to potentially life-threatening complications. Thus there is a specific need to increase AA blood donation. Efforts to promote blood donation assume increasing knowledge of the behavior and its risks and benefits is essential to good decision-making. This study developed a Blood Donation Knowledge scale with emphasis on needs for AA population in the context of SCD. Knowledge scores were compared by blood donation history and intention to donate (i.e., Stage of Change from the Transtheoretical Model). Data were collected via internet survey from 566 adult African Americans (64.1% female, Mean age 37.7) from the Northeastern U.S. Donation history ranged from none to more than 20 lifetime. The stage distribution for this sample consisted of 42.9% of the participants being in Precontemplation, 12% in Contemplation, 11.1% in Preparation, and 33.9% in Action (i.e., 2 or more donations per year). The possible range of knowledge scores was 0–22 with participants scoring between 5–16 (M=10.70, SD=2.07). Knowledge scores differed by stage, F(3,562)=23.67, p<.01, η2=.11, with Precontemplators having lower knowledge scores than those in Contemplation and Action. Knowledge scores also increased significantly in concert with donation history, F(5, 565)=16.54, p<.00, η2=.13. Scores on this newly developed Blood Donation Knowledge scale were consistent with both actual donation history and intentions to donate in expected patterns. Yet even donors in Action averaged only 11.6 out of 22 possible items highlighting the need for improved education in the AA population.

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MEASURING INFORMED DECISION MAKING RELATED TO PROSTATE CANCER SCREENING IN PRIMARY CARE

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Purpose: The extent of informed decision making (IDM) during a patient-physician encounter can impact decision making by patients. The purpose of this study was to document the level of IDM related to prostate cancer screening. A secondary purpose was to determine the feasibility and reliability of our methodological approach. We discuss the features of this approach in relation to other methods for coding physician-patient interactions, and summarize its utility to the fields of both health communication coding and prostate cancer screening.

Methods: In a randomized controlled trial of an informed decision making intervention about prostate cancer screening, we audiotaped 146 patient-physician encounters. Each encounter was coded for nine elements of IDM by trained coders. We used two coders per audio recording, averaging discrepant scores and adjudicating observed differences between coders. We then estimated the reliability of the IDM measure.

Results: Total IDM-9 scores ranged from 0 to 7.5 (mean=2.7, SD=2.1). Among the nine IDM elements, the nature and context of the decision (prostate cancer screening) were the two elements discussed most frequently during the patient-physician interaction. Reliability of the nine-item IDM scale was high (Spearman-Brown reliability=0.90).

Conclusions: This study documented low levels of IDM about prostate cancer screening. We also demonstrated the feasibility and enhanced reliability of coding IDM about prostate cancer screening. The approach used here allows for accurate measurement of essential elements of IDM and can facilitate the evaluation of interventions designed to affect physician-patient communication.

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FACTORS INFLUENCING PERCEPTIONS OF RISK FOR HPV CONTRACTION AMONG NEW AND EXPECTANT PARENTS

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The human papillomavirus (HPV) is the most common sexually transmitted infection in the US. Being in a presumably monogamous relationship can reduce perception of risk, yet does not actually eliminate risk of this highly prevalent STI as the virus's presentation is often transient, asymptomatic, and can lie dormant for long periods of time. We propose that perception of HPV Risk will negatively correlate with relationship and personal adjustment, and positively correlate with degree of knowledge about HPV. We expect that differences will be seen among individuals that view themselves as having no risk versus some risk of contracting HPV. Baseline survey data from a larger community study sample of new and expectant parents was used. Our final sample (N=101; M_{age}=28 years, SD_{age}=5.53 years) consisted of survey participants who were primarily women (86%), Caucasian (85%), obtained a Bachelor's degree or higher (50%), had at least had one (50%) or no children (34%), and married (75%). Perceptions of HPV risk were higher for those who reported that their partner had a history of STDs and HPV (r=.41, p<.001; r=.78, p<.001, respectively), and lower for those who reported themselves as faithful (r=−.21, p<.05) and perceived their partner to be faithful since their relationship began (r=−.23, p<.05). Differences were seen between individuals who felt they were at no risk compared to those who felt at some risk of contracting HPV, with no risk individuals reporting higher trust levels t(98)=2.01, p<.05, d=.48, faithfulness t(25.60)=3.50, p<.01, d=.94, and secure adult attachment t(98)=−1.96, p=.05, d=.50, compared to their some risk counterparts. Defining what HPV is might not be enough; healthcare professionals should also focus on the qualities that make HPV unique to many of the other commonly known sexually transmitted diseases, discuss an individual's options if they or their partner has ever been exposed to the virus, and make people aware that feeling secure and trusting that your partner is monogamous may not completely protect them against this virus.

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IMPACT OF FAMILIAL RISK ASSESSMENT FOR CHRONIC DISEASES ON PERCEPTIONS OF RISK AND WORRY: A STUDY OF DOSE AND DISEASE EFFECTS

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Communication of risk for multiple diseases simultaneously is growing increasingly common with the advent of familial and genomic approaches to assess disease risk. Yet, psychological and behavioral responses to this "multiple disease risk" information may vary based on dose (# of diseases) or disease effects (disease type). This study sets out to examine the impact of communicating risk for multiple diseases on perceptions of risk and worry. Data are drawn from the Family Healthware Impact Trial (FHITr), a cluster-randomized trial to evaluate the effects of a self-administered web-based family history tool that assesses familial risk for six common, chronic conditions. A total of 3786 patients were enrolled in FHITr. Perceived risk and worry for each disease was assessed at baseline and six-month follow-up. Summary indices were created for perceived risk and worry across diseases, by gender. Overall, participants were identified at elevated familial risk for 0 (18%), 1 (23%), 2 (24%), 3 (23%), 4 (10%), 5 (2%), or 6 (1%) diseases. Under a mix-models regression framework adjusting for practice clustering, dose effects were observed for perceived risk; the more diseases one was at risk for, the greater the perceptions of risk at follow-up (p<.05 for men, p<.0001 for women). When all diseases were entered into a stepwise regression model, only diabetes familial risk remained a significant predictor of follow-up risk perceptions among men; whereas familial risk for heart disease, diabetes, and breast cancer were independently significantly associated with perceived risk among women (ps<.05). Dose and disease effects were not observed for worry perceptions. Study findings shed light on the potential dose and disease effects of providing multiple disease risk feedback to individuals based on familial assessment approaches.

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MULTI-COMPONENT VULNERABILITY ESTIMATES OF HEALTH THREATS: PREDICTING PSYCHOSOCIAL AND BEHAVIORAL OUTCOMES FOR THE SEASONAL FLU AMONG HEALTHY ADULTS

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Vulnerability to health threats is commonly measured by asking people to estimate the threat likelihood numerically (0–100%) or verbally (not vulnerable-extremely vulnerable). Previous research (Baldwin & Windschitl,2010) found that vulnerability estimates contain two distinct components: objective and intuitive (or gut feeling) vulnerability. We sought to test whether statistical and intuitive estimates of vulnerability predicted unique aspects of worry and concern with the flu, vaccination intention, and subsequent vaccination. Healthy adults (N=311) were randomly assigned to one of three types of vulnerability questions. In the juxtaposed condition, participants were asked to estimate both their statistical (0–100%) and their intuitive (0–100%) likelihood of getting the flu without a flu shot. In the statistical and verbal conditions, they answered standard questions in which they reported statistical (0–100%) or verbal estimates (not at all likely-very likely), respectively. All participants reported their concern and worry about the flu and vaccination intention. Four to six months later, they reported whether they received a flu shot. Statistical estimates were stronger predictors than intuitive estimates of worry (B=.41,p<.001 vs. B=.07, p=.43), concern (B=.49,p<.001 vs. B=.05,p=.54), and vaccination intention (B=.47,p<.001 vs. B=.15,p=.22) when entered simultaneously in regression models. In contrast, intuitive estimates were slightly more effective predictors of vaccination (OR=1.28, 95%CI=1.06–1.54) than statistical estimates (OR=1.22, 95%CI=1.03–1.45), although neither added significantly beyond the prediction of the other when entered simultaneously (ps>.13). Also, juxtaposed estimates predicted all outcomes as strongly as standard statistical and verbal estimates (ps>.093). The findings suggest that statistical and intuitive estimates predict psychosocial and behavioral outcomes differently. Implications for vulnerability assessment and prediction will be discussed.

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CORRELATES OF SEXUAL SATISFACTION AMONG WHEELCHAIR USERS

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Research indicates that sex life satisfaction among the general population is related to many factors including demographics, physical and emotional health, relationship quality, and individual preferences. For the approximately 2.2 million wheelchair users in the U.S., these factors, as well as disability-related factors, may impact sex life satisfaction. This study examined correlates of sex life satisfaction among 129 wheelchair users (M=44.6 yrs, 50.4% female) enrolled in Project Workout on Wheels, a year-long home-based exercise intervention. Measures included the Center for Epidemiology Scale for Depression, Lee Fatigue Scale, Short Form Health Survey (SF-36) Pain subscale, and single items from the Quality of Life Index and the Participation Survey (PARTS). Baseline data was used for analyses. Marital status (r=.22), age (r=−.24), education (r=−.21), choice in intimacy compared to others without disabilities (r=−.47), severity of bladder (r=−.28) and bowel (r=−.22) problems, and depression (r=−.26) were related to sex life satisfaction. Satisfaction with aspects of personal life, including spouse, lover or partner (r=.43), emotional support from family (r=.25), personal appearance (r=.31), participation in socializing (r=−.25), intimacy (r=.72), and communication activities (r=−.22) were also significantly related to sex life satisfaction. SEM was used to investigate the combined effect of all predictors. The model had acceptable fit, $\chi2(144)=234.11$, p<.001, CFI=.95, RMSEA=.07. Energy, satisfaction with spouse, lover or partner, and satisfaction with participation in intimacy were positively related to sex life satisfaction; satisfaction with choice in intimacy was marginally positively related. Severity of bladder symptoms was negatively related. Results suggest that psychological interventions may be able to improve sex life satisfaction among wheelchair users through addressing relationship-related factors.

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"THINK IT OVER, BABY" A PARENTING SIMULATION ACTIVITY FOR MIDDLE SCHOOL AFRICAN AMERICAN GIRLS

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The rates of adolescent pregnancy and births during the past three years significantly increased in the United States (Martin et al., 2009). African American adolescents experienced the largest increase after more than a decade in which the rate was declining. One approach directed toward reducing the teen birth rate and prevent/delay teens from engaging in sexual behavior has been a simulation of the parenting experience using a computerized infant simulator. The simulation experience is designed to help teens contemplate the reality of being an adolescent parent with the infant simulator mimicking the behavior of a real baby. Using the Theory of Reasoned Action, the aims of this study were to: 1) assess the impact of a parenting simulation on middle school African American girls' attitudes toward adolescent parenting, and 2) explore girls' views on self-perceived parenting skills pre and post the simulation experience. The 2.5 day parenting simulation activity served as one arm in a pregnancy prevention randomized trial (5RO1HD039757). A pre-post test design was utilized with a sample of 103 African girls recruited from 5 middle schools located in Western Pennsylvania. As participants, girls completed a 15-item simulation questionnaire 5–7 days before and after the simulation experience. Using PSAW Statistics 18, descriptive statistics, and a nonparametric version of the T-test were generated. The mean adolescent parental attitudinal score prior to the simulation experience was 12.3 (S.D. 2.3) compared to a less positive mean score of 13.8(S.D. 2.2) post simulation p=.000. Five themes related to girls' perceived parenting skills emerged: physical and emotional development; inconvenient/ break in routine; no change; negative/positive change; and the future. Attitudes toward adolescent parenting significantly changed due to the parenting simulation activity. Girls' views related to parenting skills can help researchers modify interventions designed to assist middle school African American girls' delay or abstain from engaging in early teen sexual behavior.

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RISK AMBIGUITY: ASSOCIATION BETWEEN PERCEIVED RISK AND HIV TESTING AMONG AFRICAN AMERICAN ADOLESCENT FEMALES

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African American adolescent females are particularly vulnerable to HIV. A recent public health strategy designed to curtail the HIV epidemic is referred to as "test and treat." Testing allows seropositive persons to receive early medical intervention and possibly leads to a reduction in HIV risk behaviors. The aims of this study are to determine the association between perception of HIV risk and HIV testing, and to determine factors related to HIV testing. Data were collected from 701 African American adolescent females (M=17.64, SD=1.67). HIV testing behavior, perceived level of risk for HIV/STDs, sexual history and related demographic variables were collected via ACASI prior to randomization in an STD/HIV prevention trial. Approximately 25%(n=178) reported "low perceived risk" for HIV/STDs, 7.4% (n=52) reported "high perceived risk", and 67.2% (n=471) were "unsure" regarding their level of risk (67.2%, n=471). Findings indicate an association between perceived risk level and receiving an HIV test (p=.015). Self-reported HIV testing rates were: 83.7% (n=149) among those with low perceived risk, 80.8% (n=42) among those with high perceived risk, and 73.2% (n=345) among those who were unsure about their risk. Using ANOVA we tested for differences among the risk levels and self-reported sexual behaviors. Tukey post-hoc comparisons indicated adolescents unsure of their perceived risk level had significantly more sex partners in the past six months (M=2.39) compared to adolescents with low perceived risk (M=1.58, p=.001). There were no differences between those who were unsure of their risk status and those with high perceived risk (M=2.27). African American adolescent females who exhibited risky sexual behavior while being unsure of their risk level were not getting tested as often as those whose perceived risk was consistent with their self-reported risk behavior, either high or low. Future interventions should target adolescents who are unsure of their risk and may not perceive themselves as the intended audience of HIV testing messages.

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EFFECTS OF MARIJUANA ON CONDOM USE INTENTIONS AND BEHAVIOR AMONG JUSTICE INVOLVED YOUTH

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Justice involved youth have higher rates of risky sexual behavior, are at greater risk for STDs including HIV/AIDS, have higher rates of unplanned pregnancies, higher rates of lifetime and recent sexual partners and have higher rates of illicit drug use. The Theory of Planned Behavior (TPB) has often been used to examine risky sexual behavior amongst justice involved youth and empirical indicate support for the validity of the model as well as its use as the basis of the development and evaluation of interventions to decrease risky sex. Given the high rate of marijuana use among justice-involved youth and the potential influence of marijuana use on risky sexual behavior, the current study aims to build on existing research by examining the influence of marijuana use on the relationships of the TPB, and whether marijuana use might moderate the intention behavior relationship. Participants completed a baseline measure of model constructs (attitudes, intentions, etc.) and prior sexual and substance use behavior. Of the original 720 participants that completed the baseline measures, 649 completed a follow-up 6 months later. There were high levels of marijuana use and risky sexual behavior among these adolescents. The overall model was largely equivalent in both users and non-users, accounting for only slightly more of the variance amongst the users (45%) compared to the non-users (42%). Baseline intentions ($\beta=.19$, $p<.001$, pr2=.02) and attitudes ($\beta=.22$, $p<.001$, pr2=.03) were significant predictors of condom use at the 6 month follow-up. These relationships were not moderated by marijuana use (p's>.05). Results suggest that a theoretical model of condom use intentions and behavior is equally valid regardless of marijuana use, and thus interventions to reduce sexual risk behavior based on the model are appropriate regardless of participants' marijuana use.

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THE EFFECTS OF SENSE OF COHERENCE AND RUMINATION ON SLEEP QUALITY

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Sleep quality is a problem for many adults. Poor sleep quality impacts daily function and overall health (American Academy of Sleep Medicine, 2008). The purpose of this study was to determine the effects of sense of coherence (SOC) and rumination on sleep quality. Rumination was measured as a mediating variable. Participants completed an on-line survey through snowball sampling and age ranged from 30–65 years. The majority of participants were female, 64.5% (n=136), and most participants were Caucasian, 92.2% (n=188). Results indicted a significant difference with rumination and gender t(209)=3.02, p=0.002. Structural equation modeling was used to determine the strength of the effects of SOC on sleep quality. Four path analyses were conducted: the SOC Sleep Quality Model that had a direct pathway between SOC on sleep quality, the Rumination Mediator Model that included rumination mediating SOC and sleep quality, the Complex Model that combined both the SOC Sleep Quality and Rumination Mediator Model, and the Comprehensive Model that incorporated the Complex Model and included sleep hygiene. The results indicate the SOC Sleep Quality Model had the best model fit. Rumination acting as a mediator did not strengthen the relationship between SOC and sleep quality, and sleep hygiene did not strengthen the overall model fit. It is possible that SOC may act as a mediator between rumination and sleep quality. More research is needed to determine the relationship between SOC and sleep quality and SOC and rumination. Sleep specialists and health educators may provide better resources for patients with sleep quality problems. The improvement of sleep quality will lead to better overall health and daily functioning.

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IMPACT OF PHYSICIAN ADVICE TO QUIT SMOKING IN CANCER PATIENTS

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We examined whether or not physician advice to quit smoking prior to cancer surgery contributed to patients' abstinence at hospitalization.

Within the context of a randomized trial, smokers newly diagnosed with cancer and scheduled for surgery (N=185) were recruited from 7 oncology clinics, each treating a different cancer type . Patients received NRT and counseling. We collected biochemically verified 24-hour point abstinence rates before hospitalization and baseline patient-reported advice from care providers (PA): "Did any physician or nurse 1) Discuss your smoking? 2) Advise you to stop smoking? and 3) Discuss risks of continued smoking or benefits of quitting before surgery?" We examined associations between PA score (sum of 3 items, score range 0–3) and intensity (percentage of physicians delivering all 3 items) and abstinence overall, and stratified by oncology clinic.

Overall abstinence rate at hospital admission was 45% (84/185). Baseline PA scores were 2.34 and 2.24 in abstainers and smokers, respectively (p=0.50). PA intensity was 65% and 62% in abstainers and smokers, respectively (p=0.74). PA intensity appeared to vary by oncology clinic; 87% in Thoracic, 63% Urology, 62% Head & Neck, 55% Gyn, 45% Hepatobiliary & Colorectal, 44% Gastric, and 40% Breast. However, no statistically significant association was found between PA intensity and abstinence rates, which were 61% in Urology, 47% Gastric, 43% Thoracic, 41% Breast, 41% Gyn, 41% Head & Neck, and 25% Hepatobiliary & Colorectal.

Although not statistically significant, these data suggest considerable variability in oncologist cessation advice and adherence to recommendation for pre-surgical smoking abstinence rates across different cancer types. Future studies with larger sample sizes should investigate providers' cessation counseling behavior as well as knowledge, beliefs and attitudes about smoking abstinence prior to surgery.

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RESISTANCE TRAINING AS AN AID TO SMOKING CESSATION TREATMENT: A PILOT STUDY

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It is currently estimated that 20.6% of U.S. adults smoke cigarettes. Results from previous large-scale trials indicate that exercise is helpful for smoking cessation, as it positively impacts known predictors of relapse (e.g., weight gain, negative affect). The majority of these trials, however, have focused only on women, and only on aerobic exercise. Resistance training (RT) may also offer smokers a beneficial adjunctive strategy to quit smoking, as it too can favorably affect factors related to relapse. The purpose of this pilot study was to determine the effect size of using a RT program to aid smoking cessation in a sample of 25 male and female smokers. All received brief smoking cessation counseling and the nicotine patch prior to being randomized into either a 12-week RT (2 sessions/week) or contact control group. Subjects were 36.5 yrs (SD=12.0) of age and smoked for 19.1 yrs (SD=12.0). The sample was 53.8% female, 46.2% minority, with 65.4% having completed some college, and 69.2% having a household income<$50,000. At the 12 week post-treatment, objectively verified 7-day point prevalence abstinence rates were 46% for the RT group vs. 17% for contact control (OR 4.3, 95% CI: 0.7–27.8). Prolonged abstinence rates were 16% vs. 8% (OR 2.0, 95% CI: 0.2–25.4). RT subjects had a mean decrease in weight of 0.6 kg (SD=1.72) compared to an increase of 0.6 kg (SD =2.8) in the control. There was also a decrease in average body fat of 0.5% (SD=1.8) in the RT group compared to an increase of 0.6% (SD=0.7) in the control. Lastly, depression scores (CES-D) remained stable in the RT group (decreased 0.1, SD=8.3), but slightly changed in the control (increased 0.7, SD=5.6). To date, we are unaware of any other study to examine the use of a RT program as an aid to smoking cessation treatment. A larger, adequately powered trial is warranted given the promising results suggesting that RT may enhance short-term smoking cessation for men and women.

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PATTERNS AND PREDICTORS OF SMOKING IN LOW-INCOME AFRICAN-AMERICAN AND HISPANIC ADULTS WITH TYPE 2 DIABETES MELLITUS

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Smoking in people with type 2 diabetes [T2DM] increases the risk of complications such as stroke, heart, kidney and nerve disease. Burden of complications is disproportionately seen in African-Americans (AA) and Hispanics (H). The purpose of this study was to describe patterns and predictors of smoking in these populations focusing on sociodemographic and psychosocial factors in a group of adults attending a Federally Qualified Health Center. Subject characteristics (n=247) included gender (171 F; 76 M); age (53.4±12.3 years); ethnicity (AA [n=132]; H [n=115]), current smoking (AA [28.2 %] vs. H [16.5 %]). Sociodemographic variables included age, gender, education, income, employment, insurance, marital status and BMI; whereas psychosocial variables included quality of life, depression (measured using PHQ-9 scale) and diabetes distress. Logistic regression examining ethnicity as a predictor indicated significance (p=.023) with respect to current smoking. Predictors of smoking status for AA and H were assessed separately. BMI (OR=0.94[95% CI: 0.90–0.99] and gender (OR=2.44 [95% CI: 1.10–5.42]) were significant predictors of smoking status in AA. Specifically, people with greater BMIs were less likely to smoke. Additionally, males were more likely to be smokers. PHQ (OR=1.10[95% CI: 1.00–1.20]) was a statistically significant predictor for Hispanics. Specifically, people who scored higher on the PHQ were more likely to smoke. Since this study is ongoing, further logistic regression analysis, including interaction effects, will be conducted and described with a larger sample size in the presentation. The results of this study provide a better understanding of smoking behavior in these priority populations.

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WHO USES WEB-BASED SMOKING CESSATION COUNSELORS? THE QUIT PRIMO AND DENTAL PBRN STUDIES

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BACKGROUND: The Internet is becoming an important medium for helping smokers quit. In the context of Decide2Quit.org (D2Q), an Internet-based cessation program randomized trial, we compared smokers who opt in to online tobacco treatment specialist (TTS) counseling with smokers who do not, and then characterized the content of the messages.

METHODS: Current U.S. smokers, referred to D2Q by their medical or dental providers or by clicking on a Google advertisement, accessed the online smoking cessation intervention with educational materials, motivational emails, peer support, and optional counseling from a TTS. Smokers using a TTS received advice asynchronously through secure messaging. Each message sent to a TTS was reviewed and analyzed for content; qualitative themes were assigned and reviewed by the investigative team.

RESULTS: 197 smokers logged on and 51 (26%) used TTS counseling. Demographics were similar among TTS users and non-users (72% female, 8% minority, 56% over age 45). TTS users were slightly less likely to be thinking about quitting smoking (63% vs 74% p=0.32). Smokers sent 112 messages (mean per smoker=2.1 (SD 0.3): median=1; range 1–12). The most common themes in the messages were Support and Strategies for Quitting, Talk about Process of Quitting, Reasons to Quit, and Barriers to Quitting.

CONCLUSIONS: Surprisingly, the proportion thinking about quitting was slightly lower in those who used a TTS though not significant. Themes suggest that online, asynchronous counseling is a useful function. Funding for this study is provided through the NCI, grant 1 R01 CA129091 and the NIDCR, grant U01 DE16747 at the National Institutes of Health (NIH).

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DEVELOPMENT OF A BRIEF PERCEIVED SUPPORT SCALE FOR HELPER-LED SMOKING CESSATION

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Smoking cessation quitlines are telephone based services that have become important components of tobacco control efforts in the U.S. Quitlines receive a large number of calls from smokers' family and friends, providing potential for interventions with helpers. In order to evaluate helper-led cessation interventions, it is necessary to effectively measure perceived social support of smokers and helpers in the quitline environment. The present study focused on the development of a new scale that builds upon existing social support measures. Participants were 220 pairs of helpers (nonsmoking women who called a state quitline for their spouses or significant others living in the same household) and smokers (average number of cigarettes per day=15). Helpers had a mean age of 39.4 (SD=12.0) and 25% were college graduates. The sample was ethnically (49% Asian, 26% Hispanic, and 20% White) and linguistically (46% Asian languages, 34% English, and 20% Spanish) diverse. Factor analysis revealed a one factor model containing 9 items. Factor invariance testing showed that the items had the same meaning for helpers and smokers. The scale showed acceptable internal consistency (alpha=0.84 for helpers and 0.78 for smokers). Convergent validity was shown through significant correlations between helpers and smokers on most items (r's=0.19 to 0.47, p's<0.05). This brief scale showed promise for use in social support smoking cessation studies with ethnically and linguistically diverse samples. The findings also indicate that the measure is a valid assessment tool for use over the telephone.

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THE ROLE OF PARENT-ADOLESCENT COMMUNICATION AND PEER SMOKING IN ADOLESCENT BELIEFS ABOUT THE RISKS OF SMOKING AND SMOKING BEHAVIOR

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Objective: Past research suggests that smoking exposure increases the risk of smoking in adolescents by negatively influencing beliefs about the personal harm of smoking; adolescents believe smoking is less personally harmful. We sought to assess whether parent-adolescent communication may protect adolescents who have never smoked a whole cigarette at baseline (age 14) from smoking a whole cigarette 18 months later, by influencing beliefs about the personal and immediate harm of smoking.

Methods: Our sample was 276 14 year olds (50% female, 41% non-Caucasian) taking part in a three wave longitudinal study of antismoking parenting practices and smoking. We controlled for the race, sex, peer and household smoking, parental education, and whether parents warned children of smoking's risks. Data were analyzed with a Structural Equation Model (SEM), with indirect effects estimated using delta method standard errors.

Results: Thirteen percent of participants smoked a whole cigarette at 18 month follow-up. The SEM fit the data well, χ2(28,n=276) =36.50, p=.18. Only peer smoking had a significant direct effect on smoking at follow-up (Beta=.11, z=2.04, p=.04). Regarding the mediators, parent-adolescent communication (Beta=.05, z=4.29, p<.0001) and peers smoking (Beta=−.05, z=−3.89, p<.0001) had significant direct effects on personal immediate harm beliefs. There were no direct effects on general immediate harm beliefs. Regarding indirect effects, peer smoking had a significant positive (Beta=.03, z=2.01, p=.04, 95%CI=.001, .07), whereas parent-adolescent communication had a significant negative (Beta=−.04, z=−2.01, p=.04, 95%CI=−.08, −.001) indirect effect on smoking a whole cigarette at 18-month follow-up.

Conclusions: The findings suggest that one way to possibly counter the significant effect of peer smoking on smoking risk beliefs and smoking behavior is parent-adolescent communication. By keeping communication channels open with youth, parents may be able to influence adolescents' perceptions about the risks of smoking and decrease the likelihood adolescents will smoke.

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QUIT INTENTION AS A PREDICTOR OF QUIT ATTEMPTS OVER TIME IN ADOLESCENTS WITH PSYCHIATRIC DISORDERS

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Rates of smoking among adolescents with psychiatric comorbidity are high. Efforts to understand and facilitate cessation in this high-risk population are needed. A longitudinal clinical trial comparing Motivational Interviewing (MI) and Brief Advice (BA) to quit smoking (Brown et al, 2001) among adolescent inpatients, suggested a positive effect of MI on self efficacy for quitting and the increase in intention to change in those with initially low levels of intentions. The current study extends examined associations between changes in stated intentions to quit smoking over time and subsequent patterns of quitting behavior in 191 adolescent smokers with psychiatric comorbidity. In this longitudinal design, adolescents' intentions to quit smoking were assessed upon hospital discharge and at 1-, and 6-months following discharge. The timeline follow-back was used to capture self-reported quit attempts in the 30 days following each assessment of intentions to quit. Rates of quit attempts at post-hospital, 1-, and 6-month assessments were 23%, 17% and 17%, respectively. Using generalized linear mixed effects models, we examined the relationship between intent to quit and subsequent quitting behavior over time. Adolescents that reported an intention to quit smoking were significantly more likely to report a quit attempt (OR=5.34, 95% CI=2.83–10.1, p<0.001). Rates of quitting did not differ by treatment. Cognitive-motivational factors, psychiatric symptoms, and concurrent treatments influencing intentions to quit will be explored. Given that intention to quit appears to translate to substantial quit behavior over time, and particularly among such a high-risk adolescent population, the implications could include the need to connect this population with adequate services and support as well as follow-up care.

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"MODS", "JUICE", AND "VAPING" OH MY: THE LANGUAGE AND EXPERIENCES OF ELECTRONIC CIGARETTE USERS

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BACKGROUND: Awareness and use of electronic cigarettes (e-cigs) has increased dramatically. These Electronic Nicotine Delivery Systems (ENDS) deliver nicotine through an aerosol comprised usually of water, propylene glycol or glycerin, and flavorings. Scant research exists to evaluate the efficacy and safety of such devices, and only one quantitative survey of European users (N=81) has been published.

PURPOSE: This qualitative study sought to better understand US e-cig users' experiences.

METHOD: Pparticipants attended a "vapers" conference or club meetings in St. Louis, MO and were interviewed individually or in small groups. Traditional qualitative methods were used to code and analyze interview data for both deductive and emergent themes to broad research questions: How do smokers learn about e-cigs? What are the experiences of users who switch from cigarettes to e-cigs?

RESULTS: Even with a relatively small sample of interviews (N=13), saturation was reached quickly. Themes that support prior research included: use of e-cigs to quit smoking; benefits of using e-cigs vs. cigarettes including cost, renewed sense of taste and smell, and better ability to breathe and exercise; social and informational support, often via the Internet; and concerns about future bans. Emergent themes included the learning curve to using e-cigs and modified personal vaporizers ("mods"); preferences for nicotine "juices"; rapidly reduced nicotine tolerance; the culture and language of experienced users; and a strong interest in research.

DISCUSSION: The learning curve to using e-cigs has significant implications for laboratory tests of these devices with novice users. Similarly, the use of "mods" create challenges for research on the safety and efficacy of e-cigs and poses interesting questions for policy-makers and investigators interested in the cessation process and the socio-cultural aspects of the behavior. CONCLUSION: Trans-disciplinary research is urgently needed and experienced "vapers" are very interested and willing to participate in research.

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DEMOGRAPHIC AND SMOKING CHARACTERISTICS AND INTEREST IN QUITTING AMONG HIV+ INDIVIDUALS ENROLLED IN A CLINICAL TRIAL

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Although smoking rates have declined in the general population to about 20%, smoking prevalence among individuals living with HIV/AIDS is estimated to be 2 to 3 times higher. As a preliminary step towards intervention development for this population, we examined the demographic and smoking characteristics of patients (N=203) enrolled in an antiretroviral adherence intervention trial. Participants were recruited from community clinics and asked to complete self-report assessments of demographics, smoking status, nicotine dependence, and motivation and confidence to quit. Consistent with previous studies, we found that 65% of patients reported smoking at baseline. HIV+ smokers had an average age of 40.21 (SD=8.82), were primarily women (75%), and predominantly African-American (57%). On average they smoked 15.69 (SD=13.99) days out of the previous 30 days, smoked an average of 11.67 (SD=8.49) cigarettes per day, and had moderate scores on the Fagerstrom Test of Nicotine Dependence (M=3.89, SD=2.23). Mean motivation and confidence to quit rated on a 0–10 point scale was 5.93 (SD=3.00) and 6.36 (SD=2.90) respectively. Smokers reported making an average of 2.13 (SD=3.83) quit attempts in the past year and 18% intended to quit within the next 30 days. Compared with non-smokers, smokers had a lower level of educational attainment (p<.05), lower household income (p<.05), and were marginally less likely to be adherent to their HIV medication regimen (p<.078). Results confirm high rates of smoking and that HIV+ individuals with less education and lower incomes are the ones most in need of smoking interventions. Importantly, these HIV+ smokers reported moderate interest and confidence in quitting, suggesting that appropriate tailored interventions may be well received by patients.

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CHARACTERIZING THE SMOKING HABITS OF URBAN HIV-INFECTED MALES FOR THE DEVELOPMENT OF AN EFFECTIVE SMOKING CESSATION PROGRAM

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Tobacco addiction in HIV-infected patients is more than twice that of the general US population. In addition to their HIV disease, smoking puts HIV-infected individuals at increased risk for health consequences including infection, cardiovascular disease and cancer. Despite these associations, HIV providers have been slow to integrate smoking cessation into routine outpatient practice.

Two hundred HIV-infected men receiving primary care in the Section of Infectious Diseases Clinic at the Washington DC Veteran Affairs Medical Center were prospectively surveyed regarding tobacco use via Audio-Enhanced Computer Assisted Self-Interview (A-CASI) during routine clinical visits. Clinical data was extracted from the comprehensive electronic medical record, EMR (Vista CPRS).

A-CASI revealed that 82% of the sample had used tobacco and 52% were current smokers. HIV disease was well-controlled in the majority of patients; nearly all patients were receiving antiretroviral therapy. Participants most commonly smoked in reaction to their own cravings and stress-levels and actively socialized around others who smoked. Data from EMR and A-CASI showed that smokers were more likely to be substance abusers, have Hepatitis C co-infection, be clinically depressed, and were less aware than non-smokers that tobacco use can cause HIV-related health problems.

While HIV disease was considerably well-managed as evidenced by low viral load, tobacco use was widespread among our HIV-infected veteran patients. Characterizing tobacco use in the clinical setting revealed the need for a smoking cessation program to put greater focus on the treatment of underlying depression and substance use, better education to increase awareness of the health risks of smoking and to address the personal triggers, relationships and social circumstances that serve to sustain smoking behavior.

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RELIGION AND HEALTHY LIFESTYLE BEHAVIORS AMONG POST MENOPAUSAL WOMEN

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Background: Worship attendance has been associated with longer survival in prospective cohort studies. A possible explanation is the adoption of healthier lifestyles by the more religiously involved. Therefore, we examined whether attendance is associated with healthy behaviors, i.e. use of preventive medicine services, non-smoking, and healthier drinking, exercise and dietary behaviors in a population of post-menopausal women.

Methods: The population included 71,689 women from the Women's Health Initiative free of cancer, cardiovascular, and other chronic diseases at baseline (median follow-up duration, 7.96 years). Information regarding attendance, life-style behaviors and various covariates was collected at baseline using self-administered questionnaires. Each healthy behavior was modeled as a function of religious attendance using multivariate logistic regression.

Results: After adjustment for confounders worship attendance (less than weekly, weekly, and more than weekly vs. never) was positively associated with use of preventive medicine services [OR for mammograms: 1.34 (CI 1.19, 1.51), 1.41 (1.26, 1.57), 1.33(1.17, 1.52), respectively; breast self exams: 1.14(1.02, 1.27), 1.33 (1.21, 1.48), 1.25(1.1, 1.43); PAP smears: 1.22(1.01, 1.47-weekly vs. none)]; being a non-smoker: [1.41(1.35, 1.48), 1.76(1.69, 1.84), 2.27(2.15, 2.39)]; reduced alcohol consumption [1.35(1.27, 1.45), 1.60(1.52, 1.7), 2.19(2.0, 2.4)]; and fiber intake [1.08(1.03, 1.14), 1.16(1.11, 1.22), 1.31(1.23, 1.39)], but not with regular exercise or with lower saturated fat and caloric intake.

Conclusion: Attendance at religious services is associated with the adoption of certain healthy lifestyle behaviors, but not with all behaviors. Religious communities could have a role in promoting behaviors that are not found to be affected by religious involvement like dietary and exercise habits.

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INTERPERSONAL ANALYSIS OF MEASURES OF RELIGIOUSNESS AND SPIRITUALITY: CONSTRUCT VALIDATION WITH RELEVANCE TO HEALTH RESEARCH

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Religiousness (R) or spirituality (S) and health research is becoming more sophisticated and investigators desire measures that differentiate these constructs. However, there is no agreed upon definition of R or S and though measurement tools abound, they are characterized by insufficient validation evidence. Moreover, there is no organizing conceptual scheme to structure and guide research in this area. Because R and S are largely experienced interpersonally, the interpersonal model of personality and social behavior is valuable in this regard. The central component of the interpersonal approach, a structural model termed the interpersonal circumplex (IPC), has provided needed clarification regarding the nature of other health relevant constructs. The IPC consists of a horizontal axis that describes degree of affiliation (warmth-hostility) whereas the vertical axis describes control (dominance-submissiveness) in social behavior. This study's aim was to map measures of R and S onto the IPC to provide greater conceptual clarity and measurement organization. Adults (N=152; M age=44; 53% male) were recruited online from the StudyResponse panel, a national group of individuals who volunteered to participate in research. They completed a battery of instruments representative of prominent measures of R and S for use in health studies. Instruments were mapped onto the IPC space using Pearson correlations. Most measures of R and S mapped into the dominant-warm quadrant of the IPC portraying a gregarious and extroverted interpersonal style. Surprisingly, measures of S demonstrated stronger interpersonal relations than did measures of R. Certain aspects of both R and S mapped into the dominant-hostile (e.g., Negative Religious Interactions, Extrinsic R, Quest) and hostile-submissive (ASPIRES scales, Negative Religious Coping, Punishing God) quadrants. Results suggest generally stronger interpersonal characterization for measures of S and show that although most measures of R and S are characterized by a gregarious-extroverted interpersonal style, some tend more toward hostility.

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A-178

MECHANISMS OF MINDFULNESS: ACTING WITH AWARENESS AND CARDIOVASCULAR REACTIVITY TO STRESS

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Mindfulness has been linked to mental and physical health benefits and is a component of treatments for stress, depression, and pain. Although some studies have shown mindfulness to be associated with emotional control via increased frontal lobe activation and reduced limbic activity, little is known regarding the influence of mindfulness on autonomic reactivity to stress. The present study sought to determine how participants varying in self-reported levels of mindfulness reacted to tasks differing on attention to the environment. Cardiovascular reactivity [heart rate, heart rate variability, and systolic and diastolic blood pressure] to a sensory intake task (computerized reaction time task) was contrasted with reactivity to a sensory rejection task (mental arithmetic). Forty students (71% women) were selected from a sample of undergraduates and categorized as being high or low in mindfulness based on the Mindful Attention and Awareness Scale. Results of ANCOVA showed significant differences between tasks for high and low frequency HRV, with sensory rejection being associated with increased low frequency HRV [$F\ (1, 35)=19.3$, $p<.001$] and sensory intake being associated with increased high frequency HRV [$F\ (1, 35)=29.10$, $p<.001$]. Results showed that systolic blood pressure reactivity differed between high and low levels of mindfulness ($p<.01$), with higher systolic blood pressure reactions being associated with high levels of mindfulness. Examination of mindfulness factors revealed that the Act with Awareness facet was significantly related to blood pressure reactivity (systolic, diastolic, and mean) during the sensory intake task, but not during the sensory rejection task, r's=.40–.48, p's<.01. Results also revealed that participants high in mindfulness performed better on the reaction time task than participants low in mindfulness $t(36)=-2.06$, $p<.05$, $d=-.69$, but these task performance differences did not explain the elevated blood pressure responses observed among high mindfulness participants. Results relating mindfulness and reactivity to stress imply that acting with awareness may be one behavioral mechanism through which mindfulness influences stress physiology.

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A-179

FINANCIAL STRESS AND HEALTH IN A LOW-INCOME SAMPLE

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Financial stress, defined as lacking financial resources to pay for essential goods, has been linked to health behaviors like smoking and alcohol use, but relatively little is known about the profile of the financially stressed or how financial stress may be associated with other health behaviors and health status. These considerations are particularly salient as the United States continues its sluggish recovery from one of the longest recessions on record. This study explored the associations between financial stress (i.e., enough money in the next month to a) live on, b) pay for necessities such as food, shelter, and clothing, and c) pay for unexpected expenses) and demographic/health characteristics in a sample of Food Stamp recipients from a large Midwestern city ($n=522$; M age=36.2; 74% female; 82% racial/ethnic minority). Forty-six percent (46%) of the sample reported not having enough money to live on in the next month, 53% did not have enough money for necessities like food, shelter, and clothing, and 71% did not have enough money to pay for unexpected expenses. Whites were more likely than racial/ethnic minorities to experience financial stress. The financially stressed were also more likely to be unemployed. High school education or less was associated with lacking money for unexpected expenses but not other measures of financial stress. Financial stress did not differ by age or gender. While all indicators of financial stress were associated with poorer self-reported health status, being a current smoker was only associated with lacking money for necessities, and lacking money for unexpected expenses was associated with depression, ever having had a Pap test, and ever having had a sigmoidoscopy or colonoscopy (all $ps<.05$). These results suggest that a substantial proportion of low-income households are experiencing financial stress and that financial stress is associated with poor health status and important health behaviors. Interventions that simultaneously address financial status and health behavior change in low-income populations may be more effective than interventions that focus on health behaviors alone.

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THE APPRAISAL OF STRESSFUL EVENTS SCALE

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Transactional models of stress and coping suggest that cognitive appraisals of events determine the nature and intensity of the reaction to them (Lazarus & Folkman, 1984). Despite the theoretical importance of appraisal in the stress process, instruments assessing classic stress appraisals, such as threat and challenge, are limited or confounded with stress reactions and coping responses (Peacock & Wong, 1990; Skinner & Brewer, 2002). Measures that more directly assess primary and secondary stress appraisal have only been used in laboratory settings (Tomaka et al., 1997, 2002).

The purpose of this study was to develop a new stress appraisal instrument that does not confound appraisal with stress reactions and coping responses, and remains true to Lazarus and Folkman's stress appraisal model.

Researchers developed a scale that asked participants to appraise thirty-eight potentially stressful life events across five content domains. Participants ($N=166$) also completed the Perceived Stress Scale (Cohen et al., 1983) and the Carver's COPE Scale (Carver, 1984).

Factor analyses suggested the presence of six subscales, each with acceptable internal consistency (i.e. $\alpha=.74–.85$): conflict situations, unexpected events, public speaking, transportation, social anxiety, and financial concerns. Correlational analyses suggested good convergent and discriminant validity with the measures of perceived stress and dimensions of coping.

Overall, the results indicate that stress appraisal can be assessed multidimensionally using items that are unconfounded by the stress reactions and coping responses.

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A-181

EDUCATION, STRESS, AND HEALTH AMONG AFRICAN AMERICAN ADULTS: A COMPARISON OF TWO AGE GROUPS

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The significant relationship between education level and various health indicators has long been established. Furthermore, educational achievement and stress have been implicated in racial health disparities. However, the potential mediating role of perceived stress in the relationship between education and health is lacking in research with African American adults. To this end, we examined whether perceived stress mediated the relationship between education and health among African American adults and whether the relationship differed by age. The data are from the Carolina African American Twin Study of Aging (CAATSA) and the sample for the current work consisted of 395 adults aged 22–89 (mean=50.96), 38% of which were male. Data on the number of years of education completed, the Perceived Stress Scale, and the health measures of self-rated health, cardiovascular disease, obesity, lung function, depression, and smoking behavior were analyzed. In order to examine whether the relationships differ based on age, a median split on age was conducted, with the younger group comprising those individuals≤50 yrs old and the older group comprising those individuals>50 yrs old. All analyses controlled for gender and were examined separately by age group. Results demonstrated that stress partially mediated the relationship between education and self-rated health among both the younger and older groups. In addition, stress was also a partial mediator in the relationship between education and depression in the older group only. These findings suggest the importance of considering perceived stress in the associations among socioeconomic factors and health among African Americans. Furthermore, addressing this issue across age groups is critical for identifying age and/or cohort differences, particularly in relation to education.

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THE ROLE OF RACE, IDENTITY, AND GENDER IN COLLEGE DRINKING BEHAVIORS

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Racial/ethnic differences in college drinking have been found consistently, in particular, African American and Asian American college students consume less alcohol and have more conservative drinking norms compared to Whites. However, there has been growing evidence that college men and women are drinking at similar rates. There has been a limited analysis of psychosocial factors that may influence these racial and gender differences. The current study examines race, racial identity, and gender as they are related to drinking behaviors. A sample of 129 college students ($n=85$) female and male ($n=28$). The sample was 56% White and 44% racial/ethnic minorities. Students were recruited for an online study at a large Midwestern university. There were racial/ethnic differences between White and ethnic minority students in frequency of alcohol use ($t(126)=3.02$, $p<.01$), binge drinking ($t(65)=2.38$, $p<.05$), and alcohol related norms ($t(129)=4.47$, $p<.01$). African American students reported significantly lower rates of drinking ($p<.01$) and more conservative alcohol-related norms ($p<.05$). Stronger ethnic identity was associated with fewer alcohol problems among minorities ($p<.001$). Although racial identity did not moderate the effect of race or gender, there was a significant race status and gender interaction ($\beta=-.63$, $p<.01$) in predicting alcohol-related norms. Ethnic minority women reported significantly more conservative alcohol-related norms than White women. These findings support gender convergence in college drinking and ethnic identity as a relevant dimension to examine in alcohol problems. African American female college students emerged as a group with a distinctly conservative profile of alcohol use. Implications for culturally relevant prevention efforts will be discussed.

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AN EVALUATION OF THE BASICS ALCOHOL RISK REDUCTION MODEL AMONG PREDOMINANTLY HISPANIC COLLEGE STUDENTS

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This study examined the effectiveness of the BASICS risk reduction model (Dimeff et al. 1989) for reducing alcohol-related risk behaviors in two samples of non-traditional, predominantly Hispanic college students. The study also examined stages of change across multiple time points as well as several potential moderators of program effectiveness including gender, group vs. individual experience of BASICS, baseline alcohol risk, and readiness to change. All students participated in a relatively standard BASICS intervention that involved in-depth assessment of drinking patterns and beliefs and a brief intervention involving psychoeducation and provision of personalized normative feedback. Program outcomes were assessed six-month post-intervention and included AUDIT alcohol-risk scores, RAPI alcohol-related problems, and measures of consumption and drinking and driving. Both samples indicated strong and significant changes across these outcomes six-months following the intervention. Stage of change reports mirrored these patterns. Moderator analyses suggested that the program was potentially more effective among initially higher risk drinker than lower risk drinkers and among those higher in change contemplation at the time of intervention. Gender and group administration were unrelated to program impact. Overall, the results strongly support use of the BASICS intervention model in non-traditional, predominantly Hispanic college student populations.

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A-185

ASSESSING UNIVERSITY STUDENTS' PAST USE, CURRENT CONFIDENCE, AND FUTURE INTENTION TO USE ALCOHOL REDUCTION STRATEGIES

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This study was designed to evaluate further the psychometric properties of the Alcohol Reduction Strategies-Current Confidence (ARS-CC) questionnaire and the properties of two variations on this scale—one assessing past use of (ARS-Past) and another assessing future intention (ARS-Future) to employ 31 different alcohol reduction strategies. Undergraduates ($n=353$) recruited from a large, public Midwestern university completed the three different forms of the ARS questionnaires for the setting in which they reported binge-drinking most often. Based on factor analyses, internal consistency reliability coefficients, and mean inter-item correlations, we averaged all 31 items within each of the three versions. Pearson correlations revealed statistically significant relationships between each pair of ARS questionnaires (rs ranged from .48 to .76). Correlations between ARS scores, drinking history, and selected personality characteristics generally supported both convergent and discriminant validity of all three versions of the ARS. Analyses of variance revealed that women reported higher current confidence and greater intentions to use these strategies in the future, but the two genders did not differ on past use. In addition, those who engaged in more drinking binges reported less frequent use of these strategies in the past and lower intentions to use them in the future, but current confidence was not associated with binge drinking in the past two weeks. Given the promising psychometric qualities of the three ARS scales, these instruments could be employed as an outcome measure and as a clinical assessment tool.

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A-186

ATTENTIONAL BIAS TO PREFERRED TYPE OF ALCOHOLIC BEVERAGE IN UNIVERSITY STUDENT BINGE DRINKERS

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Attentional bias—the mental process in which drug-related stimuli capture and hold one's attention—occurs not only in alcohol and drug dependent persons, but also may occur in heavy drinkers who do not yet meet the criteria for alcohol abuse. The primary aim of this experiment was to test whether university student binge drinkers showed greater attentional bias to their preferred vs. non-preferred alcoholic beverage type (beer, liquor, or wine). To assess attentional bias, we employed the dot-probe task in which participants were shown multiple simultaneous presentations of both an alcoholic and non-alcoholic beverage (500 ms per stimulus pair). Following offset of the stimuli, the dot probe stimulus appeared in the location occupied previously by one or the other of the stimulus pictures. Respondents were asked to indicate the position of the probe by pressing one of two response keys as quickly as possible. Shorter reaction times across those occasions when the alcohol photo and dot appeared on the same side of the screen were interpreted as attentional bias. Participants also completed questions regarding demographics, drinking history, current craving, and preferred beverage type. Contrary to expectation, there was no apparent attentional bias for one's preferred type of alcoholic beverage, nor was attentional bias associated with typical number of binge-drinking episodes. The results imply that attentional bias may not be as robust among younger, less debilitated drinkers compared to diagnosable alcohol abusers.

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ROLE OF TRANSPORTATION IN THE PERSUASION OF ANTI-DRUG NARRATIVES

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Anti-drug strategies on the web have the potential to translate into effective public health practice, but research examining the motivational potential of personal narratives posted on anti-drug websites is in its infancy. This study examined the role of transportation in the persuasion process, particularly effects on anti-cocaine beliefs, through the mediation of cognitive and affective responses, among 500 English undergraduate students. Transportation is defined as a distinct mental process that integrates attention, imagery, and feelings in response to narratives, and is characterized by the experience of being absorbed in a narrative. Bootstrapping procedures were utilized to obtain estimates of total and specific mediational effects and significance was examined using confidence intervals. The total indirect effect of transportation on anti-cocaine beliefs through favorable cognitions and affective responses was significant, as the confidence interval did not contain a zero, Bootstrap Estimate=.08, SE=.04, 95% BCa lower=.0047, 95% BCa upper=.1730. In terms of specific effects of each of the mediators while controlling for effects of others, cognitive responses, sadness, and contentment were significant. As expected, positive association was observed between transportation and favorable cognitive response, $B=.72$, $p<.001$, and between favorable cognitive response and anti-cocaine beliefs, $B=.18$, $p<.001$. The direction of association was contrary to prior research for sadness but in the expected direction for contentment. Specifically, for sadness, higher transportation was associated with greater sadness, $B=.34$, $p<.001$, which was associated with lower anti-cocaine beliefs, $B=-.15$, $p<.01$. For contentment, higher transportation was associated with lower contentment, $B=-.18$, $p<.01$, which was associated with greater anti-cocaine beliefs, $B=-.14$, $p<.05$. These findings will be discussed in light of the potential opportunities for health educators to engage at-risk youth in reading anti-drug narratives, and implications for public health.

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FRAMING AND DOSAGE EFFECTS: EXAMINING EFFICACY OF ANTI-COCAINE VISUAL MESSAGES

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The continued prevalence of cocaine use among youth in UK calls for research examining efficacy of various drug prevention strategies. One strategy that has not received much attention in prevention literature but is used frequently in the real world is the use of visuals. Given that these visuals may increase the perceptions of vulnerability and severity of harm and motivate protective behaviors, we examined threat and coping appraisals among 164 undergraduate students from a large UK university in response to one of four visual anti-cocaine messages differing in visual framing (before-after vs. after-only effects of cocaine use) and dosage (2 vs. 8 images). Participants filled out a questionnaire following exposure to an anti-cocaine visual message appended to their respective questionnaires. The study sample was 95%Caucasian, 87%female, and aged 19–25 years. Analysis of variance revealed a significant main effect of framing on threat appraisals (but not on coping appraisals), such that after-only message ($M=3.56$, $SD=1.00$) resulted in greater perceived severity, $F(1,158)=6.16$, $p<.01$, $\eta=.04$ than before-after message ($M=3.25$, $SD=.93$). Similarly, after-only message ($M=4.10$, $SD=.80$) resulted in greater perceived vulnerability, $F(1,158)=3.84$, $p<.05$, $\eta=.03$ than before-after message ($M=3.83$, $SD=.79$). A significant main effect was observed for dosage as well, but only on self-efficacy, such that 2-image message ($M=4.79$, $SD=.47$) resulted in greater self-efficacy, $F(1,158)=3.37$, $p<.05$, $\eta=.02$ than 8-image message ($M=4.66$, $SD=.64$). None of the interactions were significant. Finally, examination of the predictive association between threat and coping appraisal and behavioral intention indicated that age, $\beta=.14$, $p<.05$, prior cocaine use, $\beta=-.57$, $p<.001$, greater perceived severity, $\beta=.16$, $p<.05$, and greater self-efficacy, $\beta=.18$, $p<.05$ predicted greater intention to stay away from cocaine. The findings reported here will be discussed in light of potential opportunities to design anti-drug visual messages for youth target groups.

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METHAMPHETAMINE USE AMONG HIV-POSITIVE MEN WITH HISTORIES OF TRAUMA

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People living with HIV report more severe histories of trauma and comorbid PTSD diagnoses than their uninfected counterparts. This comorbidity is problematic in the context of HIV, as individuals with PTSD engage in more high-risk behaviors than their peers, including substance use and unprotected sex. Self-medication to alleviate psychological and physical symptoms associated with trauma and HIV through methamphetamine use is not uncommon, and has been linked to negative outcomes such as increased rates of HIV transmission risk behavior and decreased HIV treatment adherence. To date, few studies have specifically examined associations between trauma type and sexual risk in men who have sex with men (MSM) and men who have sex only with women (MSW). We studied 167 men living with HIV and a history of trauma. Participants completed an Audio Computer Assisted Self-Interview (ACASI), which assessed methamphetamine use (DAU), trauma history (THQ), and sexual risk behavior (SERBAS). We found that 56.3% of the sample reported using methamphetamine in the last three months, with 24% reporting more than 200 lifetime incidents of use. No differences in methamphetamine use were found between MSM and MSW. Methamphetamine use was associated with having experienced violent trauma, particularly childhood sexual ($r=.14$, $p<.05$) and physical abuse ($r=.17$, $p<.05$). Use was also associated with endorsement of unprotected sexual encounters among both MSM and MSW ($r=.28$, $p<.001$) and unprotected anal intercourse among MSM ($r=.15$, $p<.05$).

Methamphetamine use is a significant issue among HIV-positive men and predicts sexual risk behavior for both MSM and MSW. More research is needed to develop interventions to reduce methamphetamine use, trauma symptoms, and risk behaviors among men living with HIV/AIDS.

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SOCIAL SUPPORT AND PERCEPTIONS OF IMMUNOSUPPRESSANT MEDICATION SIDE EFFECTS IN ADOLESCENT RENAL TRANSPLANT PATIENTS

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Immunosuppressants are a required course of treatment following organ transplantation, although side effects of these medications are notable. Psychological distress related to symptom experience, including mood swings, depression, anxiety, and decreased concentration, has been consistently found (Rosenberger et al., 2005). Peers provide an important role in the life of a chronically ill adolescent by providing empathy, support, and modeling positive health behaviors (Clarke et al., 1992). Although social support has been shown to be an important factor for adjustment and illness management, this relationship has not been explored in the pediatric transplant population. This study evaluated the relationship between social support and perceptions of medication side effects in 20 renal transplant patients age 13–18 (mean 16.1 years, 55% female, 57.1% White). The Child Adolescent Social Support Scale and a modified measure of immunosuppressant side effects (PEDS-TX) were administered. Results indicated that adolescents who perceived less social support rated greater distress from the side effects. Significant negative correlations were noted between the perception of side effects as problematic and how often parents ($r=-0.5$, $p=.04$), classmates ($r=-0.47$, $p=.04$), and people in school ($r=-0.65$, $p=.00$) provide support. Further, perceptions of low importance of classmate support was shown to be related to side effects being considered problematic ($r=-.049$, $p=.033$). Greater distress related to side effects was correlated with how often and important the adolescents rated receiving support from classmates ($r=-0.48$, $p=.05$; $r=-0.56$, $p=.02$) and people in school ($r=-0.59$, $p=.01$; $r=-0.58$, $p=.02$). Investigating psychosocial factors that impact the side effect experience may lead to development of targeted interventions to improve adjustment and adherence in this population.

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Thursday
April 28, 2011
8:45 AM–10:15 AM

Symposium 01 8:45 AM–10:15 AM 2000

ACCELERATING THE UPTAKE OF EVIDENCE-BASED PRACTICES GLOBALLY

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A number of challenges surround the uptake of evidence-based practices (EBP), especially when interventions are introduced into cultures very different than those from which they originated. A recent Delphi poll of experts in EBP and policy yielded consensus that what the field most needs is, “relevant and understandable examples of well-implemented EBP." This symposium will provide several such examples from different parts of the world.
Presenters will address three questions:
1)What were the most important strategies you adopted with community members and policymakers to foster uptake of the EBP? 2)How did you address the balance between maintaining fidelity to the research-tested intervention and tailoring it to fit the local community? 3)What were the obstacles you encountered implementing EBP and how did you overcome them?
Evidence-based practice (EBP) policy can be defined as accountable health care that conscientiously supports those interventions whose effectiveness is supported by research. EBP implements shared decision making to determine how best to promote the health of individuals or communities. The EBP conceptual model integrates three domains of information: (1) best available evidence; (2) client characteristics, including values and preferences; and (3) resources. Speakers will describe challenges and opportunities they experienced when trying to implement evidence-based practices and programs in under-resourced communities globally.
This symposium is being submitted jointly on behalf of the ISBM Collaborative Studies Committee and SBM. A distinguished panel of speakers will share lessons learned about accelerating the uptake of evidence-based practices to benefit the international public. Speakers will discuss their experiences in implementing EBP medicine interventions in diverse real-world settings internationally.

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Symposium 01A 2001

PREVENTION OF TYPE 2 DIABETES AND ITS COMPLICATIONS: HOW TO STRENGTHEN THE GLOBAL EVIDENCE BASE FOR EFFECTIVE PREVENTION

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Type 2 diabetes mellitus (T2DM) is a significant global public health problem which is already affecting more than 250 million people worldwide with an increasing number occurring in developing countries. Efficacy trials conducted in developed countries have clearly demonstrated that lifestyle change programs can significantly reduce diabetes risk. Two key challenges are: (1) How to develop and implement programs that are more feasible for ‘real world’ implementation and (2) How to extend the reach of such programs to low and middle income countries as the current trial evidence based in such countries is currently very limited? This presentation overviews the development, implementation and evaluation of such programs in Finland and Australia, as well as the recent uptake of lifestyle-related interventions for reducing diabetes risk in other countries. The GOAL study in Finland involved the “real world” evaluation of a modest intensity group-based lifestyle change counseling program to prevent type 2 diabetes that was adapted from the original Finnish Diabetes Prevention Study. Drawing on evidence from the results of the earlier Finnish DPS and the short-term results from the GOAL implementation trial, the Australian Diabetes Prevention Program (DPP) modified the GOAL program and achieved similar positive behavioral and clinical outcomes. Currently, more routinized programs are being implemented and evaluated in Finland and Australia, that are building on the evidence from these ‘real world’ implementation trials. Core components of the GOAL program are now also being adapted for use in programs that are currently being evaluated in Malaysia, India and South Africa. There is an urgent need for more collaborative and coordinated approaches that compare and contrast methods and approaches for adapting and spreading effective intervention programs between settings, regions, and countries.

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Symposium 01B 2002

USING BUILT ENVIRONMENT RESEARCH TO INFORM CHANGE IN MULTIPLE POLICIES

James F. Sallis, PhD

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Built environment changes are recommended by the WHO and national health organizations to reduce physical inactivity and obesity, two of the leading causes of death internationally. Evidence about built environment solutions to these health problems has developed rapidly. A key challenge is that all the relevant environments and policies are outside the direct influence of public health, including city planning, transportation, education, and parks sectors. In the US, the Active Living Research program has developed approaches to use research on built environments and physical activity to stimulate and guide policy changes. Goals for investigators are to ask policy-relevant research questions and effectively communicate findings to decision makers, possibly in partnership with non-academic groups. Tactics include wide distribution of research briefs, communications workshops at conferences, opportunities to interact with policy makers at conferences, use of Health Impact Assessments, collaboration with appropriate advocacy groups, supporting researchers to provide testimony to policy makers, and small grants to enhance policy impact of research. Examples of research’s impact on local policies will be described. These lessons from the US are being adapted for the International Physical Activity and Environment Network (IPEN), a collaborative study across 13 countries. One of the key goals of IPEN is to use the research to inform national and international policies. Plans are being developed to support investigators in using research to drive local and national policy change in countries that vary dramatically in political systems. National physical activity plans can provide a framework that supports evidence-based policy changes.

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Symposium 01C 2003

CONTEXTUALIZING HIV PREVENTION INTERVENTIONS THAT WORK

Geoffrey Setswe, PhD

Monash University, Roodepoort, South Africa.

Introduction: Many HIV prevention interventions have been tested for efficacy or effectiveness. However, in almost three decades of the HIV/AIDS epidemic, we are still not sure which interventions work best in preventing HIV transmission in different communities and cultural settings. This presentation provides evidence of HIV prevention interventions that work and also presents lessons learned about applying them in different contexts.

Methods: A systematic review of randomized controlled trials (RCTs) testing HIV prevention interventions for evidence of efficacy or effectiveness was conducted. The interventions were classified as biomedical, behavioral and structural. The evidence provided by RCTs was graded in four different levels: best (80% or more), good (60–79%), promising (30–59%) and poor or no evidence (<30%). We calculated the effect size to show the difference between treated and control conditions.

Findings and Discussion: Using the grading system, male and female condoms and PMTCT were classified as best evidence HIV prevention interventions because they had achieved more 80% level of efficacy or effectiveness. ART, male circumcision, HIV Counseling and Testing for people who test positive were classified as good evidence HIV prevention interventions as they had achieved between 60 and 79% level of efficacy or effectiveness. Treatment of STI, a microbicide called PRO2000, the RV144 Thailand vaccine trial and a structural community RCT that reduced intimate partner violence were classified as promising evidence HIV prevention interventions as they had achieved between 30 and 59% level of efficacy or effectiveness. All other interventions that obtained less than 30% effectiveness were classified as poor or no evidence. We will present the effect size of these interventions.

Conclusion: There is no “magic bullet” for HIV prevention, particularly as applied in different cultural settings. The lesson learned is that the acceptability of intervention strategies is not the same across most cultures and individuals. A community should choose to use a combination of interventions that best suits their context from among best, good or promising practices.

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Symposium 02 8:45 AM–10:15 AM 2004

ALTERNATIVE APPROACHES TO LONG-TERM WEIGHT MANAGEMENT: PARADOX AND PROOF

Michaela Kiernan, PhD,[1] Deborah Tate, PhD,[2] Amy Gorin, PhD[3] and Victor J. Stevens, PhD[4]

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Standard behavioral weight management interventions typically involve an intense initial weight loss phase focused on individual behavior change followed by a weight maintenance phase. Participants in such interventions typically lose weight initially, but long-term success remains elusive for many. Alternative approaches that focus on the day-to-day experiential aspects of weight loss and maintenance, namely effort, involvement, and support elements, represent key areas of inquiry. This symposium will describe three (paradoxical) approaches to the study of long-term weight management that address these experiential aspects and have promising initial results. All approaches are informed by relevant theory and systematic empirical data generated from well-controlled randomized trials. The first presentation will describe an intervention that differentiates between the skills needed for weight loss and maintenance but reverses the typical sequence for acquiring those skills to promote a mastery experience. The second presentation will describe a low-intensity intervention that optimizes the efforts of participants and staff but may perform as well as a standard high-intensity intervention. The third presentation will describe constructs within an intervention that focus on the critical role of support but in an autonomous rather than behavioral manner. This symposium is intended to stimulate discussion of the feasibility and efficacy of alternative approaches to improving long-term weight outcomes.

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Symposium 02A 2005

PROMOTING HEALTHY WEIGHT WITH 'STABILITY FIRST'

Michaela Kiernan, PhD,[1] Susan D. Moore, PhD,[1] Danielle Schoffman, BA,[1] Katherine Lee, MS,[1] Abby King, PhD,[1] C. Barr Taylor, MD[1] and Michael G. Perri, PhD[2]

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We describe the rationale, study design, treatment components, and initial results of an ongoing randomized trial that examines whether learning ‘stability skills’ before losing weight improves long-term weight management, i.e., after session/staff contact has ended. Individuals may need to learn ‘stability skills’ that optimize current satisfaction with lifestyle and self-regulatory habits, i.e., without feeling deprived (relative deprivation theory) and that regulate the balance among eating, activity, and weight with minimum effort and attention (limited resources theory). In addition, they may be more successful at maintenance if they learn stability skills before losing weight, and, thus, capitalizing on initial motivation and providing a mastery experience for stability (social cognitive theory). Obese women (N=267, BMI 32.1±3.5, 66% White) were randomly assigned to one of two 6-month programs and assessed at 0, 6, 12, and 18 months. Maintenance First women learned stability skills during a novel 2-month maintenance program before participating in a standard 4-month weight-loss program. Weight Loss First women participated in a similar 4-month weight-loss program followed by a standard 2-month maintenance program. Despite initial skepticism, women were willing to be randomized to Maintenance First and wait 2 months to lose weight. There were no program differences in retention (ps>.05); 88% completed the programs and 95% were weighed at 6 months. As designed, there was a program difference in weight loss at 2 months (ps<.0001); Maintenance First women kept their weight stable (M=−0.4±3.4 lbs) whereas Weight Loss First women lost ~1 lb/wk (M=−8.4±5.0 lbs). Also as hypothesized, there was no program difference in percent weight loss at 6 months (p=0.52); Maintenance First women lost the same amount of weight (M=−8.6%±5.7) as Weight Loss First women (M=−9.1%±6.9). Exposure to novel stability skills before losing weight does not undermine eventual weight loss.

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Symposium 02B 2006

STEPPED-CARE APPROACH TO DELIVERY OF A BEHAVIORAL WEIGHT LOSS PROGRAM

Deborah F. Tate, PhD,[1] Amy Otto, PhD,[2] Kelli Davis, PhD,[2] Kristen Polzein, PhD[1] and John Jakicic, PhD[2]

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Behavioral weight loss programs typically involve in-person sessions delivered on a weekly, bi-weekly, or monthly schedule. This intensive regimen produces significant weight loss, though is difficult to disseminate into healthcare settings. This study is examining weight loss resulting from a weight loss intervention delivered in a "stepped-care" (SC) manner compared to a standard behavioral weight loss intervention (SBWP).

SC was delivered based on the ability of the participant to achieve a pre-determined weight loss goal every 3 months. If the goal was achieved, the participant continued with the current intervention for an additional 3 months. If the weight loss goal was not achieved, the participant progressed to the next intervention step which increased the intensity and frequency of intervention contact. SC began with a low intensity intervention involving 1x per month sessions plus weekly lessons via mail for 12 weeks. SC participants achieving the 5% weight loss goal at 3 months continued to receive monthly contact, if <5% weight loss was achieved the participant moved to Step 2 that added 1 telephone intervention call per month. This process repeated every 3 months with weight loss goal progressing (e.g. 7%, 10%). SBWP received weekly in-person group sessions during this same 24 month period. Participants (n=364; 17% male; 32% minority; 42.2±9 years; BMI=32.9±3.6) were randomly assigned to SBWP or SC with weight measured at 0, 3, 6, 9, 12, 15, and 18 months. All randomized subjects have reached the 6 month assessment, with retention 87.8% in SC and 83.7% in SBWP. 6 month weight loss was 10.1±6.4 kg in SBWP vs. 8.1±6.0 kg in SC ($p<0.05$). Additional data on weight loss and step progression through 12–18 months will be available for presentation.

If successful, a stepped-care intervention may have application in health-care settings by providing a cost-effective criterion-based intervention to improve long-term weight loss.

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Symposium 02C 2007

SOCIAL SUPPORT FOR WEIGHT LOSS: WHAT HELPS, WHAT HURTS?

Amy A. Gorin, PhD,[1] Theodore A. Powers, PhD,[2] Richard Koestner, PhD,[3] Hollie Raynor, PhD, RD[4] and Rena Wing, PhD[5]

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Background: Current weight loss programs largely ignore the interpersonal environment. To move intervention development forward, examinations of the specific types of support that are associated with weight loss outcomes are needed. Self Determination Theory (SDT) suggests that support for an individual's autonomy is beneficial and facilitates the internalization of autonomous motivation and associated behavior change. A secondary analysis of a larger randomized controlled trial examined whether autonomy support and more traditional measures of social support were associated with weight loss outcomes.
Methods: Adults (N=201; BMI 37.0±6.9; 78.1% women) were randomized to standard 18-month behavioral weight loss treatment or to SBT plus home environment modifications. Autonomy support and other forms of social support (Encouragement and Discouragement of Healthy Eating; Participation and Rewards/Punishment for Exercise) were measured at 0 and 6 months and examined in relation to 18 month weight loss, controlling for demographics, initial weight, and treatment condition.
Results: Baseline measures of support and motivation were not associated with weight loss; however, autonomy support and autonomous motivation at 6 months each positively predicted 18 month weight loss ($ps<.05$). In contrast, encouragement of healthy eating at 6 months was negatively related to weight loss at 18 months ($p<.01$) and other measures of social support were not associated with outcomes. A significant partial mediational model ($p<.01$) suggested that increases in autonomy support resulted in increased autonomous motivation and better weight loss.
Conclusions: Weight loss interventions that extend into the interpersonal environment may be more effective if they specifically train family members and friends how to provide autonomy support and not just target general forms of social support. Randomized controlled trials testing this novel SDT-based approach are warranted.

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Symposium 03 8:45 AM–10:15 AM 2008

INTERVENTIONS FOR IMPROVING MULTIPLE HEALTHY LIFESTYLE BEHAVIORS AMONG CANCER SURVIVORS AND FAMILY MEMBERS

Wendy Demark-Wahnefried, PhD, RN,[3] Elliot J. Coups, PhD,[2] M. Tish Knobf, PhD, RN, FAAN,[4] Youngmee Kim, PhD[1] and Bernadine Pinto, PhD[5]

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This symposium aims to address the importance of multiple healthy lifestyle behaviors not only to cancer survivors but also to their family members; and to present supporting evidence and identified barriers from diverse intervention programs. In a randomized controlled study to enhance wellness in older cancer survivors, Dr. Demark- Wahenfried demonstrates the effectiveness of the intervention in promoting sustainable and reproducible changes. Dr. Coups, targeting cancer survivors who are overweight/obese, illustrates the success of an Internet-based weight loss intervention showing high retention rates and significant increases in physical activity. A psycho-educational intervention for African American women with breast cancer developed by Dr. Knobf and colleagues yields preliminary data on feasibility of developing culturally tailored healthy lifestyle behavior intervention. Dr. Kim pinpoints the significant role of individuals' family history of cancer in the effectiveness of healthy lifestyle behaviors intervention, broadening the scope of healthy lifestyle interventions research. All presenters also identify challenges and barriers in enrollment and retention of the participants, and dissemination of findings to diverse community populations. In her discussion, Dr. Pinto identifies the unique challenges of cancer survivors and their family members deal with in changing lifestyle behaviors. She also compares the findings from diverse interventions and strategies recruiting the participants and targeting multiple behaviors; and discusses the implications of these findings for cancer control and prevention.

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Symposium 03A 2009

RENEW (REACH-OUT TO ENHANCE WELLNESS IN OLDER CANCER SURVIVORS) - EFFECTIVE, DURABLE, AND REPRODUCIBLE, BUT CAN IT BE DISSEMINATED?

Wendy Demark-Wahnefried, PhD,[1] Miriam Morey, PhD,[2] Richard Sloane, MPH,[2] Denise C. Snyder, MS,[2] Bercedis Peterson, PhD[2] and Harvey Cohen, MD[2]

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Purpose: Lifestyle interventions can favorably influence health-related outcomes after a cancer diagnosis, but time and travel pose significant barriers to participation.
Methods: The RENEW (Reach-out to EnhancE Wellness in Older Cancer Survivors) trial tested a diet-exercise, telephone counseling and mailed material intervention to determine if it could reorient functional decline in 641 older (age 65+), overweight/obese survivors of breast, prostate and colorectal cancer. Participants were randomized to receive the intervention either immediately, or after a 1-year delay, and were followed for 2-years. Functional status, body weight, physical activity (PA), and diet quality (DQ) were assessed at baseline, 1- and 2-year follow-up.
Results: Compared to the delayed intervention arm, those assigned to the immediate intervention experienced significant reductions in functional decline (−2.15 vs −4.84) and body weight (−2.06 vs −0.92 kg), and improvements in PA (+67.8 vs 31.5 minutes/week) and DQ (4.8 vs 1.8) (p-values <.05). Changes in PA, DQ, and BMI were durable at 2-year follow-up, as confirmed by negligible shift (−0.2 min of PA/week, +0.8 DQ units and 0 kg from 1 to 2 years). Effects were reproduced in the delayed intervention arm as manifest by 2-year follow-up data that were essentially identical to those who received the immediate intervention. As compared to the projected rate of functional decline of −11.1 points over 2-years, both study arms had rates of −5.5 and −6.7 points, respectively.
Conclusion: The RENEW intervention was effective in promoting sustainable and reproducible changes in behavior that translated into durable improvements in weight and functional status. However, considerable barriers exist in disseminating this intervention broadscale. If interventions are to be disseminated, support is needed for research that can assess the impact of further fine-tuning and assess cost-effectiveness.

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Symposium 03B 2010

AN INTERNET-BASED WEIGHT LOSS INTERVENTION FOR COLORECTAL CANCER SURVIVORS

Elliot J. Coups, PhD,[1] Sharon L. Manne, PhD,[1] Neal J. Meropol, MD,[2] Christopher N. Sciamanna, MD, MPH,[3] Andrew Balshem, BS,[4] Olga Tchuvatkina, MS,[4] Jessica Collins, MS,[4] Lauren Greenberg, MS,[4] Kate Cecil, MS[4] and Pamela A. Ohman-Strickland, PhD[5]

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Introduction: Overweight and obesity are risk factors for colorectal cancer (CRC) incidence and potentially also for disease recurrence and mortality. We tested the feasibility and treatment outcomes of an Internet-based weight loss intervention for CRC survivors.
Methods: Eligibility criteria included non-metastatic CRC, 1–10 years post-treatment, and BMI of 25–35 kg/m^2. Participants completed a survey and anthropometric assessments at baseline and again 12 weeks after being randomized to the intervention (12 weeks using the website) or a wait-list control. Treatment outcomes included weight loss, diet (i.e., caloric intake, percent of calories from fat), and physical activity.
Results: Of 242 individuals invited to participate in the study, 60 were ineligible, 151 declined (not interested, $n=36$; too busy, $n=28$; do not wish to lose weight, $n=12$; transportation issues, $n=11$; medical problems, $n=9$), and 31 were consented (17% acceptance rate). The participants were 45% female, 84% white, and M age= 64 years. Follow-up assessments were completed by 80% of the intervention participants and 87.5% of the wait-list participants. Intervention participants logged on to the website 9.1 times on average (range 1–29). The intervention did not significantly impact weight loss or diet ($ps \geq .28$), but intervention participants increased their level of physical activity compared to wait-list controls ($p=.04$).
Conclusions: Although the study acceptance rate was modest, we successfully recruited a sample of overweight/obese male and female CRC survivors to take part in an Internet-based weight loss intervention. Retention to the study was good, although use of the study website was lower than anticipated. The intervention increased physical activity but did not lead to changes in weight or diet.

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Symposium 03C 2011

BUILDING A FOUNDATION FOR HEALTH: A COMMUNITY BASED INTERVENTION

M.Tish Knobf, PhD, RN, Sarah Govil, MSN, MPH, Diane Erdos, MSN and Kristopher Fennie, PhD

Yale University, New Haven, CT.

Introduction: The mortality rate for breast cancer, heart disease and diabetes is higher for African American (AA) women compared to Caucasian women. A 6 week psycho-educational intervention on healthy eating and physical activity was designed for AA breast cancer survivors. Specific aims were (1) to engage, educate and empower AA breast cancer survivors to adopt healthy lifestyle behaviors and (2) to improve functional ability, and quality of life.

Methods: A convenience sample was recruited from the community, AA breast cancer support groups and a cancer center clinic. Survivors were encouraged to recruit a partner for the study. Four intervention groups were conducted in two communities. Data were collected before, end of program, 3 and 6 months on empowerment (Self Efficacy for Exercise), functional ability (Medical Outcomes Short Form -36), quality of life (FACT-B), and healthy lifestyle behaviors (Health Promotion Lifestyle Profile II).

Results: Of 49 women enrolled, 34 women (69.3%) were breast cancer survivors, 1 had ovarian cancer and 14 were partners. Participants who attended <2 meetings were not considered for data analysis. For the 40 evaluable participants, 38% were married, 50% employed, 75% graduated or attended some college, 52% had an annual income less than $40,000 and mean age was 55.6 yrs (SD=7.79). Preliminary data analysis at 3 months found significant improvements over time in the women's lifestyle profile, for health promotion (p=.002), health responsibility (p=.009), physical activity (p<.001), nutrition (p=.004) and spiritual growth (p=.018). Final data collection will be completed September 2010. Findings on quality of life, functional ability and healthy lifestyle behaviors will be presented, comparing data across time points.

Conclusions: A culturally designed psycho-educational intervention focused on physical activity and healthy eating delivered in a community setting is feasible. While recruitment of ethnic minorities is challenging, AA breast cancer survivors were motivated to participate.

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Symposium 03D 2012

MULTIPLE HEALTH LIFESTYLE BEHAVIORS INTERVENTION FOR PERSONS WITH FAMILY HISTORY OF CANCER

Youngmee Kim, PhD,[1] Joanne Pike, MA,[2] Heather Adams, MSW[2] and Di Cross, PhD[3]

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Improving healthy lifestyle behaviors and maintaining positive changes are important factors for enhancing quality of life for not only cancer survivors but also their family members. This study is to investigate whether the effects of a program designed to help changes in multiple healthy lifestyle behaviors (MHLB) differ depending on the person's family history of cancer (FHCA) and whether such effects remained 6 months after completion of the intervention.

The Nutrition and Physical Activity Study is a nationwide longitudinal randomized controlled trial to promote MHLB. Participants were randomized into either receiving written self-help materials (SH group) or telephone counseling in addition to SH (SH + C group) during the first 6 months of the study. The FHCA status (52.7% FHCA+), age, education, ethnicity, gender, and marital status were assessed at baseline (T1); outcome variables (fruit-and-vegetable intake: FV, physical activity: PA, and weight management: WM) were assessed at T1, 6 months (T2), and 12 months (T3). A total of 869 provided valid data for the study variables.

Results from general linear modeling on MHLB and hierarchical regression analysis on single behavior outcomes revealed that at T2, SH + C showed greater increase in FV consumption than SH (p<.05), after controlling for participants' age, gender, education, ethnicity, marital status, and FV consumption at T1. This intervention effect was significant regardless of FHCA status. At T3, results showed that the positive intervention effect remained only among FHCA- (β=.07, p<.05). FHCA status was not related to the intervention effects on PA and WM.

The findings illustrated the significant role of individuals' family history of cancer in the effectiveness of healthy lifestyle behavior intervention, particularly on healthy diet habits. The psychosocial mechanisms of family history of cancer in changes of FV consumption deserve further investigation to inform program development that are tailored for persons with family history of cancer.

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Symposium 04 8:45 AM–10:15 AM 2013

BEHAVIORAL MEDICINE FOR VETERANS: THE VA MODEL FOR ACCELERATING OUR IMPACT ON THE PUBLIC'S HEALTH

Kristy Straits-Troster, PhD,[1] Kenneth R. Jones, PhD,[3] Kim Hamlett-Berry, PhD,[2] Dundon Margaret, PhD[4] and Robert Kerns, PhD[5]

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The Department of Veterans Affairs (VA) provides comprehensive health care to 5.5 million US Veterans each year, across 153 medical centers and over 800 community-based outpatient clinics. As the nation's largest integrated health care system, VA has implemented numerous prevention initiatives to promote health among all Veterans through the implementation of evidence-based practices, changes in policy and the recent creation of behavioral health program positions. In this symposium, an overview of of the VA health care system and Centers of Excellence will be followed by national program leaders' presentations on the development and implementation of successful intitiatives targeting key behavioral medicine issues, including weight management/ physical activity, tobacco use cessation, integrated primary care and pain management. Each presenter will describe one or more prevention initiatives in these areas and illustrate the current status of implementation and evaluation. Discussion will focus on lessons learned through the national implementation of these public health initiatives and the potential for coordination between these programs and other national, state and community partners.

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Symposium 04A 2014

MOVE!: A PUBLIC HEALTH WEIGHT MANAGEMENT INTERVENTION IN VA AND EXPANSION TO ADDRESS ADDITIONAL HEALTH BEHAVIORS

Kenneth R. Jones, PhD

NCP, Dept. of Veterans Affairs, Durham, NC.

US veterans were exceptionally fit as young adults. Nonetheless, the prevalence of overweight or obesity among veterans enrolled in Veterans Health Administration (VHA) care is 77%, which is higher than the general adult population. Accordingly, veterans show much higher levels of weight-related illness such as diabetes (24%). To address overweight/obesity, VHA developed an evidence-based program of screening and weight self-management support through a program called MOVE!. MOVE! was piloted in 2003–2005, implemented voluntarily in 2005, and became a mandatory program in 2006. The implementation of MOVE! was supported by online training, hardcopy and online resources, an online assessment, promotional materials, and guidance for clinicians to conduct individual and group support. Presently, 95% of veterans are screened for MOVE!, annually. Evaluations have shown that providing individual support by telephone has been challenging, and alternative formats of individual support have been developed (e.g., telephone coaching center, home messaging systems). To date, over 280,000 veterans have received MOVE! care in over 1.5 million clinical encounters, and MOVE! has rapidly become the largest weight management program provided by an integrated healthcare system. Findings suggest that 75% of MOVE! participants either halt weight gain or lose weight. Depending on extent of participation, 18–24% of participants achieve a 5% weight loss at 6 months, and early indications suggest that there is good stability of weight loss. Partly based upon the success of MOVE!, VHA is expanding the support of health risk reduction through health behavior change by enhancing infrastructure, training, clinical tools, and electronic resources. This expanded public health intervention is being integrated within a conversion of primary care to the patient-centered medical home model. Lessons learned in incorporating behavioral medicine into public health in a large, complex integrated health care system will be shared.

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Symposium 04B 2015

TITLE: INCREASING ACCESS TO EVIDENCE-BASED TOBACCO CESSATION CARE IN THE VA: A NATIONAL HEALTH CARE SYSTEM MODEL

Kim Hamlett-Berry, PhD

Department of Veterans Affairs, Washington, DC, DC.

Abstract: Smoking continues to be the leading cause of preventable death and disease in the U.S. As rates of tobacco use have historically been higher among Active Military and Veteran populations, smoking and tobacco use cessation has been a behavioral public health priority in the VA health care system since 2003. This presentation will provide an overview of national policy initiatives and system-level interventions that have been implemented including: use of national performance measures and electronic medical records to increase rates of screening for tobacco use and delivery of brief counseling; adoption of evidence-based clinical practice guidelines; policies to increase rates of pharmacotherapy; targeted interventions to increase access to care for high-risk populations such as psychiatric populations; and national trainings for VA health care professionals on evidence-based practices. These initiatives and interventions will be briefly described along with national data on decreases in the prevalence of smoking among Veterans and increases in the national rate of smoking cessation medication utilization. Lessons learned and implications for other health care systems will be discussed.

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Symposium 04C 2016

IMPLEMENTING A STEPPED MODEL AS THE SINGLE STANDARD OF CARE FOR VETERANS WITH CHRONIC PAIN

Robert Kerns, PhD

VA Connecticut HCS/Yale, West Haven, CT.

Pain management is a priority for VA, and in 1998, VA established a National Pain Management Strategy to promote a comprehensive, multicultural, integrated, and system-wide approach to improve management of acute and chronic pain and to promote improved quality of life for Veterans suffering from pain. In 2009, VA has established an evidence-based stepped pain care model as the single standard of pain care for Veterans. The model calls for most common pain conditions to be managed in the primary care setting, supported by secondary pain medicine, behavioral health, and other specialty consultation, and access to tertiary, interdisciplinary pain centers for management of the most complex, at risk, and treatment refractory patients. The presentation will describe the model and a comprehensive approach to national dissemination and implementation. This will be followed by an overview and presentation of phase one results of a foundation funded project that uses one VA facility as a "learning laboratory" for conducting a formative evaluation and implementation study of the model. Important benchmarks of pain care and quality improvement will be discussed. These data include qualitative data on the experiences of primary care staff in the care of Veterans with pain, quantitative data on providers' knowledge and attitudes, quality of care indicators derived from review of providers' progress notes, and data extracted from the electronic health record related to pain care service provision and other accepted standards of pain care. Examples of how these data are used to inform processes of improvement and related interventions will be presented and discussed.

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Symposium 04D 2017

TRAINING PRIMARY CARE STAFF IN BRIEF INTERVENTIONS FOR HEALTHY LIVING: TOBACCO CESSATION AS A MODEL

Margaret Dundon, PhD

CIH, VHA Center for Integrated Healthcare, Buffalo, NY.

Tobacco cessation remains the single most important health behavior change for all populations, but particularly for Veterans, who tend to have higher rates of tobacco dependence than the general population. Historically, VA has consistently provided counseling by medical care providers to advise smokers to quit, aided by computerized patient medical record reminder systems and specialty group programs using various evidence-based interventions. As the healthcare culture shifts to patient-centered, medical home models in the VA system, the need for advanced access to brief but evidence-based interventions has become apparent. The Primary Care-Mental Health Integration model incorporates Co-located, Collaborative Behavioral Health Providers (psychologists or social workers) who tend to be more familiar with general mental health interventions than with evidence-based health behavior interventions such as tobacco cessation. Based on current clinical practice guidelines, we developed a brief, 4-session intervention that is consistent with the 5 A's model of care and weaves motivational interviewing into the protocol. A detailed, step-by-step manual complete with scripts is available, and designed for both mental health professionals and other health care professionals, such as nurses. Response to trainings via Live Meetings has been extremely positive, and outcome monitoring via computer tracking is in process. The format of the manual and scripted, motivational content as well as the system for training (virtual meeting) may offer a useful template for efficient team training in other lifestyle interventions.

Additional lifestyle change work in these patient-centered teams (alcohol misuse, weight management, adherence, insomnia and referral management) will be briefly described.

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Symposium 05 8:45 AM–10:15 AM 2018

BEHAVIORAL MEDICINE UNDER THE PATIENT PROTECTION AND AFFORDABLE CARE ACT

Robert M. Kaplan, PhD[1] and Jenelle Krishnamoorthy, PhD[2]

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On March 23, 2010, President Barack Obama signed the Patient Protection and Affordable Care Act (PPACA) into law. This federal statute will be gradually phased in over the course of four years. One of the most important provisions of the act is the requirement that health insurance providers who offer group and individual insurance must include in their plans services that have received A or B ratings by the U.S. Preventive Services Task Force. The act also includes support for immunizations, evidence-based preventive services for infants, children, and adolescents, and additional preventive care and screening for women.

This symposium will discuss how the PPACA will affect four issues. The first paper by Marian Fitzgibbon and Laura Hayman will review the effect of PPACA on interventions that are designed to prevent and reduce childhood obesity. In the second paper, Edwin Fisher and Delesha M. Carpenter consider the evidence supporting diabetes self management education (DSME) and how evidence standards such as those created by the Guide to Community Preventive Services might lead to challenges in the support of widely advocated care. Russ Glasgow, in the third paper, will consider a more general issue relevant to measurement. He will review data needs and data sharing challenges relevant to behavioral medicine and inclusion of health behavior and psychosocial measures in performance measurement databases and EHRs being created for healthcare reform. In the final paper, Robert Kaplan will discuss another provision of healthcare reform known as comparative effectiveness research. The paper will consider evidence standards required for coverage of preventive services under the PPACA and the specific experimental design challenges that may make it difficult for many behavioral interventions to receive an A or B rating by the U.S. Preventive Services Task Force.

Senator Tom Harkin from Iowa has been a particular champion of healthcare reform. Jenelle Krishnamoorthy, a senior member of Senator Harkin's staff, will serve as discussant.

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Symposium 05A 2019

COMPARATIVE EFFECTIVENESS RESEARCH UNDER THE PPACA

Robert M. Kaplan, PhD

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Comparative effectiveness research will play an important role in determining what services will be covered by Medicare and perhaps by commercial insurance companies. The American Recovery and Reinvestment Act (ARRA) of 2009 included $1.1 billion for comparative effectiveness research (CER) to evaluate the benefits and harms of alternative methods to prevent, diagnose, treat, and monitor clinical conditions or research that will provide information on improved delivery of healthcare. CER differs from traditional outcomes research because it emphasizes the assessment of treatment from the perspective of consumers, clinicians, purchasers, or policy makers. The ultimate goal is to provide information that will help stakeholders make better decisions to improve individual or population health.

One of the provisions of the PPACA was the required coverage of preventive health services, without co-payment. Services that will qualify for this coverage include those with an A or B rating by the U.S. Preventive Services Task Force. There has been some controversy about how services obtain these ratings. For example, it is difficult to obtain A or B ratings without multiple randomized clinical trials that adhere to specific methodological criteria.

On the other hand, some services that obtain these ratings have relatively low population reach or have inconsistent results when different outcome measures are considered. For example, daily aspirin use received an A rating. However, aspirin has been shown to prevent death from cardiovascular disease, but not to have any health benefit from the perspective of total mortality. European reviewers, who have considered the same evidence, do not advocate daily aspirin use on a population basis. This paper will review these case histories and comment on the challenges and opportunities for behavioral interventions to gain recognition under the proposed review criteria.

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Symposium 05B 2020

THE NEED FOR PRACTICAL PATIENT CENTERED MEASURES OF HEALTH BEHAVIORS AND PSYCHOSOCIAL ISSUES

Russ Glasgow, PhD

NCI, DCCPS, Rockville, MD.

Recent health care reform and the American Recovery Act funding have ushered in a large push for electronic health records (EHRs). For these efforts to succeed and reach their full potential to address the Institute of Medicine priorities of care that is patient-centered, effective, equitable, safe, timely and efficient will require active involvement of patients and data on issues such as behavioral risk factors (e.g., physical activity, eating patterns, medication taking) and psychosocial functioning (e.g., quality of life, depression; distress, patient satisfaction and preferences, health literacy). EHRs have great potential for enhancing care and provide numerous research opportunities. To date however, there are quality control issues with most systems and little harmonization across competing HER systems. Currently few EHRs include behavioral or psychosocial measures, with the exception of smoking, and recently depression. This has not been because of the lack of availability of such measures, but because of issues concerning the length, feasibility, lack of consensus in the scientific community, and the large number of behavioral and psychosocial issues needing attention. Characteristics of measures that are practical to include in EHRs in real world settings are that they are brief, reliable, valid, translated into multiple languages, sensitive to change; suitable for repeated testing; have national norms; are understandable to clinicians, patients and policy makers, and actionable. There is a tremendous opportunity, and also a relatively short window of time, for behavioral and psychosocial measures to be included as part of key datasets now being created for performance indicators to be used for issues including pay for performance, the patient centered medical home and community health indicators. The presentation will conclude with information on opportunities for such measures to be included as part of large datasets for quality of care performance pay and international research collaborations.

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Symposium 05C 2021

THE AFFORDABLE CARE ACT AND IMPLICATIONS FOR CHILDHOOD OBESITY

Laura L. Hayman, PhD, RN, FAAN[1] and Marian L. Fitzgibbon, PhD[2,3]

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To achieve the goal of eradicating childhood obesity within a generation, a confluence of a supportive environment and positive lifestyle choices will be required. In this symposium we will first discuss aspects of the Affordable Care Act that are designed to prevent and reduce childhood obesity (e.g., improved nutrition labeling in fast food restaurants, promotion of breastfeeding and early child nutrition, community-based care that target communities with disproportionate rates of obesity, community transformation grants, public awareness campaigns). Second, we will examine how aspects of the Affordable Care Act can be framed and implemented most effectively when the obesity epidemic is conceptualized from a multilevel framework. Thus, it is critical to address the context in which individuals make day-to-day lifestyle decisions and how decisions are shaped by factors such as socioeconomic status, parental education, family and peer support, neighborhood safety, social networks, and social norms. Additionally, it is equally important to examine factors and processes that influence individuals' responses and interactions with macro-context factors (e.g., schools, institutions, food marketing, physical and built environment, and national policies) in their environment that impact obesity and obesity-related health disparities. Emphasis will be placed on implications for behavioral, preventive, and public health science, practice, and policy advocacy initiatives. We will include a specific focus on how these efforts can impact ethnic minority and socioeconomically disadvantaged children who have experienced increases in obesity at a faster rate than non-minority children and children raised in more affluent environments.

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Symposium 05D 2022

IMPLICATIONS OF HEALTH CARE REFORM FOR DIABETES SELF MANAGEMENT AND SUPPORT - AND VICE VERSA

Edwin B. Fisher, PhD[1,2] and Delesha M. Carpenter, PhD[3]

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Coverage of diabetes self management education (DSME) and diabetes self management support (DSMS "to sustain the ongoing behaviors needed to manage" diabetes) is impoverished. Only 55% of private plans surveyed cover DSME. After an initial 13 hours, Medicare covers only 2 hours of DSME/S per subsequent year. Medicaid varies from zero to similar coverage. Rather than reinforcing effective management with ongoing DSMS, both require worsening of clinical status for more than the 2 hours of DSMS per year. Although 60% to 70% of those with diabetes report no DSME, Medicare/Medicaid require written physician's orders, compromising access.

The Affordable Care Act's increase of preventive services should include flexible arrays of DSME/S in order to reach the 60–70% not receiving them. Varied, sustained influences are critical to long-term behavior change, so patients need access to many good rather than one or a few best practices.

DSME/S is context dependent, but this is poorly captured by methodologies of standards for health care services. E.g., the Guide to Community Preventive Services finds sufficient evidence for DSME offered through "community gathering places" such as "community centers, faith-based institutions, … cardiovascular risk-reduction centers" but not through worksites. A program's success will depend on numerous characteristics of its setting, e.g., the commitment of a clinic manager or CEO to substantive DSME rather than a public relations tactic. Such features can be captured through numerous methodologies of evidence based evaluation, but are poorly captured in RCTs. More simply, distinctions regarding the adequacy of evidence for different approaches violate principles of scientific method, e.g., the law of parsimony, according to which distinctions (e.g., worksites vs community centers) are to be based on affirmative evidence, not lack of evidence.

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Symposium 06 8:45 AM–10:15 AM 2023

STIMULATING DATA: RECOVERY ACT INVESTMENTS IN COMMUNICATING DATA EFFECTIVELY IN HEALTH AND HEALTH CARE

Brad Hesse, PhD,[1] David Nelson, MD, MPH[2] and Harry Kwon, PhD, MPH, CHES[3]

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The use of data is taking on new currency in a health care environment empowered by connective information systems. Personal health data carried within the specified data fields of an interoperable Electronic Health Record can serve as the life-sensitive trigger to clinicians and patients for cueing preventive medical services, to support shared decision making, to monitor for ongoing effects of treatment, and to promote safe adherence to acute and chronic treatment regimens. Quality improvement data can be used to compare the effectiveness of treatments within the operational constraints of real-world health care systems, potentially saving millions of dollars to the nation's exploding bottom line for health care costs. Population data can be culled both from health systems and from interconnected data systems to address disparities and empower community action. Yet communicating that data effectively in a way that is concise, clear, and empowering to users may be the biggest challenge confronting researchers and practitioners in the new era of technology-infused, health production systems.

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Symposium 06A 2024

HOW DO UNDERSERVED POPULATIONS RESPOND TO PATIENT ACCESSIBLE ELECTRONIC MEDICAL RECORDS?

Christina Zarcadoolas, PhD,[1] Wendy Vaughon, MPH,[1] Sara Czaja, PhD,[2] Joslyn Levy, BSN MPH[3] and Maxine Rockoff, PhD[4]

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Abstract
Background: Electronic health information tools for patients, including patient-accessible Electronic Medical Records (EMRs) are proliferating across health care delivery systems nationally. However, there has been limited systematic end-user assessment of these systems.
Purpose: We sought to identify consumer response to the concept of EMRs, and gather reactions to certain functions including, perceived utility and value, likelihood to use the system, readability, navigability, technology preferences, and privacy concerns. Our target population was low-income and underserved adults living in New York City.
Methods: We conducted four focus groups with a total of 28 English speaking participants. We focused on three common functions of patient accessible EMRs: medication management, lab/test results, and health maintenance/prevention. We also conducted a readability, health literacy load and task analysis of these components of representative systems.
Findings: We found high interest in patient accessible EMRs among participants. Most were enthusiastic about features that increased convenience, such as making appointments. However, we also found barriers which impede consumer use. These include complex language, design and navigation, as well as high health literacy load. Reviewing test results presented unusually high reading and numeracy demands. Prevention and maintenance information was important to participants, but they felt it must be easy to read. Although few participants had access to their health records, almost everyone used mobile and online technology in their daily lives. Our next step is to conduct usability testing of a range of existing EMR platforms and develop preliminary best practice guidelines for design.

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Symposium 06B 2025

EMPOWERING COMMUNITIES WITH DIRECT ACCESS TO HEALTH DATA

Brad Hesse, PhD,[1] Lila J. Rutten, PhD MPH[2,1] and Abdul R. Shaikh, PhD MHSc[1]

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On December 8, 2009 the White House issued a presidential memorandum to the heads of executive departments and agencies to make government transparent, participatory, and collaborative. In response to that directive, the Secretary for the Department of Health and Human Services initiated a call to the public and private sectors to find ways in which health data could be portrayed to communities to help incent personal and community action. The premise goes to the very heart of the so-called "Web 2.0" movement on the open Internet: that data would become the new "Intel Inside" for a set of highly interactive architectures incenting participation rather than passivity, collective intelligence rather than isolation. The National Cancer Institute followed up with a general "Challenge" issued to the developer community to build applications based on cancer data to empower community action.
Results of the national competition will be evaluated and showcased as part of the "stimulating data" symposium. Anticipated examples of winning applications include: (a) a state-by-state overlay of cigarette tax data, arrayed over time with adult smoking rates, to give communities a relative sense of progress compared to other states in combating cigarette smoking; (b) a "dashboard-style" visualization of key cancer control indicators as feedback to state public health planners; (c) the use of data "widgets" within a hospital-wide information system to give real time feedback on adherence to enterprise prevention goals. Each application will be evaluated within the talk to reveal the design affordances necessary to make data comprehensible to a wide array of audiences, easy-to-use, and motivating in terms of community action.

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Symposium 06C 2026

CYCORE: A CYBERINFRASTRUCTURE TO SUPPORT COMPARATIVE EFFECTIVENESS RESEARCH IN BEHAVIORAL MEDICINE

Susan K. Peterson, PhD,[1] Karen Basen-Engquist, PhD, MPH,[1] Wendy Demark-Wahnefried, PhD, RD,[2] Alexander Prokhorov, PhD,[1] Chaitan Baru, PhD,[3] Emilia Farcas, PhD,[3] Ingolf Krueger, PhD,[3] Doug Palmer, PhD,[3] Fred Raab, MS,[3] Phil Rios, MS,[3] Stephanie Barrera, MS, RD,[1] Laura Wolszon, PhD[3] and Kevin Patrick, MD, MS[3]

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The limited focus on health behavior change interventions in comparative effectiveness research (CER) has been a major hindrance in this research landscape. The rigorous testing of cancer treatment and prevention strategies has been hampered by well-known problems: poor patient adherence, inability to accurately measure environmental influences on health, and limited data on lifestyle behaviors that may affect disease progression or recurrence. The potential usefulness of CER to inform health decision-making and policy change can be greatly enhanced by rigorous and systematic collection and integration of data on health behavior and related domains. The primary aim of the CYCORE project is to create a prototype for a user-friendly, open-source cyber-infrastructure (CI) that supports the collection, storage, visualization, analysis and sharing of behavioral and other health outcome data to enhance CER in cancer. The primary interface between patients and the CI is via CYCORE's intelligent Home Health Hub (H3), to which a set of biometric and environmental sensors transmits recorded data that are then relayed to a data-management system via a web-service interface. To date, requirements for CI development have been gathered from 66 stakeholders, including researchers and clinicians from multiple disciplines in oncology, and have identified the need for CYCORE to: 1) convey frequently updated, and ideally near real-time, symptom assessment and intervention-adherence feedback to clinicians and researchers; 2) automate collection of self-reported data; 3) provide algorithms to analyze and validate data from multiple sensors; 4) integrate institutionally-established ontologies with more globally-accepted structures (e.g., caBIG). The next phase of CYCORE will involve testing and evaluation of the prototype CI in target patient populations.

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Symposium 07 8:45 AM–10:15 AM 2027

IMPACT OF A PROGRAM AND ITS EVALUATION: ACTIVE FOR LIFE (R)

Laura C. Leviton, PhD,[1] Marcia Ory, PhD,[3] Diane Dowdy, PhD,[3] Sara Wilcox, PhD,[2] Sarah F. Griffin, MPH, PhD,[4] Judith M. Ottoson, PhD,[5] Diane J. Martinez, MPH[1] and Russell Glasgow, PhD[6]

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A key challenge for behavioral medicine is the translation of research into practice. The Active for Life initiative, supported by the Robert Wood Johnson Foundation, facilitated this translation, and an independent evaluation studied it systematically. Both the program and its evaluation were highly useful to build the field of physical activity in older adults. As established by an independent study, the program and its evaluation led to seven different kinds of influence, including decision making, valuing use, instrumental use, conceptual use, use for evaluation learning, symbolic use and communication use. This symposium will define these types of influence and then describe characteristics of the program, the evaluation and its findings that facilitated these uses.Two presentations will cover characteristics of the program and its evaluation that facilitated influence. The third presentation will describe the documented evaluation use, as well as a new model, The Ecological Model of Evaluation Use.

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Symposium 07A 2028

DOCUMENTING THE INFLUENCE OF THE EVALUATION OF ACTIVE FOR LIFE: A CASE STUDY OF EVALUATION USE

Diane J. Martinez, MPH[1] and Judith M. Ottoson, PhD[2]

[1]Robert Wood Johnson Foundation, Princeton, NJ and [2]San Francisco State University, San Francisco, CA.

Evaluations are supposed to be useful. For decades, studies have explored whether and how evaluations are used. Is there anything new to say now? We think so. This presentation will illustrate the parameters of use (e.g., for whom? when? how?) as well as what constituted use of the evaluation of the RWJF-funded program, "Active for Life (R): Increasing Physical Activity Levels in Adults Age 50 and Older." During this case study, we found that the Active for Life evaluation was used extensively by multiple stakeholders. Familiar kinds of use, such as conceptual and instrumental use were identified, as well as several new types of evaluation use. We also uncovered sequential patterns of evaluation use that we called "threads" and leveraged use of evaluation-related knowledge across time and contexts. These findings led us to the development of The Ecological Model of Evaluation Use. We use that model to tell the story of this case study. This presentation will conclude with the general implications of this case study for foundations, leaders in the fields of aging, behavioral medicine, and public health, as well as other stakeholders.

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Symposium 07B 2029

TRANSLATING RESEARCH TO PRACTICE: THE ACTIVE FOR LIFE PROGRAM

Marcia Ory, PhD, MPH and Diane Dowdy, PhD

Texas A&M Health Science Center, College Station, TX.

Active for Life (AFL), a RWJF-funded national program, examined how evidence-based programs would need to be adapted to go to scale in community settings, and whether findings would be similar to those reported in the original RCT studies. An environmental scan of potentially scalable programs incorporating behavioral change principles was conducted to select the evidence-based programs for study. The AFL program was implemented through active collaboration of partners representing the National Program Office, an independent Evaluation Team, the funding agency, original program developers, a national advisory council, expert consultants on the RE-AIM framework, and implementing community organizations from aging, public health, health care, and other social service sectors. Nine different grantees sites around the nation disseminated one of two evidence-based programs based on a similar theoretical background but delivered by different modalities: (Active Living Every Day (group-based) and Active Choices (telephone home-based) to over 8000 middle-aged and older adults as a means of increasing physical activity. Working with program developers allowed adaptations to be made that were important for implementation but that did not alter the essence of the theoretically-derived essential components. The translation from research to practice was successful: 1) a large and more diverse population was recruited; 2) findings were generally the same, and of similar magnitude as the original study demonstrating the ability to increase physical activity in middle-aged and older adults; 3) and sustainability was possible through sustainability planning that began at the beginning of the projects. Lessons learned included the importance of fostering partnerships at all levels, the critical role of technical assistance to community partners, and setting up mechanisms to balance adaptation and fidelity, with an eye toward documenting the advantages and disadvantages to recommended changes. Ongoing evaluation was seen as a critical component to the success of the program, providing grantee sites feedback throughout the entire process.

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Symposium 07C 2030

FACTORS AFFECTING THE USEFULNESS OF THE EVALUATION OF ACTIVE FOR LIFE®

Sarah F. Griffin, PhD[1] and Sara Wilcox, PhD[2]

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The Active for Life (AFL) evaluation was an externally conducted process and outcome evaluation of a multisite translational research initiative. In this presentation we will provide a brief overview of the process and outcome evaluation procedures and refer the audience to previously published results. The primary focus of the presentation will be on strategies that the evaluation team used to ensure the evaluation was rigorous yet practical and useful for the varied stakeholders. We will discuss the importance of building trusting relationships between the evaluation team, program delivery sites, program developers, National Program Office, and the Robert Wood Johnson Foundation. We will describe efforts used by the evaluation team to help build this trust. Secondly, we will discuss the importance of having a collaborative planning period to hear from stakeholders about their evaluation needs and strategies we used to be flexible yet not compromise the evaluation design. Third, we will discuss how we valued the formative role of the evaluation by continually sharing preliminary evaluation findings in site-specific and user-friendly formats. Next, we will discuss the processes used to develop data collection systems and adjust measurement tools so that delivery sites could continue to use what was developed through this evaluation after AFL. Finally, we will discuss how we balanced the role of being “independent evaluators” while at the same time considering ourselves evaluation consultants for the delivery sties. We will discuss how we were available to the sites to assist them with interpreting and present results to different audiences and how to evaluate other programs. Within each of these sets of strategies we will share examples of successes and struggles.

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Symposium 08 8:45 AM–10:15 AM 2031

GENOMICS APPLICATIONS TO ADDRESS CHALLENGES FOR BEHAVIORAL MEDICINE IN THE U.S. AND ABROAD

Colleen McBride, PhD[1] and Peter Winch, MD, MPH[2]

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There is great optimism that advances in genomics can be applied to reduce the burden of disease worldwide. While some of these discoveries are far on the horizon, others could begin to be evaluated as part of intervention research to inform their potential for improving health outcomes. Yet, to date, little is known regarding the potential for using genomics tools to target interventions or promote changes in behavior. In this symposium, we first provide an overview of the unique opportunities for and challenges to applying genomics to address important public health problems. We then present two examples of ongoing intervention studies where genomics is being evaluated for health promotion. The first example highlights the potential for genomics to galvanize communication pathways within family networks, thus increasing the efficiency and potential impact of a behavior change intervention. The second illustrates a global health application where genomics is being used to target limited resources where public health impact can be greatest. An invited discussant (Dr. Peter Winch) will provide closing comments on the need for future research to begin considering the relative benefit of genomic applications worldwide.

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Symposium 08A 2032

PROJECT RAMA: USING FAMILY HEALTH HISTORY FEEDBACK TO PROMOTE HEALTH IN MEXICAN ORIGIN FAMILIES

Laura M. Koehly, PhD[1] and Anna V. Wilkinson, PhD[2]

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Project RAMA (Risk Assessment for Mexican Americans) is a study that examines whether FHH-based risk information motivates Mexican-origin families to more accurately discuss their family risk of common, complex diseases and if such communication prompts family members to encourage each other to screen for risk factors. Participants (N=497 adults from 162 households) were recruited from a population-based cohort of Mexican-American households in Houston, TX. All participants provided a detailed FHH about diabetes and heart disease and received a pedigree representing this information. Households were randomized to one of four feedback conditions defined by two factors: 1) all or one participating household member(s) received supplemental FHH-based risk assessments (RAs) and 2) whether behavioral recommendations accompanied RAs. At the 3-month follow-up, 50% had shared their pedigree and/or RA with a family member. Participants in households where all members (compared to one member) received RAs were more likely to share information (OR=1.75; p=.01) and to initiate new communication pathways regarding family risk of heart disease (OR=1.44, p=.05). At 10-month follow-up, participants from households in which everyone received RAs and behavioral recommendations were more likely to enumerate new encouragers of blood pressure (p=.02) and blood glucose testing (p<.01). These new encouragers were 3 times more likely to be family members with whom participants had not communicated with regarding heart disease risk before (ps<.001). Results suggest that genomic risk information can increase family communication and encouragement to screen. Due to shared disease risk among family members (genetic, environmental and social), interventions using FHH have the potential to lead to more efficient and effective interventions that could accelerate current health promotion efforts with important target groups.

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Symposium 08B 2033

USING GENOMIC INFORMATION TO TARGET AN INTERVENTION PROMOTING FOOTWEAR IN RURAL ETHIOPIAN CHILDREN

Gail Davey, MBBChir MSc MD

Clinical Medicine, Brighton & Sussex Medical School, Brighton, United Kingdom.

Podoconiosis is a chronic and debilitating lower-leg lymphedema affecting one million people in highland Ethiopia. The condition is caused by prolonged exposure of the bare foot to irritant particles present in volcanic clay soil and is entirely preventable if those at genetically high risk protect their feet from soil exposure. Approximately 63% of phenotypic variance is accounted for by genetic factors. Despite efforts to regularly distribute shoes to those at genetically high risk (podoconiosis patients and their children), use of footwear in rural Ethiopia is intermittent (prevalence less than 20%). A 2-phased intervention was designed: in Phase 1 (Summer 2010) qualitative strategies (interviews, focus groups) aimed to gain deeper understanding of the opportunities and challenges associated with consistent shoe wear. Phase 2 (Spring 2011) then uses this information to develop and implement evidence-based intervention modules aimed at promoting consistent use of footwear among at-risk children. One approach to be piloted uses visual aids to improve understanding of the link between genetics, use of footwear and podoconiosis. The second uses a role model intervention to encourage and model consistent use of footwear. The current projects' collaborative approach between a non-government organization and academic institutions in the U.S. and Ethiopia is an example of the kind of community-academic partnership necessary to effectively disseminate emergent genetic information to lay audiences to promote improvements in public health.

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Symposium 08C 2034

GENOMICS-INFORMED INTERVENTIONS & GLOBAL HEALTH: WHAT DO WE KNOW?

Dirk H. de Heer, PhD, MPH and Colleen McBride, PhD

Social and Behavioral Research Branch, National Human Genome Research Insitute, Silver Spring, MD.

Our ability to generate and analyze genomic information has been forecast to hold promise for improving global health. Yet, to date, little is known regarding the potential for existing genomics tools to target interventions strategies or promote changes in behavior. We present results of a descriptive review to highlight the available evidence to support three assertions put forward regarding the potential of genomics to: (1) promote more efficient allocation of limited public health resources, (2) improve the effectiveness of public health interventions, and (3) promote global health equity. This presentation will set the stage for two specific examples of current projects utilizing genomic tools in the U.S. and abroad.

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Symposium 09 8:45 AM–10:15 AM 2035

UNDERSTANDING RACISM AS A STRESSOR IN PREGNANCY THAT PREDICTS DISPARATE RATES OF ADVERSE BIRTH OUTCOMES AMONG BLACK AND LATINO AMERICANS

Lisa Rosenthal, MA and Marci Lobel, PhD

Psychology, Stony Brook University, Stony Brook, NY.

The infant mortality rate for Black Americans is more than twice the rate for White Americans, with similar disparities in rates of low birthweight and preterm delivery. Some groups of Latinos in the U.S., particularly Puerto Ricans and those with greater acculturation, also suffer from disparate rates of adverse birth outcomes. Evidence indicates these racial disparities are not attributable to factors such as socioeconomic status or prenatal health behaviors that affect birth outcomes, nor to genetic or other racial/ethnic biological differences. Increasingly, evidence suggests maternal stress during pregnancy is an important risk factor for adverse birth outcomes. Further, several studies of Black and Latina American women suggest that stress engendered by the experience of racism over one's lifetime, and exposure to racism toward other Black and Latino Americans, is a potent predictor of low birthweight and preterm delivery. The first presentation in this symposium by Parker Dominguez will discuss the results of a study demonstrating differences in experiences with racism between U.S.- and foreign-born Black women, and how these experiences help explain the reproductive disadvantage of U.S.-born Black women. The second presentation by Glynn will discuss the results of a longitudinal study with pregnant Latina women, demonstrating the connection between their experiences with racism, physiological indicators of stress, and adverse birth outcomes. The third presentation by Rosenthal will review multidisciplinary evidence and present a novel theoretical model that identifies unique sources of stress for pregnant Black and Latina women based on experiences with discrimination resulting from intersecting gender, race, and pregnancy identities. Finally, we will end with a discussion led by Lobel of theoretical connections among the presentations, comparing their findings, and describing their implications for future research and intervention aimed at reducing racial disparities in adverse birth outcomes.

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Symposium 09A 2036

RACISM , NATIVITY, AND BLACK WOMEN'S BIRTH OUTCOMES

Tyan Parker Dominguez, PhD, MPH, MSW,[1] Emily Ficklin Strong, MPH,[2] Nancy Krieger, PhD,[3] Matthew W. Gillman, MD, SM[2,4] and Janet W. Rich-Edwards, ScD[2,5]

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Since common risk factors do not explain African Americans' two-fold risk of low birthweight (LBW) and preterm delivery (PTD), some propose a genetic cause. However, foreign-born Black women's outcomes parallel Nonhispanic Whites', but their US-born daughters' do not. Researchers hypothesize that differential exposure to minority status stressors is responsible; however, no studies have empirically tested this supposition. As a preliminary effort, we compared 185 US-born and 114 foreign-born Black pregnant women enrolled in a prospective cohort study of pregnancy on self-reported racism. US-born women were 2.6 times as likely as immigrant Blacks to report ever being the direct target of racism, 3.0 times as likely to experience it in the pregnancy, and 3.2 times as likely to report that their racial group had ever experienced racism. Important differences by age at immigration and region of origin also emerged. US-born women were 3.9, 4.7, and 5.5 times as likely as those immigrating <18 to report direct, pregnancy, and group exposure, respectively, and 5.6 and 9.3 times as likely as African immigrants to report direct and group exposure. There were few significant differences between US-born and women immigrating >18 or from the Caribbean. Across all nativity designations, US-born women were significantly more likely to report childhood exposure (ORs range: 4.1 vs foreign-born to 20.3 vs <18). These findings emphasize the importance of within-group studies for uncovering unique epidemiological factors that contribute to health disparities.

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Symposium 09B 2037

PERCEIVED DISCRIMINATION PREDICTS PRENATAL STRESS HORMONE TRAJECTORIES AMONG PREGNANT LATINA WOMEN

Laura Glynn, PhD

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It has been shown that Latino immigrants exhibit comparable birth outcomes to non-Latino Whites, despite having disadvantaged socioeconomic status (the "immigrant paradox"). It also has been shown that the obstetric health of Latina immigrants declines as length of residence in the US increases (the "acculturation hypothesis"). It is plausible that the experience of discrimination may represent one contributor to rising rates of less optimal birth outcomes among Latina women. This study focused on 85 pregnant Latina women who were participating in larger longitudinal study of psychosocial and biological contributors to adverse birth and infant outcomes. They were recruited by a research nurse during the first trimester of pregnancy and then participated in study visits at 15, 25, 31 and 37 weeks' gestation. At each visit blood samples were obtained and then subsequently assayed to determine cortisol levels. In addition, at 31 weeks' gestation, perceived discrimination was assessed with the Detroit Area Study discrimination scale. Hierarchical linear growth curve modeling revealed that increased perceptions of discrimination were associated with elevations in cortisol levels early in gestation (at 15 weeks) and also with a steeper trajectory of cortisol increase across gestation (p's$<.05$). Elevations in cortisol at 15 weeks' gestation also were associated with reduced birth weight, less optimal cognitive development and impaired stress regulation in the infants of the women in this cohort. These data suggest that the perception of discrimination among pregnant Latinas may represent one factor associated with dysregulated HPA-axis and placental function during pregnancy; which in turn, is likely to have implications for adverse birth and infant outcomes.

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Symposium 09C 2038

EXPLAINING RACIAL DISPARITIES IN ADVERSE BIRTH OUTCOMES: UNIQUE SOURCES OF STRESS FOR BLACK AMERICAN WOMEN DURING PREGNANCY

Lisa Rosenthal, MA and Marci Lobel, PhD

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We offer a novel perspective on racial disparities in birth outcomes that implicates historical, cultural, social, and psychological factors in making pregnancy a particularly stressful experience for Black American women. We review evidence from a range of disciplines, which taken together suggests that Black American women are subject to unique sources of stress during pregnancy based on their multiple and intersecting identities as women, as Black, and as pregnant. Drawing on theoretical and empirical work, we examine three unique sources of stress for pregnant Black American women that elevate their risk for adverse birth outcomes: 1) historical and contemporary stereotypes about Black American women and their relation to sexuality and pregnancy; 2) abuses of Black American women by the medical system and issues of power in obstetrics that disadvantage Black American women; and 3) contradictory societal pressures exerted on Black American women about whether they should have children. We also discuss the ways this model may be applied to Latina women, particularly Puerto Rican women and other Latinas who have been in the U.S. for longer periods of time. For example, we discuss the ways that some Latinos have experienced a parallel, or even intertwined history of discrimination with that of Black Americans, including a shared history of forced sterilizations and sexualized stereotypes, which may help to explain the disparities in adverse birth outcomes seen for some groups of Latinos. Further, we discuss how this analysis can be applied to both future research and interventions for pregnant women of color. Developing a better understanding of the experience of Black American (and Latina) women during pregnancy offers insight into ways to reduce racial disparities in adverse birth outcomes and their lifelong consequences.

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Thursday
April 28, 2011
2:00 PM–3:30 PM

Paper Session 01 2:00 PM–2:18 PM 2046

DO EXERGAMES ALLOW CHILDREN TO ACHIEVE PHYSICAL ACTIVITY INTENSITY COMMENSURATE WITH NATIONAL GUIDELINES?

Eric E. Hall, PhD, Courtney A. Graham, None, Rachel M. Perron, None, Jamie R. Feldman, BS and Rebecca A. Moffett, None

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The increasing rates of obesity and decreasing physical activity rates in children are becoming a major problem in the US. In recent years, video game companies such as Nintendo have developed a potential solution to this problem: exergames, or video games in which players are required to move much more than in traditional video game play. One study found that active video game play, such as the Nintendo Wii is similar in energy expenditure as moderate-intensity walking (Graf et al., 2009). The purpose of this study was to determine if two popular exergames, Wii Fit and EA Sports Active, helped children to achieve an intensity consistent with recommended physical activity guidelines. Thirty children (19 males and 11 females, Mean age=9.4 ±1.8 years) participated in this study. Participants completed one research session lasting approximately 60 to 75 minutes. The participants were randomly assigned to play one of the games for 25–30 minutes. A short rest was given before the other game was played for the same time. During the session participants wore a heart rate monitor and accelerometer to measure exercise intensity. Perceived exertion was measured with the children's OMNI scale. Using accelerometers, we found a significant difference for game which was due to greater light activity occurring in the Wii Fit game at 60% of minutes ($p<.001$) and greater moderate activity in the EA Sports Active game at 65% of minutes ($p<.001$). Mean heart rate during EA SPORTS Active was 144.0±8.0 bpm compared to Wii Fit, 136.5±9.6 bpm. This is equivalent to 68% and 65% age-predicted HRmax and would be considered moderate intensity. It was also found that perceived exertion in the EA SPORTS Active game was higher. When using heart rate as an indicator of exercise intensity it appears that both games for the Nintendo Wii were of sufficient intensity to achieve physical activity guidelines. However, the accelerometer data does not support this conclusion. Location of the accelerometer placement on the body may be contributing factor. Future studies should continue to investigate the utility of exergaming in helping children to become more physically active.

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Paper Session 01 2:18 PM–2:36 PM 2047

WII "HEART" FITNESS: A PILOT EXAMINING EXERCISE VIDEOGAMES AND CARDIOVASCULAR FITNESS IN ADULTS

Beth Bock, PhD,[1,2] Eva Serber, PhD,[1,2] Joseph Ciccolo, PhD,[1,2] Peter Tilkemeier, MD,[1] Kathy Palmer, BS[1] and Victoria Cobb, BS[1]

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Exercise Videogames (EVG) are widely marketed to Americans as a means of increasing fitness. We examined the effects of EVGs on cardiovascular and physical fitness among a sample of pre-hypertensive adults. Objectives: to examine the feasibility and acceptability of a 12-week (3 sessions/week) supervised program of Wii EVGs, and changes in fitness and cardiovascular risk. Assessments included: program adherence, a 3-minute step test, sit-and-reach test, handgrip strength, balance testing, weekly exercise minutes, resting Blood Pressure (BP), resting Heart Rate (HR), peak exercise HR, waist & hip circumference, and participant satisfaction. Participants were given a selection of EVGs to choose from to complete exercise requirements of>moderate intensity exercise. Target HR range was set at 50–69% of max using the Karvonen formula. Resting BP was taken weekly and HR was monitored throughout each session. A total of 11 adults (79% female, mean age=51 [range: 37–62 years]) completed the 12-week program (88% adherence rate). During the intervention, the mean rating of perceived exertion (RPE) was 12, and weekly minutes of PA averaged 130±10 min. Although not powered for significance, paired t-tests showed significant improvement in fitness and cardiovascular measures including: Peak HR at end of step test (157.2±17 BPM vs. 147.9±16 BPM, p =.026), Resting HR (78±12 vs. 70±8, p=.036), Resting systolic BP (135±11 vs. 127 ±10 mmHg, p=.045); Resting diastolic BP (80±9 vs. 79±7 mmHg, p=.687), and balance testing (4±5 seconds vs. 9±5 seconds, p=.05). Minimal changes were seen in weight, and hip & waist circumference, and the sit-and-reach test. Participant satisfaction ratings showed that all participants liked the sense of competition in games, they enjoyed the supervised EVG session format, and several (n=8) planned to purchase a Wii for their home. Notably, with this small pilot, significant changes were seen resting and peak HR and systolic BP. This supports the need to study the efficacy and sustainability of EVGs for adult engagement in PA.

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Meritorious Paper

Paper Session 01 2:36 PM–2:54 PM 2048

WHO RESPONDS BETTER TO A COMPUTER-DELIVERED VS. HUMAN-DELIVERED PHYSICAL ACTIVITY INTERVENTION?

Eric B. Hekler, PhD,[1] Matthew Buman, PhD,[1] Jennifer Otten, PhD,[1] Cynthia Castro, PhD,[1] David Ahn, PhD,[1] Bess Marcus, PhD,[2] Robert Friedman, MD[3] and Abby King, PhD[1]

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Previous research indicates that a computer-delivered intervention can be as effective as a human-delivered intervention for promoting physical activity (PA). Little research has explored who responds better to a computer vs. human advisor. The purpose of this study was to explore if baseline self-determination characteristics from the Treatment Self Regulation Questionnaire (e.g., amotivation [i.e., general lack of motivation] for exercise, autonomy motives) moderated intervention effectiveness for the 2 delivery modes. Data were from the CHAT Trial, a 12-month RCT in which underactive adults ages 55 years and older (N=218) were randomly assigned to a) telephone advice via human, b) telephone advice via computer, or c) health education control. Trial results indicated significant increases in PA in both intervention arms relative to control. The two intervention arms were the focus of the current analyses. Regression was used to explore if the interaction between arm assignment and self-determination motives predicted changes in 12-month PA after controlling for baseline PA using intent-to-treat procedures. Moderate to vigorous PA was assessed via 7-day recall, validated by accelerometry. Results indicated that baseline amotivation moderated intervention effects (d=0.61, $p<0.01$) such that participants reporting higher baseline levels of general motivation to exercise responded better to computer, whereas those who reported lower baseline levels of general motivation responded better to human advice (other subscales ns). Results suggest that computer advice may be more effective for persons reporting high initial motivation to exercise relative to human advice, whereas human advisors may be more effective for persons reporting an initial lack of motivation. These results highlight the potential utility of tailoring delivery source based on baseline motivational characteristics.

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Citation Paper

Paper Session 01 2:54 PM–3:12 PM 2049

EMPLOYING ‘VIRTUAL ADVISORS’ TO PROMOTE PHYSICAL ACTIVITY IN UNDERSERVED COMMUNITIES: RESULTS FROM THE COMPASS STUDY

Abby C. King, PhD,[1] Timothy W. Bickmore, PhD,[2] Ines Campero, BA,[1] Leslie Pruitt, PhD[1] and Langxuan Yin, MS[2]

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Interactive technologies have been used increasingly to improve health behaviors associated with chronic disease. Yet little work has specifically targeted economically disadvantaged ethnic minority older adults, who often lack the English language, literacy, and computer skills to successfully utilize Web-based programs. 40 inactive low-income adults (37 Latino) aged 55 years and older were randomized to a 4-month culturally adapted, individually tailored walking intervention delivered via a touch-screen computer-based bilingual ‘virtual advisor’, or a general health education arm. Both programs were delivered in a neighborhood community center. The overall 4-month study retention rate was 98 percent, and intervention participants had a mean of 1.6 conversations/wk with the virtual advisor. The primary outcome was walking, assessed via CHAMPS questionnaire, with verification using Omron pedometry. 4-month increases in reported minutes of walking/week were significantly greater in the virtual advisor arm (mean increase=253.5+/−55.6 min/wk) relative to health education (mean increase=26.8+/−15.4 min/wk; P=.0008). Walking increases reported in the virtual advisor arm were reflected in significant 4-month increases in objectively measured daily steps (slope analysis, P=.002; mean increase of 2295 steps/day). Virtual advisor participants also reported significant 4-month increases in behavioral and cognitive motivational processes of change relative to controls (Ps<.04). The results indicate that a virtual advisor delivering culturally adapted, individually tailored physical activity advice led to meaningful 4-month increases in walking relative to general health education among underserved older adults. This interactive technology, which requires minimal health and computer literacy, may help to ensure that all segments of the population benefit from ‘e-Health’ opportunities. Its expanded evaluation across longer time periods is indicated.

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Citation Paper
Meritorious Paper

Paper Session 01 3:12 PM–3:30 PM 2050

PEER VOLUNTEERS IMPROVE MAINTENANCE OF PHYSICAL ACTIVITY: A RANDOMIZED CONTROLLED TRIAL

Matthew P. Buman, PhD,[1] Peter R. Giacobbi, PhD,[2] Joseph M. Dzierzewski, MS,[3] Michael Marsiske, PhD,[3] Christina S. McCrae, PhD,[3] Adrienne Aiken Morgan, PhD[4] and Beverly L. Roberts, PhD[5]

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Cost-sensitive, community-based approaches to promote physical activity can be effective in older adults; however, improvements are often short-lived. This study examined whether long-term maintenance of physical activity behaviors was improved with a community-based intervention supplemented with tailored support from older peer volunteers. Participants were randomized to two 16-week, group-based programs: (1) peer-delivered advice and support for physical activity initiation and maintenance (encouragement, goal-setting, problem solving, imagery exercises); or (2) an attention-matched peer-led health education program (NIA web-based materials). Eighty-one sedentary adults 50 years and over were recruited. Moderate-vigorous physical activity (MVPA) was assessed via daily self-report logs throughout the intervention and follow-up (18 months), with accelerometry validation (RT3) in a random subsample. Cardiorespiratory fitness and psychosocial (intrinsic motivation, self-efficacy) outcomes were assessed. Sixty-nine participants completed the trial (85% retention) and among those 41 completed measures at 18 months (61% follow-up). Using intent-to-treat analyses, at 16 weeks, both groups had similar significant improvements in MVPA and cardiorespiratory fitness. At 18-months, the group supplemented with peer support had significantly more MVPA (diff=96.9 MVPA min/wk, p=.04, d=0.43). The group with peer support had higher intrinsic motivation at 16 weeks (diff=2.1, p=.05, d=0.35) and 18 months (diff=4.2, p=.04, d=0.40), but no changes in self-efficacy. Trained peer volunteers may enhance long-term maintenance of physical activity gains from a community-based intervention. This approach has great potential to be delivered inexpensively in community settings.

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Citation Paper

Paper Session 02 2:00 PM–2:18 PM 2051

BIOBEHAVIORAL PATHWAYS IN HEAD AND NECK CANCER

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Among patients with head and neck squamous cell carcinoma (HNSCC), studies have noted that psychosocial factors may be associated with survival, although the potential biological mechanisms that may underlie such associations have not been identified. Data from other cancer patient populations suggest that psychosocial factors are associated with vascular endothelial growth factor (VEGF), a signaling protein that stimulates tumor angiogenesis. Studies have reported that VEGF promotes tumor aggressiveness and is associated with poor prognosis in HNSCC. VEGF not only plays a pivotal role in angiogenesis, but is also regulated by stress hormones and key cytokines. Thus, the purpose of the present study was to explore whether psychosocial functioning was associated with biological pathways related to tumor growth (VEGF) in HNSCC patients. Participants were 37 newly diagnosed HNSCC patients, predominantly male (70.3%), and with a mean age of 56.7 years (SD=12.8). The majority were married or living with a partner (62.2%). Half (50%) had obtained a high school education or less. Primary tumor sites were: oral cavity (65.9%), larynx (18.9%), and oropharynx (13.5%). Over 40% were classified as having early-stage disease. Patients completed psychosocial questionnaires prior to treatment, and VEGF expression in tumor tissue obtained during surgery was evaluated using immunohistochemistry. Analyses indicated that perceived stress and depressive symptoms were associated with greater VEGF, controlling for disease stage (*ps*=0.04 and 0.07, respectively). Greater VEGF expression was associated with shorter disease-free survival (HR=3.97, *p*<0.05, 95% CI=1.3–12.4), controlling for disease stage and other relevant variables. In sum, poorer psychosocial functioning was associated with greater expression of VEGF in tumor tissue. Greater VEGF expression was, in turn, associated with shorter disease-free survival in HNSCC patients.

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Paper Session 02 2:18 PM–2:36 PM 2052

EXPLORING CAUSAL ATTRIBUTIONS IN HEAD AND NECK CANCER PATIENTS AND THEIR CAREGIVERS

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Research suggests that cancer patients’ beliefs about the cause of their illness can have important implications for their adjustment. We examined and compared causal attributions in newly diagnosed head and neck cancer patient-caregiver dyads.

Head and neck cancer patients (72% male, average age=59) and their caregivers were recruited in a clinic setting. Patients (n=40) and caregivers (n=35) completed telephone interviews at diagnosis. Participants described, in their own words, up to 3 factors they believed caused the patients’ cancer. Causal beliefs were coded by content (e.g., smoking, drinking, diet) and type (lifestyle/behavioral or environmental). We used descriptive statistics and ANOVA to describe causal attributions and examine relationships between beliefs (type and concordance in dyads), sociodemographics and smoking.

The most commonly reported causes were smoking (51%) and “don’t know” (26%) for patients and smoking (64%) and drinking (24%) for caregivers. Among patients who were current smokers or reported quitting recently (n=21), 52% of patients and 76% of their caregivers reported smoking as one illness cause. Both patients and caregivers cited lifestyle/behavioral causes most commonly (44% and 48%, respectively). Age was associated with causal belief type (p=.02); older participants reported more environmental than lifestyle/behavioral causal beliefs. When we compared attributions in patients and caregivers (n=33) by content, 30% had concordant beliefs, 52% had partially concordant beliefs and 18% had discordant beliefs. Belief concordance was unrelated to sociodemographic variables.

Head and neck cancer patients and caregivers in this study had wide-ranging beliefs about the causes of their illness. While smoking was commonly reported, other known risk factors such as alcohol and HPV were not cited as expected. Future research should examine the role of causal attributions in coping and interpersonal interactions over time.

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Paper Session 02 2:36 PM–2:54 PM 2053

POSTTRAUMATIC STRESS DISORDER (PTSD) SYMPTOMS IN NEWLY DIAGNOSED HEAD AND NECK CANCER PATIENTS AND THEIR PARTNERS

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Background: The more than 49,000 people in the U.S. diagnosed with head and neck (HN) cancer annually confront a life threatening illness with a poor prognosis. Moreover, they undergo treatments that often result in facial disfigurement and functional impairments in speech and swallowing. Despite the clear potential for PTSD symptoms in newly diagnosed patients and in their life partners, research is scant, particularly from a dyadic perspective.
Method: Patients and their partners (n=39 dyads) were recruited within 12 weeks of diagnosis of stages I-IV of HN cancer. They provided signed informed consent and each completed the PTSD Checklist (PCL) and a rating of the degree of life threat posed by their own (or their partner's) cancer diagnosis (1=not at all; 5=extremely). Because substance use increases HN cancer risk, they also rated the extent to which they believed their own (or their partner's) cancer was caused by tobacco or alcohol use (1=not at all; 5=completely).
Results: PTSD-related symptoms were common in patients (Mean PCL score=30.2 +/- 11.9), with even higher levels in their partners (Mean=36.4 +/- 14.5; F(1,76)= 4.33; p=.041). Indeed, 20.5% of partners met criteria for PTSD (PCL scores >50), while 5.1% of patients met criteria. Cancer stage did not predict PCL scores for either patients or partners. For patients, but not partners, higher levels of perceived life threat were associated with higher PCL scores (r=.37; p=.020). The extent to which tobacco or alcohol use was seen as a cause of the cancer was also positively related to PCL scores for both patients and their partners (r=.23; p=.047).
Conclusion: Patients newly diagnosed with HN cancer and their partners experience significant cancer-related distress. Identified correlates of distress are potential targets for intervention.

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Paper Session 02 2:54 PM–3:12 PM 2054

SOCIAL COGNITIVE PROCESSING IN COUPLES COPING WITH HEAD AND NECK CANCERS (HNC)

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Couples coping with HNC are at risk for distress given the nature of the disease and its treatment. For many, cancer can be a traumatic event eliciting intrusive thoughts and cognitive/behavioral avoidance. The Social Cognitive Processing Model posits that talking with close others can facilitate processing of traumatic events if the social context is supportive. However, couples may disagree about cancer concerns (e.g., caregiving, symptom management) and express negative emotions that may impair processing and exacerbate distress. This observational study examined the effects of emotional expression on cognitive processing. Sixty-three HNC patients (86% male) and partners were videotaped while problem-solving a cancer-related concern. Tapes were rated using the Specific Affect (SPAFF) coding system (Kappas=.80-.93), which has 18 positive and negative affect codes. After the discussion, participants completed a modified Stroop-task. Patient and partner affect was not significantly associated with reaction times (RTs) to neutral words. However, actor-partner (APIM) multilevel-models revealed significant findings regarding RTs to the cancer words. Specifically, greater sadness was associated with slower RTs for both partners and greater patient interest was associated with faster RTs for spouses (p<.05). Spouses had faster RTs when they expressed more affection, but patients had slower RTs when they expressed more affection to their spouse. Interestingly, greater spouse criticism was associated with slower RTs for spouses (actor effect) and for patients (partner effect), but patient criticism did not significantly impact either partner's RTs. Taken together, results suggest that expressing positive emotions such as affection or interest may impact patients and partners differently but that spouse criticism may adversely affect both partners' ability to process and potentially cope with the cancer experience. HNC couples may thus benefit from programs that emphasize cancer-specific communication skills training.

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Paper Session 02 3:12 PM–3:30 PM 2055

INFLUENCE OF PRETREATMENT SOCIAL SUPPORT ON POSTTREATMENT DEPRESSION AND HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH HEAD AND NECK CANCER

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Background: Head and neck cancer (HNC) and its treatment may have significant physical and psychosocial impact on patients. Evidence suggests that lack of social support in individuals with cancer may be related to poor health-related quality of life (HRQOL) outcomes. We sought to determine the effect of social support present at the time of diagnosis (i.e., prior to the initiation of treatment) on HRQOL outcomes in patients with HNC at two specific posttreatment time points.
Methods: As part of a large, longitudinal study of HNC outcomes, 366 patients were assessed on several clinical and psychosocial characteristics at diagnosis and then at three and twelve months posttreatment. Depressive symptomatology was assessed using the Beck Depression Inventory and HRQOL was assessed using the SF-36. Physical and Mental Component Summary (PCS, MCS) scores from the SF-36 were calculated.
Results: Controlling for age, physical comorbidities, sex, cancer site and stage of disease, and baseline depressive symptomatology or HRQOL, multiple regression analyses indicated that patients with a greater degree of social support at diagnosis–prior to the initiation of oncologic treatment–reported significantly lower depressive symptomatology at 3- and 12-month follow-up assessments (p's ≤ .01) as well as significantly better PCS (12-month follow-up; p<.05) and MCS HRQOL scores (3- and 12-month follow-up; p's=.01).
Conclusion: These results suggest that, after controlling for several important clinical characteristics, the level of social support present before the initiation of treatment can have a significant impact on depression and HRQOL over time in patients with head and neck cancer. Thus, it may be useful to assess available social support networks in HNC patients at diagnosis and provide structured support options for individuals at greater risk of poor HRQOL outcomes.

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Meritorious Paper

Paper Session 03 2:00 PM–2:18 PM 2056

THE RELATIONSHIP BETWEEN DEPRESSIVE SYMPTOMS, SELF-EFFICACY AND ADHERENCE IN PREADOLESCENTS WITH TYPE 1 DIABETES

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Treatment of type 1 diabetes (T1D) requires adherence to a set of complex tasks essential to avoid negative health outcomes. There is evidence that depression negatively affects adherence behaviors; however, the mechanism of this relationship is still unclear. Self-efficacy for diabetes management, defined as how much an individual perceives that they can perform diabetes-related tasks, has been hypothesized to affect adherence and may be related to depression. Although this relationship has been examined in older adolescents, it has not been studied in preadolescents. We hypothesized that the relationship between depressive symptoms and adherence would be mediated by self-efficacy in preadolescents.
Baseline data from an RCT to promote adherence in preadolescents with T1D were used. For the current study, youth self-report for depressive symptoms (Child Depression Inventory), self-efficacy for diabetes care (Self-Efficacy for Diabetes Scale), and self-care behaviors were utilized (Self-Care Inventory). Participants were 85 youth 8 to 11 years old.
A mediation model using linear regression was tested. All criteria for mediation were met. Increased depressive symptoms were related to lower self-efficacy (F(2, 83)=7.05 p=.002) and poorer adherence (F(2,83)=4.46, p=.015). Lower self-efficacy was related to poorer adherence (F(2,83)=6.33, p=.003). With all variables entered in the equation (F(3, 83)=5.17, p=.003), the association between depressive symptoms and adherence was no longer significant and was fully mediated by self-efficacy as tested by Sobel's equation (z=−2.01).
The relationship between depressive symptoms and poor adherence can be explained by decreased self-efficacy in preadolescents. Clinical implications of these findings include monitoring and treating preadolescents with T1D for depressive symptoms, well as increasing self efficacy for diabetes management.

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Paper Session 03 2:18 PM–2:36 PM 2057

MATERNAL AND PATERNAL INVOLVEMENT IN TYPE 1 DIABETES MANAGEMENT AND THE DEVELOPMENT OF SELF-REGULATION SKILLS AMONG ADOLESCENTS

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Successful management of type 1 diabetes depends, to a large extent, on adolescents' ability to regulate their behavior - which includes checking their blood glucose frequently, avoiding high carbohydrate foods, and getting regular exercise. Research suggests that those who engage in planning and self-monitoring are more likely than others to successfully regulate their health behaviors and to achieve their health goals (e.g., Gollwitzer & Oettingen, 2000). But how do people develop the planning and self-monitoring skills important for self-regulation? In the current study, we used latent growth curve modeling to examine how 1) parents' initial involvement in diabetes management and 2) changes in parents' involvement over time were associated with the development of planning and self-monitoring skills among adolescents. 252 adolescents with type 1 diabetes (Mage at baseline=12.5; 54.5% female; 91.7% Caucasian) participated in a longitudinal study, completing assessments every 6 months for a period of 2.5 years. At each measurement point, adolescents reported on three aspects of mothers' and fathers' involvement in diabetes management: acceptance of the adolescent, assistance with diabetes management, and general and diabetes-specific monitoring. At 2.5 years, adolescents reported levels of planning and self-monitoring related to two important goals. Results indicated that adolescents with higher maternal and paternal involvement at the beginning of the study reported more planning and self-monitoring at the end of the study (ps<.05). After controlling for initial levels of parental involvement, greater declines in mothers' and fathers' involvement were associated with more planning and self-monitoring at the end of the study (ps<.05). This study suggests that parents can aid in the development of planning and self-monitoring skills among adolescents with type 1 diabetes - by having high levels of involvement in diabetes management early in adolescence, but declining their involvement over time, presumably as adolescents develop more competence at managing diabetes.

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Citation Paper

Paper Session 03 2:36 PM–2:54 PM 2058

MATERNAL MONITORING AND THE ADAPTIVENESS OF PARENT-ADOLESCENT DIABETES TRANSACTIONS OVER TIME

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Parental involvement is important for effective management of type 1 diabetes across adolescence. Parents' involvement is theorized to occur and to be effective through transactional processes, where parents and adolescents mutually influence each other across time, but these transactional processes are rarely examined. We tested how adolescent diabetes management (adherence, HbA1c) and parental monitoring (teen report of mother and father monitoring) are linked through time as a coordinated, transactional process. Adolescents with type 1 diabetes (N=252, aged 10–14 at baseline, 54% female) completed measures of adherence and mother/father diabetes monitoring every six months for two years (5 time points); HbA1c was indexed through medical records. Using a latent difference score approach for modeling longitudinal data, we parceled patterns of a variable's change over time into its natural pattern of change (e.g., declines in adherence across adolescence), and a coordinated portion reflecting how changes in all variables co-occur (e.g., the extent to which declines in adherence share variance with changes in all other variables at a given point in time, creating a latent construct). The overall model showed adequate fit, $\chi2$ (154, N=252)=275.69, p<.001, CFI=0.95, IFI=0.95, RMSEA CI90%:0.045 <0.056 <0.066. Adherence and both mother and father monitoring changed in a negative direction across time, consistent with declines in involvement and adherence across adolescence. Changes in adherence, HbA1c, and mother and father monitoring moved together to form a coordination factor such that decreases in adherence covaried with increases in HbA1c and decreases in parental monitoring. Maternal (but not paternal) monitoring predicted the extent to which the coordination factor slowed the natural tendency toward poorer adherence and HbA1c across time. Data are consistent with a transactional process between parental involvement and diabetes management, and indicate that maternal monitoring drives whether this transactional process is adaptive for diabetes management across the adolescent years.

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Paper Session 03 2:54 PM–3:12 PM 2059

PARENT-CHILD CONFLICT MEDIATES RELATIONSHIP BETWEEN DIABETES SELF-MANAGEMENT BEHAVIORS AND PERCEIVED ILLNESS INTRUSIVENESS IN PEDIATRIC DIABETES

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Extant research has shown parent-child conflict to be an important factor for children's and adolescents' diabetes self management. Previous analyses show diabetes self-care, hypoglycemia, and diabetes-related conflict to relate significantly to diabetes-related illness intrusiveness. This study examined the relationship between diabetes self-management (measured by the Self Care Inventory [SCI]), Severity of Hypoglycemic Experiences (SHE) within the past month, Illness Intrusiveness (measured by the Adapted Illness Intrusiveness Ratings scale [AIIR]), and parent-child conflict about self-management activities (measured by the Diabetes Independence and Conflict Scale [DICS]) for 476 patients with type1 diabetes, aged 7 to 18 (M=11.9, SD=2.36). 54.7% of participants used insulin pumps; 89% were Caucasian. Hierarchical multiple regressions were used to test whether conflict mediated the relationship between SCI and AIIR, and between SHE and AIIR. Results indicated that both SHE (Partial R=.24, p<.01) and Conflict (.39, p<.01) predicted significant variance in AIIR, and Conflict did not mediate the Hypoglycemia-AIIR relationship. In contrast, when conflict was entered into the equation (.39, p<.01), the strength of the SCI-AIIR relationship reduced from -.20 (p <.01) to -.1 (NS), indicating that conflict mediated the relationship of SCI to AIIR. It appears that, while the experience of more severe hypoglycemic events, along with parent-child conflict, influenced directly the perceived intrusiveness of diabetes and its treatment, poorer diabetes self-management influenced increased conflict, and conflict increased perceived intrusiveness of the disease and its management. Future studies should longitudinally investigate the directionality of these relationships. Implications for treatment planning will be discussed.

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Paper Session 03 3:12 PM–3:30 PM 2060

THE RELATIONSHIP OF DIET QUALITY AND DISORDERED EATING BEHAVIORS IN ADOLESCENTS WITH TYPE 1 DIABETES (T1D)

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Adolescents with T1D are at risk of disordered eating; previous research has not examined the dietary intake of T1D youth who report these behaviors. This study examined the relations between disordered eating behaviors, diet quality, zBMI, and glycemic control (A1c) in youth with T1D. Adolescents ages 13–18 years (n=138, 49% female) completed the Diabetes Eating Problem Survey (DEPS), and 3-day diet records. Clinical data were abstracted from medical records. DEPS scores were categorized into low (L), moderate (M), and high (H); the moderate and high groups consisted of the lower and upper halves of the upper tertile of DEPS scores. Dietary records were analyzed with Nutrition Data System for Research software and the Nutrient Rich Foods 9.3 Index (NRF9.3) was calculated to assess diet quality. Differences among the groups in dietary intake, adjusted for age and gender, and zBMI, adjusted for glycemic control, were analyzed using ANCOVAs. There were no significant differences in disordered eating behavior by sex, insulin regimen, age, or diabetes duration. The high group had the poorest diet quality (21.89 L, 24.30 M, 13.59 H; p=.001 for L vs. H, p=.001 for M vs. H). The moderate group showed the lowest calorie (2124.91 L, 1709.29 M, 2144.55 H; p=.001 for L vs. M, p=.006 for M vs. H), fat (84.71 L, 66.30 M, 90.08 H; p=.003 for L vs. M, p=.002 for M vs. H), protein (86.76 L, 70.41 M, 82.37 H; p=.004 for L vs. M), and carbohydrate intake (261.08 L, 213.78 M, 257.02 H; p=.007 for L vs. M, p=.05 for M vs. H). The zBMI of the high and moderate groups was significantly higher than the low group (.544 L, .963 M, 1.01 H; p=.02 for L vs. M, p=.01 for L vs. H). The high group had significantly greater A1c than the low group (8.46 L, 9.08 M, 9.45 H; p=.004 for L vs. H). Youth with T1D who report the most disordered eating behaviors had less healthful dietary intake, higher zBMI, and poorer glycemic control than youth reporting fewer risk behaviors. Relationships with macronutrient intake were nonlinear, and may reflect intentional caloric restriction among those in the moderate group.

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Paper Session 04 2:00 PM–2:18 PM 2061

PC-PEP: PRELIMINARY RESULTS FROM AN RCT OF A TELEHEALTH SYMPTOM MANAGEMENT PROGRAM FOR LOW-HEALTH-LITERACY MEN TREATED FOR LOCALIZED PROSTATE CANCER

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Introduction: We report preliminary results from a randomized controlled trial (RCT) of a low-health-literacy education program tailored to each man's symptom profile and delivered via telehealth.
Methods: To date, 75 men from a large VA hospital have been randomized to the treatment (TX) or usual-care control (UCC). Primary outcomes are urinary (UB) and sexual bother (SB) from the Expanded Prostate Cancer Index Composite (EPIC). Secondary outcomes were the International Prostate Symptom Score (IPSS), EPIC urinary (UF) and sexual functioning (SF) subscales. We used t-tests and effect sizes to examine change between baseline and follow-up for these preliminary analyses.
Results: Changes were in the hypothesized direction, with TX group participants reporting greater improvements or smaller decrements than UCC participants. TX participants reported significantly greater improvements in IPSS scores at 2 weeks, 1- and 2-months than UCC participants (all $p<.01$). TX participants improved their UF by an average of 2.8 points between baseline and 6 months, while UCC participants reported an average 0.2 points increase in UF. The improvement from baseline in UF for TX group participants was significant ($p<.05$), while the small change from baseline for UCC participants was not. TX participants report significant decreases in UB from baseline to 1-month, both compared to UCC participants (change of 6.1 vs. 0.9, $p<.05$) and to their own scores (change from 77.2 to 83.2, $p<.05$). In terms of SF, UCC participants reported clinically significant (>1 SD) decrements in SF between baseline and the four-month follow-up, while TX participants reported small improvements. The difference in SF was significant ($p<.05$).
Conclusion: Preliminary data suggest a tailored symptom management educational program can be delivered by telehealth and improve patient-reported symptoms and symptom distress.

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Meritorious Paper

Paper Session 04 2:18 PM–2:36 PM 2062

PHYSICAL AND PSYCHOLOGICAL EFFECTS OF AFFECTIONAL EXPRESSION BETWEEN SPOUSES IN ADVANCED PROSTATE CANCER SURVIVORS

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Advanced prostate cancer (APC) survivors face challenges associated with the side effects of androgen ablation therapy. As primary caregiver, the spouse plays a significant role in facilitating adjustment. However, potential mechanisms by which spousal support can affect APC survivors are not well understood. Limited research has suggested that spousal affection (e.g., demonstrations of affection and intimacy) can influence emotional well-being in PC populations. The effects of affectional expression on physical and psychological outcomes are not well documented. Married APC survivors (N=47) were an average of 70.4 years (SD=10.1) and were Non-Hispanic White (67%), Hispanic (15%) or African-American (18%). Measures of perceived stress (PSS), affectional expression (DAS), physical (FACT) and psychological (SF-36) were administered. Diurnal cortisol production (slope of the regression line across four measurements over the course of one day) was assessed. Hierarchical regression analyses revealed that higher levels of affectional expression were related to better emotional ($\beta=.49$, $p<.01$) and physical well-being ($\beta=.31$, $p<.05$), after controlling for demographic and medical variables. Additionally, after controlling for demographic and medical variables, and level of perceived stress, higher levels of affectional expression were related to a better daily cortisol regulation ($\beta=.52$, $p<.01$). Results indicate that affectional may be associated with better self-reported emotional and physical adjustment, as well as better diurnal cortisol regulation in APC survivors. These findings highlight the importance of the dyad in APC survivors. Future work should consider addressing the relative role of affectional expression in overall adjustment in longitudinal studies with larger sample sizes, and whether incorporating spouses into psychosocial interventions benefit APC survivors.

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Meritorious Paper

Paper Session 04 2:36 PM–2:54 PM 2063

BODY IMAGE PREDICTS QUALITY OF LIFE IN PROSTATE CANCER SURVIVORS

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Prostate Cancer (PC) is the most common, non-cutaneous malignancy in men in the U.S. Most patients diagnosed with PC will not die of cancer. Of the many aspects of survivorship affected by PC, body image receives very limited attention, especially when compared to the breast and gynecologic cancer literatures. Despite this trend, body image appears to be important to PC patients; previous cross-sectional research found that body image was significantly associated with quality of life (QOL) and emotional distress in men with early stage disease. The present study investigated the relations between changes in body image and QOL (measured with FACT-General) with a prospective, longitudinal design. PC patients ($n=57$) completed questionnaires before treatment (T1) and at 1 month (T2) and 2 years (T3) following treatment completion. Repeated measures ANOVA revealed that body image did not change significantly over 2 years. However, 33.3% of men's body image improved by≥½ a standard deviation between T1 and T2, while 24.6% decreased by≥½ a standard deviation. Multiple regression indicated that T1 erectile function and treatment-related optimism predicted improvement in body image. Residualized regression analyses showed that this improvement in body image was associated with increased cancer-related QOL at T3 after controlling for age, treatment, erectile function, treatment-related optimism and T1 QOL. The model accounted for 62.0% ($p<0.001$) of the variance in T3 QOL, with the change in body image independently contributing 5.5% ($p<0.01$) to the total R^2. Patients' T1 body mass index (BMI) moderated this relation such that men with high BMI and low body image reported decreased QOL compared to those with low BMI and those with high body image and high BMI. The results of this study add to our understanding of QOL following PC treatment while providing further insight into the importance of body image in men affected by this disease.

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Paper Session 04 2:54 PM–3:12 PM 2064

PRETREATMENT COGNITIVE FUNCTION IN WOMEN WITH NEWLY DIAGNOSED BREAST CANCER

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Studies show that 17–35% of newly diagnosed breast cancer patients (BCP) have cognitive deficits before starting treatment. Little is known about the nature and frequency of the cognitive difficulties BCP experience in their everyday lives or the psychosocial and situational factors that contribute to these difficulties. Using daily diaries to record cognitive failure events (CFE) can provide insight into these experiences. The goal of this study was to develop a more detailed, contextualized understanding of the cognitive difficulties BCP face, the psychosocial factors associated with CFE, and the impact of cognitive difficulties on QOL.
Sample: 34 women with stages 1–3 BC participated (mean age=52 years). 71% of the women were White and 26% were Black.
Method: Prior to chemotherapy, women maintained 7-day daily diaries of CFE, stressors, affect and fatigue, followed by onsite objective neurocognitive testing.
Results: The majority of reported CFE involved absentmindedness, followed by forgetting to perform intended actions, and conversational difficulties. Family- and illness-related stressors were the most frequently reported stress events, followed by work stressors. BCP with clinically significant distress (CES-D >16) and intrusive thoughts (IES >15) recorded a greater number of CFE and daily stressors in their diaries. BCP who met criteria for clinically significant distress had lower processing speed scores on objective neurocognitive tests (-.5SD) and those with moderate to severe levels of fatigue (FSI >4) had slower response speeds (−1SD). Deficits in perceived cognitive function and cognitive QOL were associated with greater psychological distress ($r=.78$, $p<.001$), cancer-specific distress ($r=.53$, $p=.017$), and overall fatigue ($r=.61$, $p=.005$). Conclusion: These results suggest that distress, fatigue and cancer-related intrusive thoughts underlie pretreatment cognitive difficulties in newly diagnosed BCP. Early intervention targeting these symptoms may improve cognitive function.

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Paper Session 04 3:12 PM–3:30 PM 2065

A DISMANTLING STUDY OF BRIEF STRESS MANAGEMENT INTERVENTION EFFECTS ON QUALITY OF LIFE AMONG WOMEN UNDERGOING TREATMENT FOR NON-METASTATIC BREAST CANCER

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We previously showed that participating in a 10-week group-based cognitive-behavioral stress management (CBSM) intervention improves multiple indicators of quality of life among women with non-metastatic breast cancer (BCa), effects that may be due to a combination of relaxation training and cognitive behavior therapy techniques. Because women attending as few as 5 of 10 sessions showed effects comparable to those of women attending the full intervention, we conducted a dismantling study to test the quality of life effects of 5-week versions of different CBSM elements (relaxation training (RT) and cognitive behavioral therapy (CBT)) versus a time-matched education (ED) control. Women with non-metastatic BCa are assessed at baseline (after surgery but before adjuvant treatment), immediately after completion of the 5-week group, and at two additional follow-ups. To date, 53 participants (RT, n=21; CBT, n=12; ED, n=20) have completed assessments at baseline and the immediate post-group follow-up. These include measures of benefit finding, cancer-related intrusive thoughts and avoidance, positive and negative affect, ability to engage in social interactions and recreations, and ability to achieve positive states of mind. Repeated measures ANOVA showed that the RT group had a statistically significant improvement in ability to engage in social interactions compared with the ED control (p<.05), and a tendency toward less cancer-related avoidance compared with ED (p<.10). The CBT group tended toward a greater increase in positive affect compared with ED (p<.10). These analyses are preliminary and data collection is ongoing. These findings suggest that an abbreviated group-based form of intervention containing different elements of CBSM may produce differential effects on different quality of life domains. Additional cases will be added and updated analyses will be conducted before presenting these results.

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Paper Session 05 2:00 PM–2:18 PM 2066

RACE, PSYCHIATRIC COMORBIDITY, AND HEADACHE CHARACTERISTICS IN PATIENTS IN HEADACHE SUBSPECIALTY TREATMENT CLINICS

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Background: The co-occurrence of a chronic pain and psychiatric disorder (e.g., headache and depression) is referred to as a “pain-dyad”. Patients with pain-dyads experience greater social and functional impairment, disability, and unemployment. Research suggests that Blacks in the United States may be more likely than Whites to experience pain-dyads and are also at-risk for having their psychiatric disorder(s) under-diagnosed and under-treated. This study examined how race is related to psychiatric disorders in headache patients.

Methods: This study used a naturalistic cohort design to assess 114 Blacks and 173 Whites receiving treatment in headache subspecialty clinics in Ohio. Interviews produced headache and psychiatric diagnoses, 30 day daily diaries yielded data on headache severity, disability, and frequency, and self-administered surveys obtained data on headache locus of control, quality of life, and headache management self-efficacy.

Results: Results of one-way ANOVAs and chi square analyses found that compared to Whites, Blacks reported more frequent ($F=4.9$, $p<.01$) and severe headaches ($F=7.2$, $p<.05$) and were more likely to experience headaches that were chronic in nature ($\chi^2(1)=4.3$, $p<.05$). Blacks were also significantly more likely than Whites to be diagnosed with both major depressive disorder and anxiety ($\chi^2(3)=9.0$, $p<.03$).

Conclusions: The headache treatment field remains largely uninformed about the relationship between race and psychiatric conditions in persons with headache disorders. Study findings underscore the need to identify and treat headache patients with psychiatric disorders, a disproportionate number of whom are Blacks. Interventions are urgently needed for headache patients who have comorbid psychiatric conditions. Ideally, these interventions will produce simultaneous reductions in headache activity and psychiatric symptomatology.

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Meritorious Paper

Paper Session 05 2:18 PM–2:36 PM 2067

LOCUS OF CONTROL MODERATES THE EFFECT OF STRESS MANAGEMENT THERAPY FOR CHRONIC TENSION-TYPE HEADACHE ON SELF-EFFICACY

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Increasing headache self-efficacy (HSE; confidence in one’s ability to self-manage headaches) is an integral component of behavioral chronic tension-type headache treatment. Social Cognitive Theory and recent findings in migraine suggest that locus of control may influence HSE changes with chronic tension-type headache treatment.

After a one-month baseline assessment, 203 chronic tension-type headache sufferers were randomized into a 2[Stress Management Therapy (SMT) vs. No SMT] by 2 (Antidepressant Medication vs. Placebo) factorial treatment design. Participants received two months of SMT and/or Antidepressant Medication dose adjustment and were followed for a 12-month evaluation period. The Headache Management Self-Efficacy Scale and Headache Specific Locus of Control (internal, chance, and medical professionals subscales) were administered at clinic visits during Months 0, 1, 2, 3, 5, 8, 11, and 14. Mixed models for repeated measures was used to examine the impact of SMT and Antidepressant Medication on HSE, and the impact of locus of control on treatment-related changes in HSE.

SMT, but not Antidepressant Medication, increased HSE, F(1, 1021)=49.04, p<.001. Medical professionals locus of control moderated changes in HSE with SMT, F(1, 1016)= 7.56, p<.01. Participants with high medical professionals locus of control exhibited smaller increases in HSE with SMT than participants with low medical professionals locus of control. Higher pretreatment internal locus of control was associated with larger increases in HSE across all groups F(1, 1018)=11.25, p<.001, but neither internal nor chance locus of control moderated changes in HSE with SMT, ps>.05.

The belief that medical professionals primarily influence headaches is associated with smaller increases in HSE with SMT. High internal locus of control is associated with larger increases in HSE, regardless of whether one received SMT. The influence of locus control on treatment-related changes in HSE differs between chronic tension-type headache and migraine.

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Paper Session 05 2:36 PM–2:54 PM 2068

RELATIONSHIPS BETWEEN CHANGES IN SELF-EFFICACY AND MIGRAINE COPING BEHAVIORS WITH DRUG AND NON-DRUG TREATMENTS

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Increasing positive and decreasing palliative coping behaviors are goals of Behavioral Migraine Management (BMM) and social learning theory postulates that self-efficacy (HSE) is a determinant of coping.

232 participants received 5 weeks of Optimized Acute Therapy and were randomized into a 2 (BMM vs. No BMM) x 2 (β-blocker vs. Placebo) factorial design. Participants received four months of BMM and/or β-blocker dose adjustment (4 clinic visits, 3 phone calls), and were followed for one year (5 clinic visits). At each clinic visit, interviewers assessed coping with the Interview of Coping Efforts - Migraine and participants completed the Headache Management Self-Efficacy Scale. Mixed models for repeated measures analyses were used to examine the impact of changes in HSE (Month 5 - pretreatment) on treatment-related changes in coping.

Previous research with this data demonstrated that BMM increased positive coping and self-efficacy, and decreased palliative coping, ps<.01. β-blockers combined with BMM further reduced palliative migraine management coping, p<.05.

Increases in HSE were associated with increases in positive anticipatory coping across treatment groups, F(1,1056)=6.95, p<.01. Similar, but marginally significant effects also were observed for positive proactive coping, F(1,1065)=2.87, p=.09, and for positive migraine management coping, F (1,1023)=2.62, p=.11.

For individuals who did not receive BMM, increases in HSE were associated with increases in palliative anticipatory coping; however, for individuals in the BMM group, increases in HSE were associated with decreases in palliative anticipatory coping, F(1,1055)=11.32, p<.001. No effect was detected for palliative migraine management coping, p>.50.

Increases in HSE were associated with increases in positive coping strategies across migraine treatments. However, for participants who did not receive BMM, increases in HSE were associated with increases in palliative anticipatory coping strategies. On the other hand,for participants who received BMM, increases in HSE were associated with decreases in palliative anticipatory coping.

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Paper Session 05 2:54 PM–3:12 PM 2069

CBT FOR CHRONIC PAIN: SPECIFIC VS GENERAL THERAPEUTIC PROCESSES

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Psychosocial treatments for chronic pain are effective in improving patient adjustment, yet the mechanisms producing effects are not clear. CBT is a common approach, and is hypothesized to influence outcomes via changes produced in cognition and behavior. If so, patients in CBT working to acquire specific pain coping skills at a given time should show the most gains in those targeted coping domains, whereas they should not show changes in domains not targeted at that time. 100 patients with chronic pain participated in a CBT trial in which they received 4 treatment "modules" (covering different pain coping skills) in various orders over 10 wks. Here, we examined the first module (wks 1–4) for 60 patients who completed either the exercise, task pacing, relaxation, or cognitive control modules. Using Chronic Pain Coping Inventory subscales as indices reflecting skills covered in the 4 modules, results showed that Module x Tx Period (pre, 4-, 6-, 8-, 10-wk) interactions were nonsignificant (F's<1.5) for Exercise, Task Persistence, and Coping Self-Statements subscales with significant Tx Period effects emerging (F's>6.1; p's<.01). Further, for Exercise and Coping Self-Statement subscales, 83% and 100% of total pre-post Tx gains occurred in the first 4-wks of the 10-wk trial regardless of what module was received. For Relaxation scores, the Module x Tx Period effect was significant (F=2.1; p<.02). For patients who received relaxation module during wks 1–4, the effect size for Relaxation scores was d=2.60 for pre to 4-wks, whereas the mean effect for those not receiving relaxation module during wks 1–4 was d=.39. Thus, all but one of the CBT modules had general rather than specific effects on coping skills and exerted these primarily early in treatment. Most patients spiked upward on CPCI subscales during their first module irrespective of the module's content. Results raise interesting questions regarding processes of change and the active ingredients of CBT for pain management.

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Paper Session 05 3:12 PM–3:30 PM 2070

POSITIVE EMOTION AND PAIN: DOES AROUSAL MATTER?

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Much attention has been paid to the role of negative affect (NA) and pain, with little consideration being paid to the role of positive affect (PA) in the pain experience. While there is some evidence that PA influences pain, it remains unclear if low-arousal PA (e.g. calm) or high-arousal PA (e.g. excited) can better predict pain. This study investigated whether naturally-occurring high-arousal PA and low-arousal PA predicted self-reported pain intensity in a healthy population. Participants were 121 undergraduates (mean age 19.3 years; 79.3% Caucasian; 52.1% female). Current mood was assessed using a modified version of the Profile of Mood States (POMS). Pain intensity was measured using visual analog scales. Current mood was assessed at baseline when participants first entered the lab. A blood pressure cuff was then secured to the participants' left arm and blood pressure was measured numerous times over the course of a 3-hour larger stress-reactivity study. Pain intensity was assessed during a recovery period once the blood pressure cuff was removed. Pain intensity was found not to be associated with BMI, age, race, stress, or sleep quality. Multiple linear regressions revealed that sex (t=2.86, p<.01) and low-arousal PA (POMS-Calm subscale; t=−3.86, p<.001) were the strongest predictors of self-reported pain intensity, with males and lower emotional arousal relating to lower ratings of pain intensity. Interestingly, high-arousal PA (POMS-Vigor subscale) did not predict self-reported pain intensity (t=.71, p=.48). Consistent with the existing literature, low-arousal PA (i.e. feeling calm and relaxed) was associated with lower ratings of self-reported pain intensity. Many successful clinical interventions teaching relaxation techniques to individuals with chronic pain provide evidence for the benefit of low-arousal PA. Interestingly, high-arousal PA (i.e. feeling lively and energetic) was not associated with decreased pain intensity. This is inconsistent with preliminary findings that the opioid system can be influenced through high-arousal PA pathways, thereby decreasing pain intensity.

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Paper Session 06 2:00 PM–2:18 PM 2071

DEFINING HIV MEDICINE ADHERENCE AS NUMBER OF PRESCRIBED MEDICATIONS VS. DOSES TAKEN IS THE BEST PREDICTOR OF CLINICAL OUTCOMES

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Consistently adhering >95% to prescribed antiretroviral therapy (ART) is required to achieve suppression of HIV-1 RNA (viral load, VL), prevent drug resistance, and promote recovery of CD4+ T cell numbers in HIV-infected (HIV+) patients. ART nonadherence is recognized as one of the chief causes of treatment failure, and pill burden proposed as a main contributor to nonadherence. In response, the pharmaceutical industry has developed pills combining 2 or 3 medications. We evaluated adherence and clinical outcomes in 395 largely (96%) African-American HIV+men (204) and women (186) at an inner-city outpatient clinic and inpatient hospital ward: 13.3% of the sample had poor adherence (<80%), 16% had moderate adherence (80–94%) and 70.7% had optimal adherence (>95%). There was no difference in missed doses between patients taking one pill containing 2–3 medications and those who took more pills, each with a single medication; however, those on combination drugs missed more medications in total. For the full sample, the number of missed doses was significantly associated with log VL (r=.176, p=.01), and negatively associated with log CD4+ cell count (r=−0.143, p=.05). For the first 182 patients (final analyses will include the full sample), assessing adherence as number of missed medications was the most significant and predictive measure of both log VL (r=.19; R2=.40.) and log CD4+ cell count (r=−0.21; R2=.42). These findings call into question the prevailing idea that pill burden is one of the primary causes of non-adherence and treatment failure. Instead, the findings suggest that HIV+ patients who have trouble taking 3 pills are just as likely to have trouble taking one pill containing 3 medications. Moreover, results suggest that missing one pill with 3 medications will result more quickly in treatment failure (detectable VL) and lower CD4+ cell count. These findings have important implications for medical and public health practices of prescribing ART and promoting adherence.

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Citation Paper

Paper Session 06 2:18 PM–2:36 PM 2072

TYPE C COPING, ALEXITHYMIA, AND PSYCHOPHYSIOLOGICAL REACTIVITY SIGNIFICANTLY PREDICT 3 YEAR HIV PROGRESSION AND ANTI-PROGRESSION IMMUNE FACTORS

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We have previously published results from a baseline sample of 200 largely African-American HIV-positive individuals attending an inner-city HIV primary care clinic, demonstrating concurrent associations between high Type C coping (a dysfunctional style of coping with stress), and the pro-inflammatory cytokine IL-6 that is synergistic with the immune activation which drives HIV replication and disease progression. Reciprocally, anti-HIV beta-chemokine production (as ligands for the CCR5 co-receptor, the β-chemokines MIP-1α/β inhibit HIV entry into immune cells) was associated with heart rate overreactivity to and slow recovery from experimental emotional stress tasks. These findings were essentially replicated at 24 months. We now report on cytokine/chemokine production for 125 individuals available for analysis at 36 months, which is the longest follow-up for any study of psychological and HIV progression mediators. Results are expressed as a stimulation index comparing antigen-stimulated production of MIP-1α/β or IL-6 to spontaneous production. Linear analysis (Generalized Estimating Equations) was used to make longitudinal predictions, controlling for baseline and 36-month age, CD4+ count, and medication adherence for emotional coping variables, and additionally for methadone use and antihypertensive medications for analyses involving heart rate. For 247 person observations, baseline maladaptive Type C coping was associated with significantly higher IL-6 production at 36 months in response to the HIV p24 antigen (β=0.130, p=.029). Alexithymia was negatively associated with MIP-1α production to p24 (β=-.150, p=.002). For 209 person observations, heart rate reactivity was negatively associated with MIP-1α to p24 (β=−0.22, p=.057); heart rate recovery was negatively associated with MIP-1β to p24 (β=−0.216, p=.074). These consistent results from baseline to 24 and 36 month follow-ups suggests a chronic pattern of stress response that influences HIV disease progression and anti-progression immune parameters.

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Paper Session 06 2:36 PM–2:54 PM 2073

MEDICAL OUTCOMES OF HIV+ INDIVIDUALS TWO YEARS AFTER INITIATING PSYCHIATRIC SERVICES

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Existing evidence suggests that HIV+ individuals experience high rates of mental health difficulties. Bottonari and Stepleman (2009) reported on factors associated with HIV+ patients' entry and longevity in specialized psychiatric treatment following mental health consultation in an infectious disease clinic. The present study examines archival chart data of HIV+ individuals ($N=94$; 54% African-American) two years after initiating specialized psychiatric services (psychotherapy, pharmacotherapy, or both) to: (a) characterize demographic correlates of medical outcomes; (b) describe factors associated with continued psychiatric care at two years; and (c) compare medical outcomes for those who continued in psychiatric care and those who did not. Thirty-five percent of patients were receiving psychiatric services at two years. Bivariate analyses indicated higher emergency room (ER) usage and medical hospitalizations among women ($p<.001$) and ethnic minorities ($p<.05$) over two years. Patients with a history of sexual or physical abuse were more likely to remain in psychiatric treatment than those without an abuse history ($p<.05$). Current use of psychotropic medications was associated with greater usage of HIV medications ($p<.05$) with fewer physician concerns about medication adherence ($p<.001$). In addition, those taking psychotropic medications had a lower prevalence of AIDS diagnosis ($p<.05$), but experienced more co-morbid medical conditions ($p<.001$). Patients currently engaged in any form of psychiatric treatment at two years had fewer co-morbid health problems than those not in treatment ($p<.05$). Preliminary data suggest gender and ethnicity differences in ER usage and medical hospitalizations and differential health outcomes among patients engaged in psychiatric care. This study is limited by its cross-sectional nature; future research should seek to further examine mechanisms associated with the impact of ongoing psychiatric care on longitudinal medical outcomes among HIV-positive individuals.

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Paper Session 06 2:54 PM–3:12 PM 2074

IDENTIFYING POTENTIAL MEDIATORS AND SECONDARY EFFECTS OF AN EFFECTIVE ART ADHERENCE INTERVENTION

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Use of intensive antiretroviral therapy (ART) has led to substantial declines in morbidity and mortality, however the benefits of ART are largely dependent on strict adherence. To increase adherence we tested a novel intervention that combined motivational interviewing and cognitive behavioral strategies for adherence with modified directly observed therapy (MI/CBT-mDOT). Results of our randomized controlled trial demonstrated that the intervention led to significantly better adherence than standard care (SC). The purpose of this study was to enhance our understanding of intervention effects by identifying other variables impacted by treatment, which may be mediators of the significant treatment effect or may indicate additional benefits of treatment. Participants were 134 HIV+ individuals (mean age=40.15; 23% female) randomized to MI/CBT-mDOT or standard care. Potential mediating variables examined were depressive symptoms, perceived stress, motivation, self efficacy, social support, autonomous regulation, autonomous support, coping, locus of control, perceived difficulty of regimen, and satisfaction with provider. Separate linear regression analyses that controlled for baseline levels of the dependent variable demonstrated that patients in the MI/CBT-mDOT group evidenced fewer depressive symptoms ($F[1, 118]=7.42$, $p<.05$), lower perceived difficulty of regime ($F[1, 118]=9.29$, $p<.05$), less use of substances to cope ($F[1, 118]=4.26$, $p<.05$), more motivation to adhere ($F[1, 118]=14.98$, $p<.05$), and greater autonomous regulation ($F[1, 118]=6.57$, $p<.05$) than SC patients at 24 weeks. Results suggest that the intervention, although focused on enhancing motivation and adherence skills, had impact on several motivational and psychological well-being variables. Future analyses will formally test which of these variables mediated the treatment's effect on adherence and will help to further clarify which account for the effect of this treatment and which are additional benefits of this treatment. This research supported by the National Institutes of Mental Health (RO1 MH68197).

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Paper Session 06 3:12 PM–3:30 PM 2075

PERSONAL NETWORKS OF HOMELESS MSM YOUTH: IMPLICATIONS FOR UNDERSTANDING RISK BEHAVIOR

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Adolescent and young adult males who have sex with men (YMSM) are a high-risk population for HIV/AIDS, and YMSM who are homeless may be even more vulnerable given the relatively high rates of drug use and risky sex among homeless youth. To better understand HIV-related risk behavior among homeless YMSM, we collected detailed personal network information from these youth and examined associations of network characteristics with three key risk behaviors: unprotected anal intercourse in the past 3 months, number of sex partners in the past 3 months, and any club drug use (i.e., meth, ecstasy, LSD, cocaine) in the past 30 days. A probability sample of 121 homeless MSM youth were recruited from shelters, drop-in centers, and street venues in Los Angeles County. Unprotected sex among homeless YMSM was generally unrelated to characteristics of their personal network. Homeless YMSM with a greater number of sexual partnerships tended to have networks that included more heavy drinkers ($IRR=1.06$, $p<.05$) and sexual risk takers ($IRR=1.08$, $p<.001$). These networks were also more likely to include individuals with stable employment ($IRR=1.06$, $p<.05$) and who provided the youth with tangible support ($IRR=1.06$, $p<.01$), perhaps reflecting sex trade activity. Finally, homeless YMSM who engaged in club drug use tended to have networks that included more drug users ($OR=1.10$, 95% $CI=1.03–1.17$) and isolates ($OR=1.09$, 95% $CI=1.01–1.18$), as well as fewer individuals who were relatives ($OR=0.77$, 95% $CI=0.65–0.92$), attended school regularly ($OR=0.86$, 95% $CI=0.74–0.99$), had a steady job ($OR=0.88$, 95% $CI=0.81–0.96$), or provided the youth with emotional support ($OR=0.92$, 95% $CI=0.85–0.99$). Findings from this study provide important descriptive information on the networks of homeless YMSM, as well as point to potentially promising avenues for network-based interventions to reduce risk behavior in this highly vulnerable population. This presentation will discuss the implications of these findings for intervention.

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Citation Paper

Paper Session 07 2:00 PM–2:18 PM 2076

INNOVATIVE APPROACHES TO WORKSITE-BASED WEIGHT LOSS: RESULTS OF THE WAY TO HEALTH RESEARCH STUDY

Laura A. Linnan, ScD, CHES,[1] Deborah Tate, PhD,[1] Eric Finkelstein, PhD, MHA,[2] Carolyn Naseer, MA,[1] Jiang Li, MPH[1] and Kim Chantala, MS[1]

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Effective weight loss programs are needed that are adaptable to busy work environments, maintain employee privacy, and keep employees engaged over time to help avoid weight re-gain. Web-based weight loss programs and cash incentives for weight loss have produced promising results; however, few rigorous studies examine results past 12 months of intervention. WAY to Health is a NIH-funded, group randomized worksite-based weight loss study that takes place in 12 worksites and enrolled 1020 overweight employees ($BMI \geq 25$). All enrolled employees from each campus were randomized to receive one of the four following programs: (1) Cash incentives (INC; $n=275$), (2) Web-based weight loss program (WEB; $n=252$), (3) Cash plus Web (BOTH; $n=262$), or (4) Usual care (UC; $n=231$). Weight was measured at the worksite by trained research staff at 3, 6, 12 and 18 months. Weight loss at 12 months was the primary outcome and 759 employees remained for the final analysis (74% overall retention rate). At 12 months, 55.3% of enrolled employees in the WEB group lost any weight, compared with 58.1% INC, 55.4% BOTH, and 52.6% UC. Among completers, mean 12 mo weight losses (lbs) were −0.68 (WEB); −2.60 (INC); −2.07 (BOTH); −1.51 (UC). Clinically relevant weight losses (at least 5% weight lost from baseline to 12 months) by arm were: 13.8% (WEB); 16.7% (INC); 16.4% (BOTH); and 16.2% (UC). Intention-to-treat analysis was completed using multiple imputations and NS 12 mo weight losses (lbs) were observed: −0.56 (WEB); −2.05 (INC); −2.00 (BOTH); −1.68 (UC). Modest weight loss was demonstrated at 12 months, but there were no statistically significant differences by study arm at that time point. The WEB and BOTH arms demonstrating significantly better weight loss at 3 months compared to UC, but these weight losses were not sustained over time. Process evaluation (intervention dose delivered and received) will be reported to help further understand these results. Implications for future worksite-based weight loss efforts will be described.

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Paper Session 07 2:18 PM–2:36 PM 2077

STRUCTURE AND FUNCTION OF 14 EMPLOYEE WELLNESS COMMITTEES IN THE WAY TO HEALTH RESEARCH STUDY

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Evidence suggests that employee wellness committees (EWCs) assist with the planning, implementation and evaluation of comprehensive worksite health promotion programs, yet few studies have examined the role and function of these groups. This study examined the development, structure, function, and outcomes associated with EWCs in 14 North Carolina universities and community college as part of the WAY to Health research study. Progress of EWCs was measured at 12 and 24 months by a series of 18 process objectives (POs) established prior to intervention as key implementation benchmarks. High (vs. low) functioning EWCs were operationalized based on a median split of the proportion of POs achieved both at the 12 and 24 mo time points. Two-way bivariate examinations were used to examine the effect of each factor. At 12 months, 86% of campuses had organized an EWC; 7% held at least 10 meetings per year; 71% assessed employee interests; and 93% reviewed key healthcare claims; at 24 mo 100% had organized an EWC; 29% held at least 10 meetings per year; 100% assessed employee interests; 100% reviewed key healthcare claims; 93% drafted a wellness action plan; and 29% had their action plan approved. At 12 months, we found higher President/Chancellor support for HPP (p=.05), and number of meetings held per year (p=.05) were significantly more likely to occur in high (vs. low) functioning EWCs. At 24 months, high (vs. low) functioning sites were significantly more likely to have an appointed EWC chair (p=.05), held more meetings per year (p=.03), and reported higher average attendance at EWC meetings (p=.01). Results provide important insights about how to best develop effective EWCs as well as characteristics of EWCs that are associated with high functioning EWCs. Effective EWCs will increase the likelihood that employers offer a comprehensive health promotion program for their employees.

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Paper Session 07 2:36 PM–2:54 PM 2078

ORGANIZATIONAL FACTORS ASSOCIATED WITH COMPREHENSIVE HEALTH PROMOTION PROGRAMS: RESULTS FROM THE WAY TO HEALTH STUDY

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Many factors contribute to the development and implementation of comprehensive worksite health promotion programs (HPP); yet the most recent national employer survey found only 7% of employers offer such a program. This paper will use organizational theory and key stakeholder interview data from 31 worksites to 1) describe the extent of which organizations offer the 5 key elements of a comprehensive worksite HPP and, 2) identify key factors that are associated with offering a comprehensive HPP. Interviews were conducted with the President/Chancellor and HR Director at each community college (N=22); university (n=5); and historically black colleges (n=4). A comprehensive HPP (as defined by Healthy People 2010) includes 5 key elements (health education programs; screening and appropriate follow-up; linkage to existing resources; administrative support; supportive social/physical environment). We examined the presence of these elements in relation to: President support for HPPs, perceived employee interest in HPPs, size of campus, campus type, presence of employee wellness committee (EWC), and funding. Results indicate that 6.9% of campuses had 1 element of an HPP, 24.1% had 2 elements, 17.2% had 3 elements, 24.1% had 4 elements, and 13.8% had all 5 elements; nearly double the national average. The most commonly reported element was supportive social/physical environments (82.8%); followed by linkage to existing resources (55.6%) and health education programs (55.6%). President/Chancellors attached moderate levels of importance to offering HPPs (M=2.7, SD=1.6) and perceived high level of faculty (M=3.5, SD=0.6) and staff (M=3.4, SD=0.8) interest in HPPs (5-pt Likert scale (1=not at all, 5=extremely). Fifteen campuses (48%) reported having an EWC in place; however, only 9 (29%) campuses had a designated HPP budget. Implications for developing interventions to influence key organizational factors will be discussed.

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Paper Session 07 2:54 PM–3:12 PM 2079

TITLE: WORK-SITE PHYSICAL ENVIRONMENTAL FACTORS THAT RELATE POSITIVELY TO EMPLOYEE PHYSICAL ACTIVITY AND WEIGHT STATUS

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We explored the relationships between worksite physical environments and the likelihood of employees to meet recommendations for physical activity and weight status in a sample of 28 worksites participating in the Tailored Worksite Weight Control Programs research study. Worksite audits were completed at each worksite by two trained research assistants using the Checklist of Health Promotion Environments at Worksites. A total of 6,261 employees (average age=45.03 SD=12.11; 64% female, 77% white) also completed a brief health behavior survey (>72% of all employees). Overall 23% of employees (N=1,384) reported meeting current physical activity recommendations. About 33% of participants (N=1,883) were overweight and 36% (N=2,026) were obese with an average BMI of 28.84 (SD=6.85). Employees in worksites with open outdoor areas were more likely to meet the recommended guidelines for physical activity (24.5% vs 22%, χ2 (1)=4.965, p<.05), but not more likely to have a lower average BMI (28.60 vs 28.96, t=1.885, p=.060). Employees in worksites with access to walking paths were less likely to be obese (33.4% vs. 36.6%, χ2 (3)=10.332, p<.05). Comparisons of environmental characteristics & weight status demonstrated that employees in worksites with more snack vending machines (i.e., many, some, vs none) were more likely to be obese (42.6% vs 35.4% vs 28.6%, χ2 (6)=78.561, p<.001) with significantly higher BMI (29.87 vs 28.77 vs 27.83, F(2,5675)=32.352, p<.001). Additionally, employees in worksites with a cafeteria on-site were less likely to be obese (29.4% vs 37.7%, χ2 (3)=41.034, p<.001) with significantly lower BMI (27.88 vs 29.14, t=5.951, p<.001). These results suggest that small environmental influences are significantly related to physical activity and weight status and provide additional methods to change worksite environments to promote health.

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Paper Session 07 3:12 PM–3:30 PM 2080

A RANDOMIZED CONTROLLED TRIAL PROMOTING EXERCISE FOR WHEELCHAIR USERS

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People with disabilities are significantly more inactive than those without and face more barriers, including problems with transportation and accessibility of exercise equipment and fitness centers. This study examined the effectiveness of a home-based exercise program to promote exercise adoption over 3 months for wheelchair users. Participants (n=128) were randomly assigned to self-guided or staff-supported arms. Both received the same educational content and weekly calls, only the delivery of educational content and support differed between arms. The primary study outcome was self-reported weekly aerobic exercise and strength training; secondary outcomes included changes in aerobic capacity and strength and disability-related outcomes of pain, fatigue, depression. Participants' mean age was 44.6+12.6 years, lived a mean of 22.3+15.9 years with disability, were mostly white (85.9%), and 50% men. Individual growth modeling of self-reported weekly exercise revealed the two arms showed significantly different trajectories in weekly aerobic minutes and days, with the staff-supported arm engaging in significantly more aerobic minutes over 3 months (mean of 58.0+86.3 weekly minutes) compared to the self-guided arm (mean of 35.8+53.5 minutes). No significant group differences were observed in the number of days the groups engaged in strength training over time. ANCOVA results for the secondary outcomes with gender and education included as covariates indicated no significant group differences for change in physiological (aerobic capacity and strength) or disability-related outcomes (fatigue, pain, and depression). Although the staff-supported physical activity program promoted wheelchair users adopting more days and minutes of aerobic exercise over 3 months than the self-guided approach, this level of activity was not sufficient to generate significantly better physiological or disability-related outcomes at 3 months than the self-guided approach.

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Citation Paper
Meritorious Paper

Paper Session 08 2:00 PM–2:18 PM 2081

"I FEEL LIKE A SECOND CLASS CITIZEN." OBESE ADULTS DISCUSS THEIR EXPERIENCES OF, AND SOLUTIONS TO, OBESITY STIGMA

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Background Limited research has explored how different types of weight based stigma impact on health and wellbeing. Furthermore, little research has documented obese individuals own attitudes towards anti-stigma initiatives. This study seeks to explore obese adults experiences of obesity stigma, their perceptions about the impacts that stigma has in their lives, and their opinions about ways forward in effectively tackling stigma.

Methods Semi-structured telephone interviews with a community sample of 142 Australian adults with a body mass index of 30 or more. Theoretical, purposive and strategic sampling techniques were used to ensure a diverse sample. Data were analysed using Grounded Theory techniques.

Results Stigmatising experiences fell into three distinct categories: Overt stigma (e.g. being abused when using public transport); Structural stigma (e.g. not being able to fit into seats on planes); and Insidious stigma (e.g. people looking at the contents of their supermarket trolley). Insidious stigma impacted on individuals' health and wellbeing, and health behaviours more than any other type of stigma. In particular participants described how more subtle types of stigma impacted on their emotional wellbeing; social relationships; ability to participate in exercise; and eating behaviours. Recommended strategies for reducing stigma included community awareness and education campaigns (e.g. raising awareness about the negative outcomes of stigma); changing physical environments (e.g. creating safe spaces for individuals to exercise); and social support programs (e.g. to help obese individuals to cope with barriers created by weight stigma).

Conclusion Qualitative research with stigmatised communities - such as those who are obese - can provide important detailed information about their stigmatising experiences, the impact of these experiences on their lives, and how to design effective anti-stigma initiatives to improve their health and wellbeing, and their ability to engage in health promoting behaviours.

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Paper Session 08 2:18 PM–2:36 PM 2082

A THEORETICAL AND CONTEXTUAL EXAMINATION OF OBESITY-RELATED EATING BEHAVIORS IN AFRICAN AMERICAN WOMEN

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Purpose: To examine applicability of the Theory of Reasoned Action (TRA) model to obesity-related eating habits of African American women and determine whether adding contextual factors provides additional explanation of obesity-related eating habits.

Design: Cross-sectional survey.

Setting: US community organizations.

Subjects: A total of 937 African American women recruited from two community organizations.

Measures: TRA constructs were measured by items of the Health Attitudes Scale. Obesity-related eating habits and contextual factors were measured by items on the Eating Behavior Patterns Questionnaire.

Analysis: Two latent-variable models were tested, using structural equation modeling. Variance in emotional eating behaviors was explored in a secondary analysis.

Results: The TRA theory was a strong predictor ($p<.01$) of obesity-related eating behaviors. Attitudes Toward Being Healthy has a strong direct effect (.90) on Intent To Be Healthy, which in turn directly affects (.55) Low-Fat Eating. Including contextual factors of Emotional Eating and Convenience Eating improved overall model fit (188.43 to 298.85), more broadly explaining barriers to maintaining healthy meal plans. Only 26% of women endorsed high-fat emotional eating behaviors, whereas 73% endorsed a variety of other emotional eating behaviors.

Conclusions: The TRA model provides a strong theoretical framework for obesity-related eating behaviors among African American women. Adding Emotional Eating and Convenience Eating strengthens the model's applicability to eating behaviors in African American women.

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Paper Session 08 2:36 PM–2:54 PM 2083

ETHNIC DIFFERENCES IN THE ASSOCIATION OF MOOD AND ANXIETY DISORDERS WITH OBESITY

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The aim of this study is to examine ethnic differences in the association of diagnoses of mood and anxiety disorders (past year and lifetime) with obesity among adults. Data from Caucasians, African American, and Latinos ages 18 and older in the National Comorbidity Survey Replication (NCS-R), National Latino and Asian American Study (NLAAS), and National Study of American Life (NSAL) were analyzed (n=17,445). Multivariate logistic regression models, controlling for socio-demographic factors and psychotropic medication status, tested the associations between DSM-IV past year and lifetime diagnosis of mood (major depression and bipolar disorder) and anxiety (generalized anxiety disorder, social phobia, panic disorder, and agoraphobia) disorders with obesity (body mass index >=30 kg/m2). Approximately 52% of the sample was female and 24% obese. Among Caucasians, major depressive disorder in the past year (OR=1.31) or lifetime (OR=1.31), past year generalized anxiety disorder (GAD; OR=1.28) and past year panic disorder (PD; OR=1.51) were associated with greater likelihood of obesity. Among African Americans, past year GAD (OR=1.70), panic disorder (OR=1.52) and agoraphobia (OR=1.94) were associated with greater likelihood of obesity. Among Latinos, past year panic disorder (OR=1.64) was the only disorder associated with increased likelihood of obesity. On the contrary, lifetime GAD was associated with a decreased likelihood of obesity (OR=.33) among this group. Results suggest that the associations between mood and anxiety disorders with obesity vary by ethnic group.

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Paper Session 08 2:54 PM–3:12 PM 2084

EMOTIONAL REGULATION AND WEIGHT-RELATED BEHAVIORS AMONG INNER-CITY ADOLESCENTS

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While self-control has been related to obesity, previous research has focused on behavioral control but emotional control may also be relevant. A school-based cross-sectional study examined the association of good emotional regulation with lifestyle behaviors and to test for mediation through self-efficacy or depression. The study was conducted with a sample of 607 adolescents (Mean age 12.7 years) in 4 public schools in the Bronx, NY, with a response rate of 81.5%. The sample was 58% female, 74% Latino, and 81% US born. Twenty one percent were overweight and 24.5% were obese. Good emotional regulation was measured by 3 indicators (sadness and anger control, and soothability). Criterion variables included intake of fruit/vegetables (FV), snacks, and sugared beverages, and measures of physical activity (PA) or sedentary behavior. A score indicating better regulation was related to more FV intake ($r=.13$, $p<0.01$) and more vigorous physical activity ($r=.09$, $p<0.05$), and was inversely related to sedentary behavior ($r=-.10$, $p<0.05$). Emotional regulation was significantly related to both measures of self-efficacy (healthy eating and being physically active), and was inversely related to depression. Self-efficacy measures were significantly correlated with FV intake and physical activity. A structural equation model, with emotional regulation defined as a latent construct, showed that the related of emotional regulation to FV and physical activity was partially mediated by self-efficacy (beta=0.03, $p<0.01$ and beta=.10, $p<0.001$, respectively). An inverse indirect effect, mediated by depression, was also observed for sedentary behavior. The model did not show any direct effects of emotional regulation on the lifestyle behaviors. These findings indicate that the ability to regulate emotion in adolescents has a role in weight-related behaviors, suggesting that emotional regulation needs to be addressed in obesity prevention programs.

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Paper Session 08 3:12 PM–3:30 PM 2085

DELAY DISCOUNTING, FOOD REWARD, AND EATING IN THE ABSENCE OF HUNGER IN OVERWEIGHT AND OBESE WOMEN

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Eating behavior is thought to be influenced by sensitivity to the rewarding properties of palatable food and the capacity for inhibitory control of behavior. This study tested the interaction of these two factors in predicting palatable food intake among energy-replete overweight and obese women (N=62; body mass index: eligible range=25.0–39.9; M=31.5, SD=3.4; age: M=31.0, SD=7.7; 63% ethnic minority). Sensitivity to palatable food reward was measured by the Power of Food Scale. Inhibitory control was assessed with a computerized choice task that captures the tendency to discount delayed monetary rewards, with a smaller area under the delay discounting curve reflecting poorer inhibitory control. Participants completed an eating in the absence of hunger protocol which involved consuming a bland preload of plain oatmeal to eliminate homeostatic energy needs, followed by a bogus taste test of palatable food items. A regression model was formed predicting palatable food intake from food reward, inhibitory control, and their interaction term, while controlling for body mass index and the amount of oatmeal preload consumed. The interaction between food reward and inhibitory control was a significant predictor of energy intake in the absence of hunger (β=-.30, t(53)=−2.12, p=.04). Probing this interaction indicated that higher sensitivity to food reward predicted greater energy intake at low levels of inhibitory control (β=.50, t(53)=2.58, p=.01), but showed no association with energy intake at high levels of inhibitory control (β=-.07, t(53)=-.45, p=.65). Findings support a neurobehavioral model of eating behavior in which sensitivity to palatable food reward drives eating behavior only when accompanied by insufficient inhibitory control. Strengthening the capacity for inhibitory control may enhance weight management programs.

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Paper Session 09 2:00 PM–2:18 PM 2086

A CROSS-SECTIONAL ANALYSIS OF THE ASSOCIATION BETWEEN FINANCIAL HARDSHIP AND SELF-RATED HEALTH

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Self-rated health (SRH) has been shown to be socioeconomically patterned and predictive of morbidity and mortality. However, the association between SRH and socioeconomic status (SES) differs depending on the component of SES used (i.e. income, occupation, education). Additionally, several calls have been made to extend the measurement SES beyond the traditional measures; yet, few studies have used alternative measures of SES that capture the financial well-being of individuals such as financial hardship. The purpose of this study was to determine the association between financial hardship and SRH. Cross sectional analysis was conducted using data from the Health in Common Study (N=828), an observational study conducted to investigate social and physical determinants of cancer risk-related behaviors among residents of low-income housing developments in three cities in the Boston metropolitan area. Participants were recruited from twenty publicly and privately managed low-income housing developments. Modified Poisson regression models were used to obtain the relative risk of low SRH (fair or poor) compared to good SRH (good, very good, or excellent), adjusting for demographic and socioeconomic characteristics. Unadjusted models revealed that the respondents reporting financial hardship were 45% (exp(β)=1.45; CI: 1,21, 1.75; p<.001) more likely to report low SRH compared to those not reporting financial hardship. After controlling for demographic and socioeconomic characteristics the association was only slightly attenuated, and revealed that the respondents reporting financial hardship were 44% (exp(β)=1.44; CI: 1,18, 1.76; p<.001) more likely to report low SRH. Our results suggest that financial hardship is a robust predictor of SRH; and over and above the influence of demographic and traditional socioeconomic indicators (i.e. education, income and employment status), financial hardship may exert a substantial influence on the risk of low SRH.

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Citation Paper

Paper Session 09 2:18 PM–2:36 PM 2087

TOWARD A MEASURE OF NEIGHBORHOOD STRESS: A PILOT STUDY

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Researchers and policy makers have examined characteristics of neighborhoods that are likely to increase stress for individuals and have identified factors such as crime, poverty, blight, abandoned buildings and other property, and unemployment. These have been studied in relation to self-reported health, diet, physical activity, chronic disease, and low birth weight newborns, and show that our collective experience, the physical and social environment, makes a difference in our health. These studies suggest that individual health issues are correlated with contextual factors; one mechanism may be increases in stress.

This paper presents findings from a pilot study aimed at creating an operational definition of the concept of collective stress at the local neighborhood (census block group) level. Extant tools designed to measure collective, community, or neighborhood stress are reviewed and a methodology is developed to identify and measure neighborhood stress and assess the influence on total individual-level stress. A sample of 693 participants in the Boston Puerto Rican Population Health Disparities project at Tufts University was used to operationalize and perform preliminary validation and testing of a multi-source measure of collective stress. At the individual level, the collective stress measure is compared to self-reported perceived stress and a biologic measure of allostatic load obtained from blood draws within this sample. At the neighborhood level, the collective stress measure is compared with digital photographs and direct observation for a sub-sample of the 544 census block-groups in Boston, Massachusetts.

Results are presented both numerically and graphically using GIS methodology for the city of Boston. Findings suggest reasonable agreement between this measure of collective stress and a commonly used measure of neighborhood condition - the number of violent crimes reported in each block group. Comparison to digital photographs and the observational survey suggest a high level of agreement between the neighborhood stress measure and common visual cues of neighborhood condition.

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Citation Paper

Paper Session 09 2:36 PM–2:54 PM 2088

DOES NEIGHBORHOOD STD RATE EXPLAIN THE ASSOCIATION BETWEEN RACE AND STD DIAGNOSIS?

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Racial disparities in STD rates persist even though African Americans do not report more sexual risk behavior than other groups. Such disparities may result from network factors, such as neighborhood STD rate; that is, because people often have sex with individuals who live nearby, individuals from neighborhoods with higher rates of STDs may be more likely to contract an STD. Using data from 1280 patients (74% African American; 47% female) seeking care from a public STD clinic, we investigated whether neighborhood STD rates explain the relation between race and STD diagnosis. Patients completed a computerized sexual history survey, underwent STD testing, and provided their address (to determine their census tract). Clinic data were used to calculate the yearly STD rate in each census tract; tracts were divided into tertiles. Generalized estimating equations were used to take into account the clustered nature of the data without modeling variability across census tracts. The results showed the expected racial differences in STD diagnosis; 28% of African American vs. 15% of Caucasian participants were diagnosed with an incident STD. In a model including individual- and neighborhood-level predictors, younger age, χ2=13.74, p<.05, African American race, χ2=8.70, p<.05, and riskier census tract (as determined by STD rate), χ2=4.28, p<.05, were associated with a greater likelihood of STD diagnosis; gender and recent sexual risk behavior were not associated with STD diagnosis. In a model including interactions with race, the interaction between race and census tract STD rate was significant, χ2=8.26, p<.05. Census tract STD rate was associated with STD diagnosis among Caucasians, but not among African Americans. Thus, contrary to our expectation, neighborhood STD rates did not explain racial disparities in STD rates. For African Americans neither sexual risk behavior nor neighborhood STD rates predicted STD diagnosis. Future research is needed to determine the individual, sexual network, and structural variables that affect STD prevalence among African Americans.

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Paper Session 09 2:54 PM–3:12 PM 2089

THE ASSOCIATION BETWEEN NEIGHBORHOOD ENVIRONMENT AND NEIGHBORHOOD SATISFACTION: DEMOGRAPHIC MODERATORS

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Background: Built environment attributes are associated with physical activity and obesity, but their association with other outcomes is less clear. Neighborhood satisfaction has been found to be correlated with mental health and quality of life. Therefore, it is worthwhile to better understand the relationship between the environment and satisfaction.
Objectives: To assess associations between neighborhood characteristics and neighborhood satisfaction and evaluate potential moderators.
Methods: Adult participants ($n=1745$) were randomly recruited from neighborhoods in Seattle and Baltimore selected to vary on walkability and income. Perceived neighborhood environment was assessed using the validated Neighborhood Environment Walkability Scale (NEWS), and neighborhood satisfaction was assessed as a mean of 17 survey items, which formed a reliable scale score ($\alpha=0.86$). NEWS subscales were grouped into tertiles, and mixed effects linear regression was used for analysis.
Results: Participants reported greater neighborhood satisfaction when they perceived greater pedestrian/traffic safety ($p<.001$), attractive aesthetics ($p<.001$), safety from crime ($p<.001$), access to destinations, ($p<.001$), diversity of destinations ($p<.001$), nearby park access ($p<.01$), and less residential density ($p<.01$). There was a street connectivity by gender interaction where there was a positive association between connectivity and satisfaction for women but a negative association for men.
Conclusions: Most of the neighborhood characteristics positively related to physical activity also appear to benefit neighborhood satisfaction. A key challenge is to learn how to overcome the negative association of residential density to neighborhood satisfaction.

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Citation Paper

Paper Session 09 3:12 PM–3:30 PM 2090

THE CLASSROOM SOCIAL NETWORK AND DEPRESSIVE SYMPTOMS: DO NETWORK COMPOSITION AND CHARACTERISTICS INFLUENCE ADOLESCENT DEPRESSION?

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Research on social networks has found that socially integrated individuals are more resilient and have better mental health than those who are socially isolated. The magnitude of the health risks associated with poor social network integration has been compared to the risks associated with smoking, high blood pressure, and obesity. Therefore, the social interplay occurring within the school class can be considered an influential life situation for adolescent social, emotional, and behavioral development. The purpose of this study was to examine the informal structure of social relations within the school class, representing a unique type of social network, and its influences on adolescent depression.
Methods: Social network metrics examining classroom social structure and measures of depressive symptoms were analyzed at the classroom network level using multilevel linear regression models for a sample of 124 Chinese 10th grade classrooms in 24 schools with 5,563 adolescents.
Results: Classes with higher proportions of members on the periphery of the social network had more depressed students ($\beta=0.26, p<0.05$). Professional school classes with higher proportions of high status friendship network members had fewer depressed students ($\beta=-0.23, p<0.01$). Conversely, academic school classes with higher proportions of high status popularity network members had a higher proportion of depressed students ($\beta=0.39, p<0.01$). Measures of social network density, centralization, and reciprocity were not significantly associated with depression in this sample.
Conclusions: Social network influences work together interdependently to collectively impact health and well-being. These findings suggest that prevention work would benefit from addressing the structure and characteristics of the social network along with those of the individual when targeting adolescent depression-related outcomes.

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Thursday
April 28, 2011
3:45 PM–5:15 PM

Paper Session 10 3:45 PM–4:03 PM 2091

ENGAGING IN TREATMENT FOR DEPRESSION: THE ROLE OF VETERANS' ILLNESS PERCEPTIONS

A. Rani Elwy, PhD,[1,2] Natalie S. Dell, MPH,[2] Shibei Zhao, MPH,[2] Mark Glickman, PhD,[1,2] Barbara G. Bokhour, PhD,[1,2] Paul A. Pirraglia, MD, MPH,[3] Craig M. Coldwell, MD, MPH,[2] Tu A. Ngo, PhD,[2] Melanie Vielhauer, PhD[4] and Susan V. Eisen, PhD[1,2]

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Objective: We undertook a longitudinal study of veterans' perceptions of depression and its treatment at the beginning of a depression episode in order to determine whether or not illness perceptions predict treatment engagement.
Methods: Veterans at three VA medical centers with a new episode of depression were identified through electronic medical records and sent a questionnaire assessing their demographics and illness perceptions. We used the Illness Perception Questionnaire-Revised, adapted for depression, to assess identity, cause, consequences, timeline, cure/control, coherence and emotional representations. We conducted chart reviews to determine who received treatment for depression three months after a positive screen, and categorized veterans into one of four treatment groups: 1) Received guideline concordant treatment for depression; 2) Received treatment for depression, but not guideline concordant; 3) Received mental health treatment but not for depression and 4) Did not receive any treatment. Logistic regression models were used to predict veterans' treatment.
Results: Of 142 veterans (age range 22–89) in our study, 40 (28%) received guideline concordant depression treatment, 27 (19%) received some depression treatment, but not guideline concordant, 9 (6%) received mental health treatment but not for depression, and 66 (47%) had not received any treatment. Veterans who perceived that depression treatment would not control their depression, and older veterans (>60 years), were less likely to receive any mental health treatment compared to younger veterans and those who perceived treatment as helpful ($OR=0.46$, 95% CI 0.27–0.79, $p<.01$).
Conclusion: Veterans' cure/control illness perceptions impacted their receipt of depression treatment in this study. Communication interventions addressing and potentially changing illness perceptions of treatment control may encourage more veterans to obtain timely and appropriate depression care.

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Paper Session 10 4:03 PM–4:21 PM 2092

WOMEN VETERANS TRANSITIONING FROM COMBAT TO OUR HEALTH CARE SYSTEMS: WHAT ARE THEIR NEEDS AND PREFERENCES?

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BACKGROUND: Of the over 1.5 million Veterans who have deployed to Iraq or Afghanistan,12% are women. Little is known about the health care needs and preferences of women Veterans.
METHODS: A random sample of recent veterans with valid addresses in the Southeastern US(n=4004)were mailed an advance letter, survey and post survey etter. Respondents (n=1161) included 185 women Veterans (17%) who completed the health care use survey item. Of these, 36% reported having used VA health care. VA users (n=66) and non-users (n=119) were compared to determine differences in demographics, needs and preferences for care utilizing bivariate parametric and nonparametric methods.
RESULTS: Compared to VA users, a greater proportion of non-users were married (41% vs. 59%) and reported income>$75 K (21% vs. 8%). A greater proportion of VA users had served in the Army (66% vs. 40%) and reported having been diagnosed with PTSD (37% vs. 14%), depression (47% vs. 25%), joint pain (31% vs. 12%) and were overweight (58% vs. 38%), compared to non-users. No differences were noted for age, race/ethnicity, employment status or number of times deployed. Other notable health risks reported by both groups of women included: aggressive driving (26%) and smoking (19%). Most prevalent medical symptoms were back pain (24%), joint pain (18%), stomach pain (29%) and nausea(24%).Top recommendations to make using a VA facility more convenient were: closer clinic locations (63%), evening/weekend clinics (52%/53%), and more child-friendly environs (44%).
CONCLUSION: Those with mental health problems and chronic pain conditions are more likely to have sought VA care, but most women Veterans have not yet done so, and may seek care for these varied issues through other health care systems. Overall, women Veterans report high rates of health risks, chronic pain and GI problems. Results also suggest that returning women veterans are interested in flexible, convenient health care that accommodates young families.

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Paper Session 10 4:21 PM–4:39 PM 2093

EFFECT OF A STAGE-MATCHED INTERVENTION ON EXERCISE ADHERENCE AMONG HYPERTENSIVE VETERANS

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Exercise recommendations are an important non-pharmacological approach to treat hypertension. Many people, however, have difficulty adhering to these behavioral recommendations, and non-adherence is a significant barrier to reducing blood pressure. We conducted a three-arm comparative effectiveness clinical trial using a) a Transtheoretical Model (TTM) based Stage-Matched Intervention (SMI) and b) a non-tailored Health Education Intervention (HEI) to promote behavioral change among veterans with uncontrolled hypertension. The third arm consisted of Usual Care (UC). We assessed exercise stage of change (SOC) information at baseline using a validated TTM questionnaire that placed participants into one of five SOC, based on their responses. Participants were randomized to SMI, HEI or UC equally. The SMI group received monthly phone calls with TTM-based tailored advice to increase exercise, diet and medication adherence. The HEI group received non-tailored hypertension education phone calls, and the UC group received no phone calls. We used SOC at baseline and 6 months to determine the effect of the intervention group on the proportion of participants in later exercise (action or maintenance) SOC using Chi Square tests. Data was used from the 481 participants who completed the study. At baseline, 72% of SMI, 63% of HEI and 63% of UC participants were in a later exercise SOC ($p>.10$). At 6 months, the proportion of SMI participants in later SOC (82%) was greater than in UC (74%) [$p=0.01$]. Comparisons between HEI (78%) and UC ($p=0.33$), and between SMI and HEI were not significant ($p=0.34$). These findings suggest that the SMI intervention was effective in motivating patients to exercise. However, we did not have enough statistical power for the SMI and HEI comparison. Further research should better distinguish between the two interventions and determine the comparative cost-effectiveness of implementing them.

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Paper Session 10 4:39 PM–4:57 PM 2094

IMPLEMENTATION EVALUATION OF MOVE! WEIGHT MANAGEMENT TREATMENT FOR VETERANS: BEST PRACTICES BASED ON A QUALITATIVE COMPARATIVE ANALYSIS

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MOVE! is an evidence-based weight management program that has been implemented widely in the Veterans Health Administration (VHA) to complement public health obesity efforts. Understanding clinical processes and organizational structures at facilities with better patient outcomes can facilitate more effective system-wide implementation. To determine “best practices” related to MOVE! implementation, we conducted 22 case studies of VHA facilities (Hospitals or Community Based Outpatient Clinics) that were chosen based on the facility’s weight loss performance. Eleven sites had the largest weight loss outcomes, and eleven had the smallest of the 239 facilities providing MOVE-related care during 10/07–12/08. Interviews with MOVE! coordinators, electronic medical record data, and program summary forms were used to measure clinical program features, organizational processes, and program functioning. Data were used to triangulate and code conditions for a qualitative complexity analysis (QCA) that determined multiple combinations of necessary and sufficient conditions to explain outcomes. The QCA revealed four sufficient solutions related to better weight loss outcomes: 1) high program complexity in combination with high staff involvement; 2) presence of an active physician champion in combination with low facility accountability; 3) mixed care plans in combination with low facility accountability; and 4) not using a wait-list in combination with quality improvement efforts. The first three solutions provided the most raw coverage (i.e., variance explained) and of those, the first solution provided the most unique coverage (i.e., explained the most cases not covered by other solutions) when explaining better facility-level weight loss outcomes. VHA health care facilities can use multiple strategies to implement MOVE!, but certain features are more important, in combination, than others.

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Paper Session 10 4:57 PM–5:15 PM 2095

ENHANCING ENTRANCE INTO TREATMENT FOR POST-DEPLOYMENT VETERANS THROUGH COLLABORATIVE/INTEGRATED CARE

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OEF/OIF Veterans are returning from battle and entering the Veterans Affairs (VA) Health System in record numbers. One of the pre-eminent concerns is the appropriate identification and treatment of Post-Traumatic Stress Disorder among these post-deployment Veterans. In the last 4-years the VA has dedicated significant monetary funds and general resources into the development of the Primary Care- Mental Health Integration (PC-MHI) program with the goals of increasing identification and access for Veterans with mental illness, decreasing stigma, improving continuity of care for Veterans, and improving the utilization of health care services. A preliminary examination of a consecutive 8-month period of administrative data with regard to consults placed to the OEF/OIF PTSD clinic from the hospital at large and then specifically from the PC-MHI team was utilized. A total of 265 consults to the OEF/OIF PTSD clinic were placed in this time period;. Of those, 120 (45%) were classified as "completed" indicating that the veteran was evaluated by a member of the OEF/OIF PTSD team. In that same time period, 41 consults were placed specifically from the PCMHI team, and 29 of those were successfully completed, reflecting a 70% completion rate. Moreover, while the PC-MHI teams' consults only accounted for 15% of all consults submitted, they accounted for 24% of all completed consults. Additionally, those consults that were submitted by PCMHI and not completed (13) represented only 4% of all consults. Lastly, the study will provide data with regard to racial disparities between consult completion, as well as, continuity of care after initial of treatment.

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Paper Session 11 3:45 PM–4:13 PM 2096

SELF-EFFICACY IS ASSOCIATED WITH CHANGE IN TREATMENT ADHERENCE OVER SIX MONTHS IN HEART FAILURE PATIENTS

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Nonadherence to treatment recommendations is a leading cause of rehospitalization and mortality in heart failure (HF) patients. We aimed to investigate whether perceived social support, depression, and self-efficacy were associated with the change in treatment adherence over six months in these patients. The sample consisted of 252 HF patients (32% women) with a mean age of 54 years. Of these, 168 patients completed follow-up assessments at six months. Changes in social support, depression, self-efficacy, and adherence were calculated as the difference scores between the values obtained at six months and baseline. Baseline and six-month scores were moderately correlated for adherence, (r=.394, p=.000), social support (r=.640, p=.000), depression (r=.496, p=.000), and self-efficacy (r=.626, p=.000), suggesting substantial individual differences in the change of these variables over time. Hierarchical multiple regression analyses demonstrated that neither baseline social support (p=.526) nor its change (p=.164) were significantly associated with change in adherence over six months. Similarly, neither baseline depression (p=.141) nor its change (p=.290) were significantly associated with change in adherence over six months. On the other hand, both baseline self-efficacy (β=.219, t=2.117, p=.036) and its change (β=.402, t=5.292, p=.000) were positively associated with change in adherence over six months. All analyses adjusted for demographic (age, gender, marital status, ethnicity, education) and clinical (NYHA class, comorbidity) covariates. These results suggest that although social support and depression are associated with concurrent adherence, they may not predict changes in adherence in the long-term. Self-efficacy, both at baseline and its shifts over time, remained a strong determinant of changes in disease management behavior, confirming itself as a key target for psychosocial interventions for HF.

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Paper Session 11 4:13 PM–4:21 PM 2097

AVOIDANT COPING MODERATES THE EFFECT OF ANXIETY ON PHYSICAL FUNCTIONING IN PATIENTS WITH CHRONIC HEART FAILURE

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Previous research has demonstrated that anxiety is associated with morbidity and mortality in heart failure patients, but the psychosocial mechanisms that explain this relationship have remained unclear. The present study aimed to examine (1) anxiety and approach and avoidant coping strategies in heart failure patients and their associations with physical functioning, and (2) whether approach or avoidant coping strategies mediated or moderated the association between anxiety and physical functioning. Participants included 273 heart failure patients (mean age= 54 years). Hierarchical multiple regression analysis adjusting for age, gender, ethnicity, marital status, education, New York Heart Association (NYHA) class, and treatment for depression or anxiety was conducted to examine the study hypotheses. The results indicated that both anxiety (b=2.25, p<.001) and avoidant coping (b=.43, p<.01) were significantly associated with physical functioning in separate models. Results also demonstrated a significant interaction between avoidant coping and anxiety (b=.53, p<.01) such that the use of avoidant coping strategies exacerbated the detrimental effect of anxiety on physical functioning. Approach coping, however, was not directly associated with physical functioning, nor did it moderate the association between anxiety and physical functioning. In addition, neither approach nor avoidant coping mediated the relationship between anxiety and physical functioning. In sum, employing avoidant coping strategies intensified the harmful effects of anxiety on physical functioning in patients with chronic heart failure. Alleviating anxiety and reducing avoidant coping may be important targets of intervention to improve heart failure patients' physical health.

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Paper Session 11 4:21 PM–4:39 PM 2098

HEALTH BEHAVIOR CHANGES FOLLOWING A SERIOUS HEALTH CONDITION DIAGNOSIS AT MIDLIFE

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Though outcomes for many conditions can be improved by changing health behaviors, it is unknown whether a diagnosis influences positive behavior change because study samples are limited to people already diagnosed. This is a significant gap given the identification of at-risk patients could facilitate the targeting of interventions at diagnosis. We used data from the Wisconsin Longitudinal Study to assess whether a diagnosis of diabetes, cancer or myocardial infarction (MI) at midlife (mean age=52) influences health behavior changes, accounting for pre-diagnosis factors (n=5,317). Outcome variables included 3 categories of change pre (1993) to post (2004) cancer, diabetes, or MI. BMI categories included: 1) maintained or 2) achieved CDC-defined normal weight 3) maintained/became overweight/obese (reference). Smoking categories included: 1) never smoked/maintained quit status 2) quit smoking 3) remained/became current smoker (reference). Pre-diagnosis measures included extensive sociodemographic, health, social support, and psychological factors. Multivariable multinomial logistic regression estimated odds ratios relating each condition (yes/no) to the behavior change groups. 95% confidence intervals (CI) were calculated using robust estimates of the standard errors. 28% of participants maintained/achieved normal BMI. 85% maintained/improved their smoking status. After adjustment, people diagnosed with diabetes were more likely than those without diabetes to maintain (OR=1.6,CI=1.1–2.3) or achieve quit status (OR=1.9,CI=1.1–3.1) and achieve a normal BMI (OR= 2.3,CI=1.6–3.1). People who had a MI or received a cancer diagnosis were more likely than those without these conditions to achieve quit status (OR=2.4,CI=1.4–4.2 and OR=1.7, CI=1.1–2.6). There were no significant differences in BMI change between people with and without a MI or cancer. Findings suggest health conditions are not necessarily associated with maintained/improved health behavior. Pre-diagnosis measures will be considered to assess factors associated with adaptive health behaviors. This information can facilitate proactively administered interventions to improve long-term patient outcomes.

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Paper Session 11 4:39 PM–4:57 PM 2099

THE ASSOCIATION BETWEEN VARIANTS ON CHROMOSOME 9P21 AND INFLAMMATORY BIOMARKERS IN ETHNICALLY DIVERSE WOMEN WITH CORONARY HEART DISEASE: A PILOT STUDY

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BACKGROUND: Coronary heart disease (CHD) is a multifactorial phenotype resulting from the complex interaction of multiple genes and lifestyle behaviors. The most consistently replicated genetic variants associated with CHD in populations of European descent have been found on chromosome 9p21 with little known about these associations in ethnic groups of African ancestry. These disease-associated variants are located in a genomic region of unknown function and are unrelated to traditional risk factors.

PURPOSE: The purpose of this exploratory study was to examine the allelic frequencies and haplotype structure of single nucleotide polymorphisms (SNPs) for Black and White women with CHD. We also sought to explore the relationship between these genetic variants and biomarkers of inflammation.

METHOD: Eight SNPs in a 58 kb region of chromosome 9p21 were genotyped in a cohort of women with CHD (n=91). The interethnic relationship between the SNPs and 4 inflammatory biomarkers (C-reactive protein, intercellular adhesion molecule-1, interleukin-6, and tumor necrosis factor-alpha) were examined using analysis of variance.

RESULTS: We found considerable interethnic allelic and haplotype diversity across the 9p21 locus with only 2 SNPs in perfect LD in both races. A pair of high and low risk haplotypes was most common in White women while 41% of Blacks carried the risk alleles for 3 of 8 SNPs examined. The interethnic association between the SNP genotypes and inflammatory markers were divergent in, both direction and magnitude.

CONCLUSIONS: Our results lend support for the importance of ancestry-specific allelic context when examining variants on chromosome 9p21. Early genetic CHD risk prediction has potential for motivating early and aggressive lifestyle modification before the disease manifests. Greater characterization of ethnically-specific, gene-environment interactions may improve our understanding of how changing lifestyle behaviors modifies the effects of genetic risk factors.

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Meritorious Paper

Paper Session 11 4:57 PM–5:15 PM 2100

?EVIDENCE OF SHARED POLYGENIC RISK AMONG SMOKING BEHAVIORS AND BODY COMPOSITION

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Obesity and nicotine dependence (ND) represent complex heterogeneous diseases, affecting 33 and 20 percent of Americans, respectively. Both are associated with numerous medical conditions including cancer, cardiovascular disease and major depression. While cross-sectional studies of ND are typically supportive of a negative relationship between smoking and body mass index (BMI), a positive association is supported by the observations that, within smoking cohorts, heavy smokers tend to be of increased bodyweight compared to light smokers. A growing body of literature demonstrates the utility of genome-wide association studies (GWAS) for identifying single nucleotide polymorphisms (SNP) that contribute to disease risk. The GWAS approach has been applied to BMI and smoking behaviors (SB) using sample sizes in the tens of thousands and yielded several putative risk variants of small effects. However, many traits show comorbidity but most studies do not examine common versus specific variants. The purpose of this study was to investigate whether variants affecting BMI or SB were common to multiple behaviors or were trait specific. 56 BMI and 92 SB associated SNPs were catalogued from GWAS meta-analyses. These variants were tested for association in $n=2{,}802$ (41% African-American, age 68–80) from the Health Aging and Body Composition study. Among genetic variants previously implicated in BMI, 8 were associated with either BMI or abdominal visceral fat (AbVF) including variants in or near STK33, ETVS and IGF1. One variant, rs1900273, was significantly associated with pack years ($p=0.008$), which was also significantly associated with BMI ($p=0.004$). Among SNPs previously implicated in SB, 6 were associated with either BMI or AbVF including variants in or near PPP1R3C, PSAT1 and RPH3A1 and 6 were associated with SB including variants in or near ALK, DBH and ZNF718. Results indicate shared genetic risk between SB and body composition. Future research should confirm these associations and address mechanisms behind the common genetic architecture underlying these traits.

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Paper Session 12 3:45 PM–4:03 PM 2101

AN EXAMINATION OF ADOLESCENT'S PHYSICAL ACTIVITY SPACE AND RELATIONSHIPS WITH SELF-DEFINED AND BUFFER-DEFINED NEIGHBORHOOD BOUNDARIES

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INTRODUCTION: Studies of the relationship between the built environment and physical activity often focus on an individual's neighborhood. However, little research has explicitly examined how adolescents interact with the built environment in terms of where they engage in physical activity and how their travel patterns relate to neighborhood boundaries.
METHODS: Adolescents aged 14–17 ($N=141$) living in urban areas provided locations of where they were physically active outside their home in the past week. These locations, along with home addresses, were geocoded and summarized into individual "physical activity spaces" (PAS). The resulting shapes represent the area in which adolescents were active outside the home. Characteristics of the PAS's were calculated, and differences by demographics and physical activity levels were examined. PAS boundaries were also compared to adolescents' neighborhoods both self-defined and defined by a .75 mile network buffer around the home.
RESULTS: The median size of an adolescent's PAS was .08 sq. miles. The largest PAS was 59.6 sq. miles and the smallest was 0.00005 sq. miles (78.1 sq. feet). The size of the adolescents' PAS was not explained by age, gender, or level of physical activity. The mean proportion of PAS within a neighborhood boundary was 56% (network buffer) and 44% (self-defined). For 32% of adolescents, the PAS was completely contained within a .75 mile network buffer around their home; only 23% had a PAS completely contained within their self-defined neighborhood.
CONCLUSIONS: For many adolescents, their interaction with the built environment for physical activity spanned well beyond their neighborhood. These findings suggest that the neighborhood environment, whether self-defined or defined as a buffer, may not be the most salient geography in studies that seek to examine this association.

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Paper Session 12 4:03 PM–4:21 PM 2102

DO OPPORTUNITIES WITHIN WALKING DISTANCE FACILITATE HIGHER PHYSICAL ACTIVITY LEVELS?

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In spite of the health benefits of physical activity (PA), most adults are inactive. Local environments may constrain or facilitate activity levels, and proximity to PA sites has been linked to decreased risk of disease. Although studies examining the built environment have increased in popularity, there is a lack of consistency in the operationalization of a walking distance that may hinder associations found with PA. The purpose of the present study was to (a) establish a data derived walking distance relative to PA sites and (b) examine the relationship between characteristics of PA sites and levels of PA. Adults ($N=380$; 62% female; mean (M) age=46.3) self-reported their PA levels and provided home addresses. Participants were among a diverse sample living in Hawaii (34% Caucasian, 19% Hawaiian, 15% Japanese, 10% Filipino, 11% other/mixed, 7% other Asian, 4% other Pacific Islander). Using geographic information systems technology, PA sites were mapped and counted within a 10-km radius around participants' home and aggregated within 0.5 km buffer distances. Using graphical representations of the relationship between proximity to the nearest PA site and PA levels, 0.5 km distance buffers were dichotomized as either within or beyond walking distance. A multivariate analysis of variance examined the effect of walking proximity on the average metabolic equivalent (MET)- weighted minutes of three PA levels (mild, moderate, strenuous). For the current sample, 3.5 km was identified as walking distance (approximately 25- to 30-minute walk). After adjusting for relevant covariates (age, gender, education, ethnicity, participant-rated health), participants living within walking distance to the nearest PA site had significantly higher MET minutes of strenuous PA ($M=22.6$, $SD=19.5$) compared to those living beyond walking distance($M=16.4$, $SD=19.4$), $F(1, 379)=4.54$, $p<0.05$. Results indicate that living within walking distance of particular PA sites (beaches, parks, etc.) supports higher levels of strenuous PA independent of typically significant demographic influences.

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Paper Session 12 4:21 PM–4:39 PM 2103

SOCIAL ENVIRONMENTAL PREDICTORS OF WALKERS VERSUS NON-WALKERS IN THE PATH TRIAL

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The Positive Action for Today's Health (PATH) trial is evaluating the efficacy of an environmental intervention on increasing walking in low income, high crime communities. Three communities were randomized to either a police patrolled-walking program with social marketing strategies (full intervention), a police patrolled-walking only program, or no walking-related program. The present study examined predictors of walking status in our full intervention community at 12-months. The full intervention was designed to increase safety (training walking captains, hiring police officers,contain stray dogs),and access for PA (marked a walking route), and included a social marketing campaign that targeted psychosocial and environmental factors for increasing PA. Measures included demographics, psychosocial measures, perceptions of environmental supports for PA, and objective crime data on narcotic and stray dog related incidences. Participants' addresses and crime data were geo-coded using ArcGIS, and block groups were defined by census maps and participants and crimes assigned to block groups. In the full intervention community 31 participants were identified as walkers and 99 as non-walkers based on attendance logs. A series of logistic regression models were conducted with walking status as the dependent variable. The model which showed the best AIC fit indicated that age ($p<0.04$), income ($p=0.06$) neighborhood social life ($p<.02$), and stray dog incidences ($p=0.05$) were all predictors of walking status. Participants were 0.82 times more likely to walk on the PATH route if they perceived less social life in their neighborhood and were 1.9 times more likely to walk on the PATH route if there were more stray dog incidents reported in their neighborhood. Younger participants and those of higher income were more likely to be classified as walkers than non-walkers. These data indicate that social environmental factors related to neighborhood social factors and stray dogs are important determinants of participating in a walking intervention that provides safety and support.

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Paper Session 12 4:39 PM–4:57 PM 2104

DOES THE BUILT ENVIRONMENT MAKE A DIFFERENCE? OBSERVED PHYSICAL ACTIVITY IN RENOVATED VS. NON-RENOVATED ELEMENTARY SCHOOL PLAYGROUNDS

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Over the past decades childhood obesity has increased at an alarming rate. One approach to address this has been to modify the built environment to promote physical activity. Therefore, the purpose of this study was to investigate if children in schools with renovated playgrounds (Learning Landscapes) were more active compared to students in schools without renovated playgrounds using direct observation. A sample of 6 elementary schools with renovated ($n=2947$; 76.43% free and reduced lunch; 58.58% Hispanic, 29.35% White, 7.85% Black, 4.22% other) and 6 non-renovated ($n=3123$; 73.65% free and reduced lunch; 65.13% Hispanic, 29.75% White, 2.24% Black, 2.88% other) playground schools were assessed using the System for Observing Play and Leisure Activity in Youth (SOPLAY). Schools were divided into observation zones and activity was observed separately for boys and girls during recess and lunch for 4 separate days. Counts of sedentary, walking and very active categories were averaged for each zone across observation periods by day and the counts were summed for each activity category across zones. For boys in non-renovated playgrounds, the observed percents were 25.97, 38.09, and 35.94 for sedentary, walking, and very active; and 26.60, 34.36 and 39.04 for boys in renovated playgrounds (chi-square [df=2]=4.12, $p>.05$). For girls in non-renovated playgrounds, the observed percents were 31.71, 34.03, and 34.26 for sedentary, walking, and very active; and 32.85, 29.94 and 37.21 for girls in renovated playgrounds (chi-square [df=2]=4.61, $p>.05$). The findings counter our hypotheses and may indicate that environment change alone may not be sufficient to increase physical activity and that children may need to be motivated to utilize changes in the built environment.

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Paper Session 12 4:57 PM–5:15 PM 2105

USING INTERACTIVE VOICE RESPONSE TECHNOLOGY TO SUPPORT PHYSICAL ACTIVITY GOAL SETTING

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Automated telephone counseling has been used to promote physical activity (PA) in adults because of the convenience, low cost, and the opportunity for goal setting (GS) and feedback. Yet, there is limited information on the relationship between goals set using an automated system and future PA. The purpose of this study was to examine the relationship within a sample of adult patients ($n=179$) at risk for cardiovascular disease who received automated telephone calls as part of a larger trial. A secondary goal was to determine if GS mediated the relationship between self-efficacy (SE) and PA. All participants received automated telephone contacts that facilitated GS by assessing the participants' current level of physical activity, suggesting a modest increase, and obtaining a specific goal for the subsequent 2 months. Self-efficacy was assessed using a single item indicator to avoid participant burden. Goal setting and SE assessed during Call 1 predicted PA assessed 2 months later during Call 2 (GS-$\beta=.52$, $p<.01$, R2adj=.26; SE- $\beta=.39$, $p<.01$, R2adj =.15). Similarly, Call 2 GS and SE were significantly related to PA assessed during Call 3 (GS-$\beta=.49$, $p<.01$, R2adj=.24; SE- $\beta=.26$, $p<.01$, R2adj=.06). Further, SE was significantly related to GS at both Call 1 (R2adj=.36; $\beta=.60$, $p<.01$) and Call 2 (R2adj=.18; $\beta=.43$, $p<.01$). When GS (Call 1 to 2 $\beta=.44$, $p<.01$; Call 2 to 3 $\beta=.47$, $p<.01$) was included in the regression models with SE to predict future PA, the SE regression coefficients were reduced (Call 1 to 2 $\beta=.13$, $p=.10$; Call 2 to 3 $\beta=.05$, $p=.51$) suggesting that GS mediated the relationship between SE and PA. Sobel tests confirmed that GS significantly mediated the relationship between SE and PA in both cases (p's<.01). These results suggest that the relationships seen between GS and PA when facilitated through human interaction can be replicated using an automated telephone system.

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Paper Session 13 3:45 PM–4:03 PM 2106

INCORPORATING PHYSICIAN AND PATIENT PERSPECTIVES INTO DESIGN OF AN EHR-GENERATED AFTER VISIT SUMMARY

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An electronically generated after visit summary (AVS) may enhance patient understanding and recall of information needed for adherence to treatment plans and follow-up care. However, optimal content and format of the AVS is not known. In the initial phase of a project to develop and evaluate a useful, patient-centered AVS, we conducted a series of individual, semi-structured interviews with 12 family physicians and 48 adult patients recruited from two private and two public primary care clinics serving socioeconomically diverse populations. Interview questions explored participants' experiences, attitudes, preferences, and recommendations for content and format of an AVS. Interviews were audio taped, transcribed, and entered into NVivo 8 software. We analyzed physician and patient interviews separately to capture the major content domains and emergent themes in each group. Physicians reported varying levels of experience with the EHR-generated AVS. Most viewed it as a useful tool for patient education and continuity of care, and some offered innovative suggestions for improvement; however, recurring concerns of physicians included the need for current and accurate medication and problem lists, with language and reading level better matched to patient abilities. Similar concerns were expressed by many patients. Overall, patients reported general satisfaction with the elements of the current AVS, but requested additional information and content areas, yielding an extensive list closely aligned with components of the Medicare/Medicaid Meaningful Use requirements for health IT. Patient preferences also included simplified medical terminology, more information and explanation of diagnoses and medications, specific health goals, and educational features such as personalized diet and exercise plans. After careful consideration of the applicability of these results to AVS design, the research team developed three experimental models to be tested in a subsequent phase examining the effect of AVS content on patient satisfaction, recall and use of health information, and adherence to treatment recommendations.

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Paper Session 13 4:03 PM–4:21 PM 2107

PATIENT PARTICIPATION IN PHYSICAL ACTIVITY COUNSELING IN PRIMARY CARE: ANALYSIS OF 139 AUDIO-RECORDED VISITS USING THE 5AS FRAMEWORK

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Background: The 5As (ASK, ADVISE, ASSESS, ASSIST, ARRANGE) are recommended as a strategy for brief physical activity counseling in primary care. However, efforts to evaluate the 5As are limited by lack of a gold standard measurement. Additionally, patient participation in the 5As is not well understood, yet important to facilitate behavior change. Our goal was to examine patient-physician interactions using a new coding scheme to assess the 5As for physical activity counseling via audio-recorded patient-physician discussions.

Methods: We developed a coding scheme using published definitions of the 5As, prior measures of the 5As, and in-depth study of a sample of audio-recorded physical activity discussions in routine office visits. We then applied the coding scheme to a sample of 28 physicians in Northeast Ohio and 139 of their patient visits with audio-recorded physical activity discussions. We calculated descriptive statistics of the frequency of As and qualitatively analyzed patient-physician communication using a coding and editing approach.

Results: Patients' mean age was 54 years; sixty-seven percent were White, 25% were Black, and 79% had at least some college education. The coding scheme achieved good inter-rater agreement for each 'A'. Patients contributed to ASK in 38% of discussions, ADVISE in 14%, ASSESS for readiness to change in 61%, ASSIST in 21%, and ARRANGE 0%. Two patterns emerged: 1) ASSESS of patient readiness to change was rarely directly elicited by the physician, but indirectly revealed by the patient in response to physician ASK statements and 2) patients often expressed ambivalence about changing their physical activity and this ambivalence was generally not addressed during the visit.

Conclusions: Patient participation in the 5As occurs by patients raising the topic, explaining their ambivalence or barriers to change, and suggesting goals or plans to improve activity. To improve upon the 5As, future work should evaluate strategies to elicit patient readiness to change and address patient ambivalence to tailor advice.

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Paper Session 13 4:21 PM–4:39 PM 2108

HEALTH CARE PROVIDER GUIDANCE ABOUT ADOLESCENT SEXUAL HEALTH DURING HPV VACCINE VISITS

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BACKGROUND: We sought to examine mothers' reported conversations with their daughters' health care providers (HCPs) about HPV vaccine and sex topics, and assess associations with mother-daughter communication about sex.
METHODS: A national (U.S.) sample of 936 mothers of adolescent females aged 11–14 years completed our online survey in December 2009. Most mothers were over 39 years old (60%), non-Hispanic white (62%) or non-Hispanic black (16%), married (81%), and living in urban areas (82%). We analyzed weighted data using multivariate logistic regression.
RESULTS: Half (53%) of all mothers reported ever talking with their daughters' HCPs about HPV vaccine, and only a quarter (24%) of those said the HCPs included sex topics in these conversations. Mothers were more likely to report discussing sex topics during their HPV vaccine conversations with HCPs if the mothers lived in urban settings (OR=2.91, 95% CI: 1.17–7.22) or were more satisfied with the HCPs (OR=2.28, 95% CI: 1.37–3.79); mothers who reported that their daughters' primary HCPs were pediatricians were less likely than those who saw other types of providers to report that HCPs talked about sex (OR=0.47, 95% CI: 0.26–0.85). Almost two-thirds of mothers (62%) reported discussing HPV vaccine with their daughters, 38% of whom discussed sex topics during those conversations. If HCPs included sex topics when discussing HPV vaccine, mothers were more likely to talk about sex with their daughters both during HPV vaccine conversations (OR=3.60, 95% CI: 1.84–7.04) and overall (OR=4.45, 95% CI: 1.72–11.50).
CONCLUSIONS: Providing information during HPV vaccination visits could be an effective way for HCPs to provide anticipatory guidance and promote parent-child communication about sexual health. However, our findings suggest that many HCPs are not discussing HPV vaccine with parents of their adolescent patients, and those who do are not using it as an opportunity to provide anticipatory guidance about sexual health.

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Paper Session 13 4:39 PM–4:57 PM 2109

INFLUENCE OF PHYSICIAN AND PATIENT CHARACTERISTICS ON WEIGHT LOSS COUNSELING

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Due to inherent barriers found in physicians' common day practices (i.e., lack of time, reimbursement), many overweight patients report minimal guidance from physicians regarding weight loss counseling. Particular physician and patient characteristics may influence the delivery of weight loss counseling, which has clinical implications for health care practice. This study examined the effects of patient characteristics, physician characteristics, and the physician-patient relationship on the likelihood of patients receiving weight loss counseling from their primary care physicians. Managed care patients seeking weight loss treatment (N=154; mean age=46.7+12.5 years; mean BMI=36.2±7.8 kg/m2; 89% female) completed a survey inquiring about demographic and medical characteristics, as well as patients' contact with their primary care physician (98% response rate). Hierarchical regression analyses indicated that higher BMI, having more diagnosed medical conditions, and having a female physician were associated with patients receiving more frequent weight loss counseling from their physician, ps<0.04. Increased likelihood of physician-recommended weight loss was associated with a longer duration of the physician-patient relationship and more frequent physician visits, ps<0.05. Patients with a female physician were more likely to be referred to a weight loss program, $p<0.05$. The results suggest certain patient and physician characteristics (e.g., BMI and physician gender) are associated with the provision of weight loss counseling and specific treatment recommendations. Although previous studies have examined either patient characteristics or physician characteristics, this is one of the few to simultaneously look at both sets of factors. Additional research is needed to determine if gender-matched physician-patient dyads influence the provision of weight loss counseling in primary care settings.

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Paper Session 13 4:57 PM–5:15 PM 2110

CONGRUENCE RESEARCH: METHODOLOGICAL ADVANCEMENT CAN SPEED ITS IMPACT ON THE PUBLIC'S HEALTH

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Behavioral medicine can accelerate its impact on the public's health in the area of patient-provider communication and other "congruence" (symmetry, agreement) related research areas by first advancing its methodology. Researchers are using methods to study the effect of congruence between two predictors (patient and provider preferences for patient involvement; patient preference for and experience of provider empathy/information-giving) on outcomes (patient satisfaction/adherence) that compromise the validity of their results and conclusions. Specifically, representing congruence between two predictors as a single index, such as a difference-score, increases the risk of both Types I and II error and constrains the theoretical hypotheses that researchers can assess. Polynomial regression and response surface methodology (RSM) can be used in combination to statistically test congruence-related hypotheses while maintaining the natural 3-dimensional relationship between two predictors (X and Y) and the outcome (Z). Utilizing these methods, researchers can better assess the following: if the absolute and relative effect sizes of congruence are significant (important for meta-analyses and theory/intervention development); if the congruence effect is uniform across all values of X=Y or instead if the outcome depends on the absolute levels of X,Y as well as their congruence; if perfect congruence or if a constant discrepancy between X and Y optimizes the outcome; if the degree of incongruence between X and Y is important; if the two directions of incongruence have differing effects on the outcome (the outcome may be more negatively affected when X>Y than when Y>X). This presentation provides: an overview of the congruence methods being used in behavioral medicine, with recent literature examples; a review of the statistical/interpretational problems of the methods; an explanation of polynomial regression and RSM as alternative methods; and two simulated data sets and analyses that demonstrate the usefulness of this method for behavioral medicine research compared to current methods.

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Citation Paper

Paper Session 14 3:45 PM–4:03 PM 2111

RESPONSES TO GENETIC TEST RESULTS VS. FAMILY HISTORY INFORMATION AMONG COMMUNITY HEALTH CENTER PATIENTS

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With advances in genetic testing, individuals can increasingly learn about their inherited susceptibilities to common diseases. However, little research has examined whether individuals respond differently to this information than to more traditional genomic information (i.e., family history). In this study, we examined the hypothesis that individuals would be more interested in discussing risk information or changing behavior after receiving genetic susceptibility test results compared with results based upon family history. We randomly assigned 1493 community health center patients 18 years of age or older to receive one of four vignettes in which they were asked to imagine receiving disease risk results from their doctor. Vignettes varied on two factors: risk information source (genetic susceptibility vs. family history) and disease (heart disease vs. diabetes). We examined differences between sources of risk information using regression analyses. Patients' interest in discussing the results with family members did not differ by information source. However, they reported greater interest in discussing the results with a doctor ($p<.05$) and there was a marginally significant difference in interest in making dietary changes ($p=.056$) if they received genetic test results. We also examined other differences by risk information source and found no significant differences in disease worry, perceived risk, or accuracy and believability of risk information, but patients were significantly more likely to report trust in genetic test results than in family history results ($p<.01$). These findings therefore provide some support for our hypothesis of different reactions to genetic test results compared with results based upon family history. The findings also suggest that genetic test information could have the effect of increasing clinician-patient conversations about disease risk among community health center patients.

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Paper Session 14 4:03 PM–4:21 PM 2112

UNDERSTANDING EVER-SMOKERS' UPTAKE OF AND REACTIONS TO PERSONALIZED GENETIC SUSCEPTIBILITY TESTING IN THE MULTIPLEX INITIATIVE

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Efforts to translate genomic discovery to improve smoking cessation interventions have been disappointing. We use data from a population-based sample recruited for the Multiplex Initiative, an observational study of genetic test uptake among healthy adults, to assess (1) smoking-related characteristics associated with ever-smokers' (current and ex-smokers) interest in personalized genetic susceptibility testing (PGST), and (2) ever-smokers' recall of PGST results and the impact on perceived risk of smoking-related conditions.
Eligible adults aged 25–40 years enrolled in a large managed care organization were offered a free PGST based on 15 gene variants associated with 8 common health conditions. Test results were provided by mail with telephone-based education. Telephone interviews were conducted at baseline and 3-month follow-up.
557 ever-smokers completed the baseline survey. Current smokers reported greater worry about lung cancer ($p<0.001$), heart disease ($p=0.009$), diabetes ($p=0.008$), colon cancer ($p=0.02$), and greater perceived risk of lung cancer ($p<0.001$) and heart disease ($p=0.007$), than ex-smokers at baseline. 80 ever-smokers (14%) opted to receive PGST (current smokers: 13% vs. ex-smokers: 16%). The decision to receive PGST was associated with race ($p<0.001$) and, among current smokers, with higher smoking level ($p=0.02$) but not desire to quit smoking. At follow-up there were positive associations between ever-smokers' recalling having a gene variant for a condition and perceived risk for that condition ($n=54$): colon cancer ($p=0.002$), skin cancer ($p=0.027$), lung cancer ($p=0.008$), heart disease ($p=0.035$), osteoporosis ($p=0.007$).
Despite greater worry and perceived risk of disease, current smokers are no more likely than ex-smokers to receive PGST. The implications of these findings for incorporating genetic testing into future evidence-based smoking cessation interventions will be discussed.

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Paper Session 14 4:21 PM–4:39 PM 2113

A STRUCTURAL EQUATION MODEL ON TREATMENT DECISION MAKING AMONG LATINAS WITH BREAST CANCER

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Breast cancer patients make many treatment-related decisions after diagnosis. Ethnic minorities, specifically Latinas, may face challenges during this process and few studies have explored their surgical treatment decision-making process. We propose a model to elucidate pathways in the decision-making process among low-income Latinas. We hypothesize that more highly acculturated Latinas will report greater perceived efficacy in patient-physician interactions (PEPPI) than less acculturated Latinas, which will in turn relate to better medical decision-making quality (i.e., interactive information giving, physician responsiveness, physician question asking). We also hypothesize that greater perceived medical decision-making quality will relate to greater congruency in decision making, treatment satisfaction, and quality of life. Participants were 350 Latinas with breast cancer. Measures of acculturation, PEPPI, decision-making quality, and congruency in decision making were assessed six months after diagnosis. Interactive information giving, physician responsiveness, and physician question asking formed a latent variable on decision-making quality. Congruency was coded as a match between patients' desired level and actual involvement in the decision-making process. Quality of life, measured 18 months after diagnosis, formed a latent variable consisting of vitality, social functioning, emotional concerns, and treatment-related symptoms. In a structural equation model, greater acculturation and greater PEPPI were related to greater medical decision-making quality. Contrary to hypothesis, greater decision-making quality was not related to congruency in decision making but, as hypothesized, was related to greater treatment satisfaction. Greater treatment satisfaction predicted more favorable quality of life. This model had a good fit, $\chi 2=64.45$, $p=.12$; CFI=.98; RMSEA=.03. Findings can inform interventions to improve treatment satisfaction and quality of life.

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Paper Session 14 4:39 PM–4:57 PM 2114

THE ROLE OF SOCIAL NETWORKS AND DECISION-MAKING PROCESSES ON IMPLEMENTATION OF QUITLINE EVIDENCE-BASED PRACTICES

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Background: The network of tobacco cessation quitlines in North America has evolved into a formidable entity over the past several years, yet we know little about the network and communications mechanisms by which stakeholders in the North American Quitline Consortium (NAQC) - especially state/provincial-level funders and service providers/vendors - interact, share new knowledge, make decisions about how and when to implement new knowledge, and actually adopt practices that they believe will improve quitline outcomes. We developed a survey in consultation with NAQC members to collect data about network relationships between quitline organizations, decision-making processes, the implementation of quitline practices, and learning organization characteristics from each of the organizations responsible for funding and implementation of the 63 quitlines in North America.
Results: The first of three annual surveys was launched in June, and preliminary results of our multilevel data analysis will be presented. Results of the first year survey show that distinct country-specific differences exist regarding decision-making: In Canada, the provider is more influential; in US, funder or combination funder/vendor as decision-making is most common. The coordinating organization for NAQC plays a central role in brokering information because of its extensive ties to quitlines that would otherwise have very few ties to the rest of the network. In addition, those organizations with the highest reputation scores played the strongest brokerage roles in the network. Decision-making by quitline vendors relative to funders will be presented, along with factors related to implementation of evidence-based practices.
Summary: The results are expected to increase our understanding of how to bridge the gaps between researchers, services organizations, providers, and clients, and to explore how new knowledge - especially new scientific evidence and innovations - is disseminated, implemented, and integrated within NAQC.

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Paper Session 14 4:57 PM–5:15 PM 2115

RCT OF WEB- AND PRINT-BASED DECISION AIDS FOR PROSTATE CANCER SCREENING: ACTUAL AND PREFERRED SCREENING OUTCOMES

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Background: Screening asymptomatic men for prostate cancer (PCa) remains controversial, as early diagnosis and treatment has not yet been definitively demonstrated to reduce disease-related mortality. We have assessed the impact of print- and web-based decision aids (DA) on knowledge, screening preference, self-reported screening, and screening verified by medical records.
Method: Men were aged 45–70 from three Washington DC outpatient practices ($N=1{,}893$). Trial arms were: 1) print information + DA (Print; $N=630$), 2) web information + interactive DA (Web; $N=631$), and 3) usual care (UC; $N=632$). Subjects completed telephone assessments at baseline (T0), one-month (T1; $N=1680$; 89%) and 13-months (T2; $N=1067$; 86%; T2 data collection ongoing) post-baseline.
Results: Subjects were 57 yrs ($SD=6.8$), 40% were AA, and 70% were screened for PCa in the year prior to the T0. Multivariate analyses revealed a significant improvement in knowledge for the Print and Web arms relative to UC at the T1 ($F(2{,}1630)=119.4$, $p<.001$) and at the T2 ($p<.001$). Men's preference to be screened declined from T0 to T1 in the Print and Web arms relative to UC ($X2$ ($N=1672$)$=14.2$, $p<.01$). However, this finding was not significant at the T2 assessment ($p>.70$). Similarly, neither T2 self-reported screening ($p>.20$) nor T2 actual screening ($p>.20$) were associated with trial arm.
Conclusions: Men's immediate and long-term PCa knowledge was significantly improved by both of the DAs, and their immediate screening preference was also reduced by the DAs. However, men's long-term screening preference, self-reported screening, and actual screening were not impacted. Improving men's understanding of the limitations of PCa screening does not appear to influence their long-term screening preferences or behavior. This may be associated with having undergone routine, annual screening, as well as men's need to 'do something' about PCa, regardless of the available evidence.

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Citation Paper

Paper Session 15 3:45 PM–4:03 PM 2116

IMPACT OF CANCER DIAGNOSIS ON PATIENT AND FAMILY SMOKING ABSTINENCE

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Background: While previous studies have reported that smoking tends to cluster within families, the impact of cancer diagnosis on family quitting patterns remains unclear. This longitudinal study explored whether patient or relative smoking cessation influenced each other after a diagnosis of cancer in the family.

Methods: Tobacco dependent patients (n=53) diagnosed with head/neck or lung cancer and 81 of their family members who were active smokers at the time of patient diagnosis participated in a prospective study of changes in smoking patterns following cancer diagnosis. Family members included adult children (53%), spouses (21%), siblings (17%), and friends/others (9%). At one, three, and 12 months following patients' diagnoses, patients and family members completed tobacco history and use measures. We employed a multi-level model to account for within family nesting predicting 7-day abstinence over each time point, followed by chi-square analyses to further specify intra-family quitting patterns.

Results: Using intention to treat analysis, 68% of patients and 31% of relatives reported smoking abstinence in the past seven days at 12 months. Using complete case data, abstinence was reported by 75% of patients (n=48) and 37% of relatives (n=67). Examination of covariance parameters suggested that quitting patterns were more similar within than across families. For patients, having a relative quit was not related to their own abstinence (X2=.84, p=.28); on the other hand, among patients who quit, abstinence rates among family members were higher as compared to families in which the patient did not quit (X2=3.7, p=.04).

?Conclusions: Abstinence rates suggest that a cancer diagnosis influences cessation among patients more so than among relatives. While the involvement of family members may not further patients' efforts to quit, results indicate that family members may benefit from inclusion in smoking cessation programs targeted to the "teachable moment" of cancer diagnosis.

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Paper Session 15 4:03 PM–4:21 PM 2117

THE ROLE OF BLAME AND SELF-BLAME IN THE PSYCHOSOCIAL ADJUSTMENT OF PATIENTS AND THEIR PARTNERS TO LUNG CANCER

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Lung cancer (LC) patients and their partners may experience attributions of self-blame and blame regarding the cancer cause, which may adversely affect their psychosocial adjustment. Few studies have examined blame in LC from a dyadic perspective. Moreover, the deleterious effects of blame may be less pronounced for patients who have better quality relationships characterized by greater dyadic adjustment (DA) and greater support from their social network. To examine these associations, we conducted a longitudinal study of 169 LC patients (63% Male, 88% Caucasian) and their partners. At baseline, blame was directly related to distress (BSI GSI) for both patients and partners (p<.05) and DA buffered this effect (p<.05) for patients. Specifically, patients with low levels of DA (−1SD) experienced greater distress when blaming themselves compared to those who did not report self-blame attributions. Importantly, self-blame was not a significant predictor of distress for patients with high levels (+1SD) of DA and thus, revealing a buffering effect of DA. Partners with low DA were more likely to blame the patient (p<.01) for their disease than those with high levels of DA. Social support did not play a significant role in the blame and distress association. At 6-month follow-up, only baseline distress uniquely predicted later distress (p<.0001) for both patient and spouses possibly suggesting a snowballing effect of distress. These findings highlight the importance of considering the dyadic environment of patients. In relationships characterized by greater satisfaction and communication, blame does not have adverse effects. Consequently, future psychosocial interventions that target DA may help facilitating adjustment to cancer. Moreover, the initial treatment period may be a crucial time to intervene because alleviating couples' initial distress may protect them from long-term distress.

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Paper Session 15 4:21 PM–4:39 PM 2118

DYSPNEA AND PANIC AMONG NEWLY DIAGNOSED NON-SMALL CELL LUNG CANCER PATIENTS

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Objective. Dyspnea is common in lung cancer patients and is associated with psychological distress, fatigue, and poorer coping. Dyspnea can co-occur with or exacerbate respiratory symptoms resulting from anxiety and specifically, panic. Fear of such symptoms can, in turn, reduce health promotion behaviors such as physical activity. However, panic has received little attention in cancer patients. This study explores rates of dyspnea and panic and correlates of panic in patients with newly diagnosed non-small cell lung cancer (NSCLC).

Method. During 2007–2010, all NSCLC patients presenting for initial oncology consultation at the Massachusetts General Hospital were eligible to participate in a survey of cancer-related symptoms, including dyspnea (Functional Assessment of Cancer Therapy-Lung items) and panic (Patient Health Questionnaire).

Results. Among 624 participants (M age=63.7 [SD=12.0]; 52.6% female; 91% white), almost half (48.1%) reported that breathing was at least somewhat difficult, and 12.3% had experienced at least one panic attack in the past month. Panic was over twice as prevalent in those with general breathing problems relative to those without breathing problems (Chi-square=11.4, p=.001). Panic rates were also higher in females (Chi-square=4.38, p=.04) and younger patients (t=5.02, p<.001) but did not differ by disease stage (Chi-square=1.28, p=.73). In a logistic regression model of panic controlling for all factors, dyspnea (OR=2.38, 95%CI=1.33–4.23, p=.003) and younger age (OR=.94, 95%CI=.92-.96, p<.001) were associated with higher risk for panic.

Conclusion. Panic is a prevalent feature in new NCSLC patients, particularly those who are younger or report dyspnea. Potential biobehavioral pathways are explored. Respiratory hypervigilence may increase risk for panic in patients with dyspnea, or increase breathing awareness in those with a panic history. Findings support further work to explore the implications of panic for symptom management, patient treatment adherence and cancer outcomes.

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Citation Paper

Paper Session 15 4:39 PM–4:57 PM 2119

LONGITUDINAL EVALUATION OF FATIGUE, DISTRESS, AND QUALITY OF LIFE (QOL) AMONG STAGE IV NON-SMALL CELL LUNG CANCER (NSCLC) PATIENTS

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Novel technology allows routine monitoring of patient-reported clinical data as a part of usual outpatient oncology care. Longitudinal prediction models of patient-reported symptoms and psychosocial concerns have the potential to guide behavioral medicine and cancer care in innovative ways and facilitate personalized triage to clinical services. The aims of this study were to (1) understand how patterns of fatigue relate to distress and QOL among NSCLC patients, (2) identify profiles for at-risk patients, and (3) describe potential modifiable risk factors by profile for targeted intervention. Participants were 93 stage IV NSCLC patients (59% male, 78% Caucasian, 73% married, mean age 61± 10 yrs). Patients completed measures of fatigue, psychological distress, and quality of life, including the FACIT-Fatigue, PCM, FACT-L, at baseline and during scheduled 1-, 2-, and 6-month follow-up clinic visits. Analyses were conducted in a three-step sequential process: (1) fatigue and distress trajectories were analyzed using mixed modeling , (2) distinct trajectory groups were profiled using cluster analysis, and (3) QOL at follow-up among cluster groups was compared using ANCOVA, controlling for demographics and baseline quality of life. Results supported a 3-cluster solution, with groups labeled as increasers, decreasers, and non-changers based on their respective fatigue and distress trajectories. Patients whose fatigue worsened during the first two months of tracking experienced significantly greater distress and poorer quality of life at the time of their 6-month follow-up visit, as compared to patients whose fatigue improved or remained constant (p<.001). Results highlight prognostic benefits associated with assessing and tracking longitudinal trends in patients' fatigue and distress levels in late-stage NSCLC patients and point to areas for potential targeted intervention by supportive care and behavioral medicine services.

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Paper Session 15 4:57 PM–5:15 PM 2120

PHYSICAL ACTIVITY IMPACTS QUALITY OF LIFE IN LONG-TERM LUNG CANCER SURVIVORS

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Lung cancer is a major health problem and currently represents the leading cause of cancer mortality in the US. Lung cancer survivors experience impaired quality of life (QOL), and report significantly lower QOL than survivors of other types of cancer. Despite reported links between physical exercise and improved physical functioning, decreased physical fatigue, and improved QOL, very few studies have explored the impact of physical activity level on QOL in long term lung cancer survivors. The current study examined the relationship between physical activity level and QOL in a large sample of lung cancer survivors (N=1937) who were short term (1 to 3 years, n=714), middle term (3 to 5 years, n=426) and long term (>5 years n=797) survivors post diagnosis. Lung cancer classification at diagnosis was either small cell lung cancer (6%), or stage I (49%), II (9 %), III (24%), or IV (15%) non-small cell lung cancer. A majority of participants were Caucasian (92%), male (51%), and married (79 %), with average 70 years old at follow up. Participants completed surveys an average of 4.2 (SD 2.9) years from diagnosis. Measures included the stage of change for physical activity level, the SF-8 (five domains of QOL), and the Lung Cancer Symptom Scales (LCSS). Of respondents, 39 % reported engaging in regular physical activity (i.e., 30 minutes or more per day, at least five days per week). Regular exercisers reported better mental (p<.0001), physical (p<.0001), emotional (p<.0001), social (p<.0001), spiritual (p<.0001), and overall QOL (p<.0001), as well as better symptom control related to pain, fatigue, coughing with or without phlegm, and shortness of breath (all p's<.0001), compared with more sedentary lung cancer survivors. Physical activity appears to have strong association with positive QOL and better symptom control, and future research should explore interventions aiming to improve the physical activity level of long term lung cancer survivors.

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Citation Paper
Meritorious Paper

Paper Session 16 3:45 PM–4:03 PM 2121

DIABETES-SPECIFIC FAMILY CONFLICT PREDICTS ADOLESCENTS' GLYCEMIC CONTROL ONE YEAR LATER: THE MEDIATING ROLE OF ADHERENCE

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Adolescents with type 1 diabetes often demonstrate worsening adherence and glycemic control, and diabetes-specific family conflict is a primary correlate of these suboptimal outcomes. Despite an implicit assumption that conflict breeds poorer adherence, which leads to worse glycemic control, these causal associations have not been examined longitudinally. This study tested this assumption empirically using a series of multivariate regressions in the Baron & Kenny mediation framework. We used three waves of data over 12 months from a sample of 145 adolescents (age 13–18) with type 1 diabetes. The sample had a mean age of 15.5±1.4 and diabetes duration of 6.0±3.9 years. The majority were Caucasian (86%), on insulin pumps (63%), on private insurance (85%) and had married parents (75%). In separate regressions, results showed that higher self-reported scores on the Diabetes Family Conflict Scale at baseline predicted less frequent blood glucose monitoring (BGM), our indicator of adherence, at 6 months, F(9,137)=4.18, p<.01, and higher A1c values, our indicator of glycemic control, at 12 months, F(9,135)=3.16, p<.01. The third model, including baseline conflict and 6-month BGM as predictors of 12-month A1c, was significant, F(10,132)=3.84, p<.01. BGM was a significant predictor (p<.01), and conflict was no longer significant (p=0.10; p=.01 in the zero-order model), indicating full mediation. Using insulin injections (versus pump) and not having married parents were significant covariates of higher A1c (ps<.05). The Sobel test trended to significance (z=1.92, p=.06) and post-hoc probing of effects showed that BGM explained 24% of the conflict-A1c link. In sum, diabetes-related family conflict measured in mid- to late-adolescence predicts later BGM and deteriorations in glycemic control over the following year. Prevention or early identification and treatment of conflict with family-based coping and problem-solving programs are critical to avoid a trajectory of declining adherence and glycemic control across adolescence.

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Paper Session 16 4:03 PM–4:21 PM 2122

THE ROLE OF DIABETES IN COGNITIVE DECLINE IN MIDDLE-AGED AND OLDER AMERICANS

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Background: Recent studies indicate that some domains of cognitive functioning decline with increasing age, and that chronic diseases may play a role in that decline. This study investigates the effects of the diagnosis of type 2 diabetes on three domains of cognitive functioning (both levels and rates of change) in middle-aged and older adults.

Methods: We used five waves of data from the Health and Retirement Study (1998–2006) on a nationally representative sample of more than 16,000 men and women to estimate how prevalent diabetes by 1998 and incident diabetes between 1998 and 2006, versus no diabetes by 2006, are linked to these domains of cognitive functioning, net of documented sociodemographic, physical and mental health, and health behavior correlates of diabetes and cognitive functioning. We investigated these processes using a combination of latent curve and structural equation modeling techniques.

Results: The results strongly indicate that diabetes plays a role in cognitive functioning. In particular, we find that compared to not having been diagnosed with diabetes, both diabetes prevalence and incidence significantly decrease the intercepts in immediate word recall, delayed word recall, and serial subtraction. Further, both diabetes prevalence and incidence decrease the rate of change in delayed word recall over the eight-year time frame.

Conclusions: Diabetes—both prevalent and incident—negatively impacts cognitive functioning. The results of this and future studies may point to areas for health policy interventions that add to the growing call to reverse the troubling epidemic in diabetes and its associated comorbidities, including cognitive decline.

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Citation Paper

Paper Session 16 4:21 PM–4:39 PM 2123

PSYCHOSOCIAL ADVERSITY PREDICTS INCIDENCE OF IMPAIRED GLUCOSE TOLERANCE: THE AUSTRALIAN DIABETES OBESITY AND LIFESTYLE STUDY

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Globally, diabetes rates are increasing to epidemic proportions. Psychosocial adversity predicts increased cardiovascular disease risk, however these risk factors have not been well investigated in relation to diabetes. The Australian Diabetes Obesity and Lifestyle study (AusDiab) included 11,247 adults aged≥25 years from 42 randomly selected areas of Australia. Anthropometric measurements and a 2 hour 75-g oral glucose tolerance test were undertaken at baseline (1999–2000) and follow-up (2004–2005). The Perceived Stress Questionnaire and a life events score were used to measure psychosocial adversity at baseline. Impaired glucose metabolism (defined as impaired fasting glucose, impaired glucose tolerance or type 2 diabetes) was classified according to WHO 1999 criteria. People with normoglycaemia at baseline reporting high psychosocial distress or elevated life stress were significantly more likely to develop impaired glucose metabolism five years later, compared with people reporting no psychosocial disadvantage, after adjustment for age, sex, education, smoking, and physical activity (OR: 1.53, 95% CI 1.13–2.06 and OR: 1.35, 95% CI 1.05–1.74, respectively). Once waist circumference was included in the model, these relationships were attenuated (OR: 1.44, 95% CI 1.06–1.96 and OR: 1.24, 95% CI .96–1.61, respectively), suggesting that these relationships are partially mediated by obesity. In addition, among people with diabetes at baseline, psychosocial distress, but not life stress, was associated with increasing glycosylated haemoglobin (HbA1c) at follow-up, after adjustment for other risk factors (p=0.024). Using national, population-based data, these findings suggest that psychosocial adversity predicts the development of dysglycaemia and poor glycaemic control. It is important for healthcare professionals to consider a person's psychosocial profile when assessing risk of diabetes and its complications.

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Paper Session 16 4:39 PM–4:57 PM 2124

ABUSE AND MENTAL ILLNESS AMONG MEXICAN-AMERICAN DIABETIC WOMEN

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Recent studies on the diabetes and depression co-morbidity reveal a thirty percent prevalence of co-morbid depression among diabetics. Low-income Mexican-Americans, and women in particular, are disproportionately affected by disability, morbidity, and mortality attributed to this co-morbidity. A substantial body of theoretical work suggests that psychosocial stress associated with macro-social forces, such as unhealthy social and physical environments, and micro-social forces, such as family support and emotional problems, contribute to depression and diabetes inequalities and link them together. The goal of this study is to evaluate the influence of abuse and diabetes-related stressors on depression and post traumatic stress disorder (PTSD) among diabetic women of Mexican descent living in the United States. We conducted mixed qualitative and quantitative interviews with a clinical sample of 121 women seeking diabetes care at a safety-net clinic in Chicago, including in-depth interviews, psychosocial stress surveys, psychiatric inventories, and finger stick blood samples. We examined the association of experiencing verbal, emotional, physical, and/or sexual abuse, diabetes distress, diabetes severity, and glycemic control with symptoms of depression and post-traumatic stress disorder through multivariate logistic regression. Each of these stressors was significantly associated with mental distress in bivariate association. We found that women who experienced abuse were 7.75 and 16.4 times more likely to experience symptoms of depression and PTSD, respectively, when adjusting for sociodemographics and diabetes-related stressors. The odds of experiencing mental distress were much higher for those who experienced any form of abuse, when compared to all other forms of diabetes-related distress. This study adds something new to the literature by demonstrating that abuse is more strongly associated with mental distress when compared to diabetes-related stressors. Our combined qualitative and quantitative approach provides a deeper understanding of the experiences of the women in our sample, and thus furthers both theoretical and applied approaches to depression-diabetes co-morbidity.

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Paper Session 16 4:57 PM–5:15 PM 2125

COMORBID PAIN IN ADULTS WITH TYPE 2 DIABETES ENROLLED IN A DEPRESSION TREATMENT PROGRAM

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Background: Pain is a common comorbid condition in type 2 diabetes (T2DM) and depression, yet few studies have examined pain in T2DM interventions. Studies with non-diabetes samples have found that comorbid pain may negatively impact depression treatment. The primary aims of the current study were to: (1) examine rates and severity of comorbid pain in a sample of adults with T2DM enrolled in a treatment program for major depressive disorder (MDD); and (2) determine whether differences in baseline pain severity were related to changes in depression symptom severity following treatment.

Methods: Fifty participants (68% female; mean age=57 years) enrolled in an intervention to reduce depression in persons with T2DM completed Beck Depression Inventories (BDI-II), Structured Clinical Interviews for DSM-IV-TR (SCID), and the SF-36 at baseline, post-intervention, and 3 month follow-up. Activity logs were completed during assessments and throughout the intervention.

Results: Fifty-seven percent of participants reported high levels of pain severity at baseline. Greater pain severity was significantly associated with higher levels of baseline depression, lower levels of baseline steps walked per week, and lower weekly number of steps during the intervention. Results from a repeated measures ANOVA of BDI-II scores indicated that there was a significant improvement in depression severity over time, regardless of baseline pain severity ($F(2,47)=15.47$, $p<.001$, $\eta_p{}^2=.26$). Participants also did not differ in terms of depression diagnosis after treatment based on pain severity group, $\chi^2(1, N=50)=0.09$, $p=.77$.

Conclusions: High levels of comorbid pain did not pose a barrier to depression treatment that used a combination behavioral approach.

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Paper Session 17 3:45 PM–4:03 PM 2126

PREGNANCY-SMOKING AMONG AFRICAN-AMERICANS - IS THE ENVIRONMENT WHOLLY TO BLAME FOR REFRACTORINESS TO CHANGE?

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Tobacco companies may have slowed the decline in smoking through intense advertisements in minority neighborhoods. Although African-Americans (AA) are less likely than Whites to engage in pregnancy-smoking (P-S), it is unclear whether the decline in their P-S rates has been slower. We tested the hypotheses that AA had a slower decline in P-S over 2 periods, 1990–1999 to 2000–2008, and, if so, the disparity is due to the environment. The study used the 1990–2008 birth certificate database of a large Midwest metropolis. The proportion of each race within a zip-code, a surrogate for environmental factors, was categorized in 8 levels as <25%, 25–49%, 50–74%, and>74%, AA or White. Of 119,376 pregnancies 44% were AA. Unlike Whites, AA P-S rates increased with age, segregation, and multiple gestation. P-S rates decreased over time; Whites 23% vs 15% and AA 17% vs 14%, p<0.001. Unlike other subgroups in both races, AA teenage P-S rates increased (7% vs 9%, p<0.001). In 2000–2008, relative to those with the lowest P-S rate, AA <25% [RR=1.00 (reference)], the P-S risk of Whites increased [1.09 (0.99, 1.20), 1.85 (1.66, 2.06), 2.30 (2.05, 2.59), 3.43 (3.02, 3.90)] and that of AA decreased [1.51 (1.36, 1.68), 1.51 (1.35, 1.68), 1.00 (0.90, 1.13)] with increasing racial integration (>74% vs 50–74% vs 25–49% vs <25%). In conclusion, the AA P-S rate is lower and declining slower, in part due to increasing teenage P-S and the environment. Integrated areas represent the intersection of White middle/low and AA high/middle SES. Consequently, environmental manipulations aimed at increasing smoking in AA may have the potential to significantly adversely impact lower educated and relatively poorer Whites. Restrictions on advertisement everywhere and provision of non-initiation strategies for teenage AA may accelerate the decline in P-S for everyone.

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Paper Session 17 4:03 PM–4:21 PM 2127

DEPRESSION AND PRENATAL HEALTH IN PREGNANCY: ARE BODY FUNCTIONALITY DIMENSIONS PROTECTIVE?

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Background: During pregnancy, women's bodies undergo significant physical changes, making this an important time to study body image and its psychosocial correlates. Whereas objectification theory (Fredrickson & Roberts, 1997) posits several psychological and experiential consequences of viewing one's body as an object for others to evaluate, recent scholarship also focuses on positive dimensions of body image, such as awareness and appreciation of the body's functionality. This study explores correlates of body surveillance, awareness and appreciation of body functionality, depressive symptoms, and health behaviors among a sample of first-time pregnant women, and examines whether awareness or appreciation of body functionality protect against the effects of high body surveillance, specifically in terms of depressive symptoms and poor health behaviors.

Methods: Primigravidas (n=156) recruited through list-servs and websites, completed a one-time web-based questionnaire assessing body image, prenatal health behaviors, and mood symptoms. All participants resided in the U.S., and were predominantly White (86%) and married (85%) or partnered (10%). Rates of participation across trimesters were as follows: 17.2%, 40.5%, 42.3% across 1st, 2nd, and 3 rd, respectively.

Results: Higher body surveillance was associated with more depressive symptoms and less engagement in healthy prenatal behaviors, and lower appreciation of body functionality, but was not associated with awareness of body functionality. In addition, higher awareness of body functionality was associated with more engagement in prenatal health behaviors and higher appreciation of body functionality was associated with lower depressive symptoms, even after controlling for body mass index and body surveillance. Finally, at high levels of body surveillance, women engaged more in healthy behaviors if they had higher appreciation of body functionality.

Conclusions: These findings suggest that some positive aspects of body functionality buffer the negative effects of body surveillance.

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Paper Session 17 4:21 PM–4:39 PM 2128

FERTILITY TREATMENT DURATION AND ILLNESS-RELATED COGNITIONS AND EMOTIONS IN WOMEN

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Infertility is associated with increased psychological distress, sexual dysfunction and reduced quality of life, which may increase with treatment duration. Despite these negative consequences, few studies have focused on the illness-related cognitions of women undergoing fertility treatments. This study uses a Self Regulation theoretical framework to examine the relationship between duration of fertility treatments, illness-related cognitions and emotions.

METHOD: Participants were 535 female women undergoing fertility treatments. Assessments included measures of mood and sexual functioning, and illness-related beliefs using the Illness Perceptions Questionnaire Revised.

RESULTS: Duration of fertility treatment ranged from 1–48 months (M=16.57, SD=13.89). Increased duration of fertility treatments was significantly related to higher levels of depression, negative affect, stress level, partner erectile dysfunction and reduced sexual quality of life. Treatment duration was also significantly related to a belief that infertility is a chronic condition with greater negative life consequences. Increased treatment duration was associated with a reported lack of control over infertility, lower confidence in the efficacy of treatments and stronger infertility-related emotional representations (i.e. anger, anxiety, depression).

CONCLUSIONS: A unique contribution of this study is that it provides information concerning illness-related beliefs and their relationship to duration of fertility treatments. Although data was cross-sectional, the results suggest that increased duration of fertility treatments is associated with a worsening of illness-related beliefs and psychological functioning. Our results extend previous findings on the distress-length of treatment relationship by providing a cognitive context within which distress occurs. This context is particularly important as a target for clinical cognitive behavioral interventions for women (and partners) undergoing fertility treatment.

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Meritorious Paper

Paper Session 17 4:39 PM–4:57 PM 2129

OBSTETRIC AND PSYCHOLOGICAL PREDICTORS OF POSTPARTUM POSTTRAUMATIC STRESS SYMPTOMS

Natalie Stevens, MA,[1] Nancy A. Hamilton, PhD,[1] Ken A. Wallston, PhD[2] and Danielle E. Staecker, MD[1]

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Negative childbirth experiences pose a significant risk for the development of postpartum posttraumatic stress symptoms (PTSD). Although studies have identified several predictors of postpartum PTSD, less is known about the interactions between obstetric and psychological variables. This study explored how childbirth self-efficacy and the medical aspects of birth (e.g., obstetric intervention, labor complications, delivery type) are related to postpartum PTSD. Participants recruited online and from two OB/GYN clinics were 106 women who had given birth to a single, live infant in the last 16 weeks (mean age 28.8; 85% White; 42% primiparous, 77% spontaneous vaginal delivery). Only 6% identified the childbirth experience as traumatic; however, 33% reported clinically significant PTSD symptoms in at least one of the three symptom clusters (i.e., re-experiencing, avoidance, hyperarousal). Several variables were not associated with PTSD symptoms: age, parity, educational level, length of labor, pain severity, obstetric interventions, and unplanned cesarean section. Women who reported labor/delivery complications (e.g., fetal distress, unable to push during second stage) were significantly more likely to report PTSD symptoms, $\chi2(1, N=106)=3.98$, $p<.05$ as were women who had an assisted vaginal delivery $\chi2(1, N=106)=5.0$, $p<.05$. Severity of postpartum PTSD symptoms was negatively correlated with childbirth self-efficacy ($r=-.28$, $p<.01$). Multivariate regression analyses indicated that low childbirth self-efficacy significantly predicted clinically significant PTSD symptoms (OR: 0.77; 95% CI=0.61–0.97; $p<.05$) as well as symptom severity ($\beta=-.23$, $p<.05$). Neither labor/delivery complications nor having an assisted vaginal delivery were significant predictors in the regression models. Furthermore, no significant interactions among the three predictor variables emerged. Results suggest that regardless of complications and delivery type, self-efficacy during childbirth may be an important factor for preventing psychological distress following childbirth.

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Citation Paper

Paper Session 17 4:57 PM–5:15 PM 2130

PERSONALITY AND HEALTH DURING PREGNANCY

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Pregnancy is an opportunity to identify and intervene with women at high risk. Personality, although previously linked to health outcomes, has rarely been studied in pregnant women. We aim to identify typologies of personality in pregnant women. Currently 1743 (1191 NHB, 332 NHW, 108 H, 71 Asian, and 41 Other) women are enrolled in a prospective cohort study. Personality, psychosocial and behavioral correlates were obtained through prenatal surveys; electronic medical records were used to obtain pregnancy and birth outcomes. K-means cluster analyses found three significantly different clusters (healthy, moderate, and high risk) using the NEO personality domains. The healthy group is characterized by low neuroticism, high extraversion, high openness, high agreeableness, and high conscientiousness. Conversely, the high risk group is characterized by high neuroticism, low extraversion, low openness, low agreeableness, and low conscientiousness. Importantly, these clusters differ significantly on psychosocial indices (perceived stress, depression, self-efficacy, social support, perceived racism) with the high risk personality group exhibiting a more negative psychosocial profile. The high risk group is also significantly more likely to have an unwanted pregnancy, use tobacco and illicit drugs during pregnancy, be treated for a STD, have been previously abused, and have higher blood lead levels. The healthy personality group has statistically significant higher birth weights and lower very preterm birth rates (<32 weeks). In a multinomial logistic regression of maternal demographics and cluster membership, younger age (OR=2.00, CI (1.25–3.20)), high school or greater education (OR=0.34, CI (.20-.56)), and private insurance (OR=0.31, CI (.22–.43)) predicted membership in the high risk group as compared to the high functioning group. Personality clusters relate to maternal risk factors as well as important birth outcomes. Identifying these women prenatally and targeting them for early interventions could improve pregnancy behaviors and outcomes and mental and physical health with potential spillover effects into parenting and child-rearing.

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Citation Paper

Paper Session 18 3:45 PM–4:03 PM 2131

DIETARY CHANGES IN NOURISH: AN OBESITY INTERVENTION TARGETING PARENTS OF OVERWEIGHT CHILDREN

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One strategy for the prevention of pediatric obesity is exclusively targeting parents. NOURISH is an obesity prevention program for parents of overweight children (ages 6–11, BMI≥85th percentile). Grounded in Social Cognitive Theory, NOURISH provides skills training, emphasizing role modeling of positive health behaviors to enhance parents' ability to foster healthy behaviors in their children, while also improving their own well-being. A randomized controlled trial of NOURISH was implemented and dietary assessment of parents and children was conducted at baseline and post-test. Parents (85% female, 62% African American, M BMI=34.1) were randomized into intervention (n=46) or education control (n=50). Children's (M age=8.6) mean BMI percentile was 98.1. Parents completed three-day food diaries for themselves and their child(ren), validated by a dietitian and entered into Nutrition Data System. Study personnel measured anthropometrics. Treatment effects were assessed using hierarchical regression to account for random effects of children nested within families. SAS PROC MIXED and GLIMMIX were used respectively for continuous and binary variables, adjusting for parent's race; post-test analyses were also adjusted for baseline measures. Both treatment groups reported significant dietary changes, with no treatment effects found. For parents, significant reductions were found in intake of total calories, total fat and total carbohydrate, while percent calories from protein increased ($p<0.05$). Among children, significant reductions in total calories, total fat, and total carbohydrates were found; calcium intake increased ($p<0.05$). These findings may suggest that among motivated parents who self-select into a childhood obesity program, dietary education can elicit short-term dietary changes comparable to those of a structured intervention. Implications for obesity intervention will be discussed.

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Paper Session 18 4:03 PM–4:21 PM 2132

IMPROVING MIDDLE SCHOOL BREAKFAST PARTICIPATION THROUGH POLICY, ENVIRONMENT AND MARKETING STRATEGIES

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Objectives: The goal was to develop and test the impact of providing convenient menu, serving times and eating locations and marketing strategies to promote School Breakfast Program (SBP) participation among a diverse group of middle school students.
Methods: Multiple cross-sectional studies were used to evaluate the impact of the environmental (i.e., menu and serving times) and policy (i.e., eating in the first hour) changes during year 1 and added marketing strategies during year 2 upon SBP participation. Process and impact measures were collected from students, teachers and food service using self-report, direct observation, and objectively measured methods.
Results: Students were very satisfied with homeroom (82%) and hallway (64%) SBP delivery. 94%–100% of times teachers rated breakfast foods not messy, serving/eating process not disruptive and student behavior as excellent or good. For homeroom delivery, there was a significant increase in SBP participation from 0.3 days per week to 2.1 days per week ($p<.0001$), but not the control group. For hallway delivery, there was a significant increase from 0.5 days per week to 1.2 days per week ($p<.0001$). Significant differences were more pronounced among students eligible for free breakfast.
Conclusions: Improving access to school breakfast may require exploring various strategies to identify the most sustainable one. Improving access may be especially beneficial to those most at risk for overweight.

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Paper Session 18 4:21 PM–4:39 PM 2133

RESULTS FROM A NUTRITION AND PHYSICAL ACTIVITY TRACKING AND SCREENING PILOT PROGRAM IN MIDDLE SCHOOLS

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Purpose: In an effort to provide effective tools for addressing the childhood obesity epidemic, the GOTHEALTH study developed and tested the feasibility and short term impact of an online nutrition and physical activity (PA) screening/tracking program for children.
Methods: Students in two middle schools ($n=151, 50$) completed an online screener measuring diet, PA, and home/school environmental characteristics associated with obesity that generated personal health reports (PHRs) containing tailored health advice. Students then chose PA and nutrition goals, tracked them online daily for two months, and then completed post-intervention screener measures and a survey evaluating the program. Changes in knowledge and behavior measures from pre to post intervention were assessed using paired t-tests for continuous measures and McNemar tests for dichotomized categorical measures.
Results: For pre-post comparisons, significant positive changes were observed for students in both schools for most major areas of knowledge. The majority of items measuring behavior showed significant positive changes from pre- to post- intervention for school 1 with the exception of PA (showed only a slight increase). Changes in means and proportions for school 2 were modest but in the desired direction. Students in school 1 (school 2 survey data is in process) agreed or strongly agreed that the GOTHEALTH screeners were easy to complete (91%) and that PHRs were personalized (64%) and interesting (60%). Most students agreed that the tracker was easy to use (63%) but the majority disagreed that the tracker was cool (56%) or helpful (59%).
Conclusions: A behavioral screening and tracking program coupled with PHRs could have positive effects on reported nutrition and possibly PA behaviors in middle school children. Future tracker iterations could benefit from improved design elements to appeal more to middle school students. Limitations: The quasi experimental, pre/post design limits the ability to attribute changes solely to the intervention.

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Paper Session 18 4:39 PM–4:57 PM 2134

OUTCOMES OF AN INTERVENTION TO PROMOTE WEIGHT LOSS IN ADOLESCENTS AT RISK FOR TYPE 2 DIABETES

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Obese adolescents are at risk for type 2 Diabetes yet few interventions exist to reduce this risk especially those delivered through media such as the web and text messages (SMS). PACEi-DP, an intervention delivered via web and SMS and designed to promote improved in diet, physical activity (PA) and weight was tested in 101 adolescents at risk for type 2 Diabetes (age 11–15; mean 14.3 years (SD 1.5); 64 girls, 37 boys; 74.3% Hispanic). Participants were randomized to usual care (UC) or one of three conditions: a) 26 to web-based only (W); b) 26 to web and monthly group sessions (WG); and c) 24 to web and SMS (WSMS). W-subjects were encouraged to enter daily steps and diet at least once/wk. WSMS-subjects received SMS related to intervention goals, reminder prompts to participate in intervention activities, and communicated via SMS with a case manager. WG subjects had additional activities related to weight loss. UC participants received three 1-hour sessions with a nutritionist in the first 6 weeks and print materials.
Sixty-four (63%) adolescents completed the 12-month intervention (W, 17; WG, 14; WC, 17; UC, 16). Participant drop-out was unrelated to age, sex, being Hispanic, or acculturation. Random effects models estimated treatment, time, and treatment by time effects using all available data. No between group differences were found for BMI z-score or % body fat over time. No treatment effects were found for quality of life, but Peds-QL scores improved for all treatment arms over time ($p=.015$). Use of behavior change strategies for PA and F&V consumption increased from baseline to six months in the treatment arms compared to UC ($p<.05$). However, no differences were seen at either 6 or 12 months for PA or dietary intake based on the 7d-PAR and YAQ, respectively. In spite of some evidence of efficacy of components of PACEi-DP, retention in this study was low and overall efficacy was not found. Further research is needed to determine how to prevent type 2 Diabetes in this population.

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Paper Session 18 4:57 PM–5:15 PM 2135

THE STRENGTH AND COMPREHENSIVENESS OF SCHOOL WELLNESS POLICIES (SWPS) BETWEEN SELECTED RURAL AND CITY SCHOOLS

Erin Smith, MA, Kristen Capogrossi, BS and Paul Estabrooks, PhD

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Public school policies related to physical activity and eating behaviors have recently become the focal point for policymakers to evaluate the effect of rules and regulations on the childhood obesity epidemic. However, little research has emerged that evaluates policy environments in general or across different geographic locales. The purpose of this research project was to evaluate the strength and comprehensiveness of School Wellness Policies (SWPs) within areas where disparities exist in childhood obesity–rural and city school districts. Three city and 5 rural school districts that serve a total student population of 172,392 in 434 schools were selected in a tri-state region, and their respective SWPs were coded with a 96-item tool across 7 policy subgroups to improve access to healthful foods and regular physical activity. Strength, reflecting the degree to which a policy included detailed implementation information, and comprehensiveness, reflecting the breadth of policies, were calculated. Each policy subgroup was assessed on a 0-1 point scale with lower scores representing weak strength or less comprehensiveness. Overall, the SWPs were extremely weak ($M=0.24\pm0.19$) and moderately comprehensive ($M=0.50\pm0.15$). The strongest and most comprehensive policy subgroup was nutrition education ($M=0.31\pm0.22$; $M=0.67\pm0.20$ respectively). The weakest policy subgroup was communication and promotion ($M=0.13\pm0.13$) while the least comprehensive subgroup was physical education ($M=0.35\pm0.29$). When comparing policies across rural versus city school districts, we found that city district policies were stronger ($M=0.31\pm0.12$ vs $M=0.20\pm0.22$; $ES=0.61$) and more comprehensive ($M=0.59\pm0.05$ vs $M=0.44\pm0.17$; $ES=0.96$) than their rural counterparts. While SWPs may be present across city and rural school districts, the low strength and lack of comprehensive strategies related to nutrition and physical activity may be contributing to the maintenance of an obesogenic environment in rural and city schools.

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Thursday
April 28, 2011
7:00 PM–8:30 PM

Poster Session B B-001

CAREGIVER REPORTED ADHERENCE IN PEDIATRIC CANCER

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Adherence has been an ongoing topic of research in some pediatric medical populations, but investigators have only recently begun to examine adherence in pediatric cancer patients. The current study examined caregiver-reported medication adherence and demographic variables related to adherence among pediatric cancer patients. A retrospective chart review was performed for 52 pediatric oncology patients (mean age=7.62 years; 65% male). Diagnoses included acute lymphoblastic leukemia (n=49) and other cancers (n=3). Caregivers estimated their child's medication adherence using calendars that listed daily medications and doses. Nursing staff rated the degree to which they believed the accuracy of caregivers' reports from strongly disagree=1 to strongly agree=5. Average medication adherence rate was 97.66% (SD=7.26%); rates were 48.84% (n=1), 90–94.99% (n=6), 95–99.99% (n=19), and 100% (n=26). Nurses generally agreed with the accuracy of caregiver report (M=4.67; range=1 to 5). No significant relationship was found between medication adherence and time since diagnosis, race, child age, caregiver age, caregiver education, or caregiver marital status. Zero-order correlations revealed a significant relationship between medication adherence and gender (r=.38, p<.01), as well as number of cancelled appointments and child age (r=−.29, p<.05). Independent t-test revealed that females (M=99.79, SD=0.39) were more likely than males (M=97.98, SD=2.60) to be adherent (t=3.91, p<.001). ANOVA analyses revealed that families of younger children (ages 0–4) cancelled more appointments than those of older children (ages 11–17), F=3.47, p<.05. Overall, adherence rates in this study were markedly higher than those found in previous studies (10–60%). While nurses disagreed with some caregiver reports of adherence, overall nurse agreement was high. Further research is needed to examine gender differences in adherence and barriers for families with young children. Examination of adherence using both direct and indirect methods of assessment is also needed.

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B-002

ARE OUR SURVEY SAMPLES REPRESENTATIVE?

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Paper and pencil surveys are commonly used in data collection for health psychology research. This method has been considered more accessible for those who may not have computer access. We examined the differences between cancer patients who agreed to participate in a longitudinal survey study and those who declined to participate. We also examined the differences between participants who completed the 1 year study and those who enrolled in the study but subsequently dropped out. We mailed letters of invitation and surveys to 1593 patients entered into the tumor registry at a comprehensive cancer center. These patients had one of 5 cancer diagnoses: breast, colorectal, gynecologic, lung, and prostate. The survey packets assessed symptom experience (MSAS) and quality of life (FACT-G). 559 patients enrolled in the study by completing and returning the initial survey packet. We compared the demographic and medical data for responders and nonresponders. Responders were more likely to be white ($\chi^2=46.5$, p<.01), have lower comorbidity scores ($\chi^2=22.0$, p<.01), and have a more advanced stage of cancer ($\chi^2=13.6$, p<.01).

We repeated the surveys every 3 months for one year. 411 patients completed the study and 108 patients dropped out of the study. We compared completers versus dropouts on demographic and medical variables. Dropouts were less likely to be male ($\chi^2=4.5$, p<.05) or white ($\chi^2=12.6$, p<.01) or have prostate cancer ($\chi^2=18.5$, p<.01). Dropouts were more likely to have gynecologic cancer ($\chi^2=18.5$, p<.05), or stage 3 cancer ($\chi^2=9.1$, p<.05) or higher comorbidity scores ($\chi^2=11.1$, p<.05). Dropouts had higher symptom scores at baseline (Mann-Whitney U=18741.0, p<.05) and lower quality of life scores at baseline (Mann-Whitney U=16632.5, p<.001).

These results suggest that medical patients who decline to participate in survey research may be more ill (higher comorbidity, more advanced disease). Also, medical patients who drop out of longitudinal research may be more ill (more symptomatic, poorer quality of life). Thus, results from this type of data collection may not be representative of the patient population, over-representing healthier patients.

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B-003

POSTTRAUMATIC STRESS SYMPTOMS IN CHILDREN OF MOTHERS DIAGNOSED WITH BREAST CANCER

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Review of the literature has revealed that children of mothers diagnosed with cancer may be considered at a higher risk for psychosocial distress when compared to children of healthy mothers. Researchers have broken down these manifestations of distress into two categories: external and internal symptoms. Prior to the current study, no known studies examined symptoms of PTSD in children and adolescents of women diagnosed with breast cancer compared to a normal sample of mothers. The present study examined the impact of a mother's breast cancer diagnosis on perceived internal, external, and PTSD symptoms in her children and adolescents (ages 6–18). In general, it was hypothesized that women diagnosed with breast cancer would report a higher incidence of psychopathology in their children when compared to a normative sample. The Child Behavior Checklist/6-18, UCLA PTSD Index, and Patient Health Questionnaire were administered to 40 mothers with breast cancer and 39 controls. Age ranged from 27 to 57 (M=43.9), were predominately Caucasian (87.3%), and married (74.7%).

Preliminary analysis determined that the groups were comparable across several demographic and study variables. Descriptive Discriminate Analysis (DDA) was conducted to determine how the two groups differ on three continuous variables (Internalizing subscale, Externalizing subscale, UCLA PTSD). DDA revealed that the Internalizing subscale and the UCLA PTSD measure significantly differentiated between the two groups, while the Externalizing subscale did not. Further, analyses revealed that PTSD was the variable that best discriminated between the breast cancer and healthy comparison groups, with maternal depression score occurring as the next strongest explanatory variable. These results suggested that over and above maternal depression scores, mothers with breast cancer perceived their children as having more symptoms of PTSD than non-breast cancer mothers.

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B-004

COGNITIVE-BEHAVIORAL THERAPY FOR ANXIETY IN PATIENTS WITH TERMINAL CANCER

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Introduction: One-third of patients with metastatic cancer experience marked anxiety that is associated with impaired functioning and high symptom burden. As a first-line treatment, cognitive-behavioral therapy (CBT) needs to be adapted to address realistic concerns of this population, such as worries about disease progression, disability and dying. We conducted a pilot randomized controlled trial to examine the feasibility and potential efficacy of a 7-session CBT intervention to reduce anxiety and improve quality of life in these patients.
Methods: To tailor CBT for patients with metastatic cancer, we adapted modules to target psycho-education, relaxation, coping with cancer worries, and activity pacing. We randomly assigned adults with metastatic cancer and elevated anxiety (Hamilton Anxiety Rating Scale [HAM-A]$\geq$14) to CBT or wait-list control. Outcomes included change in clinician-rated anxiety (HAM-A) per an independent assessor, and self-reported quality of life (Functional Assessment of Cancer Therapy-General) from baseline to 8-week follow-up.
Results: Forty patients were randomized (M age=55.90 years; 70% female; 95% white). The most common cancers were lung (30%), pancreatic (17.5%), and colorectal (15.0%). At follow-up, 70% completed the study (CBT n=14, Control n=14), and 30% (n=11) died or withdrew due to worsening disease. The CBT group had greater improvements in anxiety compared to the control group (M *difference*=5.64, *95% CI*=.04–11.24, t=2.07, p=.05, Cohen's d =.78). CBT patients also reported greater increases in both emotional wellbeing (M *difference*=4.14, *95% CI*=.39–7.89, t=2.28, p=.03, Cohen's d=.92) and functional wellbeing (M *difference*=2.90, *95% CI*=−.26–6.06, t=1.90, p=.07, Cohen's d=.76) but not physical or social wellbeing.
Conclusion: Providing a brief CBT intervention that addresses realistic, cancer-related worries was feasible for the majority of patients with metastatic disease and led to significant improvements in anxiety and certain aspects of quality of life.

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B-005

INFLAMMATION GENES PREDICT PAIN SEVERITY IN LUNG CANCER

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BACKGROUND: Pain is one of the most devastating, persistent, and incapacitating symptoms in patients with lung cancer. Prevalence rates vary with 80-100% of patients experiencing cancer pain. Healthcare costs are five times higher in cancer patients with uncontrolled pain. Therefore, early identification, and treatment may not only significantly decrease patient morbidity, but healthcare dollars as well. Although recent studies have suggested a relationship between single nucleotide polymorphisms (SNPs) in several cytokine genes with cancer susceptibility and prognosis, associations with symptom burden have not been examined thoroughly. Therefore, the primary aim of this study is to identify SNPs related to symptom burden in lung cancer survivors.
METHODS: All participants were enrolled in the Mayo Clinic Lung Cancer Cohort upon diagnosis of their lung cancer. 1149 Caucasian lung cancer survivors, (440 surviving<3 years; 354 surviving 3-5 years; and 355 surviving>5 years) completed questionnaires and had genetic samples available. Outcomes included symptom burden (pain, fatigue, appetite, cough, dyspnea, hemoptysis) as measured by the SF-8.
RESULTS: Single nucleotide polymorphisms in LTA and PTGS2 genes were associated with pain severity. Our results suggested both specificity and consistency of cytokine gene SNPs in predicting pain severity.
CONCLUSION: These results provide support for genetic predisposition to pain severity and may aid in identification of lung cancer survivors at high risk for morbidity.

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B-006

THE EFFECT OF RACIAL DISCORDANCE WITH A VIRTUAL DOCTOR ON LUNG CANCER RISK PERCEPTION AMONG AFRICAN AMERICANS

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Risk communication is the cornerstone of many patient-provider interactions. However, patients' perceptions of risk often do not match objective information given by providers. This is of particular concern among patients from underserved minority groups, as racially discordant patient-provider dyads may not communicate about risk as effectively. We examined whether processing of numeric lung cancer risk information differed for racially discordant versus concordant patient-provider dyads in a simulated clinical interaction. The study was conducted using virtual reality such that all factors were held constant in a virtual clinical encounter except apparent physician race (African-American or White). All participants were between the ages of 25 and 40 and self-identified as African American. Half were female. Following the interaction, participants perceived their lung cancer risk to be significantly higher than the risk level given by the virtual physician, t(105)=2.74, p=.007. Current smokers' risk perceptions were particularly discrepant from physician-provided risk (M=9.9 percentage points difference, SD=18.3). Participants who received risk information from a racially discordant physician were less accurate in their risk perception than participants who received information from a racially concordant physician, β=.20, t (105)=2.09, p=.04. Smokers again showed the largest effect. Trust in the physician did not mediate this relationship. Smokers who interacted with the discordant physician were more likely to take supplemental information about lung cancer, χ2(1, N=19)=4.56, p=.033. This research suggests that providers' race alone can influence patients' perceptions of their lung cancer risk and information seeking. This may be particularly important for patients who are current smokers as these processes could influence cessation attempts and other health behavior.

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B-007

GEOGRAPHIC VARIATION IN TRIPLE-NEGATIVE BREAST CANCER DIAGNOSIS

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Triple-negative breast cancer (TNBC) is a specific breast cancer subtype characterized by negative progesterone receptor, estrogen receptor and human epidermal growth factor. TNBC has fewer effective therapeutic options and poor survival compared to other subtypes of breast cancer. Studies have shown that non-white and younger women are more likely than white and older women, respectively, to be diagnosed with TNBC. Little is known about geographic disparity and contextual factors associated with TNBC. In this study, we examined the geographic variation in and neighborhood socioeconomic effect on primary TNBC diagnosis. Of 3069 first primary breast cancer cases diagnosed from January 1, 2000 through May 29, 2009 at the Siteman Cancer Center, a NCI-designated comprehensive cancer center in St. Louis, MO, 497 (16.2%) were TNBC (mean age, TNBC 53.5 years vs. non-TNBC 57.1 years), including 245 of 2001 (12.2%) White patients, 241 of 1000 (24.1%) African American patients, and 11 of 68 (16.2%) other non-white patients (race-by-TNBC chi-square=69.1, p<0.0001). Spatial clustering analysis detected a statistically significant high-risk area of TNBC (radius: 20.82 kilometers, relative risk: 1.76, p=0.001). Hierarchical models indicated a significant geographic variation in TNBC at the census-tract level (between-census-tract variance: 0.18, 95% confidence interval [CI]: 0.04-0.32; p< 0.05). Census tract-level poverty rate was associated with TNBC diagnosis (the highest quartile vs. the lowest quartile: odds ratio [OR]=1.88, 95% CI: 1.41-2.52). The effects of geographic variation (random) and poverty (fixed) on TNBC were fully explained by age and race (variance: 0.07, 95% CI: −0.06–0.19, the highest quartile vs. the lowest quartile of census tract-level poverty rate: age- and race-adjusted OR=1.14, 95% CI: 0.81-1.59). In conclusion, age and race explained the geographic variation in TNBC diagnosis in this hospital-based study. Further research should validate these findings in a population-based sample.

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B-008

DUCTAL CARCINOMA IN SITU PATIENTS' DEPRESSED MOOD AFTER SURGICAL TREATMENT IS SIMILAR TO THAT OF WOMEN WITHOUT BREAST CANCER OVER TIME

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Depressed mood is reported by a significant proportion of women diagnosed with breast cancer. Although patients with ductal carcinoma in situ (DCIS) have an excellent prognosis and DCIS is clinically different from early-stage invasive breast cancer (EIBC; stages I and IIA), DCIS and EIBC patients have similar surgical treatment options and may experience depressed mood similarly after surgery. We examined differences in depressed mood over time among DCIS and EIBC patients after definitive surgical treatment and women without breast cancer (controls). We interviewed 1096 breast cancer patients and age-matched controls (184 DCIS, 282 stage I, 83 stage IIA, 547 controls; mean age 58 [range 40-91]; 23.6% non-white) a mean 7 weeks, and 6, 12 and 24 months after surgical treatment (patients) or routine screening mammogram (controls). The Center for Epidemiologic Studies Depression (CES-D) Scale measured depressed mood "during the past week" with higher scores indicating greater depressed mood. An adjusted mixed model tested the effects of diagnostic group (DCIS, stage I, stage IIA, controls) and time on depressed mood, controlling for factors significantly associated with depressed mood (age, comorbidity, body mass index, menopausal symptoms, social support, body image, education, depression history, race, income, and smoking, employment, and marital status). Depressed mood decreased over time for all participants ($p<.0001$). DCIS patients had lower depressed mood than stage I ($p=.0077$) and stage IIA patients ($p=.0002$) but not than controls ($p=.8157$). Controls had lower depressed mood than stage I ($p=.002$) and stage IIA ($p<.0001$) patients. Changes over time did not differ by diagnostic group. While depressed mood decreased over time, DCIS patients reported lower depressed mood than EIBC patients and did not differ from controls. DCIS patients may experience lower depressed mood after surgery than their EIBC counterparts, which may differentially impact other areas of patients' quality of life.

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B-009

PHYSICIAN TRUST AND COMMUNICATION INFLUENCES WILLINGNESS TO FOLLOW PHYSICIAN HPV VACCINE RECOMMENDATIONS AND ACTUAL VACCINE UPTAKE

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Background: Physician recommendation increases likelihood of cancer screening and immunization. Aspects of the physician-patient relationship, such as patients' trust in and quality of communication with physician, may influence their willingness to follow physician recommendations. Trust and communication may be especially important issues for racial and ethnic minorities. As the primary medical decision-makers for their families, mothers play an important role in deciding whether daughters should receive the HPV vaccine. It is important to understand if a mother's relationship with her daughter's physician affects HPV vaccine uptake.
Objective: Examine whether trust and communication were associated with mother's willingness to follow physician recommendation and vaccine uptake.
Methods: Racially and ethnically diverse mothers of daughters aged 9-22 ($N=312$) who attended safety-net clinics or community events completed a self-administered survey. Primary Care Assessment Tool was used to assess trust and communication. Logistic regressions were conducted.
Results: Mother's rating of physician trust and communication were highly correlated ($r=0.65$). There were no differences in trust and communication scores between race/ethnic groups(Caucasian, Hispanic, and African American). In bivariate and multivariate analyses (latter controlled for mother's race/ethnicity), higher trust scores were associated with willingness to follow physician recommendation (AOR: 1.48; 95% CI: 1.10, 1.99) and HPV vaccine uptake (AOR: 1.66; 95% CI: 1.17, 2.37). Race/ethnicity remained associated with willingness to follow physician recommendation when trust was included in the model, this association was not found for communication with physician
Conclusions: Our findings support the importance of trust and communication with physician in mother's HPV vaccine decision-making.

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B-010

CHARACTERISTICS OF MALE ATTENDEES OF HEALTH-BASED EDUCATIONAL INTERVENTIONS FOR HISPANICS: A UNIQUE INFLUENCE?

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Introduction: Research has demonstrated that Hispanic subgroups in the US often shoulder a greater burden of disease. (ACS, 2009, CDC, 2009). Although there are examples of culturally-appropriate interventions for reducing disparities and promoting effective health practices for diabetes management and cancer screening, there is little information regarding male involvement or participation. As the cultural norm of patriarchy in decision-making for health-related decisions has been found to be common among Hispanics (Erwin et al., 2010), the current study examined the characteristics and health-related knowledge of Hispanic males who attended group-based health education programs.
Method: The data for this presentation was collected as part of a larger, randomized trial focused on promoting breast and cervical screening among Hispanics in which attendance was open to the entire community. Demographic information was collected from 473 male attendees (20% of the total sample) across three geographic areas (Arkansas, NYC, New York State), along with pre and post-intervention responses on questions regarding diabetes management (control program) and cancer screening (intervention).
Results: The majority of male attendees were over the age of 40 (62%) and were originally from Mexico (39%) or Puerto Rico (25%). Approximately half of attendees reported having health insurance and living less than five years in the USA. Hispanic men at both diabetes and cancer programs demonstrated significant increases in knowledge as a result of the intervention.
Conclusion: The current study describes characteristics of a group that may be influential in guiding family health behaviors and decisions. Future studies should examine the role of Hispanic men in the adoption of medical care among family members. This information will assist in the development and implementation of effective health interventions for Hispanic men, women and families.

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B-011

LONG-TERM CANCER SURVIVORSHIP: PREVALENCE OF SYMPTOMS AND PSYCHOSOCIAL ISSUES AND REPORTED DESIRE FOR SUPPORT SERVICES

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Purpose: Cancer survivors may face ongoing symptoms of physiological and psychological distress long after treatment has ended. This may affect their quality of life, immunosupression and adjustment; thus, greater attention to the ongoing care of survivors is warranted. This study reports the prevalence of ongoing symptoms and psychosocial issues in a group of long-term survivors, their reports of distress, and their desire for support services.
Method: 342 cancer survivors (M age=62.8 years, female=70%, M years since treatment=10 years) completed measures of physical symptoms, psychosocial issues and distress (DT, HADS), and then rated their interest in speaking to a health professional.
Results: Participants reported an average of five ongoing symptoms, with the most prevalent being muscle/joint stiffness or pain (45%), fatigue (40%), tingling/numbness (31%), and memory difficulties (30%). The most frequent request to speak to a health professional (15% overall) was associated with reports of tingling/numbness, memory difficulties, and undesired weight-gain (5% each). The average number of psychosocial issues reported was 1.4, with the most prevalent being financial issues (27%), stress (22%) and sexual issues (18%). Desire to speak to a health professional (11% overall) was associated with reports of stress (5%), finances (4%), and emotional distress (3%). Correlations between number of symptoms and issues and valid measures of distress ranged from .54 to .62 ($p<.01$).
Conclusion: Long-term survivors continue to experience symptoms of physiological and psychological distress. Despite this, very few survivors expressed interest in speaking to a health professional. The current study reinforces the importance of addressing the long-term care needs of survivors within a comprehensive model of care; however they also exemplify the challenge that exists in developing effective and desired follow-up care for cancer survivors.

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B-012

INCREASING MAMMOGRAPHY AMONG MEDICARE-ENROLLED WOMEN THROUGH DIRECT MAIL

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Among women 65 and older, breast cancer incidence is high compared to other age groups yet the screening mammography rate is relatively low. Although Medicare coverage eliminates some cost barriers to screening, there is still ample room to increase rates. Direct mail is a potentially cost-effective method for promoting screening mammography to unscreened women who have Medicare, yet the effect of direct mail has not been widely studied.
Method: We conducted a population-based, randomized controlled trial to test a mail-based intervention intended to increase mammography rates among unscreened Medicare beneficiaries. Study population was a random subset of unscreened women in Minnesota ages 65 to 84 and enrolled in Medicare ($N=18{,}939$). Women were randomized into Direct Mail Only, Direct Mail Plus Incentive, and Control conditions. Women in both direct mail groups received two mailings with a brief message about the importance of mammography. Mailings for Direct Mail Plus Incentive group also included a $25 incentive for mammography completion.
Results: In initial analysis, the Direct Mail Plus Incentive group had a higher mammography rate than both Control and Direct Mail Only groups, $p<.05$. Direct Mail Only and Control did not significantly differ. After verification of recent screening history, some women then were excluded from analysis that had been screened in the year prior to the actual mailing. Within that sub-sample, the Direct Mail Only screening rate was significantly higher than the Control group rate, and odds of mammography in Direct Mail Plus Incentive remained significantly higher than in the other two groups. After 15 months, the mammography rates in the Direct Mail Only and Direct Mail Plus Incentive groups were 0.5 and 2.5 percentage points (respectively) higher than in the Control group. This suggests that a direct mail strategy can have population level impact among previously unscreened Medicare beneficiaries, especially when paired with an incentive.

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B-013

THE CANCER RISK INTAKE SYSTEM PRELIMINARY OUTCOMES

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Background: People at average risk for colorectal cancer (CRC) may choose among several screening modalities, starting at age 50, but tailored recommendations are needed for those at increased risk. We developed a Cancer Risk Intake System (CRIS) that collects data prior to office visits and generates printouts for patients and MDs tailored on: personal and familial risk factors; recommended test modality, age, and schedule; and concerns about testing. In a randomized trial, we are comparing recipients of tailored ($n=329$) or non-tailored print outs ($n=322$).
Objectives: Compare tailored and non-tailored recipients': ratings of the touch-screen program and printouts; perceived risk and concerns about CRC testing; and testing-related discussions during the visit.
Methods: Patients non-adherent for CRC testing with upcoming appointments were identified via records and sent letters from their clinics. Those not opting out were invited by phone to arrive 30 minutes early to use CRIS and receive tailored/non-tailored printouts, and complete 1-week follow-up phone surveys. Data analysis used linear and generalized linear mixed models. Reported associations are $p\leq 0.05$.
Results: Tailored and non-tailored recipients were similar at baseline in perceived CRC risk, concerns about testing, and ratings of physician trust and communication. At follow-up, user ratings for the touch-screen program and printouts were favorable and similar between groups: perceived CRC risk had increased slightly in both groups. Tailored recipients were more likely to report having spoken with their MD during the visit about personal and family CRC risk factors and CRC testing; their concerns about tests finding a problem lowered significantly from baseline to follow-up.
Conclusions: Patients' favorable reactions suggest feasibility of instituting CRIS into clinical practice. Tailored printouts facilitated more discussion of risk and testing during the office visit, and reduced concern about testing.

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B-014

PEDIATRIC CANCER SURVIVORSHIP IN EMERGING ADULTHOOD: PERCEPTIONS OF SOCIAL ACCEPTANCE AND RELATIONSHIP SELF-EFFICACY

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Using social cognitive theory as a foundation (e.g., Bandura et al., 1977), social acceptance (SA) and peer and romantic relationship self-efficacy (SE) were assessed as salient social development factors among emerging adult (ages 18 to 25) survivors of pediatric cancers. Cancer treatment intensity, perceived health vulnerability (PHV), situational coping style (SCS), parent and peer attachment, and perceived physical attractiveness (PA) were also explored in relation to SE and SA via a cross-sectional design. Additionally, SA was examined within a cancer stereotyping framework. Fifty-two emerging adult survivors of pediatric cancers (54% male; Mage=21.38 years, SDage=3.11 years) completed self-report questionnaires. Participants were diagnosed between ages 5 and 19 ($M=12.59$ years, $SD=4.57$ years) and were at least six months off treatment ($M=7.32$ years, $SD=4.46$ years). Simultaneous regression analyses indicated that PHV, SCS, parent and peer attachment, and PA accounted for significant variance in peer ($R2=.45$, $F(5, 46)=7.39$, $p<.001$) and romantic relationship SE ($R2=.23$, $F(5, 46)=2.67$, $p=.03$) and SA ($R2=.47$, $F(5, 46)=8.26$, $p<.001$). There were main effects of PA and peer attachment on peer relationship SE (PA: $B=.81$, $p=.02$; peer attachment: $B=.37$, $p=.004$) and SA (PA: $B=.26$, $p=.002$; peer attachment: $B=.06$, $p=.02$). There was also a main effect of PA on romantic relationship SE ($B=.46$, $p=.006$). Treatment intensity was not related to SE or SA. Participants believed that others viewed them as more socially accepted than they viewed themselves ($t(51)=-2.36$, $p<.05$). They also rated a hypothetical peer with cancer as less socially accepted than healthy peers ($t(51)=2.11$, $p<.05$). Results suggest greater PA and stronger peer attachment may be strongly related to greater relationship SE and feelings of SA. Survivors may also hold stereotyped views of their own level of SA and the social acceptability of peers diagnosed with cancer.

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B-015

LATINO COLORECTAL CANCER SCREENING: THE INFLUENCE OF SOCIAL NETWORKS AND KNOWLEDGE

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Introduction: Colorectal cancer (CRC) is the second most commonly diagnosed cancer among Latinos, a large and growing population in the United States. Routine screening for colorectal cancer is the most effective way to reduce incidence and mortality of the disease, yet CRC screening rates among the Latino population remains low (30%) compared to Caucasian populations (45%). Two specific aims guide this work: 1) identify differences in CRC screening between Latinos and non-Hispanic Whites participating in the population-based Health Information National Trends Survey (HINTS); 2) identify mediation effects between ethnicity and social networks, and ethnicity and knowledge on CRC screening among Latinos.
Methods: Data for this study were derived from the 2005 HINTS. HINTS is a population-based probability survey of health communication and information among US adults aged 18 and over. HINTS was selected for use here because it provides a diverse sample of ethnic minority participants ($n=491$ Hispanic, $n=4{,}103$ Non-Hispanic White) and allows for the exploration of ethnic differences in cancer knowledge and social support on colorectal cancer screening. Statistical analyses were conducted using Stata 11SE.
Results: Significant differences in colorectal screening were identified. Hispanic individuals were 47% less likely than non-Hispanic individuals to report colonoscopy ($OR=.53$, 95% CI=.35,.79). Regression analyses indicate the relationship between ethnicity and CRC screening behavior was mediated by social support, (95% CI=1.08,1.37, $p=.001$) where social support reduced the influence of ethnicity on CRC. The relationship between CRC screening behavior and ethnicity was also mediated by cancer knowledge, where cancer knowledge reduced the influence of ethnicity on CRC screening (95% CI=1.40, 1.75, $p<.001$).
Conclusion: Knowledge improvement is critical in reducing disparities for Latinos. Findings point the way to solutions amenable to knowledge-oriented policy intervention targeting CRC screening disparities among Latinos.

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B-016

USING THE THEORY OF PLANNED BEHAVIOR TO EVALUATE SUNLESS TANNING

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Skin cancer is the most rapidly increasing cancer among 15-29-year-olds. Epidemiological evidence suggests this is due to UV-exposure through tanning activities. Despite public health initiatives, young adults continue to engage in risky tanning behaviors at high levels. Since young people report their primary motivation is to improve appearance, the use of sunless tanning products as a safer alternative is a promising strategy. Understanding the variables that predict sunless tanning intentions is critical for integrating this alternative into prevention campaigns. Utilizing a cross-sectional study design, we explored participants' intentions, attitudes, perceived behavioral control (PBC), and social norms relative to sunless tanning lotions (STL) and spray-on tanning (SPT). We used the Theory of Planned Behavior (TPB) to understand these relationships. 247 participants (mean=25.7 yrs, sd=7.4) completed the survey measuring TPB constructs using standardized questions and scales. Moderated linear regression analyses based on Jaccard et al (2003) were performed to evaluate fit with the data. Attitudes toward STL was the only significant predictor (p<.01) of STL intentions; attitudes toward SPT was the only significant predictor (p<.01) of SPT intentions. Positive attitudes toward being tan, peer popularity of STL, and safety advantages of STL were significant predictors (+βs, p<.05) of attitudes toward STL as were smell disadvantages of STL and appearance disadvantages of STL (-βs, p<.05). Similarly, positive attitudes toward being tan, SPT popularity among peers, and SPT advantages over sunbathing were significant predictors (+βs, p<.05) of attitudes toward SPT, as were beliefs that SPT tans look fake (-β, p<.01). These results point to beliefs that could be targeted to improve attitudes toward sunless tanning in current tanners. Improved attitudes should increase tanners' intentions to try STL and SPT, leading to reductions in indoor tanning and sunbathing.

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B-017

PARENTAL ATTITUDES TOWARD ADOLESCENT VACCINATION AGAINST THE HUMAN PAPILLOMAVIRUS

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Human papillomavirus (HPV) is the most common sexually transmitted virus in the U.S.; at least 50% of sexually active individuals will have genital HPV at some time in their lives. HPV is the primary cause of cervical cancer among women. In the U.S., approximately 12,000 women are diagnosed with cervical cancer each year and about 4,000 die from it. In 2006, the Food and Drug Administration (FDA) approved a HPV vaccine (Gardasil) for use in females ages 9 through 26 years to prevent cervical cancer. In 2009, another HPV vaccine (Cervarix) was approved for use in females ages 10 through 25 years. The Advisory Committee on Immunization Practices (ACIP) recommends routine HPV vaccination for girls ages 11 or 12 years and catch-up vaccination for females ages 13 through 26 years. While HPV vaccines hold great promise to reduce cervical cancer incidence rates, realization of this promise hinges on widespread public acceptance of HPV vaccination, especially among decision-makers (e.g., young adults, custodial parents of adolescents). To inform the design of effective HPV communication messages, this research seeks to understand parental attitudes toward adolescent HPV vaccination, their socio-demographic correlates, and reasons underlying people's rejection of (or uncertainty about) HPV vaccination for their daughters. Analysis of data from a national survey (N=7674) revealed that 54.9% of Americans would have their daughters ages 9-12 get the HPV vaccine, 28.7% were unsure, and 16.4% would not have their daughters within that age range get the vaccine. Gender, age, and household income are significant predictors of HPV vaccine acceptance. Males, younger adults, and higher household incomes are associated with greater vaccine acceptance. Education and race have no significant effects. The main reasons respondents would not have daughters get the vaccine included "don't know enough about the vaccine" (44.5%) and "worried about safety of vaccine" (17.4%).

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B-018

DISTINGUISHING FACTORS FOR ASYMPTOMATIC COLONOSCOPY SCREENING

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Introduction: In this cross-sectional study we compare insured populations that received asymptomatic colonoscopy (n=41) with those who did not participate in any form of CRC screening (n=46).
Methods: Measurements were collected by telephone interview and included:a variety of information regarding CRC screening, and preventive health behaviors.
Results: The majority of participants were Black or African American (~ 60%) females (80%); mean age=59 years. Almost all spoke English, and were high school graduates with a total annual household income of $31 K-$50 K. Being overweight was reported by 15.2% of those screened versus 48.6% of those not screened (P<.05). Pain and discomfort was a problem in 9.8% of those screened versus 32.6% of those not screened (P<.05). Knowledge about CRC screening was higher in the screened group in terms of knowing what a doctor is looking for (93% versus 61%, p<.01), and believing that a colonoscopy was recommended even for those without symptoms (100% versus 86%, p<.05). Those in the screened group were more likely to believe that CRC screening was a priority for their PCP (50% versus 17.1%, p<.001), and to have received counseling about CRC from their PCP (92.7% versus 55.6%, p<.001). Other differences pertained to perceived fear (2.4% screened versus 27.3% not screened, p<.005), embarrassment (7.3% versus 42.2%, p<.005), concern about undergoing sedation (9.8% versus 34.9%, p<.001), and problems finding a chaperone (9.8% versus 32.6%, p<.05). A higher percentage of the screened group believed that more than half of the people aged 50 or older in New York City have had a colonoscopy (68.3% versus 26.3%, p<.001).
Conclusions: Variables to consider as possible determinants of colonoscopy screening include: overweight and pain status, specific knowledge about colonoscopy, PCP counseling and priorities, selected barriers and beliefs about normative behavior. Identifying effective ways to motivate and enable PCPs to be stronger advocates for colonoscopy screening warrant attention.

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B-019

LOW AWARENESS THAT CIGARETTE SMOKING IS A RISK FACTOR FOR BLADDER CANCER

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Introduction: Bladder Cancer is the fifth most common cancer in the United States, with an estimated 70,530 new cases in 2010. The primary risk factor for bladder cancer is cigarette smoking. According to limited data on the topic, few people are aware that smoking is a risk factor for bladder cancer. A study was conducted to more extensively evaluate awareness of smoking as a risk factor for bladder cancer.
Method: A community sample of 595 adults, 40 years and older was recruited from shopping malls in 5 metropolitan areas. Participants completed a self-report survey about their beliefs about bladder cancer.
Results: The sample was 29% Black, 43% female, and 44% married. The median yearly income range was $20,000 to $39,999, the median education level was "some college or technical school," and the median age-group was 50-59. 41% agreed, 23% neither agreed nor disagreed, and 36% disagreed that smoking is a risk factor for bladder cancer. Awareness was not associated with gender, race, age group, marital status, income, education, or personal experience with a diagnosis of bladder cancer (self, family member or friend) in either unadjusted or adjusted models. Among participants who agreed that smoking is a risk factor for bladder cancer, most also agreed (inaccurately) that smoking is a risk factor for breast and prostate cancers (n=189). A tiny minority (n=3) accurately identified that smoking is a risk factor for bladder cancer but not prostate and breast cancers.
Conclusion: Self-reported agreement that smoking is a risk factor for bladder cancer is low and appears to be primarily based on non-specific beliefs that smoking causes cancers in general. The majority of participants and even the majority of participants with personal experience with bladder cancer were unaware that smoking is a risk factor for bladder cancer. There is an urgent need for bladder cancer education in both public health and health care settings. In addition, tobacco control efforts may be strengthened by making the public fully aware of the health effects of cigarette smoking.

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B-020

THEORETICAL VARIABLES AND CHANGE IN PHYSICAL ACTIVITY, NUTRITION AND WEIGHT AT 16-MONTHS IN WEB-BASED GUIDE TO HEALTH

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This study examined how 6-mo changes in social cognitive (SCT) variables contributed to weight gain prevention and changes in nutrition and physical activity (PA) at 16-mo among users of the entirely online, SCT based Guide to Health intervention (WB-GTH). FFQ, SCT, PA questionnaires and 7-day step log at were completed at base, 6-mo and 16-mo. Overweight, inactive participants (n=272, age M =43.68 yrs, 86% female, 92% Caucasian, M=17.45 yrs educ, income~$85 k) received one of two equally effective versions of the 12-mo cancer-prevention WB-GTH (one with enhanced self-regulation). The longitudinal structural model's fit was good (RMSEA<.05). Weight loss (~3% bodyweight) at 16 months was predicted by improvements in PA (β=-.34,P=.01), fruits and vegetables (F&V) (β=-.20,P=.03) and kcal consumption (β=.15,P=.04). Improved PA self-efficacy (SE) (β=-.10,P =.03), PA self-regulation (SR) (β=-.15,P=.01), nutrition social support (SS) (β=-.08, P=.03), and outcome expectations (OE) (β=.08,P=.03) also predicted weight loss. Increased SS (β=.26,P=.04), SE (β=.30,P=.01) and SR (β=.45,P=.004) led to improved PA (~1500 steps). Decreased fat and sugar consumption (~2-3%) followed improved SS (β=-.10,P=.02), OE (β=.15,P<.01) and SR (β=-.14,P<.01). Decreased kcal intake (~10%) followed increased SS (β=-.30, P<.001). Increased F&V intake (~1.5 serv/day) followed improved SE, OE and SR (β=.20, β=.27, β=-.29,P <.01). The indirect effects on PA (SE: β=.17; SS: β=.20,P<.01), F&V (SS: β=.14; SE: β=.18,P<.001) and fat and sugar sweetened foods (SS: β=-.07; SE: β=-.09,P <.01) supported theorized relations. The SCT-based online WB-GTH influenced behavior and weight loss in a manner largely consistent with SCT. Improving SS, SE, OE and SR, in varying combinations, led to healthier diet, PA, and weight. High initial SE levels among those interested in online interventions may alter the function of SCT in these programs: researchers may find although increased SE enhances program outcomes, participants' whose SE is tempered by online interventions may still benefit.

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B-021

SOCIAL COGNITIVE DETERMINANTS OF NUTRITION AND PA AMONG OVERWEIGHT, SEDENTARY WEB-HEALTH USERS ENROLLING IN AN ONLINE INTERVENTION

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This study examined the demographic, behavioral, and psychosocial characteristics of 963 overweight, inactive, but otherwise healthy web-health users recruited from 4700 visitors to a social cognitive theory (SCT) based nutrition, PA (PA), and weight-gain prevention intervention website. Web-health users (82% female, mean age=44.40 yrs, SD=11.03, 90% Caucasian, 61% college graduates, median income~$85 k) completed assessments entirely online. Daily step counts were in the low-active range (M=6485.78, SD=2352.54) and overall dietary levels were poor (total fat g/day M=77.79, SD=41.96; fat %kcal M=36.51, SD=5.92; fiber g/day M=17.74, SD=7.35; and fruit and vegetable (F&V) serv/day M=4.03, SD= 2.33). Despite detrimental behavior, web-health users' had comparatively high self-efficacy (SE) (~72 of 100 pts) and outcome expectations (~3-4 of 5 pts) for health behavior change. They perceived little social support (SS) (<3 of 5 pts) for making changes and seldom-to-never engaged in self-regulatory behaviors (SR). Theory-based structural models provided good fit to web-users' data (RMSEA<.05). Largely supporting SCT, SS and SR were good predictors of PA (SS: β=.30,P<.01, SR: β=.23,P<.01) and nutrition (SS: β>.20,P<.01, SR: β.10-.19,P<.05). Self-efficacy (SE) was also a good predictor of healthier levels of PA (β=.25,P<.01) and dietary fat β=-.21,P<.01, but not of fiber, F&V (P>.20). SS had indirect effects through SR (33% PA, 100% fiber; F&V) and through SR and SE (68% fat). Web-health users visiting and ultimately participating in online health interventions may likely be middle-aged, well-educated, upper middle class women whose detrimental health behaviors put them at-risk of obesity, heart disease, some cancers, and diabetes. Internet PA and nutrition interventions may temper web-users' unrealistic confidence and expectations and may be more successful if they help them garner SS and develop SE for behavior change and if they provide a platform for setting goals, planning, tracking, and providing feedback.

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B-022

MOTIVATION FOR HPV VACCINATION AMONG FEMALE COLLEGE STUDENTS: VALIDATION OF TTM DECISIONAL BALANCE AND SELF-EFFICACY CONSTRUCTS

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Human papillomavirus (HPV) is the most prevalent sexually transmitted disease in the world, associated with several cancers and genital warts. High infection rates are found in college-aged women, most of whom are not vaccinated. TTM-tailored interventions are a promising option to increase HPV vaccination rates. Before developing interventions, valid and reliable measures of TTM constructs must be developed. Here, we developed and validated measures of Decisional Balance (Pros and Cons) and Self-Efficacy in a sample (N=340) of female college students (ages 18-26) at a midsized, northeast university. Of the approximately 50% of women in our sample who had not received the vaccination, 63.3% were in the Precontemplation stage, 22.5% were in Contemplation, and 14.2% were in Preparation. Principal component analysis (PCA) and confirmatory factor analysis (CFA) were performed on randomly split subsamples to determine factor structures. For the Decisional Balance scale, PCA revealed a 2-factor solution representing pros (4 items, α=0.9) and cons (4 items, α=0.66) with loadings from 0.48-0.69. CFA also supported a two-factor correlated model as the best fit, χ2(19)=39.33, p<.01, CFI=.97, GFI=.95, and AASR=.03. CFA loadings ranged from .48-.86, with α's of .90 (pros) and .67 (cons). For the Self-Efficacy scale, PCA revealed a single-factor solution (6 items, α=0.84) with loadings from 0.70-0.78. CFA supported the same single factor structure as the best fit, χ2(9)=50.87, p<.05, CFI=.94, GFI=.91, and AASR=.03 with loadings from .59-.90 and α=.90. Findings confirm predicted relationships between stage of change and pros and cons, as well as self-efficacy, supporting the external validity of these scales. Results support the internal and external validity of these TTM measures for HPV vaccination, provide the foundation for their use in TTM-tailored interventions, and support the importance of addressing the needs of the 85% of unvaccinated women who are not prepared to act.

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B-023

USING ULTRAVIOLET-LIGHT PHOTOGRAPHY TO PROMOTE SUN PROTECTION: WILL CANCER SURVIVORS "GET THE PICTURE?"

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Cancer survivors are at risk for significant health problems, including second cancers. Skin cancers are among the most common second cancers, but studies show survivors generally do not adhere to recommended sun protection (SP). Ultraviolet light photography (UVP) which reveals early skin damage has shown promise in promoting SP, but has not been applied to cancer survivors. This study evaluated survivors responses to UVP and its acceptability as part of SP education. 41 young adult cancer survivors (18 male, 23 female, ages 18-45) attending a survivorship clinic participated. 31 UVP subjects received a SP information sheet and UVP photograph of themselves. Their responses to a 13-item exit survey asking about the materials were contrasted with responses from 10 controls who received no UVP materials. 19 UVP survivors were also interviewed 1-month later.

On the survey, no UVP subjects reported being upset or anxious. 26 (84%) UVP subjects rated the materials "very good," and 27 (87%) agreed they "should be given to all cancer survivors." Only 14 (45%) reported learning new information, however, and only 6 (19%) reported the intervention changed their thinking about SP. No significant differences were found between UVP and control participants on survey items, though power is limited by small samples. In interviews, almost all subjects noted the novelty appeal of UVP, reported sharing the UVP with significant others, and reported keeping it for future viewing. Suggestions for improving the delivery of UVP for cancer survivors were also made.

Results indicate young adult cancer survivors respond positively to UVP, and it may provide a way to make SP education more salient to this group. A pilot study comparing UVP and conventional education materials on survivors' behavioral intentions is currently underway, and preliminary results will be reported.

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B-024

PREDICTORS OF PHYSICAL SYMPTOMS AFTER BREAST CANCER TREATMENT

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Intrusive thoughts are known to impact emotional adjustment to cancer but effects on physical symptoms and moderators of these effects are unknown. Fatigue and sleep problems are prevalent among breast cancer survivors but few longitudinal studies have identified predictors of these symptoms. This study examines whether post-treatment intrusions predict physical and psychological symptoms 6 months later in a longitudinal sample of breast cancer survivors. Social environment is tested as a moderator of the negative effects of intrusions. Data come from the Moving Beyond Cancer psychoeducational intervention for breast cancer survivors aimed at easing the transition into survivorship. Participants (n=433) completed questionnaires within four weeks post-treatment, and again 6 months later to assess intrusive thoughts about breast cancer (IES-R), depressive symptoms (CES-D), fatigue (Fatigue Symptom Inventory), sleep (MOS sleep adequacy scale), social support, and desire to talk more about their cancer. All analyses controlled for intervention group assignment, relevant demographics, and clinical confounds. Intrusions at baseline predicted increased depressive symptoms at 6 months (p=.015), but not fatigue or sleep adequacy. Social support did not buffer the effect of intrusions on any outcome. However, the interaction of desire to talk and intrusions was significant (p=.011). For women who did not wish to talk more, higher intrusions predicted higher depressive symptoms (p=.003). Those who did desire to talk more evidenced a buffering effect, as intrusions did not predict worse outcomes for them. We speculate that intrusions did not predict increases in physical symptoms because the physiological effects of cancer treatment are potentially more relevant for these outcomes than is incomplete cognitive processing. Although social support did not decrease the negative effects of intrusive thoughts, women who desired to talk more did demonstrate a buffering effect. Women who want to talk more may be better able to emotionally express and process their experience, though additional probing is needed.

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B-025

SEX DIFFERENCES IN POSITIVE PSYCHOSOCIAL ADJUSTMENT OF LUNG CANCER (LC) SURVIVORS

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LC is the leading cause of cancer related mortality and morbidity but few studies have examined sex differences in psychosocial adjustment to LC. The aim of this study was to examine sex differences in psychosocial adjustment of LC survivors across positive and negative domains of psychological functioning. Male (n=71) and female (n=70) LC survivors (M=62.7 yrs.), 12-15 months post-dx with non-small cell LC, completed a survey and structured interview including measures of distress (NCCN distress thermometer (DT)), current problem areas, depression and anxiety (Hospital Anxiety and Depression Scale (HADS)), post-traumatic growth (PTG), benefit finding (BF), social constraints (SCs), and social support (SS). Independent samples t-tests revealed no statistically significant sex differences on age, education, physical comorbidities, or current problem areas. A considerable proportion of our sample reported negative psychosocial adjustment as indicated by clinically significant distress on the DT - cutoff of 5 (43%), and depression and/or anxiety as indicated by the HADS (33%). No sex differences in negative psychosocial adjustment or social resources (SS, SCs) were detected (p's>.05). The domain in which men and women differed was positive psychological adjustment including PTG (Cohen's d=.36;p =.03) and BF (Cohen's d=.41;p=.02) such that women reported significantly greater levels of PTG and BF from their LC experience. Results indicate considerable distress in both male and female LC survivors 12-15 months post-dx and accentuate how negative (DT, HADS) and positive psychological adjustment (PTG, BF) can co-occur but remain relatively independent. Remarkably, female LC survivors, while reporting similar levels of distress, physical symptoms, and SCs reported greater PTG and BF. Additionally, in female LC survivors there was a positive association between PTG and BF with comorbid conditions - an association which suggests PTG and BF may serve as coping mechanisms in light of higher rates of medical problems. Future research should elucidate how PTG and BF might serve to enhance or protect psychosocial adjustment in LC survivorship.

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B-026

COMPARISON OF CANCER WORRY IN HEALTHY WOMEN AND BREAST CANCER SURVIVORS

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Worry about a future cancer diagnosis is a common concern for cancer survivors. To date, no study has compared breast cancer worry in cancer survivors to that in women with no history of cancer. It was hypothesized that survivors would report higher perceived risk and greater worry about future breast cancer than healthy controls. Potential moderators of group differences in cancer worry were also examined. The sample consisted of 203 stage 0-II breast cancer survivors who were 3 years from completion of active treatment (radiation, chemotherapy, or both) and 192 age-matched women with no history of cancer. Participants completed measures of cancer worry (Cancer Worry Scale), perceived risk of a future breast cancer diagnosis, depression (Center for Epidemiologic Studies Depression Scale), and quality of life (MOS SF-36 general health; physical & mental component scores). Breast cancer survivors reported significantly greater worry about a future breast cancer diagnosis (p<.001), higher perceived risk for future breast cancer (p<.001), and worse physical functioning (p<.001) than controls. After controlling for physical functioning and perceived risk, cancer worry remained significantly higher in survivors versus controls (p<.001). Survivors and controls did not differ on depression, general health, or mental health scores (ps>.05). However, these markers of quality of life moderated the relationship between group and worry (ps <.001) such that worse scores on these measures were related to more cancer worry in survivors, but not in controls. As expected, breast cancer survivors reported significantly more cancer worry than controls. The moderators suggest there may be differences in how survivors and controls appraise symptoms associated with poorer quality of life, which in turn impacts cancer worry. Future research is needed to understand the mechanisms by which cancer status interacts with perceived health status to influence cancer worry. Funded by NCI RO1 CA82822

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B-027

SPOUSAL CAREGIVERS (CG) OF BREAST CANCER SURVIVORS: THE STRESS-PROCESS MODEL (SPM) OF CAREGIVING

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Purpose: Given increased demands on familial CG in the cancer context, it is important to identify variables associated with poor CG outcomes. The SPM provides a comprehensive theoretical framework for this, incorporating context of care (e.g., CG employment), objective (e.g., patient impairment) and subjective (i.e., perceived) stress, and resources that may offset CG burden. The present study tests the SPM, specifically 1) the independent contributions of objective and subjective stress to CG outcomes, and 2) the role of social support as a buffer against CG stress.

Method: Cross-sectional data from 32 patient/partner dyads were obtained. A series of hierarchical multiple regressions were used with variables entered as follows: 1) context of care; 2) objective (recurrence [REC] vs. disease-free status, patient Karnofsky Performance Status [KPS]) or subjective (composite of Perceived Stress Scale & Life Distress Inventory) stress; 3) social support (Social Network Index [SNI]); and 4) SNI X stress interaction. CG outcomes included depressive symptoms (CES-D), QoL (SF-36 MCS), and fatigue (FSI). Simple slopes aided in interpreting significant interactions.

Results: High objective (KPS, not REC) and subjective stress were associated with poor outcomes (CES-D, SF-36, FSI, ps<.05). There was no direct effect of SNI; significant interactions were observed, but not in the expected direction. For CG with larger social networks, high subjective stress was associated with greater depression (β=.36, p<.01) and poorer QoL (β=-.26, p<.01). A similar trend was seen for objective stress; high stress (low patient KPS; β=-.30, p<.10) predicted greater depression in those with larger social networks.

Discussion: CG stress was associated with poor psychological and physical outcomes. A larger social network did not ameliorate the ill effects of CG stress; the contrary was observed. These results suggest that the role of social support for male CG is complex. Future research should consider ways to help CG evaluate the quality of support, better utilize support, and avoid costly interactions.

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B-028

PHYSICAL DISTRESS AND CANCER CARE EXPERIENCES AMONG CHINESE AMERICAN WOMEN WITH EARLY STAGE BREAST CANCER

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Research investigating how Chinese American women deal with their physical distress after breast cancer treatment is limited. This qualitative study aims to understand Chinese breast cancer survivors' physical distress and follow-up care, and how this might be related to communication with physicians. Twenty-one Chinese women were recruited from the Greater Bay Area Cancer Registry. Eligible women were diagnosed with breast cancer at stage 0-II, and had survived for one to three years without recurrence. Two Chinese focus groups and 10 individual telephone interviews were conducted in Cantonese, Mandarin, or English. The audio-taped Chinese language interviews were translated into English for analysis. An anthropologist led data coding along with two trained coders (intercoder reliability 87%). The mean age for our sample was 55 years. All but two of the women are immigrants. All women had medical insurance (including public insurance). Women's top concern was recurrence, followed by treatment side effects. Although most of the women felt satisfied with their physicians and believed that they received better care in the US than they would have in their native countries, many also felt that physicians were too busy to answer questions. This was key since women reported that physicians were the most reliable sources for medical information. Physician communication concerning side effects and risk for recurrence helped to alleviate their worries. More than two-thirds of our participants reported the use of Chinese medicine or therapeutic foods to alleviate treatment side effects, especially when Western doctors could not explain their physical distress or provide effective remedies. In summary, the quality of physician-patient communication about follow-up care plays a significant role in Chinese women's physical and emotional well-being. Chinese immigrant survivors often use alternative therapies to cope with physical distress after breast cancer treatment.

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B-029

THE MODERATING AND MEDIATING EFFECTS OF RELIGIOUS COPING ON QUALITY OF LIFE IN LONG-TERM SURVIVORS OF CANCER

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Purpose: Determine if religious coping functions as a mediator or a moderator in quality of life (QOL) of long-term survivors of cancer, by using structural equation modeling.
Methods: A non-experimental descriptive field design was used to examine the role of religious coping in long-term adult survivors of cancer. Participants were identified through the Tumor Registry. All participants had received tertiary treatments at a Midwestern cancer center. Data was collected using surveys through the U.S. Postal Service mail system and the survey methodology guidelines of the Tailored Design Method (Dillman, 2007). Survey instruments included the FACT-G (Cella et al., 1993), OL-CS (Ferrell, Dow, & Grant, 1995), RCOPE (Pargament, Koenig, & Perez, 2000), and the SBI-15R (Holland et al., 1998).
Results: The mean age of the sample (n=213) was 67-years-old (SD=11.3). A majority of participants were Caucasian (96.2%), female (75%), married (67.6%), and Christian (94%). While the data had a poor fit with the model, structural equation modeling revealed several significant paths in the mediation model. Sex significantly predicted religious coping ($\beta=-.289$, $p<.05$). Age also significantly predicted religious coping ($\beta=.009$, $p<.05$). Most importantly, religious coping significantly predicted QOL ($\beta=.603$, $p<.05$). No paths were significant in the moderation model.
Conclusion: Religious coping acts as a mediator in the relationship between demographic variables and QOL. Thus, religious coping should be considered an important psychosocial factor in some long-term survivors of cancer. CLINICAL IMPLICATIONS: An individual's religious beliefs should be considered a multicultural aspect of who they are and what they bring to the therapeutic setting. To completely disregard a client's religious beliefs and how he or she uses religion to cope is to disregard a part of who they are and potentially a major source of coping.

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B-030

IMPACT OF LUTEINIZING HORMONE-RELEASING HORMONE (LHRH) THERAPY ON QUALITY OF LIFE IN MEN WITH PROSTATE CANCER: A CONTROLLED COMPARISON

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Many men diagnosed with prostate cancer (PCA) will be treated with LHRH therapy, which blocks production of testosterone. To date, there has been limited research conducted on the effects of LHRH therapy on quality of life. To address this issue, we assessed aspects of quality of life in PCA patients (n=24) at the start of LHRH therapy (T1) and 6 months later (T2). An age- and education-matched comparison group of men with no history of cancer (n=20) was assessed over a similar time interval. We hypothesized that depression, sleep, and fatigue would demonstrate a symptom cluster by significantly correlating in both groups. Furthermore, we hypothesized that these symptoms would increase from T1 to T2 in men receiving LHRH therapy while remaining stable in the control group. All participants completed measures of depression (CES-D), sleep quality (ISI) and fatigue (FSI) at T1 and T2. At T2, all symptoms were highly correlated for men receiving LHRH therapy (all $ps<.01$) and controls (all $ps<.05$). Paired samples t-tests demonstrated LHRH patients experienced worsening depression ($p=.005$), sleep quality ($p=.001$), and fatigue ($p=.001$) from T1 to T2. In comparison, the control group demonstrated no differences on these measures between T1 and T2 (all $ps>.05$). In conclusion, these findings suggest that a symptom cluster of depression, sleep, and fatigue exists in both men undergoing LHRH therapy and men with no history of cancer. They further suggest that these symptoms worsen as a consequence of LHRH therapy but remain stable otherwise. Additional studies are needed to investigate temporal patterns of quality of life in men receiving LHRH over longer periods of time. Future research could also compare the effects of LHRH therapy on quality of life with effects of other forms of PCA treatment such as prostatectomy.
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B-031

SOCIOECONOMIC DISPARITIES IN DEPRESSIVE SYMPTOMS AMONG BREAST CANCER SURVIVORS

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Introduction: Breast-cancer survivors face a significant burden of depressive symptoms which may persist several years after treatment. Few studies have investigated the association between socioeconomic disparities and depressive symptoms or the potential for psychosocial factors to mediate this relationship among survivors.
Methods: We analyzed longitudinal data from a Missouri cancer registry-based sample of female breast-cancer survivors who remained cancer-free at 1 and 2 years after diagnosis. Covariates measured at Year 1 included: the 11-item Center for Epidemiologic Studies Depression (CESD-11) scale, sociodemographics, clinical and tumor factors, health care access, perceived health status, health behaviors, social support, and perceived stress. Logistic regression was used to analyze the association of Year 1 socioeconomic status (using annual household income and perceived adequacy of income in separate models) on Year 2 clinically significant depressive symptoms (CSDS) as measured by the CESD-11 (CSDS=score of ≥ 9 vs. <9).
Results: Among the 830 survivors (mean age 57.4 years; 97.6% insured; 91.9% White race), 169 survivors (20.4%) at Year 1 and 139 survivors (16.8%) at Year 2 reported CSDS. In unadjusted analyses, survivors with the lowest incomes (< \$35 K/year vs. ≥\$75 K/year) had higher odds of CSDS (OR: 2.8 95% CI: 1.6-4.9), however this association was mediated by social support and perceived stress (OR: 1.8 95% CI: 0.9-3.5). Compared to survivors who reported being comfortable with their incomes, those who reported not being able to make ends meet had higher odds of CSDS at Year 2 (OR: 4.6 95% CI: 2.4-8.6) in unadjusted analyses and in the final fully adjusted model (OR: 2.2 95% CI: 1.1-4.5).
Conclusions: Lower household income and worse perceived adequacy of income were associated with CSDS among breast-cancer survivors. The role of perceived adequacy of income as well as the potential mediating roles of social support and perceived stress deserve greater attention in the literature.

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B-032

ATTACHMENT STYLE AND SOCIAL SUPPORT PREDICT EMOTIONAL FUNCTIONING AND QUALITY OF LIFE IN BLADDER CANCER SURVIVORS

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Introduction: Relationships between attachment styles and health outcomes such as self-care, adherence, mortality have been examined in chronic illness. There is no known study examining attachment theory in bladder cancer survivors and its relationship with health-related quality of life (HRQOL). Predictors of general HRQOL and emotional functioning were examined.
Methods: Participants (N=77) recruited from a large Veterans hospital completed self-report measures of general HRQOL and emotional functioning (EORTC QLQ-C30), urinary symptoms (EORTC BLS-24), attachment (Relationship Questionnaire), and social support (REACH composite measure). We fit a series of regression equations based on hypothesized main effects between attachment model of self, social support, and urinary symptoms and a meditational relationship between model of self and social support.
Results: A positive model of self was positively related to general HRQOL and emotional functioning. More specifically, total social support and satisfaction with social support scores were positive predictors of emotional functioning, whereas higher scores on negative social interactions were related to lower emotional functioning. Of particular interest, a positive model of self appeared to mitigate the impact of greater urinary symptoms on general HRQOL. The hypothesized meditational model was not supported.
Conclusions: A positive model of self may improve emotional functioning and reduce the impact of disease-specific symptoms to enhance general HRQOL. Attachment theory can suggest intervention strategies for improving HRQOL for bladder cancer survivors and identify patients who may need additional psychosocial support.
Keywords: Cancer survivorship, Attachment, Quality of life, Emotional functioning.

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B-033

VALIDATION OF A PROBLEM-BASED BIOPSYCHOSOCIAL SCREENING INSTRUMENT FOR USE IN THE COMMUNITY

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Objective: To adapt and validate an existing problem-related distress screening tool for cancer survivors that can be disseminated into diverse community settings.
Methods: A 53-item screening tool developed at the City of Hope Comprehensive Cancer Center was administered to 350 participants with mixed cancer diagnoses at ten sites nationwide. The survey included the Center for Epidemiologic Studies Depression Scale (CES-D), the Patient Health Questionnaire-2 (PHQ-2), and the Functional Assessment of Chronic Illness Therapy - Spirituality expanded scale (FACIT-Sp).
Results: Based on the percentage of people who marked$\geq$3 (moderate, severe, or very severe) for a problem, the five most common causes of distress were fatigue (49%), sleeping (43%), worry about the future (39%), finances (37%), and side-effects of treatments (34%). The five most common problems for which participants requested assistance, either written or to talk with a team member, were managing my emotions (49%), worry about the future (46%), sleeping (44%), feeling down or depressed (43%), and feeling anxious or fearful (42%). Using statistical and theoretical criteria, 19 items were dropped from the screening tool, 6 items revised and 2 items added comprising a 36-item community version. Using results from factor analysis, 6 items comprised a depression scale which correlated strongly with the CES-D score for depression ($R=0.72$, $p<0.001$, $n=343$) and the PHQ-2 ($R=0.64$, $p<0.001$, $n=332$). The single item “finding meaning or purpose in life” correlated strongly with spirituality as measured using the FACIT-Sp ($r=0.55$, $p<0.001$) and with the meaning subscale ($r=0.63$, $p<0.001$). Surprisingly, “spiritual or religious concerns” did not correlate as highly with spirituality ($r=0.30$).
Conclusions: Next steps are to further validate the 36-item community version of the screening tool and implement and disseminate the screening program across a diverse community network.

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B-035

BELIEFS IN FALSE SYMPTOMS IN HYPERTENSIVE PATIENTS: THEIR NEGATIVE INFLUENCE IN ADHERENCE TO TREATMENT

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Arterial hypertension has been considered as an asymptomatic disease. Notwithstanding, several studies have pointed out that hypertensive patients could present beliefs in the form of false symptoms that they use as predictors of their blood pressure level (BPL). The falseness of these beliefs is confirmed by the lack of relation between their presence, and actual BPL. The goal of the present study is to resolve if these false symptoms could be actually regulating the adherence to medical treatment of the hypertensive patients, inducing them to reduce and/or to increase their medical intake. In a sample of 324 hypertensive patients most of them (67.9%) report beliefs about false symptoms they associate to changes in BLP. Cephalea (55%), dizziness (27.7%), nervousnees (25.5%), rubefaction (12.3%), weakness (5%), tachycardia (4.5%), chest pain (4.5%), eyestrain (2.3%) and nausea/vomit (1.8%) are the most frequent symptoms reported by patients. The relative risk to reduce the medical intake is about 1.739 in those patients who not report false beliefs, and 3.309 in those patients who present beliefs in false symptoms. So, the presence or absence of false symptoms must be considered as a variable that may affect the adherence of patients to medical treatment.

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B-036

TRAIT TYPE D COMPONENTS PREDICTING POST-CABG PSYCHOPHYSIOLOGIC OUTCOMES

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The two specific domains of Type D personality, social inhibition and negative affectivity, have been considered significant risk factors for poorer physical prognosis in individuals following Coronary Artery Bypass Graft (CABG) in recent literature. We investigated the impact of the Type D personality features using measures of physical and psychological functioning in Caucasian patients undergoing CABG (N=75; 82.7% male; age 35 - 70 (M=57.64)). Heart rate variability (HRV) and depression measures (Center for Epidemiologic Studies Depression Scale (CESD)) were collected prior to surgery and at five intervals up to 6 months post-CABG. Trait measures were collected prior to surgery. High frequency spectral power (HF-HRV), a frequency domain measure of HRV, has been shown to be a reliable measure of vagal tone and autonomic regulation via parasympathetic activity. Thus, the HF power band is indicative of cardiovascular health. It was hypothesized that the interaction of Neuroticism and Extraversion scores on the NEO Five Factor Inventory (NEO-FFI) would significantly predict poorer HF-HRV following surgery. A hierarchical linear regression analysis indicated that an interaction between the previously defined Type D personality components accounted for significant variance in participant HF-HRV following CABG ($p<.05$) when controlling for time domain measures of HRV. In assessing psychological functioning post-CABG, Neuroticism significantly predicted higher participant CESD score ($p<.01$) when controlling for years of education. Our findings provide preliminary evidence that an incremental amount of the variance in vagal tone is accounted for by Type D traits beyond that of traditionally used time domain measures of HRV suggesting the importance of evaluating Type D traits and both time and frequency domain measures of HRV in CABG patients to target additional psychological interventions. Additionally, these results support a multitude of prior evidence demonstrating the association between trait negative affectivity and depression.

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B-037

FEASIBILITY OF A MINDFULNESS-BASED INTERVENTION FOR TREATMENT OF ANXIETY IN PATIENTS WITH IMPLANTABLE CARDIOVERTER DEFIBRILLATORS (ICD)

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Background: Meditation has been linked with a reduction in the activity of the adrenergic system that may benefit patients with severe cardiac arrhythmias. This report describes the design, feasibility, and treatment fidelity of a pilot randomized trial evaluating the effect of a phone-delivered, mindfulness based intervention on anxiety in ICD patients.

Methods: Clinically stable outpatients with recent shocks or who underwent ICD surgery at the UMass Memorial Medical Center in Worcester, MA were randomized to a mindfulness-based intervention (MBI) or to usual care (UC) after providing informed consent. The intervention, based on the Mindfulness Based Stress Reduction (MBSR) program and adapted to the needs of ICD patients, involved 8 individual phone sessions (30 minutes each), and practice with the aid of a CD. Sessions were tape-recorded (10% randomly reviewed). Assessments were completed at baseline and post-intervention.

Results: From 5/2009 to 6/2010, 321 patients were screened: 35.3% were ineligible and 56.7% declined. 31 patients (age range: 46-78) were enrolled (16 UC, 15 MBI). Participants were male (70%), White (90%), married (70%); 60% had less than a college degree. Mean ejection fraction was 0.31. 76.7% received an ICD for primary prevention; median time from implantation was 1.4 months. Retention was 90%. Attendance in completers was 97.9%. Engagement (scale: 0-10) was 8.74±1.27. Instructors covered 97.5% of the planned objectives and delivered the intervention as intended 95% of the time. 83.3% of patients reported that the intervention had been “somewhat” to “extremely” helpful and 75% that it had moderate to great impact on their well-being. There were no side effects. The cost was $225 per patient.

Conclusions: Phone delivery is a feasible alternative to MBSR classes for ICD outpatients, with low attrition, high adherence and limited costs. The intervention is safe and acceptable and can be successfully delivered by experienced instructors.

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B-038

HEART SMART: A STRATEGY FOR ASSESSING AND PROMOTING CARDIOVASCULAR HEALTH IN DIVERSE GROUPS

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As cardiovascular health remains a significant public health concern for Americans of diverse ages and backgrounds, innovative Behavioral Medicine approaches need to be implemented to engage the public in 1) learning about the association between behavior and cardiovascular health and strategies to improve health and 2) participating in health research. *Heart Smart* is an interactive science museum exhibit addressing the role of behavior in cardiovascular health by emphasizing nutrition, physical activity, and stress management. *Heart Smart* educates the public by inviting visitors to take personal measurements (height, weight, waist size, blood pressure, and self-reported habits) using the exhibit’s interactives. Visitors receive personalized feedback on their measurements, and, after consenting, can anonymously contribute their information to a research database. The exhibit reaches a wide audience, and is a vehicle to study health disparities in Black, Hispanic, and White Americans. During the 5-month period ending 9/1/10, approximately 80% of visitors (n=13,026), 6-90 yrs old (55% female; 14.9% Black; 49.5% Hispanic; 35.6% White), consented to contribute personal data. With few exceptions, group comparisons favored Whites across gender and age cohorts. For example, relative to Black and Hispanic women, White women spent less time watching television and were more aerobically active ($ps<.05$). Relatedly, the BMI of White women was significantly less than Hispanic and Black women (25.2, 26.2, and 27.5 kg/m^2, respectively, $ps<.05$).

The *Heart Smart* findings underscore the need for aggressive prevention efforts directed at communities with disadvantaged minority groups. Targeted and tailored strategies that personalize the value of adopting a healthy lifestyle would address a critical public health concern by preventing, delaying onset, and/or decreasing severity of cardiovascular disease and comorbidities in those at risk.

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B-039

DEVELOPMENT OF A COMPREHENSIVE HEART DISEASE KNOWLEDGE QUESTIONNAIRE

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After a review and critique of the existing literature, a questionnaire addressing five central domains of heart disease knowledge was constructed. In Phase I of its development, 606 undergraduate students completed the 82-item, true/false questionnaire. In Phase II, 248 undergraduate students completed a revised 74-item, true/false scale. In both phases, item clarity and difficulty were evaluated, along with the overall factor structure of the scale. Exploratory and confirmatory factor analyses were used to pare down the scale to 30 items with fit statistics, CFI=.82, TLI=.88, and RMSEA=.03. Scores were positively, though moderately correlated with an existing scale (Suminski et al., 1999) and a measure of health literacy (Chew, Bradley, & Boyko, 2004), thereby establishing divergent validity. Participants were often inaccurate in their judgments of their heart disease knowledge, further demonstrating the need for such an instrument. The finalized 30-item questionnaire is a concise, yet discriminating that reliably measures participants’ heart disease knowledge levels.

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B-040

YOUNG AFRICAN-AMERICAN MEN WITH PRIOR KNOWLEDGE OF ELEVATED BLOOD PRESSURE HAVE INCREASED BLOOD PRESSURE AWARENESS

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Young African-American men are at risk for developing elevated blood pressure which can lead to early onset hypertension (HTN). As a step toward tailoring interventions to prevent HTN for these young men, we surveyed a sample of African-American men (15-22 years, n=106) which included high school athletes (n=27) and non-athletes (n=13), college athletes (n=16) and non-athletes (n=26), and non-students (n=24). Participants were asked about their HTN awareness (past BP screenings, understanding of BP measures, and HTN family history). BP was assessed and elevated BP was found in all groups; 37 (34.9%) were classified as Normal BP (SBP$<$120 & DBP$<$80), 39 (36.8%) as Low Pre-HTN (SBP$\geq$120 or $<$130 SBP or DBP$\geq$80 or $<$85), 19 (17.9%) as High Pre-HTN (SBP$\geq$130 or $<$139 SBP or DBP$\geq$85 or $<$89), and 11 (10.4%) as HTN (SBP$\geq$140 or DBP$\geq$90). Few differences in BP awareness were found across groups. However, past BP screenings were related to awareness; 12 participants had previously been told they had elevated BP, and 11 of these had elevated BP at the time of the study. One was currently being treated; the remainder had not modified their lifestyle. All had greater BP awareness than those not aware of their BP risk. This group of 12 could explain BP readings and recall their own recent BP results; they knew more people with HTN and were aware of their grandparents’ HTN history. These findings point to the need to conduct BP screenings for young African-American men in a wide range of settings. The results also suggest that the Health Belief Model may be a suitable theoretical framework for the design of future interventions for young African-American men with elevated BP. That is by first increasing perceived HTN susceptibility through an initial BP screening, a tailored intervention for those with elevated BP can follow to focus on the benefits of lowering HTN risk and address barriers to and promote self-efficacy for BP self-management, i.e., regular monitoring and healthful eating and exercise patterns.

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B-041

IMPACT OF TYPE D PERSONALITY AMONG CARDIAC AND NON-CARDIAC INDIVIDUALS

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Objective: Type D personality has been established as a risk factor among cardiac patients. There have been some findings about the negative impact of Type D personality among non-cardiac individuals as well. It is not clear if Type D personality is a general risk factor or unique to heart disease. Therefore, this study sought to explore differences in implications of Type D personality among cardiac and non-cardiac populations.

Method: 254 individuals (137 cardiac patients and 108 non-cardiac individuals) were recruited from a various settings in NYC, which included a hospital, a private physician outpatient practice, and an online survey to the general population. Average age was 49.6 (SD=16.2) and 60.8% of the sample was female. Participants were ethnically and racially diverse with 46.9% identifying as Black/African American, 36.3% as White, 12.7% as Hispanic, and 4.1% as other. The Center for Epidemiologic Studies-Depression scale (CES-D) and DS14 were used to assess depression and Type D personality, respectively. The outcome variable was disease status (cardiac disease vs. non-cardiac).

Results: Prevalence of Type D personality among the overall sample was 29.4%. Correlation between Type D and depression was 0.31 (p<.01). A hierarchical logistic regression was conducted. In the first block, all the demographic and confounding variables were entered. Age and BMI were independently associated with having a cardiac diagnosis [Odds Ratio (OR)=1.13; 95% Confidence Interval (CI)=1.08 - 1.19; OR=1.12, 95% CI=1.04 - 1.20, respectively]. In the second block, depression was entered into the model and did not show a significant association with cardiovascular disease (p>.05). In the last block, Type D personality was entered and was found to be a significant predictor of a cardiac diagnosis (OR=4.79; CI=1.5 - 15.19).

Conclusion: Findings demonstrated that individuals with Type D personality are more likely to have a cardiac diagnosis. Type D personality was also found to be a different construct from depression. It may be beneficial to screen for Type D personality in clinical practice.

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B-043

ADHERENCE TO DIABETES MELLITUS MEDICATION IN A LATINO POPULATION

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This study uses baseline data from an RCT that is investigating medication adherence in a Latino population in Imperial County, CA, as part of the international Peers for Progress network.

Patients are randomly sampled, invited to participate and if eligible, asked to sign a consent form. Eligibility criteria include being diagnosed with Type I or Type II Diabetes Mellitus (DM) and having uncontrolled HBA1c (>7). Interested patients complete a baseline interview with trained staff.

Adherence is assessed via self-report using the four-item Morisky Medication Adherence Scale (adherence is all scores =0). Health literacy is assessed using the short 3-item Health literacy scale (α=0.52). Personal actions in disease management are assessed using the 3-item subscale of the Chronic Illness Resource Scale (α=0.82).

To date 152 participants have been recruited (45% of target). The mean age of patients is 56 (SD=12.09), the majority are non-US born (68%), married (56%), unemployed (74%), females (66%) and have less than high school education (59%). Almost half (49%) of the participants were unsure which DM type they had, while 47% have a Type II DM diagnosis. The adherence rate was 41%.

Bivariate analyses showed adherence is significantly related to personal actions (r=−0.19), health literacy (r=−0.20), and education. For every one point decrease in (a) health literacy, the odds of non-adherence increase by a factor of 1.84 (95% CI (1.10 - 3.10)), (b) personal actions, the odds of non-adherence increase by a factor of 1.52 (95% CI (1.10 - 2.12)). Patients with a high school education or greater are 2.74 times (95% CI (1.13 - 6.70)) more likely be non-adherers as compared to those with a less than high school education.

More highly educated patients may be deciding to discontinue medications. Future analyses may offer possible explanations for the relationship between these variables and adherence.

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B-044

VALIDATING SELF-REPORTED MEDICATION ADHERENCE IN TYPE 2 DIABETES

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Aim: To assess the validity of self-report measures of diabetes medication adherence.

Methods: Adults with type 2 diabetes were screened for an intervention study for treatment nonadherence and depression. Self-ratings, previously validated in HIV/AIDS, used both qualitative (very poor-excellent) and percentage-based (0-100%) response scales to assess diabetes medication adherence in the prior week. The Summary of Diabetes Self-Care Activities (SDSCA) also assessed prior-week adherence. Depressed patients with HbA1c>7.0 also received Medication Event Monitoring System (MEMS) caps, the primary indicator of validity, to record actual adherence over the following week. HbA1c, a more distal indicator of validity, indicated baseline glycemic control.

Results: Participants (N=146, 53% female, 82% white, mean age=55, SD=10) had a mean HbA1c of 8.2% (SD=1.6) and an average of 14 years (SD=3) of education. The majority (60%) qualified for Major Depressive Disorder. Qualitative adherence ratings (r=-.16, p=.06), percentage ratings (r=-.18, p=.03) and SDSCA items (r=-.15, p =.09; r=-.14, p=.14) were associated with lower HbA1c. Effect sizes for correlations (N=80) between qualitative ratings (r=.35, p<.001), percentage ratings (r=.56, p <.001), SDSCA items (r=.43, p<.001; r=.47, p<.001) and MEMS adherence were medium to large. MEMS adherence was also associated with HbA1c (r=-.31, p =.005). Discrepancies (on a 100-pt scale) between MEMS and self-reported adherence were greatest for qualitative ratings (M=10.59, SD=31.55) and smallest for percentage ratings (M=−1.16; SD=23.33). Neither depression severity nor years of education were significantly associated with these discrepancies.

Conclusions: Our results support the validity of simple, easily administered items to assess diabetes medication adherence and suggest that these measures are robustly associated with objectively measured adherence and modestly related to glycemic control.

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B-045

PARTICIPANT RECRUITMENT AND RETENTION IN AN AUTOMATED TELEPHONE INTERVENTION TO ENHANCE EXERCISE ADOPTION IN VETERANS WITH TYPE 2 DIABETES

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Recruitment for medical patients for clinical trials focused on lifestyle changes can be extremely challenging; participants must meet medical inclusion criteria and be willing to engage in a behavioral intervention. Retaining participants can also be difficult, as medical events and difficulties returning to lifestyle management training following medical events can negatively affect retention. Telephone-Linked Care - Promoting Exercise for Diabetes (TLC-PED) is an interactive voice response and speech recognition intervention that provides automated, motivational telephone messages to enhance exercise adoption. A randomized controlled trial is underway to test its efficacy in sedentary veterans with Type 2 diabetes. Given the innovative nature of the intervention, the 1-year length of the study, and the health status of participants, recruitment and retention were major concerns for investigators. Regarding recruitment, the primary method involved mailing letters with a study description to veterans with elevated HbA1c. Veterans could: 1) return a postcard stating interest or disinterest, 2) call the number provided, or 3) wait to be called by study staff. Of the total number contacted by mail (N=1808), approximately 12% (N=208) expressed interest in being screened. Regarding retention, preliminary reports have been encouraging: of 53 randomized participants, only 2 have dropped out to date, despite 18 medical adverse events since the start of the study. Although retention has been excellent, the high rate of medical adverse events has impacted participants' ability to engage in exercise or exercise testing at their follow-up assessments. These issues need to be taken into account when designing and implementing exercise studies involving populations with significant medical diagnoses. Interventions that keep participants engaged during periods of medical instability may have a significant impact on the efficacy of exercise interventions designed for medically compromised populations. Methods to enhance recruitment and retention of participants will be discussed in this presentation.

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B-046

AFROCENTRIC CULTURAL VALUES AND BELIEFS: MOVEMENT BEYOND THE RACE AND ETHNICITY PROXY TO UNDERSTAND VIEWS OF DIABETES

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Illness representations are influenced by culture. Race and ethnicity as a proxy for culture provides an incomplete understanding of the mechanism by which cultural values influence representations of diabetes. Hospitalized adults(N=91)with type 2 diabetes were surveyed about their level of agreement with Afrocentric cultural characteristics using Jones' (2003) TRIOS (temporality, rhythm, improvisation, orality, and spirituality) measure and their illness perceptions (causes, identity, controllability, consequences, emotions)of diabetes. The TRIOS measure was adapted to the context of diabetes care and demonstrated validity in African American/Black subjects but not other ethnicity/racial groups. The TRIOS measure adapted to diabetes care explained variance in illness representations of diabetes (F(1,35)=5.4, p=.02, while African American ethnicity/Black race was not able to explain variance in illness representations (F (2,79)=.33, p=.72). Spirituality was able to explain 10% variance in illness representations weakly (B=.32, CI=-.002-1.0), yet significantly (F(1,36)=4.1, p=.05). The other subscales did not uniquely explain any variance in illness representations. Clinicians would benefit from considering the degree to which a patient identifies with particular cultural characteristics when tailoring health threat communication interventions or when attempting to understand illness perceptions.

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B-047

EMOTIONAL AND COGNITIVE MODELS OF DIABETES DEPEND ON FAMILY HISTORY: ASSOCIATIONS WITH SELF-CARE BEHAVIOR

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Illness representations are shaped by personal experience, views of family, friends, and healthcare providers and are shown to be associated with self-care adherence. We tested the hypothesis that perceptions of diabetes differ depending upon self-reported family history of diabetes. Surveys assessing illness representation were administered by mail to adults with type 2 diabetes who attended diabetes education programs in a Northern Metropolitan East Coast location. Perceptions of diabetes were significantly different between those who remember a family member having diabetes and those who do not. Components of the commonsense model that differ in this sample were personal control (p=.001) treatment control (p=.001), emotional representations (p=.048), and illness coherence (understanding) (p=.043). Those without a family history had a higher understanding of their diabetes. Those with a family history of diabetes had higher perceptions of personal and treatment control, and yet higher emotional reaction scores. Exploring commonsense models of diabetes during education sessions may help identify perceptions that may be shaped by the experiences of family members.

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B-048

OLDER ADULTS' TREATMENT PREFERENCES FOR TYPE 2 DIABETES CARE

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Diabetes treatment can involve subjective tradeoffs between quality of life and disease progression. Patients with similar clinical characteristics - age, diabetes duration - may differ in their willingness to accept treatment recommendations. Thus, exploring diabetes treatment preferences is a logical first step in developing realistic and attainable treatment goals. The purpose of this study was to identify older adults' preferences in the treatment of type 2 diabetes. Ninety-one older adults (95% White, 51% female, 71±7 years old, 78%≥high school education, 12±7 years with diabetes, A1c=7.0%±1.0%) completed a telephone survey on preferences for diabetes care. Older adults also completed questions on physical functioning, self-reported health, and diabetes attitudes. For these participating older adults, "maintaining current health" (33%) and "doing whatever it take to prevent complications" (27%) were the most important treatment preferences. The most important interpersonal or doctor-patient preference was "having good communication with your doctor" (49%) and the most important practice preference was "receiving affordable care" (42%). When asked if their doctor or nurse inquired about their preferences for care, 43% of older adults reported almost never or generally no. In sum, healthcare providers may not always discuss preferences with their patients; however, our findings provide reason for providers to consider older adults' preferences in the treatment of type 2 diabetes. When developing treatment prescriptions and recommendations, providers should assess the impact treatment will likely have on older adults' health while explicitly acknowledging their preferences for care. Longitudinal research with a larger, more heterogeneous sample should examine older adults' treatment preferences and their impact on self-care and glycemic control.

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B-049

"I'M MY OWN WORST ENEMY:" SELF AS A BARRIER IN DIABETES MANAGEMENT

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Successful diabetes self-care requires that patients understand the short-term and long-term benefits of treatment recommendations and carry out required self-care behaviors. Multiple factors impede self-care, including inaccurate perceptions of self-care recommendations, lack of understanding of how to implement or interpret the advice, ineffective coping styles, depression, diabetes-related emotional distress, and negative treatment attitudes. The purpose of this ongoing study was to explore patients' explanations for their difficulties integrating self-care into their lifestyles. A purposive sample of 33 type 1 and type 2 diabetes patients (91% White, 52% male, 61+10 years old, 16+2 years of education, 42% with type 1 diabetes, 24+16 years with diabetes, A1c=8.0+1.2%, BMI=29+6) participated in semi-structured interviews. Five researchers independently coded the transcribed interviews, met to resolve discrepancies, and agreed on common themes. "Self as a barrier" emerged as a prominent theme. Patients frequently acknowledged that they got in the way of their own self-care, citing lack of discipline, laziness, and impatience as reasons. Some patients also described feeling resistant to following their self-care regimen; these patients recognized the importance of the self-care regimen but felt that a strict routine was against their nature/personality. Further, other patients stated that they did not perform self-care behaviors because they did not experience any repercussions from not following their self-care regimen. Our findings suggest patients used self-blaming terms to describe reasons for their lack of self-care instead of addressing the underlying problem. Further, patients may have assigned lower priority to their diabetes self-care because they did not yet experience serious symptoms or diabetes complications. Quantitative research needs to confirm these hypotheses and their impact on self-care.

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B-050

DIABETES-SPECIFIC FAMILY CONFLICT, ADHERENCE AND GLYCEMIC CONTROL IN YOUTH WITH TYPE 1 DIABETES

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Current treatment of pediatric type 1 diabetes (T1D) requires family teamwork to maintain adherence and optimize glycemic control (A1c). Diabetes-specific family conflict may arise from the complexities of management involving blood glucose monitoring (BGM), insulin administration, meal planning and exercise. To assess the relationship of diabetes-specific conflict, adherence and A1c, we studied youth (n=287, 49% female) with T1D, aged 8-18 years (mean±SD; 13.4±2.9) with T1D duration≥1 year (6.4±3.4). Parents completed the Diabetes Family Conflict Scale (DFCS; higher score=greater conflict) and the Diabetes Management Questionnaire (DMQ; higher score=greater adherence). Metrics of adherence included daily BGM frequency, DMQ score and report of insulin omission. Youth performed BGM 5.3±2.2 times/day and 65% used pump therapy; mean A1c was 8.6±1.4%. Increased conflict was associated with less frequent BGM (r=−0.25, p<0.0001), lower DMQ score (r=−0.33, p<0.0001) and absence of insulin omission (p=0.01). Higher A1c was associated with older age (r=0.22, p<0.0001), higher daily insulin dose (r=.29, p<0.0001), pump use (8.2% vs. 9.2%, p=0.001), insulin omission (8.2% vs. 8.8%, p<0.0001), higher DFCS (r=0.34, p<0.0001), less frequent BGM (r=−0.50, p<0.0001) and lower DMQ score (r=−0.40, p<0.0001). In a significant multiple linear regression model (R2=0.38, p<0.0001) adjusting for these covariates, diabetes-specific conflict remained significantly associated with A1c (p=0.003). Insulin pump use, lower daily insulin dose, more frequent BGM, higher DMQ score, and absence of insulin omission remained significant, independent correlates of lower A1c. Diabetes-specific conflict appears to negatively impact A1c independent of adherence, perhaps related to physiologic stress. Interventions aimed at reducing diabetes-specific conflict may help to improve glycemic control in youth with T1D.

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B-051

THE ASSOCIATION OF DEMOGRAPHIC, CLINICAL, PSYCHOSOCIAL, AND FAMILY FACTORS WITH RESILIENCE IN ADOLESCENTS WITH TYPE 1 DIABETES

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Resilience is defined as an individual's capacity to maintain psychological and physical well-being in the face of adversity. This pilot study was designed to examine the personal factors associated with resilience in adolescents with type 1 diabetes (T1D). Fifty participants were seen at Seattle Children's Hospital for a research visit (mean age=15.6±1.7; diabetes duration=5.8±3.6 yrs; 50% female; 96% NHW; mean HbA1c=8.6±1.4). Adolescents/caregivers completed a survey battery of demographic, psychosocial, and family variables. Chart review was completed for clinical variables. Resilience was assessed by a factor score of optimism, self-esteem, self-efficacy, and self-mastery. No demographic variables (i.e., age, sex, duration, race, insurance) associated with the resilience factor. Of the clinical variables, lower depression (r=-.48, p<.01) and higher diabetes knowledge (r=.55, p<.001) were associated with higher resilience, but self-care, current HbA1c, # of comorbidities/adverse events were not. Psychosocial variables were associated with higher resilience scores, including anger (less trait anger: r=-.31, p<.05; more anger-control: r=.53, p<.001), lower distress (r=-.37, p<.01), and higher quality of life (general: r=.62, p<.001; diabetes-specific: r=.47, p<.01). Family variables, including lower parental anxiety surrounding medical care (r=-.39, p<.01), and more parental diabetes responsibility (r=.30, p<.05) were associated with higher resilience, but family conflict was not. Person-focused analysis with categorized low, moderate, and high resilience groups (based on a tertile cutpoints) yielded similar results in one-way multivariate analyses of variance. These results reveal a profile of attributes that are associated with resilience in T1D youth. Low resilience may be a particularly relevant factor in patients who are struggling in psychosocial areas. Interventions to improve resilience are needed, and these results may be helpful in informing their development.

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B-052

SOCIAL SUPPORT, PARENTING STRESS AND QUALITY OF LIFE IN MOTHERS OF YOUNG CHILDREN WITH TYPE 1 DIABETES

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In addition to normative challenges of parenting, mothers of young children with type 1 diabetes (T1D) typically assume primary responsibility for daily management of a complex T1D regimen. Research suggests that parents of older children with chronic illness perceive lower levels of social support, higher parenting stress, and decreased quality of life (QOL) as compared to parents of healthy children. Thus, it was hypothesized that lower perceived social support among mothers of young children with T1D would be associated with greater pediatric parenting stress and decreased diabetes-related QOL. As part of an ongoing RCT, 82 mothers (M age=36.78, SD=4.85; 80.5% Caucasian; 80.5% married) completed baseline questionnaires concerning social support (MSPSS), pediatric parenting stress (PIP), and parents' diabetes-related QOL (PDQOL). Children were ages 2-6 years (M=5.63, SD=1.16) and diagnosed with T1D for at least 6 months (illness duration M=2.29 years, SD=1.40). In the current sample, mothers reported levels of social support similar to the normative population (p>.05). Married mothers and mothers with fewer children in the home perceived more social support. Controlling for marital status and number of children, decreased perceived social support was associated with greater difficulty with pediatric parenting stress [F(3,77)=6.13, p<.01, R2=.19] and decreased diabetes-related QOL [F(3,77)=6.67 p<.001, R2=.21]. Like parents of older children, mothers of young children with T1D with lower levels of perceived social support reported greater difficulty with parenting stress and lower diabetes-related QOL. Prior research indicates that increased social support from other adults, including spouse, friends, and/or family, may also lead to more positive parenting. Assessing mothers' levels of social support and providing strategies to increase diabetes-related support may reduce potential negative mental health outcomes for parents and improve QOL.

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B-054

BARRIERS TO INITIATING BEHAVIOR CHANGE: PERCEPTIONS OF THIRD YEAR MEDICAL STUDENTS PARTICIPATING IN A FAMILY MEDICINE CLERKSHIP

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Despite the significant roles of health behaviors (e.g., tobacco cessation, overeating, physical inactivity) in the development of chronic disease, physicians often do not discuss these behaviors with patients. Time limitations and lack of confidence to affect behavior change are primary reasons physicians do not engage in behavior change counseling more frequently. The Institute of Medicine has emphasized the need to teach principles of behavior change. It is unknown what barriers medical students perceive to using behavior change counseling techniques. Over the course of two academic years, 325 third year students enrolled in a six week family medicine clerkship participated in a health behavior change curriculum that blended a 1.25 hour classroom interactive experience with online distributed learning materials (i.e., text, images, and media). Before attending the classroom experience, students were asked to discuss on an online discussion board what they believed were barriers or difficulties that they anticipated encountering when trying to use motivational enhancement techniques. The responses were categorized as environmental barriers, patient barriers, or student/provider barriers and the frequency of responses were calculated. The most frequently identified environmental barriers include time constraints and lack of continuity of care. The patient's resistance to change was the most common patient barrier. Students cited their lack of experience, student status, desire to be directive, and their negative emotional responses and negative thoughts about the patients as frequent barriers to using these techniques. These findings suggest that beyond teaching the skills of initiating behavior change to medical students, it is also important to address how to adapt these skills for time limited appointments and how to manage emotional responses to patients who struggle with behavior change.

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B-056

INTERVENTION EFFECT ON HIV MEDICATION ADHERENCE OVER TIME

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Medication adherence in patients with HIV continues to be less than optimal. Good medication adherence is important for suppressing or maintaining a suppressed viral load, decreasing mutations, and decreasing morbidity and mortality. This study examined the effect of a nurse delivered intervention on anti-retroviral medication adherence over time in patients with HIV.

Using data from 3 time points in a randomized controlled trial (R01-NR04749) we used a mixed model approach for repeated measures to compare all differences among pairs for group and time effects. Measures included the Morisky Self Report Medication Adherence Scale (SRA), electronic monitors (EEM) (days, doses, and interval adherence), and a demographic tool.

The sample of 335 participants was randomized into three equal groups: usual care, individualized intervention, and structured intervention. The sample was 69% male, 55% African American, 80% unemployed, and had a mean age of 44 years. There were significant group by time effects for SRA (F=2.90, p=.022). There was also a significant group by time effect for EEM interval adherence (F=4.76, p=.001). Additionally, there were time effects for EEM dose adherence (F=22.68, p<.0001) and EEM days adherence (F=13.76, p<.0001) plus a group effect for EEM days adherence (F=3.51, p=.032).

These findings suggest weekly individualized intervention improves interval adherence, however as frequency tapers adherence decreases. Measurement in adherence studies continue to be problematic because self reported adherence is subjective and potentially biased, while electronic monitors, which are objective, may not be used correctly by participants.

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B-057

EXQUISITE VOICES: MEN AND WOMEN OF COLOR LIVING WITH HIV/AIDS IN VERMONT

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Vermont is considered a low prevalence state with regard to HIV infection. While merely 3% of the state's population is from under-represented groups, 15% of individuals living with HIV/AIDS in Vermont self-identify as Black, Latino, Pacific East Islander, Native American or Bi-Racial. The current study is part of a larger NIMH funded project that is examining coping with HIV/AIDS stigma in rural New England. Few, if any studies have documented the experiences of people of color living with HIV/AIDS in their own words. This paper will discuss the stories of men and women of color living with HIV/AIDS in rural New England. Forty-two face to face interviews were conducted with men and women of color with HIV/AIDS employing a 56-item semi-structured measure developed for the larger study. Questions were designed to gather information on self-perceptions, HIV/AIDS knowledge, HIV/AIDS disclosure, difficult aspects of living with HIV/AIDS, social support, difficult aspects of being a person of color living with HIV/AIDS in rural New England, etc. Data were analyzed utilizing Atlas.ti, a qualitative software program. For example, 62% of respondents described themselves utilizing positive attributes, only secondarily referring to their serostatus as an important attribute; 68% reported hiding or masking their serostatus primarily through non-disclosure; 56% of respondents reported that the most difficult aspect of living with HIV/AIDS is establishing and maintaining relationships. Data collected and analyzed present a rare opportunity to document the experience of people of color with HIV/AIDS in their own words.

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B-058

IMPACT OF A SAFER SEX VIDEO GAME FOR YOUNG AFRICAN-AMERICAN HETEROSEXUAL MEN IN THE U.S. ON SAFER SEX INTENTIONS

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Poor, urban African-American men with low education remain at high risk of HIV transmission, but are difficult to engage in interventions. An innovative approach is to attempt to engage them with safer sex messages imbedded in a fun video game, given that the majority of young African-American men play video games. Our team developed and tested the efficacy of a safer sex video game - Nightlife - in changing HIV-related behaviors. Game development drew on social cognitive theory, attention and information processing theory, the theory of planned behavior, and the information, motivation, behavioral skills model, and extensive formative research over 3 years.

Method: The game was tested in a national randomized control trial with African-American men age 18-30 years old recruited from online panels, N=143. Men completed a baseline, immediate posttest (reported here), and 3 month delayed posttest, and were randomly assigned play to either Nightlife or a control game.

Results: Controlling for prior behavior, playing Nightlife increased intentions in the next 3 months to get tested (b=.16, p=.05) and use condoms with on-going partners until testing negative (b=.19, p=.02). Nightlife decreased intentions to not use condoms during vaginal sex (B=-.22, p<.01). Among those who played the oral sex sequences, the game increased intentions to have oral sex to reduce risk (B=.22, p=.01). Nightlife did not affect mutual masturbation intentions and condoms use intentions during anal sex.

Conclusions: A safer sex video game can have an impact on safe sex behavior intentions. Interventions may benefit from considering use of video games to reach some groups otherwise hard to affect. The results were limited by the relatively low N and the focus here on behavioral intentions rather than actual behavior.

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B-059

PSYCHOSOCIAL CONCERNS OF OLDER HIV-INFECTED WOMEN

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Background: Due to advances in treatment and subsequent increased life expectancy, HIV infected individuals will face challenges of managing HIV along with developmental milestones of aging. The number of HIV infected women (HIW) over 50 in the U.S. is rising, but little is known about the psychosocial needs unique to this population. The purpose of this study was to identify and explore such challenges.

Method: This is a qualitative study of 19 HIV infected women≥50 years enrolled from a medical center in Boston, MA. Participation involved a one-time, in-depth individual interview of experiences living with HIV as a woman over 50. Transcribed interviews were analyzed using qualitative software (NVivo 8).

Results: Mean age of participants was 58.09 (SD=4.58). 37% were White, 47% Black, 5% Hispanic, and 53% completed≤12 years of education. Mean time since diagnosis was 17.21 (SD=5.59) years, and 90% of women reported current HIV treatment. Themes related to relationships, isolation, and adjustment to HIV emerged. Most participants indicated they were not in a romantic partnership and described HIV-related factors that negatively impacted relationships/sexuality, including persistent concerns around disclosure/rejection, fear of transmission, and dissatisfaction with body image due to HIV treatment. Those infected via heterosexual contact reported feeling like a minority among HIV infected MSM and IDUs. Growing older was described as a conduit to better adjustment to HIV. A subset of women described moving from hopelessness at diagnosis to acceptance/hopefulness for the future with aging, having learned how to better optimize their health over time.

Conclusion: Results may have implications for the care of older HIW, including helping women better negotiate safer sexual activity and engage in medical/behavioral treatments for HIV related body image disturbance. A subset of older HIW seem to develop confidence in managing HIV over time, and may have much to teach providers and younger HIW.

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B-060

THE MODERATING ROLE OF BMI ON THE RELATIONSHIP BETWEEN DEPRESSION AND TRANSMISSION RISK BEHAVIORS AMONG HIV-INFECTED MSM

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There are mixed findings regarding the association between depression and sexual risk behaviors among men who have sex with men (MSM), possibly suggesting the presence of moderator variables in this relationship. One variable that has received limited attention in this area is body mass index (BMI). Given the relative salience of body image within the gay male community, BMI represents one body-related variable that has recently been hypothesized to be related to sexual risk behaviors. Indeed, men who possess an "undesirable" body (i.e., extremely under or overweight) may be less likely to be assertive regarding condom use during sexual contact. Although mixed results have also found between BMI and sexual risk behaviors, some reports have noted significant relationships between these variables. Thus, the present study aimed at exploring BMI as a moderator variable in the relationship between depression and sexual risk behaviors among a sample of HIV-infected MSM. Participants were 433 HIV-infected MSM. Analyses were conducted via hierarchical logistical regression (i.e., a dichotomized variable of unprotected insertive or receptive anal sex present within the past 3 months with HIV-uninfected or unknown status partners: yes vs. no), with demographic variables entered into Step 1. Step 2 and 3 included the main effects of depression and BMI, and their interaction term, respectively. Results revealed a significant main effect of depression (β=.36, z=2.4, p=.015), and interaction (β=-.13, z=2.2, p=.026). Higher levels of depression predicted increased risky sexual behaviors only for men who were underweight (Odds Ratio: 1.25, β=.23, z=2.5, p=.014), or normal weight (Odds Ratio: 1.11, β=.10, z=2.1, p=.039). These findings suggest that psychosocial interventions aimed at addressing the complex relationship between body variables and depression may be effective at reducing transmission risk behaviors among HIV-infected MSM.

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B-061

BRIEF MOTIVATIONAL INTERVIEWING ENHANCES ATTITUDES AND SELF-EFFICACY FOR CONDOM USE IN HIV+ OLDER ADULTS: A RANDOMIZED CONTROLLED TRIAL

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Background: The prevalence of HIV in late middle-age and older adults continues to rise, and it is estimated that 50% of all HIV+ adults in the U.S. will be at least 50 years old by 2014. Interventions that address transmission risk behaviors in this population are desperately needed.
Participants and Procedures: Participants were 100 HIV-positive adults 45+ years of age enrolled in a 3-arm randomized controlled trial (1-session Motivational Interviewing [MI], 4-session MI, no treatment control) that tested the efficacy of telephone-delivered MI to reduce risky sexual practices. Eligible participants reported engaging in one or more occasions of unprotected anal and/or vaginal intercourse in the past 3 months. At baseline, 3 months, and 6 months, participants completed a telephone interview that assessed attitudes about the use of protection, condom use self-efficacy, and intentions to use protection during sex in the next three months.
Results: Generalized estimating equations modeled the longitudinal effects of treatment on participants' attitudes, self-efficacy, and intentions for condom use. Participants in the 4-session MI condition reported greater condom use attitudes and self-efficacy than 1-session participants (p<.05 and p<.10, respectively) and control participants (all p's<.05); however, 1-session participants did not significantly differ from control participants on condom use attitudes or self-efficacy. Intentions to use condoms did not differ by treatment condition.
Conclusions: Brief MI delivered over the telephone can enhance HIV+ older adults' perceptions about safer sex. The efficacy of these interventions should be tested on a larger scale.

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B-062

PREDICTORS OF HIV-RELATED NEUROCOGNITIVE IMPAIRMENT

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Although HIV has increased in the US, survival rates have improved due to the advent of HAART(Kaul,2009). Unfortunately, HAART has limited permeability into the CNS; thus, HIV-related dementia still persists (Ghafouri et al.,2006). The Health Belief Model is used to explain and predict behavior in relation to chronic illness (Glantz, Rimer & Lewis,2002). Our study adds to the existing model by examining supplementary variables,such as stigma, trauma, ethnicity and symptom load; all relevant to disease progression in HIV/AIDS. Previous researchers linked stigma and immune compromise (Leonard,2000), trauma and memory (Brenner et al.,1999), ethnicity and neuropsychological impairment(Tang et al.,2001)and symptom load and CNS alterations(Foltzer, 2005). Therefore, we hypothesized that these predictors would explain a significant portion of the variance in HIV-related neurocognitive impairment. Participants were recruited in the Dallas Metroplex; n=64; 43.8% women; age(μ=47.9,SD=9.0);62.7% African American,26.6% European American,7.6% Latino(a)and 3.1% other. Participants completed demographic and a health history questionnaire, the International HIV Dementia Scale (Sacktor,et al.,2005), the HIV Stigma Scale (Berger, Ferrans & Lashley,2001)and the Trauma History Questionnaire (Green,1996). A binary logistic regression analysis revealed that our predictors explained 45.7% of the variance in HIV-related neurocognitive impairment (χ2(4,n=64)=18.1,p<.01). Interestingly, self-identifying as African-American(B=2.9,OR=18.6;p=.02) and increased symptom load(B=.204,OR=1.2;p=.04) were positively associated with HIV-related neurocognitive impairment. Conversely, trauma history(B=-.23,OR=.80;p=.04)was negatively correlated with neurocognitive impairment,which is contrary to previous research in this field (Brenner et al.,1999). Lastly, HIV-related stigma was a trending predictor of neurocognitive impairment in this sample (B=.04, OR=1.0,p=.06). We hope that our results will contribute to revisions of older health models as well as suggest avenues for prevention and remediation to address those living with HIV/AIDS.

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B-063

STRESS, SOCIAL SUPPORT, HIV STATUS AND DEPRESSION AMONG SEXUAL MINORITY WOMEN OF COLOR

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The chronic stress of an HIV/AIDS diagnosis can be further compounded by minority stress experienced by female sexual and ethnic minorities. This study examined the differences between urban sexual minority women of color with and without HIV on levels of depression, physical symptoms, alcohol use, drug use, stress, and social support within the framework of Meyer's (2003) minority stress model. One hundred and eight-four sexual minority women of color participated. It was found that the HIV subsample reported more physical symptoms, drug use, and satisfaction with social support received than those without HIV. Among HIV+ women, stress was related to alcohol and drug use while social support was negatively related to perceived stress. Both HIV+ and HIV- women report very high levels of depression. Possible contributors to these results are discussed.

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B-064

FORGIVENESS, ATTACHMENT AND PHYSICAL HEALTH QUALITY OF LIFE (PHQOL) IN HIV+ ADULTS

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Positive coping strategies (e.g., forgiveness) may alter the relationship between psychological characteristics such as attachment style and physical health quality of life (PHQOL). The current study identifies the main and interactive effects of attachment style and forgiveness on the PHQOL of HIV+ adults. Participants ($n=288$, 49% women) were recruited in Dallas/Fort Worth and self-identified as African-American(52%), European-American(32%), Latino(a)(12%) and other(4%), with an average age of 41.7 ($SD=8.6$), and average years since diagnosis of 7.6 ($SD=5.4$). Participants completed medical and demographic information, measures assessing attachment anxiety and avoidance, forgiveness of self and others and five PHQOL scales (physical functioning, pain, role functioning, social functioning and health perceptions). Hierarchical multiple regression analyses revealed that fewer HIV-related symptoms and greater self-forgiveness accounted for 32% of the variance in pain ($F(12,225=10.43$, $p<.001$). There was a significant interaction between anxious attachment and forgiveness of others ($t=-2.00$, $p<.05$). For individuals who reported greater attachment anxiety, greater forgiveness of others was associated with poorer PHQOL associated with pain. Younger age, not endorsing a Latino/a, Native American, or Other ethnicity, fewer HIV-related symptoms, and greater self-forgiveness accounted for 26% of the variance in health perceptions ($F(12,221=7.85$, $p<.001$). The interaction between attachment anxiety and self-forgiveness was significant ($t=2.02$, $p<.05$). For individuals who reported greater attachment anxiety, higher self-forgiveness was associated with greater perceptions of health than for those who reported lower self-forgiveness. There were no significant interactions between attachment and forgiveness in the prediction of physical, role, or social functioning, though significant main effects were present. Research has indicated that forgiveness interventions lead to positive health outcomes for most individuals; however, in HIV+ adults, attachment style may play a role in whether forgiveness promotes PHQOL.

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B-066

THE DEVELOPING OF PRIVATE PSYCHOSOMATIC MEDICINE CLINIC IN INDONESIA

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Background: Psychosomatic Medicine (PM) is a new subject in medical specialty field in Indonesia. Before 2008, there was no psychosomatic medicine clinic conducted by psychiatrist. Omni International Hospital opened a psychosomatic medicine service for public conducted by a psychiatrist as a chairman in October 2008. Collaboration with other specialties in the hospital was also performed.
Methods: We collected data from medical admission to know about the amount of visiting patients to Psychosomatic Clinic in the hospital. The amount of visiting patients was counted every month to know about the increasing amount of patient in the clinic. The data collected from January 2009 until December 2009.
Results: The visiting patients who came to Psychosomatic Clinic from January 2009 until December 2009 were 484 patients with average of 40.33patients/month. Three hundreds and forty patients (70.24%) came to the clinic by his/her own will, the rest (29.76%) were came by referral from the referring physician. January 2009 was the minimum amount of the patients (10patients/month) and August 2009 was the maximum amount of the patients (45patients/month). Most of the diagnosis of the patients were generalized anxiety disorder (280 patients, 57.85%). The other diagnosis were panic disorder (102 patients, 21.07%), somatization disorder (50 patients, 10.3%), major depression disorder (46 patients, 9.5%) and schizophrenia and delusion disorder (10 patients, 2.07%).
Conclusion: There was a relatively increasing amount of patient who visited the psychosomatic clinic from month to month. The most frequent underlying diagnosis for psychosomatic symptoms that the patients complain was generalized anxiety disorder.

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B-067

HOW MUCH DOES DEPRESSION REALLY IMPACT PROCESSING SPEED?

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Multiple Sclerosis (MS) is a common chronic inflammatory disease affecting approximately 1 in 1,000 individuals residing in western countries. The disease is characterized by at least two demyelinating events separated by time and anatomical place. Approximately 40-60% of people with MS develop a cognitive impairment throughout the course of the disease. Common cognitive deficits include difficulties in learning and memory, visuo-spatial deficits, disruption in verbal fluency and a disturbance in executive functioning. The most common cognitive deficits are in processing speed, attention and working memory. Many studies have suggested a connection between depression and decreased processing speed. The potential of this relationship could impact how neuropsychological tests are conducted and interpreted. Because both depression and cognitive dysfunction are highly prevalent in MS it is especially important to understand the relationship between these two factors in this population. The relationship between depression (as measured by the BDI-II) and processing speed (as measured by the SDMT) was investigated in a MS clinic outpatient population ($N=79$) using Pearson product-moment correlation coefficient. There was a small, negative correlation between the two variables, $r=-.217$, $n=79$, $p<.05$, with high levels of depression associated with decreased speed of information processing. However, using the coefficient of determination it was found that depression explained only 4.7% of the variance in processing speed scores. Possible confounding factors such as disease severity and age were also examined. No significant correlations were found between age and processing speed or disease severity and depression. Though depression was significantly correlated with a decrease in processing speed, the relationship was weak with only a small amount of variability in processing speed explained by depression. Future research should focus on additional psychosocial and disease variables, which may explain more of the variance in SDMT scores.

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B-068

ALCOHOL BUFFERS STRESS-INDUCED DEPRESSION IN RATS

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Depression and anxiety are the most common mental disorders in the United States and are often comorbid with drug use, including alcohol. There is substantial anecdotal, clinical, and some experimental evidence that environmental factors, especially stress and social environment, affect alcohol self-administration, anxiety, and depression. Stress is associated with increased alcohol consumption. Social enrichment decreases drug self-administration, but there is mixed evidence regarding social enrichment and alcohol intake. Further, stress and alcohol consumption can increase depression and anxiety, whereas a strong social foundation can reduce incidence of these disorders or be beneficial during treatment. However, the relationships among all of these variables lack experimental examination with regard to anxiety and depression and the mechanisms underlying these relationships are not clear. The purpose of this experiment was to examine effects of stress, social environment, and alcohol self-administration on anxiety and depression in male Wistar rats. The experiment was a 2 (alcohol, no alcohol) x 2 (stress, no stress) x 2 (rats housed alone, rats housed in groups of three) full-factorial design with repeated measures. The dependent variables were anxiety-like behavior (decreased time spent in the center of an open field) and depression-like behavior (increased immobility in the forced swim test). Animals housed alone exhibited less anxiety-like behavior than those housed in groups of three. Alcohol consumption acted as an anti-depressant, but only in stressed animals. In non-stressed animals, alcohol acted as a depressant. It seems that the rats (in the alcohol group) may have self-administered alcohol as a way to self-medicate or reduce stress-induced depression. Perhaps alcohol self-administration can be beneficial in combating symptoms of stress-induced depression and as an adjunct in therapy, if used in moderation and under professional supervision.

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B-069

THE RELATIONSHIP OF INTERPERSONAL SENSITIVITY, IDENTITY IMPAIRMENT, AND BINGE EATING DISORDER AMONG COLLEGE WOMEN

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Bulimia is associated with both identity impairment and interpersonal sensitivity (IPS), but little is known about how these constructs may relate to Binge Eating Disorder (BED). In this report, identity impairment refers to deficits in the quantity and emotional valence of self-schemas. IPS refers to the unnecessary and extreme responsiveness to the feelings and actions of others (Boyce & Parker, 1989). Relationships between identity impairment, IPS, and BED were explored in a sample of college women. Data collection is ongoing, with the current sample (N=235 female undergraduates) including 77% Caucasian students with a mean age of 21.9, of whom 4.8% met full criteria for BED. Measures included a Possible Selves Questionnaire, assessing how participants viewed their future potential identities, and two IPS scales, Fear of Negative Evaluation (FNE; apprehension about unfavorable evaluation from others), and Self-Consciousness (SC). Preliminary results suggest that, relative to women who do not meet BED criteria, women with BED have higher FNE, t (213)=−2.291, $p<.05$, higher SC, t (210)=−2.782, $p<.01$, fewer positive possible selves, t (229)=2.474, $p<.05$, and a higher number of negative possible selves, t (229)=−2.053, $p<.05$. Although not significant, results were also in the direction of women with BED endorsing fewer total possible selves. To date, treatments developed for BED tend to focus on body image dissatisfaction, but not identity development or interpersonal sensitivity, more generally. Future research should explore the extent to which an emphasis on managing social anxiety and overcoming identity impairments might enhance treatment outcome. With respect to identity impairment, findings are consistent with those of Stein and Corte (2008), suggesting that identity impairments might be an effective target for prevention of disordered eating behavior, including that which is characteristic of BED.

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B-070

MENTAL HEALTH PROBLEMS AND TREATMENT PREVALENCE IN COLLEGE STUDENTS: IMPLICATIONS FOR PRACTICE AND RESEARCH

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To facilitate informed decisions regarding resource allocation, college-based medical and mental health clinic administrators require current and accurate prevalence estimates of mental health problems and treatment. We administered a treatment history questionnaire and screening measures of depression (PHQ-8), anxiety (BAI), alcohol use (AUDIT), and eating disorder symptoms (EDE-Q) to 412 psychology students from two universities. Using descriptive statistics and established cut scores, we examined the prevalence of present mental health concerns, past/present self-report of mental health diagnosis, and past/present mental health treatment seeking. The sample averaged 20.1 years (sd=4.2); 62.9% were female, and 81.1% reported their ethnicity as white. The PHQ-8 estimated the prevalence of major depressive symptomatology as 14.1%, and 11.4% reported moderate-severe anxiety on the BAI. 31.8% of students reported problematic alcohol use on the AUDIT. Nearly 16% of the sample reported significant concerns about weight, shape or eating; 10% reported significant restraint in eating behavior. Considering past diagnosis and treatment, 15% reported a lifetime psychological disorder diagnosis and 23.3% reported past professional help (medication=13.3%, psychotherapy=18.9%, both=9.2%). Whereas 46.1% of the sample screened positive on one or more current diagnostic indicator (23.5% when excluding alcohol misuse), less than 10% reported current professional help. These data confirm the high prevalence and undertreatment of mental health problems among college students. Moreover, our results suggest that student health clinic administrators might consider campus-based education campaigns to highlight treatment availability. Also, policy makers who control university funding might consider increased allocation of resources to student health initiatives. Finally, these data offer potential guidance for researchers who are considering or planning clinical research using general undergraduate samples.

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B-071

CROSS-NATIONAL COMPARISON OF A SELF-REPORT MEASURE FOR TREATMENT PLANNING AMONG NORTH AMERICA, CHINA, AND JAPAN

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Significant studies have contributed to health psychology/psychotherapy research and practice, yet a demographically sensitive and evidence-based psychotherapy delivery system has not been established (Beutler, 2004). Over the past two decades, several efforts have been directed at developing an integrated psychotherapy framework to enhance its adoption and application across treatment models and settings.

A model of Systematic Treatment Selection (STS) serves as a system of psychotherapy but as an assessment tool for delivering optimal treatments consistent with extant scientific evidence and cross-theoretical approaches. As the first phase in a series of studies, this presentation addresses reliability studies conducted in North America, China, and Japan, regarding 27 kinds of interpersonal and psychological problems and six STS (individual dispositional factors) scales. Three sets of data were collected from 200-300 clinical and non-clinical community samples from North America, China, and Japan. Participants were over the age of 18 and balanced in age, gender, and education. Translation and back translation was conducted by senior researchers or language professors who were proficient in either English, Chinese, or Japanese.

Each participant answered 171 questions as well as a short section with three feedback questions (North America-English, China-Chinese, and Japan-Japanese) by utilizing an online or paper and pencil approach. After evaluating the readability and comprehensiveness of these items, reliability for each scale and sub-scale was conducted using both alpha-test and distributional analysis in order to identify cross-cultural differences and similarities on these questionnaires. These scales and subscales will measure the client's psychological and dispositional factors that guide individually tailored treatment and improve outcome. In addition, this paper delivers descriptive information about cross-cultural attributes toward self-help resources and therapist preferences.

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B-072

DO HOPE AND SOCIAL SUPPORT INFLUENCE SELF-ESTEEM IN EARLY STAGE DEMENTIA?

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A diagnosis of dementia typically results in feelings of loss, social stigma and uncertainty placing major demands on the coping strategies for the individual. Individuals acknowledge and actively seek to understand and adjust to current and future loss of memory, independence, previous roles and lifestyle, as well as feelings of depression and frustration. This pilot study examined the relationships between hope and social support on self-esteem in individuals with early stage dementia. A descriptive correlation design was used. The sample included 53 individuals diagnosed with early stage dementia who completed questionnaires assessing their experience of hope, social support, and self-esteem. Linear regression models were used to examine whether hope and social support satisfaction are significantly associated with self-esteem. Hope was significantly associated with self-esteem ($\beta=.49$, $\rho<.001$). Hope accounted for 25% of the variance in self-esteem; a key component in predicting self-esteem in early stage dementia. Social support satisfaction was not related to self-esteem. The current results suggest that hope may be an important yet understudied factor to help individuals manage potential threats to self in the experience of early stage dementia. It is likely that consideration of hope in future studies can lead to better understanding of the fluctuations in self-esteem and improved outcomes.

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B-074

UNDERSTANDING THE STRUCTURE OF INTENTIONAL ADHERENCE

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Prior research has suggested that non-adherence can be divided into two types: (1) intentional, and (2) non-intentional. However, it is unclear the extent to which intentional non-adherence represents a unidimensional construct. We examined the factor structure of the Medication Adherence Rating Scale (MARS-A10) to test the hypothesis that intentional non-adherence is a multifaceted construct. We analyzed data from 294 adult participants with asthma using exploratory structural equation modelling (ESEM). Analyses examined the (1) dimensionality of the scale, and (2) the discriminant validity of the factors against illness and treatment representations. Results indicated that a solution with two-factors had the best fit to the data ($\chi 2(25)= 37.69$, $p=.05$). Item content suggested that one factor represented non-adherence based on symptoms and the other factor represented non-adherence based on intentional medication avoidance (rF1-F2=.66, $p<.05$). Contrary to expectations a non-intentional non-adherence factor was not extracted. Both factors were significantly and similarly correlated with beliefs about importance of using medications when asymptomatic (rF1=-.56 and rF2=-.51, ps<.05), worry about side effects (rF1=.17 and rF2=.25, ps<.05), and self-efficacy beliefs about treatment use (rF1=-.24 and rF2=-.30, ps<.05). These two factors were differentially associated with beliefs about the importance of using medications when symptomatic (rF1=-.16, $p<.05$ and rF2=.00, NS). Neither factor was significantly associated with the belief that asthma is an acute condition (rF1=.09 and rF2=.05, NS). Overall, the results suggest that there are two types of intentional non-adherence. Most of the associations of beliefs with both factors were statistically significant and similar. Future research needs to further examine how these two factors are differentially related to both predictors and outcomes of non-adherence.

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B-075

COMPARISON OF INTENSIVE PULMONARY REHABILITATION WITH AND WITHOUT COPING SKILLS TRAINING: THE ITALIAN VITA-COPD STUDY

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Chronic Obstructive Pulmonary Disease (COPD) is a progressive illness that afflicts 2.6 million Italians. Although coping skills training in COPD patients has been studied in the United States, it has not been studied systematically in Europe. The VITA-COPD trial is designed to evaluate the added value of coping skills training when combined with an established, intensive pulmonary rehabilitation (PR) program. In this pilot study, 60 COPD patients will be recruited from Salvatore Maugeri Foundation Rehabilitation Institute of Tradate and will undergo either intensive PR alone or PR combined with coping skills training modeled after the INSPIRE study. An additional 30 patients recruited from pulmonary clinics affiliated with Duke University Medical Center and matched for FEV1, age, and six minute walk test (6MWT) will serve as an Education control group. At baseline patients will undergo measurement of functional capacity (6MWT) and pulmonary function(FEV1). Quality of life endpoints, obtained after 8 weeks of treatment, will include the Beck Depression Inventory (BDI-II), State-Trait Anxiety Inventory (STAI-X1), SF-36 and St. George Respiratory Questionnaire. PR will consist of 4 weeks of in-hospital treatment primarily involving physical therapy followed by 4 weekly phone calls to monitor symptoms, while the coping skills training will consist of a manualized program of relaxation training, cognitive restructuring and problem solving skills in which patients will be seen twice a week as inpatients and then receive 4 weekly booster sessions delivered by telephone. The COPD Education control group will consist of weekly telephone-delivered educational sessions and symptom monitoring. The VITA-COPD study design will be presented and preliminary data will be discussed.

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B-076

VALIDATION OF THE TTM PROCESSES OF CHANGE MEASURE FOR BLOOD DONATION IN AN AFRICAN AMERICAN SAMPLE

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African Americans (AA) are more likely to suffer from diseases that require blood transfusions (e.g. Sickle Cell Disease (SCD)). Treatment of SCD requires blood transfusions that can lead to hemolytic reactions, a potentially life-threatening complication if a direct match is not obtained. Among blood donors (5% of the eligible population), the majority are White (80%), and within the minority subset only 7% are AA. Thus there is a need to increase the number of regular AA donors. Many views, experiences, and behaviors associated with blood donation are unique to AA culture. Evidence suggests that tailored health promotion programs might help with increasing blood donation especially if culturally tailored. To be effective, these programs need to be based on valid and reliable measures. Transtheoretical Model (TTM) constructs such as the Processes of Change (POC), can provide an understanding of covert and overt experiences (i.e. talking about blood donation, rewarding oneself) that individuals engage in when they try to change their behavior. Factor analytic and structural modeling procedures were used to examine the internal and external validity of the POC measure in a sample (N=566) of adult AA (64.1% Female, Mean age 37.7) from the Northeast region of the US. The stage distribution for this sample consisted of 42.9% of participants being in Precontemplation, 12% in Contemplation, 11.1% in Preparation, and 33.9% in Action/Maintenance. Confirmatory analyses replicated the theoretically expected structure of the scales. For POC, the ten-factor, fully correlated model was determined as the model of best fit based on the following fit indices:$\chi 2$ (695)=4041.9, CFI=.82, GFI=.69, and AASR=.06. Expected theoretical patterns by Stage of Change were confirmed. Results suggest that this culturally tailored measure showed good internal and external validity. POC can be utilized towards intervention development by helping to better understand their role in blood donation decision-making and thus improving interventions.

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B-077

IMPROVING CULTURALLY-SENSITIVE ASSESSMENTS USING COGNITIVE INTERVIEWING

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Participants do not always read and interpret survey questions the way researchers anticipate, especially when surveys are translated into different languages and for different cultures. Cognitive interviewing provides a technique to assess thought processes during survey completion to help ensure the face validity of surveys. Cognitive interviewing refers to a process by which an interviewer prompts participants to verbalize their thoughts (Beatty & Willis, 2007). This study employed cognitive interviewing in a community sample of Spanish-speaking Latino participants (N=20) to improve and validate scales intended for use in a large scale study. Interviews were conducted in Spanish and audio recorded. Participants responded to 12 randomly selected items from scales psychometrically validated in English assessing personality variables and health attitudes, beliefs, and behaviors (e.g., chronic regulatory focus, Health Action Process Approach (HAPA), weekly fruit and vegetable consumption). Content analyses of verbatim transcriptions of the interviews revealed that 12% of the 42 items tested were not valid with this sample. Moreover, analyses suggested that items needed further modification than just a translation of the item into a second language as the meaning of some items did not translate into the cultural knowledge of the participants. A follow-up study should back-translate all survey items and explore further the specific items that were not valid.

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B-079

YOUNG MOTHERS' PERCEPTION OF BEING OVERWEIGHT IS RELATED TO A HEIGHTENED CONCERN FOR CHILD'S WEIGHT

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Background: Prior research suggests maternal feeding practices (e.g. restrictive, monitoring, or pressure to eat) may be associated with childhood obesity. The initiation of these practices may be further influenced by weight related concerns. This study investigates the relationship of child-feeding practices with young mothers' and their weight related concerns for themselves and their children.
Methods: Young mothers (N=71; MN age=20.02 years; 65.2% White, 23.2% Hispanic, and 11.6% African American) located across 17 states completed the Child Feeding Questionnaire (Birch et al., 1998) measuring risk factors, concerns, and control in child feeding.
Results: Young mothers who categorize themselves as overweight (56%) compared to normal weight (44%)reported a significantly higher concern about their child being overweight ($z=-2.61$, $p=0.009$), and the increased use of restrictive ($z=-2.26$, $p=.023$) and monitoring ($z=-2.26$, $p=.023$) child-feeding strategies. No relationships were found between maternal weight perception, future childhood overweight concern, and pressuring their children to eat.
Conclusions: Young mothers who perceive themselves as overweight have a heightened concern for their child's weight status. Increased concern for childhood overweight may be related with the use of child feeding strategies that are associated with the development of obesity. This finding is congruent with similar studies. Early interventions, especially with high risk young mothers, may be needed as a first step in preventing childhood obesity.

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B-080

EVALUATION OF SELF-EFFICACY MEASURES FOR FAMILY PHYSICAL ACTIVITY AND FRUIT/VEGETABLE INTAKE

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This study examined the factor structure, reliability and correlates of two measures of parent-rated self-efficacy (SE) for physical activity (PA; self: P-PASE; child:C-PASE) and fruit/vegetable (FV) intake. Parents (N=361; M age=35.04[5.97]; M BMI=27.38[6.83]; 97.8% mothers; 88.8% Caucasian) were recruited online to participate. Self-reported weekly activity was high for parents (min=431.67[355.43]; days=4.33[1.92]) and children (min =714.00[377.60]; days=6.01[1.39]). Parents completed an adapted 6-item PASE measure (Marcus et al., 1992), 5C-PASE items, and 11 parent and child FV items. To determine if SE varied for parent and child behaviors, the PA and FV items were subjected to exploratory factor analysis using principal axis factoring extraction with oblimin rotation. Two distinct PA scales emerged (P-PASE [loadings, ≥.4]; C-PASE [loadings≥.5), whereas FV items clustered to form a single factor (loadings≥.6). Internal consistency was good for the adapted P-PASE (.88), C-PASE (.88), and FVSE (.95) scales, and test-retest reliability (n=44) using ICC was marginal to acceptable (P-PASE=.74; C-PASE=.65; FVSE=.62). The FVSE scales were correlated with subscales of the Child Feeding Questionnaire (Restriction, Pressure to Eat, & Monitoring, ps<.001) and all About Your Child's Eating-Revised subscales (ps≤.001). P- & C-PASE were related to reported parent and child PA (ps<.001). Greater SE on all scales was related with more authoritative and less authoritarian/permissive parenting practices (ps<.05). Overall, FVSE appears to be a uniform construct that is family driven, whereas parent-rated SE for PA is unique for self vs. child. Future family-based weight interventions should consider addressing nutrition as a family-based target and PA with separate parent/child targets. Finally, correlations suggest that general parenting style and feeding practices may be important intervention targets when attempting to change nutrition and PA behaviors.

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B-081

EXPLORING COMMUNITY GARDENS IN A HEALTH DISPARATE POPULATION: FINDINGS FROM A MIXED METHODS PILOT STUDY

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While community gardens (CG) have emerged as a popular strategy to improve fruit and vegetable access and consumption, there is little empirical evidence to support dietary improvements. Further, most research focuses on existing gardens, thus less is known regarding the factors that may impact initiation and long-term sustainability of CG. Grounded in CBPR, this study applied a mixed methods approach to explore influences on parent's gardening intentions, children's gardening interests, and community stakeholders' opinions regarding CG. Methods: Theory-based surveys were administered to parents and youth at four summer camps in a health-disparate region. Guided by a social-ecological model, key informant interviews were conducted using a semi-structured script among stakeholders in the same region. Four researchers coded the transcribed interviews using a deductive approach, including coding raw data into meaning units which where further clustered into higher order themes.
Results: Participants included 67 parents (51% black), 87 children (54% black), and 10 key informant interviews. Among parents, gardening attitudes and gardening beliefs provided a strong prediction for intentions to garden at home ($R2=0.40$; $F=20.7$, $p<0.01$), with attitudes providing the strongest prediction followed by beliefs. The model to predict intentions to engage in a community garden was also significant, yet weaker ($R2=0.10$; $F=5.0$, $p<0.01$), and indicated that gardening beliefs were most important, as compared to non-significant attitudes. From the qualitative analysis, major themes emerged including individual, community, and policy level influences related to initiating and sustaining a community-wide gardening program.
Conclusion: This study reveals important factors that influence home and community gardening intentions. Understanding the underlying beliefs, attitudes, and social-ecological influences related to gardening, will help inform the development, implementation, and long-term sustainability of community garden program in this health disparate community.

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B-082

DIETARY BEHAVIORS OF ADULTS AT HIGH RISK FOR TYPE 2 DIABETES

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Background: The extent to which an individual's dietary behavior is related to type 2 diabetes (T2DM) knowledge, risk perceptions, and weight loss intent is not currently known.
Purpose: To explore correlates of fruit/vegetable (FV) and fiber intakes and percent energy from fat (PEFat) in adults at high risk for developing T2DM.
Methods: Primary care patients with pre-diabetes were enrolled in a randomized trial comparing the cost-effectiveness of two different community-based lifestyle interventions to prevent T2DM. Baseline survey data included knowledge, risk perceptions and an adaptation of the NCI Multifactor Screener. Linear mixed effects models were used to analyze correlates of baseline dietary intake, treating primary care sites as random effects. All analyses controlled for demographics and BMI.
Results: Of the 429 participants, 72% were women and 56% were African American with a median household income between \$10 K and \$15 K. Mean age was 51 (range 16-80 years), and median BMI was 35 (range 24-72 kg/m2). Adults with 'no weight loss interest' had a higher mean intake of FV (4.4 servings, CI=3.7, 5.1, $p=0.006$) compared to adults who had not lost weight but planned to do so within 6 months (3.4 servings, CI=3.2, 3.6). Weight loss interest was also significantly related to daily fiber intake ($p=0.003$) but intake did not vary between no interest in weight loss and higher levels of interest. There was no significant association between weight loss interest and PEFat.
Adults with lower incomes had a statistically significant yet modest difference in PEFat ($p=0.02$). Higher risk knowledge ($p=.009$) and income ($p=.02$) were both associated with increased FV intake, with an average 3% increase in FV for every one unit increase in either risk knowledge or income.
Conclusions: Adults with pre-diabetes and low economic status have especially poor baseline dietary habits. More research is needed to understand the nature of these disparities and to develop targeted interventions that maximize success toward dietary changes and improve health in underserved groups.

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B-084

THE ASSOCIATION BETWEEN OBESITY AND PRIMARY CARE UTILIZATION

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Obesity has been associated with increased healthcare costs, primarily due to increases in obesity-related, co-morbid conditions. Despite overall greater healthcare utilization by obese individuals, there is research suggesting that these individuals may avoid certain types of preventative-care medical visits (e.g., pelvic exams, mammograms, and cancer screenings), potentially due to discomfort with expected negative reactions from health-care professionals. It is particularly important to assess whether this pattern of avoidance is found with routine physician check-ups because primary care has been associated with improved health outcomes and lower long-term healthcare costs. The current study investigated the association between obesity and routine-care physician visits using the Center of Disease Control's Behavioral Risk Factor Surveillance System (BRFSS), a nationally representative dataset collected using a random-digit telephone survey. The current sample, taken from the 2008 BRFSS, included 395,832 U.S. adults (≥18 years old; mean age=54.5, mean BMI=30.8 kg/m2) who had full data for the variables included in the current study. Using the World Health Organization's BMI categories, 35.9% of participants were underweight or of normal weight, 36.6% were overweight, and 27.5% were obese. Logistic regression was used to assess the association between BMI category and attendance at a primary-care appointment in the prior two years, after adjusting for age, gender, race/ethnicity, years of education, and income, and health-insurance status. We found a significant positive association between BMI category and attendance at routine primary-care appointments such that those who were obese were more likely to attend these appointments than those who were either underweight or of normal weight, $p<.001$. Compared to normal and underweight individuals, individuals who were obese had 1.27 higher odds of attending a primary-care appointment in the past two years. These results suggest that, unlike certain other types of preventative-care visits, obese individuals are not systematically avoiding primary-care medical visits.

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B-085

EXPLORING WEIGHT AND LIFESTYLE: LATINO IMMIGRANT MEN'S PERSPECTIVES

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Purpose: Despite an increasing interest in family-centered obesity and diabetes prevention programs for Latinos, almost no studies have assessed men's perspectives on obesity-related behaviors. The purpose of this study was to explore Latino immigrant men's perspectives regarding obesity, diet and physical activity as they relate to the individual and the family.
Design: Qualitative study using focus group methodology
Methods: Subjects participated in one of three 90-minute focus groups moderated by a bilingual, bicultural, Latino male. The moderator's guide was based on constructs of the Health Belief Model and a review of existing literature. Three independent researchers identified themes pertinent to health beliefs and behaviors using a combined deductive/inductive approach.
Results: Participant's mean age was 41 years, all male, and 100 percent were born in Mexico. Mean time residing in the United States was 10.3 years. Men attributed weight gain to the sedentary lifestyle common to U.S. culture compared to culture of origin and also felt immigration had a negative impact on dietary patterns and traditions. Perceived barriers to weight loss include decreased physical activity due to a demanding work schedule and an environment not conducive to physical activity. Men felt their female partners control the dietary habits of the family but voiced openness to dietary changes that would benefit family health. Perceived benefits to weight loss included improved mobility, decreased obesity-related morbidities, and overall improved health for themselves and their children. Participants reported a lack of culturally relevant health information and programs available in Spanish.
Conclusions: While a number of studies among women cite husbands' resistance to lifestyle intervention, particularly those involving diet, men in this study voiced openness to behavior change programs for obesity and diabetes prevention. Future family-centered programs should engage men and promote communication within the family on common goals related to health.

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B-086

POVERTY, FOOD INSECURITY, AND OBESITY: A CONCEPTUAL FRAMEWORK FOR RESEARCH, PRACTICE, AND POLICY

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Alarming trends in obesity and food insecurity in the US have raised public health concerns and efforts to understand and address these potentially related public health problems. Although much research has been done to discern whether food insecurity is causally related to the obesity epidemic, the evidence to date is mixed. To address a pressing need for greater conceptual clarity regarding these urgent public health problems, we summarize findings from research examining the association between obesity and food insecurity in the US and describe a conceptual framework to characterize the factors that may fuel a cycle of mutual influence among obesity, food insecurity and their shared mechanisms and health-related outcomes.

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B-087

OBESITY PREVENTION IN EARLY CHILDHOOD: CHILD CARE PROVIDERS' PERSPECTIVES

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Early childhood it a critical time for influencing children's food preferences, gross motor skill for physical activity, and risk for obesity. Recent findings suggest that obesity is alarmingly common in early childhood (nearly 1 in 5 American 5-year-olds) but that healthy feeding practices are not—in a national study, toddlers' most commonly consumed vegetable was French fries. We conducted preliminary, non-random, interviews of child care providers' obesity prevention activities in Colorado. Our objectives were to enhance understanding of existing prevention programs and barriers to additional prevention activities. Also to identify promising next steps for supporting child care providers' continued obesity prevention efforts. We performed telephone interviews of 84 child care providers from various child care settings (centers, home providers, Head Start) in a variety of Colorado locations (urban and rural). Using summary statistics, we found preliminary suggestion that many providers believe that some of the children in their care are at risk for the development of obesity (67% in our sample); that they (providers) could affect children's risk for obesity (84%); that there is time in children's schedules for additional activities (90%); and that additional prevention activities would be welcomed by key stake holders at child care facilities. Reported barriers to additional health programs included lack of financial resources and technical expertise, limited equipment, and physical space. Thirty three percent of providers identified the Child and Adult Care Food Programs (CACFP) as "their" obesity prevention program. Recommendations from the Environmental Scan include the initial steps of increasing the number of providers enrolled in the CACFP; dissemination of practical, evidence-based prevention programs and policies, expanding states' child care licensing requirements; and providing convenient, low cost, child health/obesity prevention education opportunities for child care providers.

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B-088

DO THEY REALLY LISTEN? THE EFFECT OF PARENT MESSAGES AND WEIGHT STATUS ON ADOLESCENT FOOD CHOICES

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Adolescent obesity has tripled in recent decades, and weight gain during adolescence is associated with increased risk for obesity and chronic diseases. Many adolescents consume high-calorie, low-nutrient foods which may contribute to weight gain. Research shows that parents may influence adolescent decision-making about nutrition behaviors, but it is unclear whether overweight adolescents are influenced differently than non-overweight peers. Using cross-sectional telephone survey data combined across 4 years (n=849 adolescents), we examined adolescent efforts to limit less healthy snacks (i.e., chips, sodas, sweets) and two healthy nutrition messages from their parent(s) (i.e., importance of eating fruits and vegetables; limiting chips, sodas, and sweets). Body mass index (BMI) was calculated from adolescent-reported height and weight and categorized into overweight (OW; overweight or obese) or not overweight (NOW) based on CDC age-gender BMI percentiles. NOW adolescent s trying to limit snacks were more likely to receive both messages than OW adolescents (OW=41.3%;NOW=55.6%). Adolescents in both weight groups were more likely to report limiting snacks if the single message was the importance of eating fruits and vegetables (OW=31.7%;NOW=26.3%), compared to a single message to limit snacks (OW=12.0%;NOW=10.4%) or no messages (OW=15.0%;NOW=7.7%). After adjusting for gender and frequency of family fast-food meals, a weight-adjusted logistic regression model showed a significant interaction effect between number of parental messages received and weight status (p=0.02). NOW adolescents were more likely than OW peers to report limiting snacks when two messages were received; when a single message or no messages were received, OW teens were somewhat more likely to report efforts to limit snacks. These data suggest that the number and type of messages parents give adolescents play a key role in influencing teen food choices and that OW youth may respond differently to messages, although both OW and NOW adolescents do seem to respond to healthy eating parental messages.

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B-089

PHYSICIAN COMMUNICATION OF BODY WEIGHT, HEALTHY DIETS, AND PHYSICAL ACTIVITY WITH OVERWEIGHT OR OBESE OLDER ADULTS

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Background: The examination of physician-older patient communication about healthy diets and physical activity can guide effective obesity prevention interventions.

Purpose: To investigate how demographics, health behaviors, health status, and healthcare access are associated with being recognized as overweight or obese, and reporting physician discussion about healthy diets and physical activity.

Methods: Participants were 596 adults aged 65 years or older who had BMI equal to or greater than 25 kg/m^2 and completed a self-administered community survey on perceived health status, access to healthcare, and physician communication about lifestyle behaviors including diet and physical activity.

Results: Only half of those who were overweight/obese reported being recognized as overweight/obese and having a healthcare provider discussion about healthy diets and physical activity. A greater number of chronic conditions and more frequent physician visits increased the likelihood of being recognized as overweight or obese and reporting lifestyle discussions. Older ages (≥75), being female, and eating more fast food decreased the probabilities of reporting such lifestyle discussions.

Conclusions: Despite their increasing competing demands in a treatment, co-morbidities may promote healthy lifestyles discussions between physicians and patients. Proper communication about older adults' excess body weight with physicians may increase healthy lifestyles. Older adults with excess body weight may be more likely to consult about their health-related behaviors with more frequent visits to their healthcare providers.

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B-090

A FAMILY SYSTEMS APPROACH FOR UNDERSTANDING YOUTH OBESITY, PHYSICAL ACTIVITY, AND DIETARY PROGRAMS

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Family-based programs have been widely used to treat overweight in youth. However, few programs incorporate a theoretical framework for studying a family systems approach in relation to youth health behavior change. This study used a family systems theory framework for evaluating family-level variables (parenting styles, parenting skills, child management, family functioning) in obesity treatment and prevention (physical activity and/or diet) programs in youth. Twenty-one obesity treatment and 24 obesity prevention (physical activity and/or diet) programs were reviewed and effect sizes were calculated. Overall, obesity treatment programs that incorporated training for authoritative parenting styles, parenting skills, child management, or family functioning had positive effects on youth weight loss. Programs to improve physical activity and/or dietary behaviors that involved the family also demonstrated improvements in youth health behaviors, however, none of these programs specifically examined family-level variables. Furthermore, none of the physical activity or dietary programs reviewed included components to improve parenting styles, parenting skills, or family functioning variables. Including these variables may improve the effectiveness of obesity prevention programs for youth since these variables have shown promise in obesity treatment programs. Both obesity treatment and prevention programs for youth would benefit from evaluating family-level variables (e.g., parenting styles, parenting skills, child management) as possible mediators of intervention outcomes. Overall, the following recommendations for future obesity treatment and prevention programs include incorporating and evaluating parenting style, parenting skills, child management, and family functioning variables within a family systems theoretical framework. Given the relevance of the family in youth health behaviors, evaluating and implementing theoretically driven approaches to incorporate the family can guide future obesity treatment and prevention efforts.

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B-091

THE FEASIBILITY OF USING AUTOMATED TEXT MESSAGES TO MONITOR APPETITE RATINGS CONTINUOUSLY IN A FREE-LIVING POPULATION

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'Eating in the Absence of Hunger' (EAH) describes eating that occurs without physiological hunger and has been shown to distinguish between lean and obese individuals in laboratory-based research. However, there is no standardized protocol for assessing EAH in free-living populations. A convenience sample of healthy, free-living, young adults (n=15; age 19-24 yrs; 2 males; 79% normal weight) tested the feasibility of using an automated text messaging system, supported by two web-based social networking services, Twitter and HootSuite, to continuously monitor perceived hunger ratings. Participants were sent text messages hourly for seven consecutive days (168 texts) and were instructed to reply with their current hunger rating on a 1-10 scale (10=extremely hungry) at their earliest convenience during waking hours. During the same period, participants kept a record of all eating events (excluding beverages) on provided forms. They recorded the date/time of each event, their pre-meal/snack hunger rating, and noted if they perceived themselves as hungry (self-reported EAH). Because perceived hunger ratings vary by individual, text-based EAH was operationalized as the number of eating events occurring at a hunger rating equal to or less than mean daily hunger ratings (within-individual) using all available data. Most of the hunger ratings (95%) were returned between 7 am and 11 pm and between 78% to 99% (92.6±6.2%) were returned within 30 minutes of the hour. Errors with the automated system resulted in 0.6% to 7.1% undelivered text messages (3.3±2.6%) that varied by mobile service provider (p=0.024). Yet, the mean number of hunger ratings reported per day was similar by provider, 11.6 to 13.9 ratings/day (12.4±3.2; p=0.662). There was a 70% agreement between self-reported EAH and EAH inferred using the text-based protocol. This study suggests that despite issues across mobile service providers, automated text messaging is an effective method to assess EAH in free-living populations.

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B-092

EFFECTIVENESS OF A MINDFUL RESTAURANT EATING INTERVENTION ON WEIGHT MANAGEMENT

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Background: Restaurant eating contributes to obesity by promoting excess intake by serving tasty, high calorie food in large portions. The purpose of this pilot was to evaluate the effect of a Mindful Restaurant Eating intervention on weight gain prevention.
Methods: Women (n=35), who were 40-59 years old and ate out at least 3 times per week, were recruited through ads. Participants were randomly assigned to the intervention (n=19), 6 weekly 2 hour small group sessions, or a wait list control (n=16). The sample was tri-ethnic (54.3% White, 28.6% Hispanic, and 17.1% African American) with a mean age of 49.6 (SD=6.8) and a BMI of 31.8(SD=6.8).
The intervention focused on reducing calories and fat when eating out using knowledge about weight management and restaurant foods, individualized behavior change strategies, and mindful eating meditations.
Data was collected at baseline and week 6. Weight, height, and waist circumference were measured. Caloric and fat intake was calculated from 24 hour dietary recalls using the multiple pass method. Emotional eating, diet-related self-efficacy, and barriers to weight management in restaurant settings were also measured.
Results: A series of general linear models were used in which the Time 2 outcome variable was regressed on the baseline measure while adjusting for group effects. Intervention participants lost significantly more weight (β=-.04; p=.03), have lower average caloric intake(β=-.44; p=.002), and have lower average fat intake (β=-.45; p=.001). Intervention participants also had increased diet related self-efficacy (β=.36; p=.02) and fewer barriers to weight management when eating out (β=-.38; p=.001).
Conclusions: The Mindful Restaurant Eating intervention shows promise as a weight gain prevention intervention for perimenopausal women who eat out frequently. Further study is warranted with longer follow-up.

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B-093

MULTI-BEHAVIORAL DETERMINANTS OF WEIGHT LOSS IN MEN AND WOMEN

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Improvements in physical activity (PA), sedentary behavior (SB) and diet can promote weight loss but little is known about the relative importance of these when they are addressed simultaneously in interventions. The current study examined behavioral determinants related to weight loss over a one-year period. The sample included 351 adult (M age=43.2 yrs) men and women (52.1%) who were enrolled in separate but similar internet-based randomized controlled trials that targeted physical activity and dietary behaviors for weight loss. The final sample included both intervention (46.2%) and control (53.8%) participants who had accelerometer and food frequency questionnaire data at both baseline and 12-month time points. A two-step regression process determined the relationship of PA, SB, and diet to weight loss. First, 12 month values of average daily minutes of sedentary, light, and moderate-to-vigorous intensity activity (MVPA, from accelerometry), percent calories from fat, servings of fruit and vegetables per 1000 kcals and servings of fiber per 1000 kcals were regressed on baseline values. Second, logistic regression models predicting the likelihood of losing 5% body weight by 12 months were specified with baseline behavior values and residual change in behaviors as independent predictors adjusting for age, gender, and intervention status (control vs. intervention). Participating in more MVPA (OR=1.02, 95% CI=1.00, 1.03) increasing fruit and vegetable consumption (OR=1.33, 95% CI=1.1, 1.61) and increasing fiber intake (OR=1.10, 95% CI=1.01, 1.21) were related to 5% or greater weight loss over a 12-month period. No relationship was found for changes in SB, light-intensity PA or percent fat intake. These results suggest that successful weight loss over 12-months involves changes in both PA and diet. Future interventions should focus on multi-factorial behavior change approaches to promote weight loss in men and women.

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B-094

STEPPED-CARE: MATCHING TREATMENT INTENSITY TO PARTICIPANT PERFORMANCE

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Background: In a stepped-care (SC) approach to weight loss, patients are transitioned to more intensive treatments when less intensive treatments fail to meet weight loss goals. This investigation examined the effectiveness of a self-help (SH), SC weight loss program.
Methods: Fifty-three overweight/obese adults (BMI>27 kg/m2; mean BMI of 37.3, SD=6.6, 89% Caucasian, and 77% female) participated in a weight loss intervention. Based on weight loss goals, participants were eligible to be stepped-up to two levels of treatment intensity (weight loss group [WLG]; individual counseling [IC]) beyond SH. The primary outcome was weight change, while secondary outcomes included self-monitoring as well as energy intake and expenditure.
Results: Of the participants who completed the 18-week program, 16 remained in SH, 1 participant received a WLG only, 8 were stepped-up to a weight loss group and individual counseling (WLG + IC), and 12 received IC only. Sixteen participants (30%) did not complete the program. During several phases of the investigation, those stepped-up to more intensive treatment lost comparable weight to those who were not stepped-up (i.e., non-significant difference between conditions). Nevertheless, by the end of treatment, individuals who remained in SH (M=8.6%, SD=4.7) lost a significantly greater percentage of baseline body weight than individuals who received just IC (M=4.7%, SD=2.2; p<.05) and individuals in IC lost a significantly greater percentage of baseline body weight than individuals who received a WLG + IC (M=1.6%, SD=3.0; p<.05). Participants who were stepped-up self-monitored fewer days and reported higher daily caloric intake than SH participants (ps<.05).
Conclusions: Individuals differentially benefited from being stepped-up to greater intensity treatment when unsuccessful at losing weight with SH during several phases of the investigation. The application of SC principles to the treatment of obesity has promise.

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B-095

IMPLICIT AND EXPLICIT ATTITUDES AMONG THE OBESE: IMPLICIT IDENTITY, WEIGHT BIAS, AND PSYCHOLOGICAL WELL-BEING

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Background: Levels of implicit and explicit weight bias as well as implicit identity of overweight individuals in the areas of attractiveness, thinness, and self-esteem have not been studied among overweight/obese treatment-seeking adults. This investigation examined associations between weight bias, implicit identity, and psychosocial maladjustment (binge eating, body image, depression) in an overweight/obese treatment-seeking sample.
Methods: Fifty-three overweight/obese adults (BMI>27 kg/m2; mean BMI of 37.3, SD=6.6, 89% Caucasian, and 77% female) participated in a weight loss intervention. Participants completed baseline measures of body image, depression, binge eating, explicit and internalized weight bias, implicit weight bias, and implicit identity (attractiveness, thinness, and goodness).
Results: Despite evidence for significant implicit and explicit weight bias (p<.01), implicit identity among overweight/obese treatment seeking adults was largely favorable (p<.01). In other words, participants perceived themselves as good, attractive, and thin relative to other people. Greater internalized weight bias and a greater propensity to see obese people as possessing negative traits were strongly associated with greater depressive symptoms, poorer body image, and greater binge eating (p<.01). Implicit identity was generally unrelated to measures of explicit weight bias or psychosocial maladjustment.
Conclusions: Consistent with prior research revealing a self-protective function in automatic appraisals of the self, there was considerable evidence for favorable implicit identity. However, implicit identity was not associated with psychological maladjustment. In contrast, explicit measures of weight bias, including internalized weight bias, strongly predicted psychological maladjustment. The relationships among implicit identity, implicit weight bias, explicit weight bias, and their impact on behaviors, including weight loss outcomes, would benefit from further exploration.

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B-096

ARE THERE NEGATIVE CONSEQUENCES TO DAILY SELF-WEIGHING AMONG OVERWEIGHT ADULTS?

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Despite evidence that daily self-weighing (DSW) is beneficial for weight control; there remain concerns about negative psychological and behavioral consequences. The purpose of this analysis was to examine the effect of DSW on these outcomes among participants in the CHOICE Study, a 6-month, low intensity beverage reduction weight loss intervention.
Participants (n=200) were healthy, mostly female (85%), African-American (55%), college-educated (55%), age 42y±11, and obese (BMI:36.18±5.8 kg/m2). At baseline and 6 months, self-weighing frequency was assessed via a 7-point scale ranging from several times a day to never, and dichotomized to those who reported DSW compared to less frequent weighing. At baseline and 6 months, symptoms of binge eating disorder and bulimia nervosa were assessed via The Questionnaire for Eating and Weight Patterns-Revised. Objective weights were measured at the same time points.
Using logistic regression, with exclusion of missing values and control for treatment group and baseline values, those who reported DSW throughout or increased to DSW at 6 months (n=51) were 3 times more likely to achieve a 5% weight loss [OR=3.13 (1.47, 6.68); p=.003] compared to less frequent weighing. At 6 months, controlling for baseline values, those who reported DSW compared to less frequent weighing were not more likely to report binge eating [OR=0.86 (0.34, 2.21); p=.76). Of those that reported any binge eating (n=55), there were no differences by DSW status in the average number of binge episodes per month (2.93 vs. 2.29; p=.53). There were no differences with weight and shape concerns, feeling upset due to overeating or inability to control eating, or fasting/use of diet pills to avoid weight gain after a binge. There was a trend towards less use of excessive exercise after a binge to avoid weight gain among those who reported DSW compared to less frequent weighing [OR=0.16 (0.02, 1.25); p=.08].
These results suggest that daily self-weighing is associated with greater weight loss, but does not appear to increase risk for negative psychological and behavioral outcomes among overweight adults.

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B-097

THE EFFECT OF CORTISOL REACTIVITY ON EMOTIONAL EATING BEHAVIORS

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Emotional eating, or the inclination to eat in response to negative mood states and stressors, has been implicated as a contributing mechanism in obesity and eating disorders. Abnormalities in the stress response network are observed in individuals with eating disorders and obesity, and the stress-induced release of cortisol may play a role in food intake, particularly in the context of emotional eating. College students (n=106) ranging in age from 18 to 23 participated in a stress induction task, provided salivary cortisol samples, and completed self-report questionnaires about their eating behaviors. Individuals with high levels of cortisol reactivity were expected to endorse higher levels of emotional eating, with higher levels of maladaptive coping and perceived stress strengthening this relationship. Results indicated a significant effect of the stress induction task, Wilks's λ=.94, F(1, 105)=6.32, p<.05. The relationship between cortisol reactivity and emotional eating specifically was nonsignificant, and was slightly positive in nature for women (r=.04) and negative for men (r=-.20). Neither perceived stress nor coping styles were identified as moderators of the relationship. However, follow-up analyses indicated that for women, emotion-oriented coping moderated the relationship between cortisol reactivity and both disinhibition (t=−2.12, p<.05) and bulimic symptomatology (t=−2.06, p<.05). Similarly, distraction coping moderated the relationship between cortisol reactivity and hunger (t=−2.54, p<.05). The nature of the relationships between cortisol reactivity and the outcomes of disinhibition (r=-.21), bulimic symptomatology (r=-.30), and hunger (r=-.31) were unexpected, as higher levels of emotion coping and distraction-oriented coping were related to lower levels of the maladaptive eating behaviors. Results suggest that training in the use of appropriate coping mechanisms may be an important focus of treatment for individuals with eating disorders, obesity, or a general tendency toward emotional eating.

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B-098

BEYOND BMI IN UNDERSTANDING OBESITY AND HEALTH: A STRESS-AND-COPING ANALYSIS OF THE STIGMA OF OBESITY AND OBESE WOMEN'S MENTAL HEALTH

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The prevalence of overweight and obesity in the U.S. has made it invaluable to understand the health concerns related to obesity. The health risks associated with obesity itself are well known. In comparison, little is known about the health risks associated with the social stigma associated with obesity. Overweight and obese people, particularly women, are targets of prejudice and discrimination across multiple domains. Using stress-and-coping theory, the current study examines a process of how weight stigma affects health via coping strategies and mental health indicators. We surveyed overweight and obese women (N=111) about their experiences with weight stigma, the coping strategies they used in response to a specific stigmatizing incident, their current depression and anxiety, and their health behaviors. Results showed that previous experiences with weight stigma were related to increased levels of current depression (b=5.6, p<.001) and anxiety (b=.26, p<.05). Further, the data pointed to three potential mediators. Using multiple mediational analysis, we found that with the three mediators in the model only escape-avoidant coping significantly mediated the relations between weight stigma and current depression and anxiety. Specifically, the relation between weight stigma and depression dropped to non-significance (b=1.5, ns) when the effects of self-control (b=−1.8, ns), accepting responsibility (b=3.0, ns), and escape-avoidance (b=8.8, p<.001) were included as mediators in the model. The same pattern emerged for current anxiety as the outcome variable. We also examined the effect of depression on health behaviors. We conducted logistic regressions controlling for BMI, and found that depression was predictive of a decreased likelihood of exercising in the past month (OR=.95, p<.05) as well as an increased likelihood of smoking in the past month (OR=1.07, p<.001). Implications for weight stigma, the applicability of stress-and-coping theory, and for research on the link between obesity and health are discussed.

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B-099

PROBLEM-SOLVING DEFICITS, NEGATIVE AFFECT, AND THE MAINTENANCE OF BINGE EATING BEHAVIOR

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Current evidence suggests that negative affect often precipitates binge eating behaviors. Some researchers posit that individuals may seek to avoid unpleasant thoughts and emotions by engaging in binge eating rather than employing more adaptive problem-solving efforts. In the current study, we hypothesized that binge eating severity would be negatively associated with social problem-solving skills and with perceived ability to resist eating during negative affective states. We tested this hypothesis by conducting a hierarchical regression with self-rated binge eating severity as the dependent variable and problem-solving abilities (entered in block one) and self-efficacy to resist eating during negative affective states (entered in block two) as the independent variables. The study sample included 191 obese adults (M±SD, age=52.7±10.7 years, BMI=36.5±3.9 kg/m2) who volunteered to take part in a behavioral weight-loss study. All measures were taken prior to the start of treatment. Results showed that problem-solving skills alone explained 12.1% of the variance in binge eating severity, F(1,189)=27.04, p<.001, β=-.201, and that self-efficacy to resist eating in the face of negative emotions explained an additional 16.7% of the variance, F(2,188)=38.75, p<.001, β=-.436. The degree of collinearity between the independent variables was within the acceptable range (Tolerance=.877). Collectively, the findings in this study suggest that deficits in social problem-solving abilities and low self-efficacy to resist eating during negative affective states represent factors that contribute significantly and independently to maintenance of binge eating behaviors.

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B-100

BMI & THE FREQUENCY OF HOT FLASHES IN POST MENOPAUSAL WOMEN

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Hot flashes are characterized by sweating and peripheral vasodilatation. They include chills, shivering, anxiety, visible reddening and blotching of the face and neck, and a decrease in core body temperature. Hot flashes occur in 75-80% of naturally post menopausal women and 94-100% of oophorectomized women. Unfortunately, hot flash etiology is not well understood; however, some confounding variables that have been associated to hot flashes include stress, smoking, alcohol, and obesity. Obesity, however, has been in discordance as to whether it is a protective aspect verses a causal one. Many of the studies that have been conducted do not include postmenopausal women or did not find an association between hot flashes and BMI. In the few studies that did include postmenopausal women and/or found an association, concluded that high BMI equates to low frequency of hot flushes. In order to assess this important question an evaluation of post menopausal women was conducted. BMI was calculated using subjective height and weight [(weight (lb)/ [height (in)^2]) x 703]. The number of severe and very severe hot flashes were also recorded subjectively using the Hot Flash Daily Diary. A Chi Square analysis showed that BMI and Obesity were associated ($p>.0002$). According to the contingency table, severe hot flashes decreases slightly for the overweight group and increases in the obese group ($BMI<24.99=32.56\%$; $BMI>25\text{-}29.99=29.46\%$; $BMI>30=37.98\%$). A continual increase in severity of hot flashes as BMI increases becomes apparent when looking at the very severe hot flashes ($BMI<24.99=13.64\%$; $BMI>25\text{-}29.99=22.73\%$; $BMI>30=63.64\%$). In conclusion, there is a positive trend in the percentage of very severe hot flashes in association with increasing BMI, and a significant association between BMI and the amount of severe and very severe hot flashes and in postmenopausal climacteric women.

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B-101

RELATIONSHIP BETWEEN FOOD HABITUATION AND REINFORCING EFFICACY OF FOOD

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Eating involves processes related to both the motivation to eat and the cessation of eating. Behavioral measures of reinforcing efficacy of food, related to the motivation to eat and habituation to food, related to cessation of eating, aid in conceptualizing eating processes. Both processes have been shown to be involved in the prediction of normal eating and differ between the obese and their non-obese counterparts. Reinforcing value has also been shown to be dependent on several environmental and temporal stimuli including deprivation of the reinforcer and availability of alternative reinforcers. The goal of this study was to examine the relationship between relative reinforcing value and habituation and their ability to predict normal eating and the effect of deprivation on both constructs. Twenty two women were randomized to a deprivation group (preload/no preload) and a task order (reinforcing value, habituation, ad libitum eating or; habituation, reinforcing value, ad libitum eating). Participants completed computer tasks that assessed food reinforcement or habituation to food. An interaction effect of deprivation and task was observed for both habituation and reinforcing value such that the fed group habituated at a faster rate than the deprived group ($p<0.05$) and the deprived group had a higher reinforcing value of food than the fed group ($p<0.05$). There was also a significant relationship between reinforcing value and habituation such that participants who habituated at a slower rate also responded more for food in the reinforcing value task ($p<0.05$). These results indicate that reinforcing value and habituation are related constructs and warrants further research into the processes that underlie both constructs.

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B-102

LONG TERM HABITUATION FOR FOOD DIFFERS FOR OBESE AND LEAN SUBJECTS

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People habituate to repeated presentations of a food in a meal, and the rate of habituation is related to energy intake, with slower habituation being related to more energy intake. Habituation to the same food may also occur over days to influence in addition to within meals. This has not been examined previously in humans. The goal of this study was to examine long term habituation to food in obese and non-obese women. Thirty-two women (16 Obese/16 non-obese) were randomized to either presentation of the same food 5 days in a row, or once per week for 5 weeks. Participants completed a computer task designed to measure habituation of responding for food, during which points could be earned on a variable-interval schedule. Results indicated an interaction between weight status, sensory exposure session and time block on the habituation task ($F(16, 448)=1.73$, $p=0.039$). Both obese and non-obese groups habituated if they were presented the same food over 5 days. Non-obese subjects did not show habituation of responding if presented the same food once per week ($p>0.55$), while obese subjects did habituate in the weekly exposure group ($p<0.001$). These results show that habituation to food occurs not only within a meal, but also across days and for obese participants, across weekly meals. Memory is an essential component of habituation, as memory of the previous meal or food presentation allows for habituation to occur, and differences in food memories for obese and non-obese women may account for the differences in long-term habituation for once weekly exposures between obese and non-obese women.

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B-103

HEALTH RELATED QUALITY OF LIFE & WEIGHT CHANGE AMONG OVERWEIGHT CHILDREN RESIDING IN SOUTHERN APPALACHIA: PRELIMINARY OUTCOMES FROM PLAN FOR HEALTHY LIVING

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Child obesity is an important public health concern, especially in rural areas. Primary care providers are well positioned to intervene with children and parents,and need effective and feasible intervention approaches. Our objective is to assess the efficacy of a parent-mediated approach to treat child obesity in the primary care setting by measuring reduction in zBMI and increases in HRQoL. Overweight children 5-11 years and their parents were recruited from 4 clinics in Southern Appalachia. Two clinics were randomized to an intervention group. Those assigned to the intervention, Parent-Led Activity and Nutrition (PLAN) for Healthy Living, received 2 brief visits with their doctor and attended 4 group sessions. Children's height and weight along with parent's completion of the PedsQL, assessing their child's HRQoL, at baseline and completion of the intervention(3 months for control group. This study examined an initial subsample of available data ($n=54$). Six month follow up data will be collected. A one-way analysis of covariance (ANCOVA) though not statistically significant ($F=0.578, p=0.425$)revealed that children in the intervention(24)showed greater reductions in zBMI (-0.057 ± 0.140) than those in the control group (30)(-0.004 ± 0.123). Similarly, ANCOVA revealed that children in the intervention group showed greater increases in HRQoL (5.012 ± 16.290) than those in the control group (1.667 ± 13.284)also not statistically significant ($F=1.966, p=0.167$). Though not statistically significant, results indicate a reduction of zBMI and increase in HRQoL for the intervention group compared to the control group. These preliminary findings are encouraging given the low dose of treatment and delivery format and setting for project PLAN. If effective, this approach may be exported to other primary care practices.

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B-106

PROVIDERS' ENGAGEMENT OF CHILDREN DURING MEDICAL VISITS: ARE CHILDREN GETTING WHAT THEY WANT?

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Background: Effective patient-provider communication benefits children living with asthma. However, the extent to which engagement concordance (degree to which the provider engages a child matches the child's desired level of engagement) is associated with more effective disease management is not known. Our goal was to determine whether engagement concordance was related to children's psychosocial and behavioral outcomes, like self-efficacy and medication adherence.
Methods: Children (n=296) ages 8-16 with asthma were recruited at 5 pediatric practices in North Carolina. Medical visits were recorded and the number of questions the provider asked the child about medications was assessed (0 = no questions, 1 = 1-4 questions, 2= >4 questions). During an interview after their medical visit, children reported their desired level of provider engagement (0 = no engagement, 1 = some engagement, 2 = a lot of engagement), inhaler self-efficacy, and medication concerns. Proper inhaler technique also was assessed. Medication adherence was measured 1 month later at a home visit. Concordance scores were calculated to determine how well the child's desired level of engagement matched the physician's actual level of engagement. Correlations determined whether engagement concordance was associated with outcomes.
Results: 56% of children wanted some engagement from their provider, yet 54% of providers did not ask children any medication questions, resulting in an engagement concordance of 26%. Engagement concordance was significantly associated with greater inhaler self-efficacy (r=.20), fewer medication concerns (r=-.19; both p<.05), and proper inhaler technique (r=.12, p=.052).
Conclusion: Providers' engagement of children is low and often doesn't match the child's desired level of engagement. Greater engagement concordance can benefit children by increasing their medication self-efficacy and reducing medication concerns.

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B-107

HOW CHILDREN WITH ASTHMA AND THEIR CAREGIVERS INFLUENCE EACH OTHER'S QUALITY OF LIFE

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Background: Asthma affects the quality of life (QOL) of children and their caregivers, yet dyadic influence, or the extent to which children's attitudes/ beliefs influence caregiver outcomes and vice versa, remains relatively unexplored. Using longitudinal data, our goal was to determine whether children with asthma and their caregivers mutually influence each other's self-efficacy, outcome expectations, and asthma-related QOL.
Methods: Children ages 8-16 with asthma and their caregivers (n=255 dyads) were recruited at 5 pediatric practices in North Carolina. Children and caregivers separately completed a baseline and 1-month follow-up survey that included measures for asthma-related self-efficacy (α=.80-.86), outcome expectations (α=.64-.83), and QOL (α=.90-.96). We used the Actor-Partner Interdependence Model (APIM) to determine whether: 1) children's self-efficacy predicted their own (actor effect) and their caregiver's (partner effect) outcome expectations (OE); 2) caregiver's self-efficacy predicted their own (actor effect) and their child's (partner effect) OE; 3) children's OE predicted their own (actor effect) and their caregiver's quality of life (partner effect); and 4) caregiver's OE predicted their own (actor effect) and their children's (partner effect) quality of life.
Results: We found significant (p<.05) actor effects for the effect of self-efficacy on outcome expectations as well as outcome expectations on QOL. For both children and caregivers, greater self-efficacy predicted more positive outcome expectations and more positive outcome expectations predicted higher QOL. No significant partner effects were found.
Conclusion: We did not find significant dyadic influences in our sample. Significant actor effects indicate that children's attitudes/beliefs are important predictors of their own outcomes. Additionally, caregiver's attitudes/beliefs were important predictors of their own outcomes. Future research should explore whether variables, like gender, moderate the effect of children's outcome expectations on caregiver's QOL and vice versa.

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B-108

RELATIONSHIP OF SYSTEMIC INFLAMMATION WITH LUNG FUNCTIONING, PSYCHOLOGICAL DISTRESS, QUALITY OF LIFE, AND PHYSICAL ENDURANCE AMONG COPD PATIENTS

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Elevated pro-inflammatory cytokine levels among patients with chronic obstructive pulmonary disease (COPD) are associated with negative outcomes such as impaired energy metabolism, impaired functional capacity, hospitalization, and death from COPD. In addition, elevated pro-inflammatory cytokine levels are associated with psychological distress and poor physical endurance in the general population. However, prior studies have not evaluated the relationship between inflammation and modifiable risk factors for morbidity in patients with COPD. This pilot study evaluated the relationship of systemic inflammation with lung functioning, physical endurance, psychological distress, and quality of life in COPD patients. Twenty-three older (66±9 years) men (n=11) and women (n=12) were recruited from an outpatient pulmonary exercise rehabilitation program. Prior to entering the rehabilitation program, participants completed a blood draw to measure serum interleukin-6 (IL-6) as well as an assessment of physical endurance and several self-report measures, including measures of depression, anxiety, quality of life, and dyspnea. Results indicated that higher inflammation was associated with more severe pulmonary disease (r=-.37, p=.09), higher weight (r=.45, p=.03), more energy (r=.45, p=.04), and younger age (r=-.44, p=.04). IL-6 was not correlated with physical fitness, depression, anxiety, or most indicators of quality of life. Further, when the data were examined by gender, results indicated that higher inflammation was associated with more severe pulmonary disease in men only (r=-.64, p=.03). No other significant correlations with IL-6 were found for men or women. Thus, these pilot data indicate that systemic inflammation may be more closely related to lung functioning than to other modifiable COPD outcomes, including physical endurance, quality of life, and distress, particularly for male patients. Among patients with COPD, psychological distress may not be associated with systemic inflammation.

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B-109

PREDICTORS OF BEHAVIORAL HEALTH PROVIDER ADHERENCE TO INTEGRATED PRIMARY CARE MODEL METRICS

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Nearly one-third of adults experience a mental illness in a given year, but most will only see their primary care provider for treatment. Additionally, 133 million Americans have at least one chronic illness (CI) often comorbid with other psychological diagnoses (dxs). Integrated/collaborative models of primary care have been shown to address complex patient presentations and improve access to care by including Behavioral Health Providers (BHPs) as part of the primary care team. For this study, clinical psychology doctoral students (years of training range=0-3) served as BHPs in 5 integrated Federally Qualified Health Centers. Patients with at least one BHP contact were included in the study sample (N=709; M age=43; SD=13.74) that was primarily Caucasian (78%), and female (75%). Most had at least one psychological dx (81%) including depression (47%) and anxiety (25%). Nearly half had at least one CI (49%), and 25% had a pain related dx. Of those referred to a BHP, there were 468 face-to-face sessions. A significant positive relationship was found for length of BHP session and number of psychological dxs (r=.12, p<.01), but not for number of CI dxs. Hierarchical logistic regression was conducted to determine if the BHP's ability to adhere to the model metric of session length (< = 30 minutes) would be predicted by the number of psychological dxs and number of chronic illnesses when controlling for the number of years of training of the BHP. The overall model was significant ($\chi2$=34.40, df=3, N= 468, p<.001; Variance=.071). Training years (OR=1.8, p<.01) and number of psychological dxs (OR=.78, p<.05) contributed to the model. Patient presentations with comorbid psychological dxs may be more complex and thus require more management to stay in the model. In this sample where CI management was not a primary focus of the model, CI dxs did not seem to have the same effect. Additional work in this area may elucidate factors (e.g., clinician training) related to adherence and outcomes in this model of care.

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B-110

EFFECTS OF THE HEPATITIS C SELF-MANAGEMENT PROGRAM AT 1-YEAR

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Chronic hepatitis C (HCV) affects millions of people in the US. Antiviral treatments are available for HCV but have side effects, are not offered to everyone, and are less than 50% successful. Self-management interventions are one option for improving the health-related quality of life of HCV-infected individuals. We have published data showing better outcomes among the workshop group directly after the 6-wwek intervention ended. Here, we present data on group differences at the 12-month follow-up.

134 VA patients with HCV (mean age of 54.6, 95% male, 41% ethnic minority, 83% unmarried, 72% unemployed or disabled, 48% reported homelessness in last 5 years) were randomized to one of two self-management interventions, a 6-week workshop or information-only. The six 2-hour self-management workshop sessions were co-led by a peer-leader and a health care professional. The cognitive-behavioral intervention was developed by adding HCV-specific modules to an existing chronic disease self-management program that was efficacious in other chronic diseases. Outcomes including generic and disease-specific HRQOL, HCV knowledge, self-efficacy, depression, energy, and health distress were measured at baseline, end of intervention, 6-months and 12-months. Data were analyzed using repeated measures ANOVA.

Data were available for 93 of the 134 participants at 12-month follow-up. Attrition rates were not significantly different between groups. When compared to the information-only group, participants attending the self-management workshop improved more on HCV knowledge (F(2,89)=7.84, p=.001), SF-36 energy/vitality (F(2,90)=3.41, p=.038), and total Quality of Well-being score (F(2,90)=3.20, p=.044). Non-significant trends were found for depression (p=.091).

Many of the positive health effects (HCV-related knowledge, energy, and overall HRQOL) of the Hepatitis C Self-Management Program were sustained at 12-month follow-up, long after the intervention ended. Plans for implementing the intervention in other VA and community settings are being developed.

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B-111

ETHNIC IDENTITY AND OBJECTIVE MEASURES OF LUNG FUNCTION IN CHILDREN WITH ASTHMA

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Introduction: Asthma is the most prevalent chronic illness in American children, with higher morbidity and mortality rates in minorities. Our prior research revealed less asthma attacks in children raised by caregivers with strong ethnic identities. The relationship between ethnic identity of caregivers, objective measures of asthma, and demographics were explored.

Method: Participants were 121 primary caregiver-child (age 7-15, M=10.8, SD=2.31) dyads from Bronx, NY. Ethnic identity was assessed by caregiver report of how closely they identify with their ethnicity (strong identity vs. weak to moderate identity). Objective measures of the children's lung function at testing were obtained through spirometry and were: percent predicted forced expiratory volume in one second (%FEV1); predicted ratio of FEV1 to forced vital capacity (FEV/FVC); and predicted peak expiratory flow rate (PEFR). Demographics included: ethnicity; race; years living in US; and years of school.

Results: The sample had 6 Anglo, 56 Puerto Rican, 36 African American and 23 Afro-Caribbean primary caregiver-child dyads. Analysis was collapsed across ethnicity, as there was no significant between-group difference in ethnic identification across ethnicity or between US and foreign born. Children with caregivers who closely identified with their ethnicity, had lower %PEFR (M=70.77, SD=20.01), than those with caregivers who identified less (M=81.20, SD=21.74), t(107)=−2.61, p=.01. There were no significant correlations between demographics and ethnic identity strength.

Conclusion: Our research shows that children with caregivers with stronger ethnic identities had lower PEFR at testing. The lack of a significant correlation between ethnic identity and caregiver demographics suggests that ethnic identity is influenced by factors not captured by this study. Further research exploring ethnic identity formation, and its relationship to asthma may enhance understanding and care.

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B-112

RELATING LIVING ARRANGEMENTS TO CONCERN WITH FACIAL AND BODY MORPHOLOGY

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The objective of this project was to compare the influence of boarding at school on concerns with appearance of the orofacial area (OFA) and body shape in two Catholic all-girls schools in Taiwan. 1182 questionnaires containing 58 exploratory OFA items added to 34 items of the already-validated Cooper et al. BSQ, translated into Chinese with back-translation verification, were distributed to 11- 12 graders; of which 194 valid (total 202) were returned from boarding students (B) and 586 (total 628) living at home (H).

Results: Although Bs were slightly larger than Hs, there were no overall demographic differences; age (yrs): B 16.6±0.6, H 16.6±0.6; weight (lbs): B 113.2±13.1, H 112.3±18.2; height (in) B 63.5±2.0, H 62.6±2.1; BMI B 19.8±2.2, H 20.1±3.0. Total OFA scores for Bs 112.1±25.6 were not significantly different from Hs 111.3±28.4; total BSQ for Bs 89.5±29.81 was higher, including 8 significantly greater concerns relating to being overweight and unfit than Hs 84.7±33.37 (p<.087). The total BSQ for both Bs and Hs was significantly higher than normative score of 71.9±23.6 and lower than 129.3±17.0 for probable bulimics. OFA / BSQ correlated significantly for H (r=0.69) and B (r=0.55), compared to no relationship for a comparable Taiwan co-ed school.

Although total OFA scores for B and H were not significantly different, a number of significant and near significant concerns were greater for B than H, which factored down to concerns about OFA appearance: dental self-consciousness, nose shape, facial asymmetry and unattractive hair.

In addition to the influence of greater B than H opportunities for self and peer evaluation, the differences between Bs and Hs may be a function of greater supervised study requirements and academic expectations with less dietary freedom than Hs who have greater access than Bs to comfort food and commercial skin, hair, and eye products.

Conclusion: The difference between B and H in distribution and magnitude of OFA and BSQ concerns may be related to psychosocial/behavioral and institutional factors.

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POST-TREATMENT CHANGES IN ABBT MECHANISMS AND SOCIAL ANXIETY SYMPTOMS

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Social anxiety disorder (SAD) is a chronic condition accompanied by diminished quality of relationships and quality of life. Many individuals suffer a relapse of their anxiety after treatment. Although treatment gains are often maintained between post-treatment and follow-up, symptom improvement has not been well documented during this period (Heimberg, 2001). This study investigated the post-treatment period after an ABBT intervention for SAD. Our analysis examined if symptoms and use of ABBT constructs were maintained or changed over the follow-up period. Participants (avg n=28) were drawn from a trial examining the efficacy of a 12-week ABBT protocol for SAD. Treatment focused on exposure and increasing acceptance of distressing experiences. As our study had a low sample size and was underpowered, we based our interpretation of these analyses on effect sizes. Social phobia symptoms (SPAI, t=2.11, p<.05, r2=.15), severity (t=3.58, p<.01, r2=.35), fear of social situations (LSAS t=2.16, p<.05, r2=.13), and avoidance (LSAS, t=2.47, p=.02, r2=.21) improved significantly between post-treatment and follow-up. Furthermore, 4 out of 7 individuals who qualified for an SAD diagnosis at the end of treatment no longer met diagnostic criteria at follow-up. Of the participants who did not meet diagnostic criteria at their final session, none regressed back to meeting criteria at follow-up. Depressive symptoms (BDI II, t=−1.31, p=.20, r2=.06) decreased, though this change was not significant, and quality of life likewise (QOL, t=1.250, p=.22, r2=.05) did not significantly change during the follow-up. Since the effect sizes for these comparisons were small, it is unlikely that lack of power influenced this result. Measures of mindfulness and experiential acceptance at post-treatment and follow-up indicated that the use of these constructs did not significantly change over time (t=-.28, p=ns, r2=.007, t=0.61, p=ns, r2=.017, respectively). Overall, these data provide preliminary evidence for continued improvement in anxiety across a 12-week period following ABBT, with a maintenance of gains in mindfulness, depression, and quality of life.

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B-114

ER VS. ED: A COMPARISON OF TELEVISED AND REAL-LIFE EMERGENCY MEDICINE

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Background: Americans obtain health-related information from mass media more than any source other than health professionals. Inaccurate portrayals can engender misinformation and negatively impact health perceptions and behaviors. The purpose of this study was to compare socio-demographic and medical characteristics of televised vs. actual U.S. Emergency Department (ED) patients.
Methods: We conducted a content analysis of all 22 programs from a complete season of the popular television drama ER. Two trained coders working independently abstracted key socio-demographic and medical information from the televised patients. Inter-rater reliability was excellent, and all initial coding differences were easily adjudicated. We then abstracted identical information for real life emergency medicine visits from the National Heath and Ambulatory Medical Care Survey (NHAMCS) of the same year and used survey weights to calculate national estimates. We used Pearson's chi-squared test to compare televised vs. real distribution across key socio-demographic and medical variables.
Results: Ages at the extremes (e.g., ≤4 and≥45) were less commonly represented on television compared with reality. Compared with reality, characters on television were less commonly women (31.2% vs. 52.9%), African American (12.7% vs. 20.3%) or Hispanic (7.1% vs. 12.5%). The two most common acuity categories for television were the extreme categories "non-urgent" and "emergent," whereas the two most common categories for reality were the middle categories "semi-urgent" and "urgent." Compared with reality, televised visits were most commonly due to injury (63.5% vs. 37.0%), and televised injuries were less commonly work-related (4.2% vs. 14.8%).
Conclusions: Socio-demographic groups underrepresented on television are the same ones that suffer disproportionate morbidity in real life, including minorities, women, and the elderly. These differences in representation may affect audiences' health beliefs and behaviors, choices, and expectations of medical treatment outcomes.

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B-115

SUBJECTIVE LIFE EXPECTANCY AND PREVENTIVE SERVICE USE IN OLDER ADULTS

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Socioemotional selectivity theory suggests that older adults who perceive diminished life expectancy may emphasize goals that optimize current positive emotions over goals that optimize the future, and in turn may de-prioritize their use of preventive health services; however, this remains untested. We used data from 6,279 adults aged 63-67 (54% female) responding to the 2004 survey of the Wisconsin Longitudinal Study (WLS), to examine the effect of subjective life expectancy on preventive service use. Subjective life expectancy was assessed via respondents' rating of their chances of living for another 10 years (0=no chance at all to 10=absolutely certain). Outcomes included indicators for receipt of 9 sex- and age-appropriate preventive services. We used logistic regression stratified by gender to examine the effect of subjective life expectancy on use of each preventive service, before and after controlling for predisposing factors, enabling factors, and multiple measures of current health/medical need. The proportion receiving each preventive service ranged from 60% (males' receipt of influenza vaccination) to 94% (females' receipt of blood pressure check); the mean level of certainty of living for another 10 years was 8.0 for females and 7.8 for males ($t(6059)=-2.8$, $p<.01$). Fully adjusted models showed that a one-point increase in certainty of living 10 years was significantly related to increased odds of cholesterol tests (OR=1.05; p<.05), pelvic exam/Pap test (OR=1.05, p<.01), and mammogram (OR=1.08, p<.01) among females, and increased odds of all 7 applicable preventive health services except influenza vaccination among males (significant ORs ranged from 1.05-1.09). Results suggest that longer perceived life expectancy, above and beyond current health status, may motivate use of preventive health services and warrant targeting in interventions to increase preventive service use among older adults.

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RELATIONSHIP BETWEEN ASTHMA CONTROL TEST SCORES AND RECENT HEALTH CARE UTILIZATION

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Asthma control assessment is critical for the evaluation, monitoring, and management of the condition. We evaluated the relationship between Asthma Control Test (ACT) scores and recent health care utilization in a cross-sectional study of 1,106 adult asthmatics quota sampled from an online consumer health panel. Participants completed a patient-reported outcomes assessment that included the ACT and items on past three-month emergency room/urgent care visits and overnight hospitalizations. ACT scores were categorized into three levels based on prior research (<16 poorly controlled, 16-19 somewhat controlled, and≥20 well controlled asthma). ACT score groups did not differ by race, ethnicity, age, and education, though a difference was observed by gender. Chi square analyses found a significant relationship between ACT score level and emergency room/urgent care visits [$\chi 2(2, N=1{,}106)=59.73$, $p=.00$)] and overnight hospitalizations [$\chi 2(2, N=1{,}106)=8.75$, $p=.01$)]. Those with ACT scores indicating poorly controlled asthma were 2.5 times more likely than those with somewhat controlled asthma, and 11 times more likely than those with well controlled asthma, to have visited an emergency room/urgent care center for asthma treatment in the past three months. Similarly, those with ACT scores indicating poorly controlled asthma were twice as likely as those with somewhat controlled asthma, and 7.5 times more likely than those with well controlled asthma, to have had an overnight hospitalization due to asthma in the past three months. These findings show that the tool is able to distinguish between those with and without a recent history of exacerbated asthma, supporting the growing body of evidence that ACT is a valid measure of asthma control. Regular use of ACT in clinical care and patient self-management may enable proactive treatment intervention and reduce the need for unscheduled health care services.

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B-117

PERCEPTIONS OF PREVENTIVE HEALTH CARE AND HEALTHY LIFESTYLE CHOICES FOR LOW INCOME FAMILIES

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Health literacy affects caregivers' ability to engage in preventive health care behavior for themselves and their children. Studies suggest that health literacy among low-income families needs improvement as this possibly contributes to the disparity in seeking preventive health care. Parents and caregivers may not be able to provide or seek preventive health care for their children because of lack of knowledge and skills to do so effectively. To improve and better target health literacy in low-income families, greater efforts are needed to clarify caregivers' perceptions of preventive health care.
Purpose: To identify and explore caregivers' perceptions on preventive health and healthy lifestyle choices and the areas of each they were most interested in improving on and in getting help with. Method: Low income parents of children enrolled in a Head Start program in Texas, were invited to participate in two focus groups (English-speaking [N=10], Spanish-speaking [N=11]). Parents completed a brief questionnaire and participated in the focus group. Questions were designed to elicit responses indicative of parents' perceptions of preventive health and healthy lifestyle choices. Transcripts were analyzed and coded using thematic analysis.
Results: Parents provided several ideas of good preventive health and healthy lifestyle choices for their children, including regular medical and dental check-ups, weight management, and quality time with the family. They reported wanting more help with cleanliness and reduction of unhealthy habits if their children. Themes will be expanded on and other relevant findings, including group differences, will be presented.

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COPING AND EXPERIENTIAL AVOIDANCE: UNIQUE OR OVERLAPPING CONSTRUCTS?

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The present study examined associations between coping as measured by the Brief COPE and experiential avoidance as measured by the AAQ-II and the role of both constructs in predicting psychological distress and well-being. Specifically, associations between experiential avoidance and other types of coping were examined, and factor analysis addressed the question of whether experiential avoidance is part of coping or a related but independent construct. Results showed that experiential avoidance loads on the same factor as other emotion-focused and avoidant types of coping. The higher people are in experiential avoidance, the more they tend to utilize these types of coping strategies. Both experiential avoidance and coping predicted psychological distress and well-being, with most variance explained by coping but some additional variance explained by experiential avoidance. ANOVAS also showed gender differences in experiential avoidance and coping approaches. Results are discussed in light of previous relevant findings and future treatment relevant implications.

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AN EXAMINATION OF WEEKLY CHANGE IN SYMPTOM LEVEL AND ACT-BASED CONSTRUCTS ACROSS TREATMENT FOR SOCIAL ANXIETY DISORDER

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Although ACT strategies have been shown to relate to symptom level and mediate treatment outcome, the relationship between the rate at which these strategies are learned and rate of improvement across the course of treatment has yet to be examined. In a recent effectiveness trial of a 12-week acceptance-based treatment for social anxiety disorder, patients completed the 15-item Before Session Questionnaire (BSQ; Forman et al., 2010), which assessed their use of ACT strategies as well as their symptom levels, progress towards goals, and quality of life over the preceding week at the beginning of every session.

Forty-seven participants completed this measure across 12 weeks of treatment. Significant improvements were seen across all ACT, quality of life, and disorder-related variables over the 12-week period ($ps<.001$ - $.05$), with the exception of general sense of well-being and depression. Proxy mediational analyses suggest that levels of ACT utilization drove changes in outcome variables. Increases in acceptance of distressing thoughts over the 12-week period were correlated with improvements over the same time frame in romantic life satisfaction ($r=.34$, $p=.02$) and depression ($r=.33$, $p=.03$) and approached significant correlation with overall life satisfaction ($r=.26$, $p=.09$) and anxiety ($r=.29$, $p=.06$). Increases in acceptance of distressing feelings approached significant correlation with depression ($r=.29$, $p=.06$) and anxiety ($r=.30$, $p=.054$). Increases in cognitive defusion were significantly correlated with improvements in romantic life satisfaction ($r=.37$, $p=.01$), distress caused by symptoms ($r=.34$, $p=.02$), depression ($r=.35$, $p=.02$), anxiety ($r=.40$, $p=.007$), progress towards goals ($r=.50$, $p=.001$), and psychological and emotional state ($r=.31$, $p=.04$). To follow up preliminary analyses, more sophisticated meditational analyses (using hierarchical linear modeling) are planned for winter, at which point the number of participants will be more adequate for these purposes (projected $n=60$).

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B-120

STIGMA AND QUALITY OF LIFE OF PEOPLE LIVING WITH CHRONIC ILLNESSES

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We examined the relationship between anticipated stigma (i.e., expectations of prejudice, discrimination, and stereotyping) from healthcare workers and quality of life among people living with chronic illnesses within two studies. Study 1 supported the psychometric properties of a new measure of anticipated stigma, the Chronic Illness Anticipated Stigma Scale (CIASS), among 184 students living with chronic illnesses. The CIASS includes three subscales that evaluate anticipated stigma from friends and family members, coworkers and employers, and healthcare workers. The entire scale was reliable (internal consistency: $\alpha=.91$; test-retest reliability: $r=.82$, $p<.001$) and structurally valid (RMR=.05, GFI=.99). The healthcare workers subscale was externally valid, correlating with measures of experienced stigma from healthcare workers ($r=.77$, $p<.001$), internalized stigma ($r=.39$, $p<.001$), stigma consciousness ($r=.34$, $p<.001$), and anxiety ($r=.25$, $p<.05$). Study 2 demonstrated that anticipated stigma from healthcare workers was associated with decreased quality of life among 172 adult community members living with chronic illnesses ($\beta=-.40$, $p<.001$). Participants who anticipated stigma from healthcare workers were less likely to access healthcare when they need it ($\beta=-.26$, $p=.001$), and this decreased healthcare access partially mediated the relationship between anticipated stigma from healthcare workers and decreased quality of life (Sobel=−2.09, SE=.01, $p=.04$). Therefore, people living with chronic illnesses who anticipated stigma from healthcare workers were less likely to access healthcare when they needed it, and decreased healthcare access undermined quality of life. The importance of considering stigma as a barrier to healthcare access and quality of life of people living with chronic illnesses will be discussed.

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THOUGHT SUPPRESSION AND CARDIOVASCULAR REACTIVITY TO ACUTE PAIN: MODERATING EFFECTS OF ANGER-OUT STYLE

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Previous research has shown ironic effects of attempts to suppress thoughts and awareness of pain. One individual difference factor that has been shown to affect ironic effects is Anger Management Style (anger-out and anger-in). The current study aimed to replicate findings suggesting that when thoughts and feelings during acute pain are suppressed, high anger-out people show greater ironic effects than low anger-out people. 145 chronic pain patients underwent a cold-pressor pain task. Patients completed the anger-out subscale of the Spielberger Anger Expression Inventory, a median split procedure classified high and low anger-outs . During the cold pressor, patients were instructed to either suppress all thoughts and feelings or to think anything. After the cold pressor, there was a 5-min recovery, followed by a 5-min stress interview. SBP, DBP and HR were assessed continuously. Results showed significant Condition (Suppress, No Suppress) x Anger-out (low, high) x Period (Baseline, cold pressor, recovery, stress interview, recovery) effects for SBP, DBP and HR [F's(4, 540)>3.75, p's<0.01]. Simple effects tests focused on Condition x Anger-out effects during the cold pressor and stress interview. The pattern of findings indicated that low anger-out patients in the Suppress condition showed greater SBP, DBP and HR than low anger-outs in No Suppress condition [F's(1,570>2.8, p's<0.01). The low anger-outs did not differ as a function of condition during the stress interview [F<1]. High Anger-outs showed high SBP, DBP and HR during cold pressor and stress interview but did not differ depending on suppression condition [F's<1]. Results suggest that low anger-outs were most vulnerable to the immediate effects of attempting to suppress thoughts and feelings during pain, contrary to expectations. Moreover, delayed effects of suppression, expected during the stress interview, were not evident. A fuller understanding of the influence of individual differences on the detrimental effects of suppression requires further research.

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B-123

PAIN-RELATED COGNITIONS AND COPING IN YOUNG ADULTS: ASSOCIATIONS WITH AFFECT AND CARDIOVASCULAR REACTIVITY

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Both the meaning that is ascribed to pain and the way in which individuals cope with pain are important predictors of clinical outcomes among patients with chronic pain. Few experimental studies of appraisal and pain-coping styles, however, have investigated physiological outcomes, although these appear to be as important measures to examine. In this study, the relations of cognitive pain appraisals and styles of pain coping to cardiovascular reactivity and affect were examined in seventy-eight healthy female participants (age range 18 - 23 years). Measures of systolic blood pressure, diastolic blood pressure, heart rate, cardiac index, and total peripheral resistance were assessed at rest and during the forehead cold pressor test. Participants also completed measures of pain appraisal, pain coping, and positive and negative affect prior to and following the cold pressor test. Results indicated that higher self-reported threat appraisal independently predicted greater systolic (t(69)=5.02, p<.05) and diastolic (t(69) =5.59, p<.05) blood pressure reactivity. Cardiovascular responses were not predicted by the challenge appraisal measure. Threat appraisals predicted greater negative affect (R2=.29), whereas challenge appraisals were related to greater positive affect (R2=.34). Styles of pain coping, including pain catastrophizing were unrelated to task-related changes in cardiovascular functioning. Thus, our results do not support pain catastrophizing as a mediator of the effect of threat appraisal on total peripheral resistance. A second model examining active coping strategies as mediators between challenge appraisal and increased cardiac output was similarly unsupported. Our findings do, however, highlight the importance of appraisals and their impact on affect and physiological responses to pain. Future interventions that target reductions in the threat value of pain may help to reduce the negative impact of pain on the cardiovascular system.

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FAMILIAL AND INDIVIDUAL FACTORS IN THE LONGITUDINAL STRUCTURE OF PAIN: A TWIN STUDY

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Ratings of pain fluctuate daily in individuals with and without a persistent pain condition. No studies have examined the role of familial and environmental influences on the longitudinal experience of pain. The goal of this study was to examine the relative contribution of familial and individual environmental factors to the variation in pain ratings of monozygotic twins over 7 days. Female twins from the community-based University of Washington Twin Registry participated in a study of psychological, behavioral, and physiological risk factors and correlates of chronic benign pain. Daily pain ratings on a 0-100 Visual Analog Scale were collected from 67 monozygotic twin pairs. Latent Trait-State-Error modeling was used to decompose the sources of variation into stable familial (i.e., genetic and common environmental), stable individual, and changing individual influences. Twins were on average 30 years old (SD=10.54); 84% were White, 54% were single, and 54% had a college degree or higher. There were 88 twins without reported pain, 26 with persistent localized, 11 with persistent regional, and 9 with persistent widespread pain. We found that 14% of the variance in daily pain ratings was due to shared familial factors, 34% to stable individual, and 52% to changing individual influences. The previous day's pain rating predicted 11% of the current day's changing individual variance. Therefore, stable individual factors such as past trauma, and changing individual factors such as daily stress, may play a more substantial role in pain fluctuations than genetic and common environmental influences. Behavioral interventions that target daily stress and other individual factors may mitigate a substantial source of daily pain. Future research should examine the longitudinal course of the correlation between daily pain and stress fluctuations, as well as elucidate the specific individual factors that affect pain.

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B-125

THE EFFECTIVENESS OF AN EXERCISE COMPONENT IN BEHAVIORAL INTERVENTIONS FOR CHRONIC HEADACHE: A REVIEW

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Exercise has been cited as a potential treatment option for chronic headache, though the research in this area has been limited. While studies of exercise-only interventions have demonstrated improvements in headache frequency, intensity, and duration, a literature review (Busch, 2008) indicates that the study designs and data limitations do not warrant consideration of aerobic exercise as a primary treatment for headaches. Given the high rates of obesity and the fact that many people do not meet the minimum daily requirement for exercise, this review investigated the additive effect of exercise to behavioral headache interventions. A systematic literature review was conducted on PubMed, Medline and PsychInfo to identify studies that included aerobic exercise as part of a multidisciplinary treatment. Search terms included "exercise,""behavioral" or "multidisciplinary" and "treatment," "program," or "intervention" and "headache" or "migraine." Studies with only stretching, postural or physical therapy as the exercise intervention were not included. Seven studies met inclusion criteria. Of those, 4 studies included a specific exercise prescription as part of a multidisciplinary intervention (e.g., biofeedback, education, PMR, stress management); 2 studies recommended exercise as part of a behavioral intervention without describing type, amount or frequency; and 1 offered an aerobic exercise class as an optional part of treatment, but did not report data. Of the 4 studies that included specific exercise prescriptions, interventions tended to show improvements in headache pain days and intensity. No study reported component analysis, preventing interpretation of the additive effect of exercise on headache outcomes. Limitations of the current research include inconsistent inclusion of specific exercise prescriptions, variability in exercise prescriptions between studies, and limited information on exercise adherence. Future research should examine the independent effects of exercise on headache outcomes, including potential mediating and moderating variables, such as mood, sleep, and eating.

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AN INVESTIGATION OF BODY DISSATISFACTION AND CHRONIC PAIN PATIENT PERCEPTION OF SATISFACTION IN VALUED DOMAINS

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Chronic pain (CP) conditions often lead to deconditioning and sedentary lifestyles resulting in weight gain/loss, bodily changes and subsequent body dissatisfaction. Body dissatisfaction (BD) has been associated with maladaptive behaviors that may compromise patient health outcomes. Conversely, engagement in value directed activities has been associated with positive outcomes. We recruited CP patients via online CP support groups. The total sample (N=101; Mean age=41.86, SD=10.73) was primarily female (87.1%), Caucasian (84.2%), married/partnered (56.5%), well educated (M=14.62 years, SD=2.68) and overweight/obese (Mean BMI=30.12, SD=8.08). Participants completed demographic items, the Valued Directions Questionnaire, and Body Image Assessment Scale-Body Dimensions. High and Low BD groups were formed based on absolute BD scores (Mean=26.77, SD=15.8). Absolute BD score is representative of participants' wish to be bigger or smaller than their current size. There were no differences in High versus Low BD groups on pain characteristics including pain severity, average pain rating, number of surgeries, or number of years in pain. We compared High and Low groups with respect to Satisfaction across various value domains including Family, Relationships, Parenting, Friends, Work, Education, Fun, Spirituality, Citizenship, and Health. In general, participants rated levels of satisfaction (Scale 0-10) as quite low across all value domains (Mean range 2.6-6.2), with even lower levels of satisfaction among the High BD group [Wilks Lamda=.683; F(3,202)=2.42; p=.02]. High BD Participants rated satisfaction lower than their Low BD counterparts on nearly all domains. Notably, High BD rated satisfaction with the Friends domain particularly low [High BD=3.55 vs Low BD=.6.03; F(1,100)=13.65; p<.01]. These findings suggest that BD may generalize to lower levels of engagement in valued activities and thus, hinder adaptive behavioral outcomes. Assessment of BD may warrant further consideration to foster functional behavioral outcomes in CP patients.

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PAIN-RELATED CHANGES IN HEALTH-RELATED QUALITY OF LIFE OVER TIME IN PEDIATRIC SICKLE CELL DISEASE

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Sickle cell disease (SCD), an inherited blood disorder, is associated with numerous complications in childhood that may impair health-related quality of life (HRQL). Among these complications, pain is a prominent feature of this disease that has been associated with both physical and psychosocial difficulties (e.g., reduced opportunities for social interactions, frequent school absences, and higher ratings of depression and anxiety). Despite links between pain and changes in these specific areas of child adjustment, measures designed specifically to assess HRQL constructs have been inconsistent in capturing reduced physical and psychosocial HRQL that would be anticipated in children with recurrent pain from SCD. Of particular importance is whether these measures are sensitive to changes in physical and psychosocial HRQL that may occur over time as the result of pain, which might inform their use in monitoring a child's progress and response to treatment for pain. Using a prospective approach, this study examined pain-related changes in physical and psychosocial HRQL over time in children with SCD. Eighty-one parents of children with SCD (ages two to 19) completed proxy reports of the PedsQL at two time points, ranging from six to 18 months apart. Using two hierarchical regressions, we examined whether intervening pain episodes would be predictive of decreases in physical and psychosocial HRQL over time. Time one ratings of HRQL were entered first into the model to predict time two ratings. Then, after controlling for time between ratings, child age, insurance status (proxy for income), and neurobehavioral difficulties, number of intervening pain episodes was found to be a significant predictor of declines in physical HRQL, t (1, 73)=−2.27, p=.026. A trend toward pain predicting declines in psychosocial HRQL, t (1, 71)=−1.96, p=.056, was also observed. These results provide some preliminary support for the use of the PedsQL to monitor pain-related changes in HRQL in children with SCD.

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HOW DO MALE AND FEMALE YOGA PRACTITIONERS REACT TO STRESS?

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There is growing evidence that the practice of Yoga yields beneficial cardiovascular effects, but there is a paucity of research on the physiological stress coping abilities of its practitioners. This knowledge will allow an empirically-based formulation of intervention strategies and choice of suitable measurement tools for research on its effectiveness via randomized controlled trials. Cardiovascular reactivity, referring to changes in blood pressure and heart rate in response to a stressor, is a significant predictor of hypertension and coronary artery disease. Research examining the association of physical activity on cardiovascular reactivity has yielded mixed results, and has largely ignored gender effects. The present study compared adults (20-59 years, M=36.16, SD=11.62) who regularly participate in yoga (n=51), or running (n=47), or no regular physical activity (n=50). Blood pressure (BP) and heart rate (HR) were measured at rest and in response to two counterbalanced five-minute laboratory stressors: a math challenge and a handgrip strength task. Both stressors significantly increased BP and HR. Reactivity was computed by subtracting averaged baseline physiological scores from averaged scores measured during tasks, covarying for baseline values. Across both tasks, statistical analyses revealed numerous main effects and interactions of group and gender. These included particularly large sympathetically-driven cardiovascular stress reactivity in runners of both genders, but a dampened response in male Yoga practitioners. The current study provides evidence for specificity in terms of gender differences and active versus passive lifestyles. Further research is needed to understand the impact of physical activity type on cardiovascular reactivity depending on gender.

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BASELINE CHARACTERISTICS AND PHYSICAL ACTIVITY CORRELATES IN A LARGE TRIAL OF AFRICAN AMERICAN CHURCH MEMBERS

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Background: Churches hold promise for reaching many African Americans for health promotion to reduce health disparities, but few studies have focused on physical activity (PA). We report baseline characteristics and correlates of PA in a large trial targeting PA and healthy eating in churches.
Methods: Pastors of African Methodist Episcopal churches in selected regions of South Carolina were invited to participate. Adults (N=1315) from 74 churches enrolled; 1017 had complete baseline data for these analyses. Univariate analyses examined associations between hrs/wk of self-reported leisure-time PA (LTPA) and sociodemographic, health, dietary, and psychosocial variables. A multivariate regression analysis which accounted for clustering within churches examined independent associations with LTPA.
Results: The sample (age=54.2±14.1 yrs) was 75% women, 54% were married, 28% were college graduates, and 57% had a family income<$40,000. Health conditions were prevalent: overweight or obese=89%, high waist circumference=84%, hypertension=65%, high cholesterol=40%, arthritis=35%, diabetes=23%, and asthma=11%. More hrs/wk in LTPA were associated with younger age; male gender; higher education; more favorable self-rated health; lower body mass index and waist circumference; the absence of self-reported diabetes, hypertension, high blood cholesterol, heart attack, arthritis, and asthma; greater fruit and vegetable consumption; greater fat reducing and fiber enhancing dietary behaviors; and higher PA self-efficacy and church support for PA (P<.05). Variables that remained independently associated with LTPA (model R^2=26%) were age, gender, self-rated health, waist circumference, fruit and vegetable consumption, fat and fiber behaviors, PA self-efficacy, and church support for PA.
Conclusion: In this high-risk population, sociodemographic, health, dietary, and psychosocial variables were independently associated with LTPA, consistent with social ecological models. Our findings help to further target particularly at-risk subgroups within this population.
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PHYSICAL ACTIVITY AND SEDENTARY BEHAVIORS AMONG RURAL CHINESE ADULTS

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Background: Modernization and urbanization have led to lifestyle changes and increasing risks for chronic diseases in China. Physical activity and sedentary behaviors among rural populations need to be better understood, as the rural areas are undergoing rapid transitions.
Methods: A random sample of adult residents (n=287) in Suixi County, Guangdong, China were surveyed in 2009 by trained interviewers. Questionnaires assessed multiple physical activities and sedentary behaviors, and their correlates. Analysis of covariance compared activity patterns across occupations, and multiple logistic regressions assessed correlates for leisure-time PA and TV viewing. Quantitative data analyses were followed by community consultation for validation and interpretation of findings.
Results: Activity patterns differed by occupation. Farmers were more active through their work, but were less active and more sedentary during the non-farming season. Rural Chinese adults generally had a low level of leisure-time physical activity, and a high level of TV viewing time. Marital status, social modeling for leisure-time physical activity and owning sporting equipment were significantly associated with leisure-time physical activity but not with TV time. Most findings were validated through community consultation.
Conclusions: For chronic disease prevention, attention should be paid to decreasing occupational physical activity and increasing sedentary behaviors in rural China. Community and socially-based initiatives provide opportunities to promote leisure-time physical activity and prevent further increase in sedentary behaviors.

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WHAT TYPES OF SEDENTARY BEHAVIORS ARE RELATED TO CHILDHOOD OBESITY? DATA FROM THE IPLAY PROJECT

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Childhood obesity has increased to epidemic levels over the last few decades. Physical activity, eating habits, and sedentary activities are behaviors that have been related to childhood obesity. However, the type of sedentary behaviors most related to obesity is not yet clear. This study quantified, via self-report, four types of sedentary behaviors (TV/video/DVD watching; studying; computer-based schoolwork; and video [DS, XBOX, Playstation, computer] game playing) for weekday and weekend separately and how they were related to obesity (BMI percentile) in a sample of grade 4 and 5 elementary school students (n=257; mean age=10.22 [SD=.77]; 49.61% female; 49.02% Hispanic, 26.67% White, 7.06% Black, 17.25% other; mean BMI percentile=63.02 [36.11]). For weekday 2.66 [2.23], 2.85 [2.74], .96 [1.49], 2.43 [2.75] hours per day were spent in TV/video/DVD watching, studying, computer-based schoolwork, and video game playing, respectively. For weekend day 3.61 [2.56], 1.20 [1.83], .44 [1.02], 3.54 [3.33] hours per day were spent in TV/video/DVD watching, studying, computer-based schoolwork, and video game playing, respectively. Correlations revealed that computer-based schoolwork and video game playing on weekdaysrelated to BMI percentile (Spearman's rho=.15, p<.05; and .15, p<.05, respectively). However, none of the other sedentary behavior indicators were found to be related to BMI percentile (p>.05). Elementary school students spend more time watching TV/videos/DVDs and playing video games than doing schoolwork on weekdays and weekend days. The amount of time spent playing video game should be addressed in efforts to decrease childhood obesity levels.

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DO ELEMENTARY SCHOOL CHILDREN PERCEIVE DIFFERENCES IN PLAYGROUND ENVIRONMENTS? THE IPLAY PROJECT

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Childhood obesity has increased at alarming rates over the last several decades. One approach to address this has been to modify the physical environment. However, individuals who do not perceive a difference in the modified environment will not be motivated to use it. Therefore, the purpose of this study was to investigate if children in schools with renovated playgrounds (Learning Landscapes) perceived the playground equipment to be present and in better condition compared to students in school without renovated playgrounds. A sample of grade 4 and 5 elementary school children from 2 renovated (n=124; mean age=10.17 [SD=.75]; 46.34% female; 61.29% Hispanic, 13.71% White, 8.87% Black, 16.13% other) and 2 non-renovated (n=133; mean age=10.28 [SD=.79]; 52.63% female; 37.40% Hispanic, 38.93% White, 5.34% Black, 18.32% other) playground schools completed the survey which addressed the presence of playground structures (e.g., swing sets, four square, etc) and their condition. Results showed that more structures were observed in renovated playgrounds (mean=11.90; SD=2.09) versus non-renovated playgrounds (mean=8.50; SD=1.73) (Satterthwaite t for unequal variances=14.14; p<.05). Additionally, the structures' condition were evaluated as better in the renovated versus non-renovated playgrounds (mean= 3.64; SD=.82; vs. mean=2.75; SD=.63; respectively; Satterthwaite t=9.64; p<.05). This provides evidence that environmental modifications (in this case playground renovations) are noticed and may play a role in the promotion of physical activity and prevention of obesity.

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PREDICTORS OF ADOLESCENT EXERGAME PLAY OVER FOUR WEEKS

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Exergames are video games that use exertion-based inputs to control game play. Playing exergames increases energy expenditure above resting levels while also being entertaining. Few studies have assessed the extent to which exergame play is sustained over time. This study evaluated predictors of game play over 4 weeks. A sample of 63 adolescents (age 11-15; 62% male; 38% Hispanic; 44% overweight) was recruited and randomized to 1 of 4 XaviX games (Boxing, Bowling, Tennis, J-Mat). Participants played the game at home and recorded game play sessions in a paper log for 4 weeks. Participants completed the Motivation for Exergame Play Inventory, which assessed perceived challenge, sensory-immersion, and control related to the exergame. All three 8-item scales had good reliability (alphas .73 to .88). Weekly game log entries ranged from 0 to 20 and showed that only 21.3% of participants played the exergame at least once during all 4 weeks; 26.2% played 3 of the 4 weeks; 23% played for two of the 4 weeks; and 29.5% played during 1 of the 4 weeks. Generalized estimating equations (GEE) were used to model square root transformed weekly minutes of game play and predictors of game play. Minutes of game play decreased by week (p<.001). The type of exergame, child gender, age, school grade, Hispanic ethnicity, number of children in the home, parent education, and marital status were not related to minutes of game play. BMI category was positively related to game play (p<.01), while household income was negatively related to game play (p=.11). Game control and sensory/immersion were positively related to minutes of game play (ps <.01), but game challenge was not related. In a combined model, only game control and control x week interaction predicted game play (ps<.05). Findings indicate that adolescent exergame play was not sustained over 4 weeks and decreased substantially after the first week. Perceptions of the game controller, such as how well the device tracked a player's movement, were important game design features for exergame play.

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Citation Poster

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LEISURE TIME PHYSICAL ACTIVITY AND MORTALITY RISK: PATTERNS MATTER

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Physical activity has been associated with a broad array of positive health and well-being outcomes, including lower mortality risk. However, most findings are based on single or two point assessments. From a lifespan perspective, the consequences of behavior build over time; it may be the accumulated pattern that is most relevant to positive or negative health outcomes. Using archival data developed from the eight-decade Terman Life Cycle Study, we examined how patterns of physical activity across adulthood relate to longevity. In 1936, 1940, 1950, 1960, and 1972, participants freely reported leisure time activities. Death certificate information was collected through 2008. Activities were coded for energy intensity (average MET values) and the total number of activities reported at each assessment. On average, participants became less active but engaged in more activities as they aged. Using a joint growth-survival analysis with a linear model, both level and changes in activities across adulthood were used to predict all-cause mortality risk. For both predictors, intercepts were significant, indicating that higher average levels of activity or engaging in a greater number of activities predicted lower risk. However, slopes were stronger predictors, indicating that it was continued activity that was most protective. Results were consistent across males and females, although females were less active on average and showed less variation than males. The results suggest that although activity is important, short bouts of activity may do little to improve health and lengthen life. Interventions should emphasize building active lifestyles that can be maintained across the lifespan.

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FACTORIAL VALIDITY AND INVARIANCE IN MEASURES OF INTRINSIC MOTIVATION AND SELF-EFFICACY FOR PHYSICAL ACTIVITY IN UNDERSERVED ADOLESCENTS

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Research has demonstrated the importance of motivation and self-efficacy in understanding the influences on physical activity (PA). However, little research is available on the measurement properties of psychosocial measures of PA, particularly measures with a theoretical underpinning and particularly in underserved (low-income, minority) adolescents who are at greater risk for chronic disease. Baseline data from the Active by Choice Today (ACT) Trial were used for a series of confirmatory factor analysis (CFA) to test factorial validity and invariance in measures of motivation and self-efficacy for physical activity. Underserved adolescents (n=1422, mean age 11.3 years, 54% female, 72% African American, 71% reduced lunch) self-reported motivation and self-efficacy. A four-factor model (X2(604)=1336.9, CFI=.98, TLI=.98, RMSEA=.04) of motivation based on dimensions of Self-Determination Theory and a single factor model of self-efficacy (X2(89)=251.4, CFI=.98, TLI=.98, RMSEA=.04) were fit to the data. Construct validity was supported by hypothesized relationships between motivation and self-efficacy as well as significant relationships with accelerometer estimates of moderate-to-vigorous PA and other psychosocial measures including social support. Invariance testing showed the measures performed similarly in boys and girls. Evidence of factorial validity supports the use of the measures of motivation and self-efficacy in underserved boys and girls.

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CHANGES IN CARDIOVASCULAR HEALTH MEASURES AMONG HOSPITAL EMPLOYEES AFTER AN UNSUPERVISED THREE-MONTH WELLNESS PROGRAM

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The purpose of this study was to examine the changes in cardiovascular health measures among healthcare employees who participate in an unsupervised worksite wellness program. A sample (n=320) of participants at a large regional hospital participated in an incentive-based worksite wellness program through which each participant was screened and provided with an exercise prescription. Baseline and three-month post-measurements were recorded for weight, systolic (SBP) and diastolic blood pressure (DBP), total cholesterol, HDL, LDL, triglycerides, and glucose. A total of 320 subjects (196 females and 124 males) with a mean (± SD) age of 44.17±10.26 years participated in the study. Paired samples t-tests were used to examine changes from baseline measurements. Results showed statistically significant changes in DBP, HDL, and triglycerides. DBP decreased from 77.32±8.42 to 75.25±8.72 mmHg (p<0.001). HDL increased from 62.23±16.62 to 64.45±17.44 mg/dL (p<0.001). Triglycerides were reduced from 117.18±75.26 to 110.05±71.70 mg/dL (p<0.033). Although not statistically significant, positive changes also were recorded for the measures of weight (170.30±42.36 to 169.89±41.53 lbs), SBP (117.33±13.48 to 116.73±13.68 mmHg), LDL (102.03±32.27 to 100.30±31.53 mg/dL), and glucose (96.57±18.18 to 96.05±17.50 mg/dL). Mean exercise time per visit was 39.39±17.92 minutes. A significant correlation (r2=0.695, p<0.001) existed between each participants mean minutes of exercise and pre-post difference in weight. Among those participants who lost or maintained weight, the mean exercise time was 47.42±20.32 minutes compared to 31.45±10.25 minutes for those who experienced weight gains. The results of this study indicate that improvements in cardiovascular health among healthcare workers can occur through participation in a brief physical activity program. These results lend support for the development of wellness and exercise programs targeting the growing healthcare workforce.

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DOES THE PLAN FIT? COMBINING IMPLEMENTATION INTENTIONS AND REGULATORY FIT TO INCREASE PHYSICAL ACTIVITY AND DECREASE SEDENTARY BEHAVIOR

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This study examined the effectiveness of combining implementation intentions (II) and regulatory fit in the context of two health goals: increasing physical activity (PA) and decreasing leisure time sedentary behavior. II specify exactly how, when, and where a behavior will occur and can be an effective method of increasing goal enactment. Regulatory fit occurs when a goal or strategy used to achieve the goal matches an individual's regulatory orientation. University students (N=180, 21.6% men) were randomly assigned to a goal (increase activity/decrease screen time) and an experimental condition (II/non-II). Participants formed a goal to increase their PA or decrease their screen time over four weeks. The II group also formed a detailed plan regarding how they would accomplish their goal. Regulatory fit was determined based on group assignment and score on the regulatory focus questionnaire. PA, screen time, and goal commitment were assessed with self-report questionnaires. Follow-up occurred online four weeks after baseline. Data were analyzed separately by goal type using linear regressions to examine the effects of regulatory fit, experimental condition, and goal commitment on the behavior variables. The regulatory fit manipulation lacked strength. Among those with the PA goal, no significant effects emerged. Among those with the screen time goal, the 3-way interaction was significant for moderate PA, $\beta=.53$, p=.01. In a simple slopes analysis, stronger goal commitment tended to be associated with increased participation in moderate PA among participants in the fit, II group. Also, participants who set II for the screen time goal and were committed to this goal tended to report less screen time than participants with lower goal commitment, $\beta=-.40$, p=.05. Findings provide preliminary insight into the effectiveness of II and the importance of goal commitment in interventions aiming to reduce sedentary behavior.

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DISENTANGLING THE EFFECTS OF CHOICE AND INTENSITY ON PREFERENCE FOR SELF-PACED VERSUS IMPOSED HIGHER-INTENSITY PHYSICAL ACTIVITY

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Consistent with self-determination theory, previously sedentary adults have been shown to exhibit more favorable affective valence (pleasure/displeasure) in response to self-paced physical activity (PA) versus PA imposed at a higher intensity. However, it is not clear whether this more favorable affective response can be attributed to (a) the ability to choose one's PA intensity, or (b) the lower intensity of self-paced PA relative to imposed higher-intensity PA. We examined the independent effects of PA intensity and choice of PA intensity when comparing affective response to and relative preference for self-paced versus imposed higher-intensity PA. Twenty-nine healthy, low-active women completed four PA bouts over two sessions. The first session consisted of a one-third mile self-paced treadmill walk during which the speed was recorded, but was not accessible to the participants. The second session consisted of three, counterbalanced, one-third mile treadmill conditions: (a) self-paced, (b) same intensity as recorded for the session one self-paced walking bout, but with the intensity imposed by the experimenter (i.e., yoked self-paced), and (c) intensity set at 20% greater than the session one self-paced walking bout (imposed higher-intensity). Acute affective valence (pleasure/displeasure) was recorded prior to, during, and following each walking bout. Preference for each walking intensity was assessed using a behavioral choice paradigm. Contrary to hypotheses, there was no effect of condition on acute affective valence. However, consistent with hypotheses, there was a linear trend, F (1, 22)=11.00, p=.003, indicating preference in descending order from self-paced to yoked self-paced to imposed higher-intensity PA. Results indicate that both choice over the intensity and a lower intensity per se contribute to greater preference for self-paced over imposed higher-intensity PA among healthy low-active women; however, there was no evidence to support the notion that affective response to PA mediates this relationship.

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ACUTE AFFECTIVE RESPONSE TO PHYSICAL ACTIVITY PREDICTS FUTURE PHYSICAL ACTIVITY PARTICIPATION: A REPLICATION AND EXPANSION OF PREVIOUS FINDINGS

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Recent research has shown that, for most people, affective valence (pleasure/displeasure) improves upon completion of PA, but that there is considerable inter-individual variability in affective valence during moderate intensity PA. Consistent with Hedonic Theory, it has been proposed that more favorable affective valence (greater pleasure/less displeasure) during PA leads to greater likelihood of future PA participation. In a previous study we showed preliminary support for this theorized relationship, albeit among a small sample of individuals (N=37). The present study represents a replication and expansion of our previous findings. Participants were 147 healthy, sedentary adults enrolled in a PA promotion trial. Participants reported their basic affective response (i.e., pleasure versus displeasure) prior to, during, and immediately following a 10-minute moderate-intensity treadmill walk performed at month 6 and month 12 (program end) of the intervention program. As hypothesized, basic affective response during the moderate-intensity treadmill walk at month 6 was predictive of PA level at month 12 (b=15.66, SE=6.37, t=2.46, p=0.02) when controlling for month 6 PA level and self-reported affect prior to the month 6 treadmill walk, with a slight tempering of the effect when also controlling for Rated Perceived Exertion during the treadmill walk (b=15.02, SE=8.65, t=1.74, p=0.09). However, using the same covariates, reported affective valence immediately following the month 6 treadmill walk and during a subsequent 10-minute rest period was not predictive of month 12 PA level (p=0.47 & b=0.67 respectively). The findings are consistent with Hedonic Theory in that those who experienced more favorable affective valence during a bout of moderate intensity PA were more likely to adhere to the PA program six months later. Moreover, consistent with Learning Theory, affective valence experienced during PA—i.e., most proximal to the PA behavior—appears to have a greater influence on future PA behavior than affective valence experienced upon PA completion.

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AFFECTIVE RESPONSES TO EXERCISE PREDICT FUTURE EXERCISE MOTIVATIONS AND BEHAVIOR

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Exercise behavior is complex and is influenced by a number of factors. This study tested the extent to which immediate affective responses during exercise predicted exercise motivation and behavior at a three month follow-up. Ninety-nine active individuals (>90 minutes of voluntary exercise per week) completed a 30-minute exercise session at a moderate level of exertion. Every ten minutes, individuals rated their affect using the Physical Activity Affect Scale (PAAS; Lox et al., 2000),which provides assessments of positive affect (PA), negative affect (NA), tranquility, and exhaustion, and the Feeling Scale (FS; Hardy & Rejeski, 1989). Current physical activity was measured three months following the session, and motivational measures derived from the Theory of Planned Behavior (TPB) assessing exercise attitudes, norms, self-efficacy, and intentions were taken both directly following the exercise session and three months later. Change scores were created for each individual for affect assessments taken during the exercise session. A series of tests predicted 3-month activity level and 3-month TPB constructs from change in affect during the exercise session. Change in NA and tranquility during the exercise session significantly predicted exercise attitudes, norms, self-efficacy, intentions, and behavior 3-months later. Further, the relationship of during-exercise affect and behavior at 3 months was largely mediated by post-session self-efficacy. These findings suggest that affect experienced during exercise influences both long-term motivation to exercise and exercise behavior, perhaps via immediate feedback on one's ability to exercise successfully. Future research should focus on the role affect plays in decisions to initiate and maintain exercise.

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RELATIONS BETWEEN PHYSICAL SELF-PERCEPTIONS AND EXERCISE BEHAVIORS: TESTING THE RECIPROCAL EFFECTS MODEL IN A PHYSICAL EDUCATION CONTEXT

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BACKGROUND: Recently, physical education programs shift its interest towards the adoption of healthy habits, especially the adoption of an active lifestyle. In this regard, physical educators should focus on approaches encouraging the adoption and maintenance of physical activity.In the educational context, many authors have demonstrated strong relations between self-perceptions and academic achievement. However, there is different hypothesis regarding the causal path of this relation. The reciprocal effects model (REM) suggest that self perceptions are both a determinant and consequence of behavior.
OBJECTIVES: The purpose of this study is to test the REM in a physical education context. The hypothesis of this study suggest that the practice of physical activity should influence specific physical self perceptions and consequently, positive self perceptions should be associated with physical active behaviors.
METHODS: A questionnaire was administered (2 times on a 3 month interval) to 386 college students, measuring dimensions of the physical self-concept and specific types of physical activites. Structural equation modeling was performed to test the REM between different exercise behaviors and corresponding self concept measures.
RESULTS: The results supported the validity of the REM. Structural equations revealed good fit indices (NFI>0,92, RMSEA<0,05), suggesting reciprocal effects in which prior self perceptions and exercise behaviors influence subsequent self perceptions and physical active and/or exercise behaviors.
CONCLUSION: The findings of this research contribute to a better understanding underlying the mechanisms of adopting physical active behaviors. The enhancement of self-perceptions should be considered in physical education interventions.

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EXAMINING THE RELATIONSHIP BETWEEN EDUCATIONAL ATTAINMENT AND EXERCISE

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A higher level of education is consistently associated with better health outcomes. Research has indicated that education influences health via its effects on health behaviors such as exercise, though the moderators of this association are unclear. An improved understanding of the factors contributing to who does versus does not exercise can help to improve and target interventions designed to increase physical activity. The current study investigated the relationship between educational attainment and exercise behavior, and the degree to which the relationship between self-efficacy for exercise and intentions might be moderated by educational attainment. The current study draws from a larger exercise intervention study, Colorado STRIDE (COSTRIDE), a 12-month randomized controlled trial. We included the 196 individuals who were randomly assigned to either the STRIDE (n=96) or health-and-wellness (n=100) intervention condition and also completed baseline and 6-month assessments of self-efficacy towards exercise, intentions to exercise, and self-reported physical activity. Multiple regression analyses were conducted to predict physical activity at 6-month assessment from educational attainment, exercise self-efficacy, and intentions at baseline. Controlling for intervention condition educational attainment did not predict physical activity, nor did it moderate the effects of self-efficacy or intentions, (p's>.30). Greater self-efficacy, (p<.01) and greater intentions (p<.01) were significantly associated with more exercise. This was a highly educated sample, with a mean of 15.81 years of education, and ranging from 12-26 years of education. Thus the results suggest that past some threshold of education, further variability in education is not associated with exercise. It may be that the effect of education is only seen when educational attainment levels include those at the lower end of the education spectrum.

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IMPACT OF BASELINE BMI UPON THE SUCCESS OF LATINA PARTICIPANTS ENROLLED IN A 6-MONTH PHYSICAL ACTIVITY INTERVENTION

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High rates of obesity in Latinas highlight the need to determine if physical activity interventions are equally effective across the BMI range. This study assessed the influence of baseline BMI on intervention efficacy as measured by change in physical activity and associated process variables. Forty-five Spanish speaking Latinas were enrolled in a 6 month culturally and linguistically adapted, individually-tailored physical activity print intervention, as part of a randomized controlled trial. Measures used at baseline and 6 months were: demographics, 7 Day Physical Activity Recall, Stages of Change for Physical Activity, Processes of Change, Self-efficacy for Exercise, and Social Support for Exercise. Linear regression models assessed the association between baseline BMI and changes in physical activity and psychosocial outcomes from pre- to post-intervention (6 months). There was a trend for higher baseline BMI to be associated with a lower average change in minutes of moderate intensity physical activity, suggesting that for every one-unit increase in baseline BMI, participants reported 9.89 minutes less of a change in physical activity over 6 months ($b=-9.89$, $SD=7.56$, $p=0.20$). Higher BMI was also associated with lower average change in family social support ($b=-0.75$, $SD=0.35$, $p=0.04$). Data suggested trends for higher baseline BMI to be associated with lower average change in cognitive processes ($b=-0.04$, $SD=0.02$, $p=0.15$) and self-efficacy over six months ($b=-0.04$, $SD=0.03$, $p=0.17$). Participants with higher BMI may need additional intervention to promote physical activity.

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THE ROLE OF EXECUTIVE FUNCTION IN 400 M WALK PERFORMANCE: THE SENIOR'S HEALTH & ACTIVITY RESEARCH PROGRAM-PILOT (SHARP-P)

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The purpose of this study was to examine the role of changes in executive functioning (EF) on gait speed (GS) improvements in older adults. In a 2 x 2 factorial design, 73 older adults (M age=75.1 years; SD=4.5) were randomized into one of four treatment groups: physical activity (PA), cognitive training (CT), combined (PACT), or healthy aging education (HAE). All treatment groups met for 4 months. Participants in the PA condition performed center-based walking and flexibility training 2 days/week as well as home-based PA. Participants in the CT group performed repetition-lag training 2 days/week for the first 2 months and 1 day/week for months 3 and 4. The PACT group completed both the physical activity and cognitive training interventions. The HAE group involved healthy aging lectures and met 1 day/week for the duration of the trial. GS was calculated from performance of the 400 M walk test. Composite scores for EF (Trail Making task, Eriksen Flanker Task, task switching, N-back, and self-ordered pointing test) and Episodic Memory (Hopkins Verbal Learning Test-immediate and delayed; Logical Memory parts I and II) were used. A main effects analysis revealed that participants receiving PA (PA & PACT groups) experienced significant improvements in GS (0.059 m/s). Multiple regression analyses indicated that PA and changes in executive functioning accounted for 11.5 % of the variance in change in GS ($Adj.R2=.12$; $p<.05$). Change in N-back performance (working memory)($\beta=0.2812$, $p<0.05$) was the only EF variable to account for unique variance in change in GS. This is the first study to document a significant relationship between training induced changes in EF and changes in GS. Future research is needed that further examines the causal relationships between EF and gait so as to enhance our ability to develop interventions that improve functioning and prevent disability in older adults.

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IS THE THEORY OF PLANNED BEHAVIOUR FIT FOR FITNESS? THE LONGITUDINAL PREDICTION OF SPORT AND EXERCISE BEHAVIOURS AFTER SPINAL CORD INJURY (SCI)

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After SCI, individuals may face many years with severe disability. The majority remain sedentary despite the the physical, mental, and social benefits of physical activity. The objective of this prospective cohort study was to assess the utility of the Theory of Planned Behaviour (TPB) in predicting two related, yet different leisure time physical activities (LTPA): sport and exercise. In addition to the traditional TPB factors, barrier self-efficacy was also collected given the strong relationship it has to health behaviour. Logistic and linear regressions were used to determine if a baseline measurement of traditional TPB and social cognitive predictors could determine the extent of participation in different forms of LTPA in a cohort of 696 individuals with SCI (76% men, Mage=46.8±13.4, Myears-post-injury=15.2±11.1). In the cohort, 187 individuals participated in sport over the 6 month period (Msport=14.2±26.6 minutes) compared to 329 individuals who participated in exercise (Mexercise=18.5±32.0 minutes). None of the TPB variables predicted sport participation (yes/no) or the amount of time spent playing among those who participated in sport. On the contrary, intentions (OR=1.23, 95% CI 1.07-1.42) and barrier self-efficacy (OR=1.32, 95% CI 1.15 - 1.50) predicted whether participants engaged in exercise at 6 months even when age, sex, and mode of mobility were added as covariates. Of the 329 exercisers, both intentions and perceived behavioural control predicted the minutes spent in exercise at 6 months ($\beta int=2.74$, $p<0.047$; $\beta pbc=-3.92$, $p<0.011$) even when controlling for the effect of age, sex, and mode of mobility. Despite the fact that sport and exercise require similar abilities, physical strength and endurance, these behaviours are not equally predicted by the TPB model. However, given that TPB questions asked about LTPA as a whole, it is possible that the questions were not specific enough to capture sport participation. Therefore, future work that aims to understand sport behaviours and participation may also need to consider different theoretical frameworks.

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LACK OF ASSOCIATIONS OF HOSTILITY AND CONSCIENTIOUSNESS WITH PHYSICAL ACTIVITY, BMI, AND WAIST CIRCUMFERENCE AMONG YOUNG ADULTS

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Dispositional cynical hostility and conscientiousness have opposing associations with health and longevity, however, these constructs may not be mutually exclusive within individuals. The extent to which conscientiousness moderates the effect of hostility on physical activity and health risk factors was examined in 309 young adults in college (ages 18-26 years (M=18.6, SD=1.01); 63% female; 83% White). Measures included the Cook-Medley Hostility Scale, NEO-PI Conscientiousness scale, Houston Non-Exercise Questionnaire, body mass index, and waist circumference. It was expected that greater hostility would be associated with a poorer profile on health factors for those low on conscientiousness than those scoring higher on conscientiousness. Hostility and conscientiousness were not significantly related ($r=.09$, $p>.05$). Using a median split for hostility and conscientiousness scales, analysis of variance models indicated no significant main effect or interaction terms (p's>.05). Hostility and conscientiousness do not appear to be mutually exclusive constructs. The lack of effects suggests that young adults in college may not be measurably impacted by hostility and conscientiousness on these physical health factors, however, associations could potentially emerge with age.

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SEDENTARY BEHAVIOR, HEALTH-RELATED QUALITY OF LIFE, AND SYMPTOM OUTCOMES AMONG EARLY-STAGE BREAST CANCER SURVIVORS

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Background: Many breast cancer survivors experience long-term physical and psychological symptoms after diagnosis and treatment. We examined how time spent sitting, and how prolonged sitting combined with a lack of recreational moderate-vigorous physical activity (MVPA), are associated with health-related quality of life (HRQOL) and symptom outcomes among a large, ethnically-diverse cohort of breast cancer survivors.
Methods: Participants included 778 women diagnosed with stage 0-IIIA breast cancer in the Health, Eating, Activity, and Lifestyle Study. Women completed self-administered questionnaires at approximately 30-months postdiagnosis (sitting; recreational MVPA) and 41-months postdiagnosis (norm-based physical and mental HRQOL subscales and component scores; fatigue; lymphedema). In multivariate models, we regressed these outcomes linearly on hours spent sitting per day, and a combined variable reflecting prolonged sitting (0.8-4.9; 5-7.4; 7.5-19) and recreational MVPA (none/any). We also explored if any observed associations differed by recreational MVPA, body size, race/ethnicity, or number of limiting comorbidities.
Results: Regardless of recreational MVPA, survivors spent, on average, 6 hours per day sitting. Time spent sitting was inversely, though not significantly, associated with physical functioning ($\beta=-2.100$, p=0.06). Prolonged sitting combined with a lack of recreational MVPA was associated with poorer physical functioning ($\beta=-4.98$, p=0.0002). We did not find evidence of effect modification by any investigated factors.
Conclusions: Prolonged sitting combined with a lack of recreational MVPA was associated with poorer physical functioning among breast cancer survivors. Efforts to reduce time spent sitting in addition to promoting recreational MVPA may be helpful for improving HRQOL among breast cancer survivors.

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SELF-REPORTED FATIGUE LEVELS IN PERIMENOPAUSAL WOMEN ARE IMPACTED BY HABITUAL PHYSICAL ACTIVITY AND ADIPOSITY

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Fatigue, defined as a perceived lack of physical or mental energy or a general feeling of tiredness, is a common complaint in mid-life, especially in women. Here we report a secondary analysis on cross-sectional data exploring the impact of physical activity (PA) and relative body fatness on perceived fatigue in perimenopausal women [$X \pm SD$:=49.9±3.6 y (range=42-58 y); N=150] who were initially recruited for an intervention study assessing exercise mode on menopausal symptoms and psychological well-being. Menopause status was determined by self-reported menstrual bleeding history following STRAW criteria. PA was assessed via self-report with subsequent METS per day calculations. Whole body adiposity (%Fat) was assessed using dual energy X-ray absorptiometry (DXA). Fatigue was assessed from specific questions on the Greene Climacteric Scale (GCS) targeting “feeling tired or lacking energy”. Fatigue was inversely related to PA (r=−0.25, p=0.002) and directly related to trunk fat mass (r=0.17, p=0.042). Controlling for age, women with little or no fatigue had higher PA (p=0.005) and lower %Fat (p=0.046) than women with moderate to high levels of fatigue. The sample was divided into %Fat tertiles and PA level (sedentary, physically active); interactive effects of adiposity and PA were apparent (F1,5=2.669, p=0.024). Obese/Sedentary women reporting the highest levels of fatigue being greater than the Lean/Sedentary women (p=0.024). PA also reduced fatigue in Overweight women (Active vs. Sedentary; p=0.052). Our results suggest that both %Fat and PA impact perceptions of fatigue in perimenopausal women. Future studies need to assess fatigue in multiple domains (i.e. physical, social, etc.). Moreover, as there is a known relationship between %Fat and PA, future research needs to explore the efficacy of both lifestyle behaviors to reduce fatigue in midlife women.

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EXPLORING SOCIAL CONNECTEDNESS, ORAL HEALTH STATUS AND QUALITY OF LIFE IN PREGNANT AND PARENTING ADOLESCENT WOMEN

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Social connectedness is considered a protective factor in the overall health of adolescents. Good oral health plays an important role in preventing adverse maternal, infant and childhood outcomes. Adolescent women who feel disconnected from others may not engage in adequate oral health promoting behaviors or seek professional oral health care which and in turn may alter quality of life. However, little is known about these relationships. A descriptive design was used to explore relationships between social connectedness, oral health status and quality of life among a school based sample (N=46) of pregnant (n=20; 43%) and parenting (n=26; 57%) adolescent women. Participants completed four questionnaires: Demographic Information; Dental Health-Self Report (DHSR); Social Connectedness Scale (SCS) and Oral Health Related Quality of Life (OHRQoL). Objective measures used to visualize oral health status were: Visual Periodontal Disease Identification Index (VPDII) and Visual Oral Hygiene Identification Index (VOHII). Pearson correlations indicated a correlation between SCS and OHRQoL (.349) indicating that those participants reporting high levels of social connectedness also reported higher levels of quality of life related to oral health. A significant association was also noted between VPDI and the DHSR (-.328) indicating incongruence between objective visual evidence and the DHSR. This is important because the participants self reported a lack of dental health problems yet the visual assessment revealed varying degrees of periodontal status (healthy gum tissue to bright red gum tissue and/or visible bleeding along the gum line). A significant correlation was also observed between DSHR and OHRQoL (-.395) indicating that those participants self reporting a lack of dental problems reported a better OHRQoL. Health professionals should assess maternal adolescent oral health status, social connectedness and oral health related quality of life. This assessment may identify adolescent women in need of referrals, more intensive education and treatment.

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INNOVATIVE METHODS FOR RECRUITING PREGNANT AND POSTPARTUM WOMEN FOR BEHAVIORAL INTERVENTION TRIALS

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Introduction: Recruiting pregnant and postpartum women for behavioral intervention trials is challenging, and innovative strategies for successfully recruiting this population are needed.
Purpose: The purpose of this study was to evaluate strategies for recruiting pregnant and postpartum women into a randomized controlled behavioral intervention trial in a large metropolitan area.
Methods: Data for this study were obtained from an ongoing study in which participants at risk for postpartum depression are being randomly assigned to a telephone-based exercise intervention or a health/wellness control condition. The purpose of the overall study is to examine the effect of exercise on preventing postpartum depression. Participants are recruited during pregnancy or after delivery and randomized into the study once healthcare provider consent to exercise is obtained during the postpartum phase. Recruitment strategies have included print advertisements, targeted emails sent out by a local newspaper, recruitment table at a local consignment sale, healthcare provider referrals, and advertisements on Craig’s List (i.e., online local classifieds).
Results: Of the 112 participants who completed a telephone screening interview, the three most successful recruitment strategies included targeted emails sent out by a local newspaper (33%), advertisements in the local parent magazine (27%), and ongoing advertisements on Craig’s List (25%). Only two participants were telephone screened as a result of healthcare provider referrals and none were screened as a result of a local print newspaper advertisement.
Conclusion: Our findings indicate that online advertising (e.g., Craig’s List, targeted emails) and a local magazine were more successful than traditional recruitment methods such as healthcare provider referrals and an advertisement in the newspaper. Additional research is needed to evaluate other innovative strategies for recruiting this population of women.

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DYADIC GOAL APPRAISAL DURING TREATMENT FOR INFERTILITY

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Infertility often is a dyadic stressor constituting blockage of a central life goal. Primary aims were to examine heterosexual partners' goal appraisals during treatment for infertility and to test whether the direct effects of and interactions between partners' goal-related appraisals were associated with each partner's adjustment. Women (N=37) receiving fertility treatment and male partners (N=37) did not differ on ratings of the importance of parenthood, but women indicated lower perceived chance of pregnancy [t(34)=−1.90, p<.05] and higher perceived goal blockage [t(33)=2.27, p<.05] than their partners. For both women and men, perceived chance of becoming pregnant and goal blockage were uncorrelated with actual goal blockage (number of unsuccessful treatment cycles). Goal appraisals were moderately correlated between partners. Women reported greater depressive symptoms [t(34)=5.18, p<.01], more infertility-specific rumination [t(35)=5.74, p<.01], and lower positive states of mind [t(36)=−2.63, p<.05] than partners. For both partners, greater own perceived goal blockage was associated with greater depressive symptoms (Women: B=.37, p<.05; Men: B=.35, p<.05). For men, own higher goal importance was associated with greater positive states of mind (B=.32, p<.05). Women's greater perceived likelihood of pregnancy was psychologically protective, but high pregnancy likelihood reported by their partners was associated with women's negative psychological adjustment. Self and partner goal appraisals accounted for 32% to 37% of the variance (p<. 01) in women's adjustment indices. Goal appraisals are salient factors for psychological adjustment to infertility. Broadening the assessment of goal-related appraisals from the intrapersonal level to the interpersonal level may promote development of interventions to enhance individual adjustment and marital functioning among couples experiencing infertility.

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REPRESENTING RANDOMNESS IN THE COMMUNICATION OF INDIVIDUALIZED CANCER RISK ESTIMATES: EFFECTS ON CANCER RISK PERCEPTIONS, WORRY, AND SUBJECTIVE UNCERTAINTY ABOUT RISK

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Background: Randomness is an important component of the uncertainty implicit to individualized risk estimates, and an essential concept to understand. However, it is challenging to convey and seldom addressed in risk communication efforts, and the optimal methods and effects of representing randomness are unknown.
Objective: To develop and test the effects of novel alternative representations of randomness on risk perceptions, worry, and subjective uncertainty about individualized colorectal cancer risk estimates.
Methods: A Web-based factorial experiment was conducted, in which 225 adults aged 40 years and older were provided with hypothetical individualized colorectal cancer risk estimates, using 5 alternative textual and visual representations varying in expressed randomness. Outcome measures were perceived cancer risk, cancer worry, and subjective uncertainty about cancer risk; the moderating effect of dispositional optimism was also examined.
Results: Representational format was significantly associated with subjective uncertainty about cancer risk (F(4, 210)=2.98, p=.02), but not with perceived cancer risk or worry. A format using software-based animation to express randomness dynamically led to the highest subjective uncertainty, although a static visual non-random format also increased uncertainty. Dispositional optimism moderated this effect; between-format differences in uncertainty were significant only for participants with low optimism.
Conclusion: Representing randomness in individualized estimates of cancer risk increases subjective uncertainty about risk. A novel dynamic visual format produces the greatest effect, which is moderated by individual differences in optimism.

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HEALTH CARE PROVIDER PERCEPTIONS OF CLIMATE-RELATED HEALTH RISKS IN A LOW-INCOME, URBAN COMMUNITY

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Background: Many state and local health departments have climate change adaptation programs such as heat wave preparedness interventions. Little is known about health care providers' perceptions and readiness to act regarding reducing risk of climate change-related health effects.
Objective: To identify and explore health care providers' perceptions of the associations between climate change and health and potential adaptation activities.
Methods: Five focus groups were conducted with health care providers from out-patient health clinics in East Harlem, New York City - using a pilot tested moderator's guide. Focus groups explored provider awareness and perceptions of health effects and adaptation to climate change in general and specifically in relation to heat waves. Coding and thematic analysis was conducted.
Results: The participants identified numerous susceptible groups but never indicated perceived vulnerability of themselves. They listed reminding co-workers of risk reduction behaviors, notifying susceptible patients when weather increased health risks, and educating self and others regarding risks. Some of the barriers to adaptation included conflicting public health messages, negative consequences of adaptation actions, and skepticism about efficacy of governmental agencies. Overall, health care providers in this study identified that they could do a better job of preparing their patients but that the bulk of adaptation activities fall to the public health departments.

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THE EFFECTS OF ETHNICITY AND EDUCATIONAL LEVEL ON WILLINGNESS TO PAY A HEALTH CARE ADVOCATE

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A Health Care Advocate (HCA) is an individual hired to help patients and family members maneuver through the healthcare system. Past research shows that minority ethnic groups have more health problems, but use health care services less often, than Caucasians. Lower educational level is also related to poorer health. In the emerging field of Health Care Advocacy, the factors that influence how much a patient is willing to pay to receive HCA services are unknown. The present study investigated the impact of a respondents' ethnicity and educational levels on how much they would be willing to pay a pediatric HCA to research treatment options, based on a vignette about parents with an ill child. It was predicted that ethnic minorities and those with lower education levels would be willing to pay more than Caucasians and those with higher education levels. A community-based sample of participants (N=1142) was randomly selected to complete a questionnaire that included demographics and a range of dollar amounts they would be willing to pay an HCA. A 2 (Ethnicity: Caucasian vs. Minority) by 3 (Educational Level: HS or less, college, advanced) between-groups ANOVA was conducted on the hourly rate the participant was willing to pay an HCA. There was no significant main effect for ethnicity, and no interaction effect, on the amount one was willing to pay. There was a significant main effect for educational level on the rate willing to pay (F (5, 1086)=3.149, p=.043, partial η¬2=.006). A planned comparison analysis indicated that respondents with a HS degree or less were willing to pay more than those with a college or advanced degree. (t=−2.344, p<.09). It should be noted that all groups indicated that they would be willing to pay within the same monetary range (i.e., $51-$75/hr). The results may suggest that those with less education may feel less confident in their ability to research treatment options and be more willing to pay for extra help.

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DECISION TO ABORT FOLLOWING A PRENATAL DIAGNOSIS OF SEX CHROMOSOME ABNORMALITY: A SYSTEMATIC LITERATURE REVIEW

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Purpose: To present findings from a systematic review of the psychosocial factors influencing parental decisions to abort, following a prenatal diagnosis of a sex chromosome abnormality (SCA).
Background: SCA is one of the most common types of chromosome abnormalities encountered among fetuses in the United States. SCA can be detected through prenatal testing, leading parents to face an abortion decision. Although SCA commonly poses non-life-threatening health conditions, abortion rates are as high as 60%-81% in Canada, Switzerland, and the U.S. Understanding the underlying factors which affect parents' decisions to continue or terminate an SCA-affected pregnancy is important.
Methods: 21 studies, from five electronic databases, met our inclusion and exclusion criteria. Each study was also assessed for its methodological quality, receiving a unique quality score (MQS).
Results: The five most frequently identified factors associated with terminating SCA-affected pregnancies included: specific types of SCAs (45,X [Turner syndrome] and 47,XXY [Klinefelter syndrome] — found in 73.6% of reviewed studies), length of gestation at diagnosis (36.9%), maternal age (36.8%), professional training of counselors and availability of genetic counseling (36.8%), and number of live children (25.8%). The average MQS was 10.6, a below-average quality (the theoretical average=12).
Conclusion: Although most identified factors are not amenable to change, availability and professional training of genetic counselors could affect parental decision-making. Thus, better genetic counseling services should be provided for parents with SCA-affected pregnancies. Additionally, the overall methodological quality of these reviewed studies was below a hypothesized-ideal average. More rigorous studies are needed to inform practitioners, users, and researchers in the field.

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PHYSICIAN NUMERACY AND ASSOCIATIONS WITH BREAST CANCER CARE

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Introduction: Numeracy is the ability to use and understand numbers. Numeracy levels of both patients and provides impact healthcare communication. Physicians are often overlooked as part of the problem of health illiteracy; indeed we have found that some ob-gyns have problems with some numeracy tasks such as calculating the positive predictive value after a positive mammography. The communication of breast cancer screening, testing, and treatment information is an important aspect of gynecologists' practice. Little research has been done on physician numeracy and how it is associated with specific aspects of physicians' communication regarding breast cancer.
Methods: Survey study of 240 obstetrician-gynecologists. Three questions were asked to measure numeracy (Schwarz numeracy scale). Ob-gyns were asked to rate how much their typical patient agreed that women should have annual mammography screenings, and asked to answer true/false questions about breast cancer facts.
Results: 99.6% physicians perceive that their patients know that breast cancer is heredity, 86.5% predicted that there is a gene mutation related to breast cancer, and 79.4% predicted that most breast cancer cases occur in women aged 50 years or greater. A total of 66% of obstetrician-gynecologists answered all three numeracy questions correctly. Less numerate physicians (answered two or fewer numeracy questions correctly) were more likely to indicate that their typical patient would agree with the that all women should get regular mammography screening each year, compared to more numerate physicians (answered all three numeracy questions correctly).
Conclusion: Based on previous studies about patient knowledge, ob-gyns may be over estimating patients' knowledge about some breast cancer risk factors such as age. Given that numeracy has been found to be associated with one's own risk behaviors, it makes sense that numeracy would also be associated with perceptions of others' risk behaviors (i.e. physician's perceptions of their patients' agreement about regular screening).

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HIV RISK AMONG YOUNG MEN WHO HAVE SEX WITH MEN (YMSM): A SOCIAL ACTION THEORY PERSPECTIVE ON SEXUAL RISK BEHAVIOR

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Social Action Theory (SAT; Ewart, 1991) provides a promising model for examining HIV risk among YMSM. This study aims to empirically validate the chain of relationships depicted in SAT to determine if the theory addresses the individual, contextual, and social correlates of sexual risk behaviors among YMSM. Data come from the NIDA-funded "Healthy Young Men" study, which longitudinally tracked an ethnically diverse cohort of YMSM ages 18-24. Confirmatory factor analysis was used to establish latent variables consistent with SAT constructs. Structural equation modeling was used to examine the hypothesized pathways from initial contextual influences to intermediate self-change process constructs and to distal outcomes of sexual risk, psychological distress, and health protective behaviors. The model predicting sexual risk displayed excellent fit (CFI=0.949, TLI=0.941, RMSEA=0.037; R2=0.15). Action contexts were negatively associated with social interaction and marginally associated with generative capabilities; social interaction and generative capabilities were in turn associated with reduced psychological distress; and motivational appraisals were positively related to both psychological distress and health protective behaviors and negatively related to sexual risk, indicating a difference in risk factors for mental versus physical health and suggesting concordance between social support, personal capacity for HIV prevention, and good mental health. Results support the utility of SAT in understanding sexual risk behavior among YMSM. While the model presented here differs from Ewart's original conceptualization, the statistically significant relationships that emerge from these analyses are promising. Our model highlights the oscillating relationships between environmental experiences, individual self-change processes, and mental health and sexual risk outcomes.

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SEXUAL RISK BEHAVIOR AND ALCOHOL MISUSE IN YOUNG ADULTS: THE INFLUENCE OF SOCIOTROPIC COGNITION

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Objective: Alcohol misuse and sexual risk taking are influenced by the social environment and peer interactions. Individuals may respond differently to social demands based on their need for social approval. Sociotropic cognition is a set of beliefs associated with social dependency and a high need for social approval. Prior studies found that high sociotropic cognition was associated with sexual risk behavior in women, but has not been studied in men.
Purpose: To examine the influence of sociotropic cognition on alcohol/substance use and sexual risk behavior in young adults.
Method: As part of a larger study of health risk behavior, N=362 college men and women completed anonymous self-report measures of sexual risk behavior, alcohol and drug use, and expectancies and consequences of alcohol use. Sexual risk behavior results are based on a subsample of n=251 participants that reported lifetime sexual activity and alcohol use in the past month. Standardized betas are reported from multiple regression analyses.
Results: Women high in sociotropic cognition reported more sex-related expectancies about the effects of alcohol (.34***), consuming more alcohol on a typical day (.12†), experiencing more negative consequences from alcohol use (.17*), and recent amphetamine use (.14*). In men, higher sociotropic cognition was associated with less use of alcohol (-.16*) and marijuana (-.14†), and was positively associated with amphetamine use (.14†). For women, sociotropic cognition was associated with more sexual partners (.29†) and having tested positive for a STI (.21†). For men, sociotropic cognition was associated with having been pressured to have sex (.20***), but not with number of partners or STIs. Note. †p<.10. *p<.05. ***p<.001.
Conclusion: These findings show that sociotropic cognition is an important correlate of sexual risk and alcohol and drug use for women. Moreover, findings show that men's health risk behavior is influenced by sociotropic cognitions. Individuals high in sociotropic cognition may engage in health risk behaviors when there is a strong social influence for risk-taking.

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HIV DISEASE AND SEXUAL RISK BEHAVIOR: THE IMPLICATIONS OF THE USE OF ERECTILE DYSFUNCTION MEDICATION

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The advent of HAART has allowed HIV providers to focus on the management of other medical problems that patients experience, including issues related to sexual behavior. Previous research has indicated an association between erectile dysfunction drugs (EDD) and sex risk among MSM. Both HIV disease itself and HAART can influence erectile dysfunction, but providers should consider the impact of prescribing such medications on the likelihood of unprotected sex among HIV-positive individuals.

An ACASI survey including questions about EDD use and sexual behavior was administered to 200 HIV-infected men receiving primary care in the Infectious Diseases Clinic at the Washington DC VA Medical Center. The mean age of the sample was 54 years, and 42% reported no sexual activity during the previous 3 months. Fifty-four percent of the sample identified as straight and 46% identified as MSM. Slightly over one quarter of the men had used EDD in the previous 3 months. Logistic regression was performed to examine the effect of EDD on unprotected sex. Control variables included age, education, main partner status, and sexual orientation. The results revealed significant effects of age ($p<.001$) and main partner status ($p<.001$) on sexual risk, with younger men and those with a main partner more likely to have engaged in unprotected anal or vaginal intercourse. There was no significant association between the use of an EDD and sexual risk behavior after controlling for the other variables in the model. Results are discussed in terms of the age, sexual activity, and sexual orientation of the men in the sample. The relationship between EDD and unprotected sex among HIV-infected men may differ greatly depending on the characteristics of the study sample. However when prescribing EDD to HIV-infected patients, clinicians should continue to counsel on safe sex practices given the potential public health threat of HIV and other STD transmission.

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SLEEP DISTURBANCE IN RHEUMATOID ARTHRITIS

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Background: Previous research has shown that many patients with rheumatoid arthritis have insomnia or unrestful sleep. This cross-sectional study examined a multivariate model in which disease activity, pain, and psychosocial factors were evaluated as potential correlates of sleeping difficulty in a sample of patients with RA. Subjects: RA patients ($n=106$), recruited from the greater Los Angeles area, were predominantly female (71%) with an average age of 56.22 years and reported illness duration of greater than ten years. The sample included patients of Caucasian (45.2%), Hispanic (12.1%), Asian (4.8%), and African-American ethnicity (8.9%).

Methods: Patients underwent a physical exam conducted by a rheumatologist and completed a self-report assessment inventory, including pain (SF-36 pain scale), disease activity (Rapid Assessment of Disease Activity in Rheumatology), active and passive pain coping (Pain Management Inventory), helplessness and internality (perceived control) subscales of the Arthritis Helplessness Index (AHI), depression (CES-D), and sleep disturbance (Pittsburgh Sleep Quality Index). Regression analyses were conducted to identify individual correlates of PSQI scores, and a model was tested that examined whether the effects of pain on sleep would be mediated by depression.

Results: The univariate regression model accounted for 45% of the variance in PSQI scores. Younger age ($be=-.17$, $p=.07$), higher SES ($be=.30$, $p<.01$), higher SF-36 pain ($be=.27$, $p<.05$), lower internality ($be=-.19$, $p=.09$), and higher depression ($be=.40$, $p<01$) were independently associated with greater sleep disturbance. In the mediational analysis, higher pain was associated with higher depression ($be=.40$, $p<.001$), that, in turn, was associated with greater sleep disturbance ($be=.35$, $p<.001$). A Sobel test following the Preacher and Hayes (2004) bootstrap method indicated significant partial mediation.

Conclusions. Pain and depression play significant roles in reported sleep disturbance in RA, suggesting the need for treatment of these problem areas in order to enhance sleep.

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AFFECT AND SLEEP: DOES A HIGHER POSITIVE/NEGATIVE AFFECT RATIO PREDICT SLEEP UNDER STRESS?

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Previous research has linked positive affect (PA) to numerous physical health benefits, from strong immune functioning to lower cortisol levels. However, it remains unclear exactly how PA benefits health and what role the balance between positive and negative affect (NA) plays in the relationship between PA and health. One possibility is that PA buffers negative health consequences of stress, leading to better health outcomes. This may also be true of the ratio of PA to NA. This study examined this by investigating the possible stress-buffering role of affect and/or having a positive PA/NA ratio in a critical health behavior: sleep. As expected, positive and negative affect were individually associated with better and worse self-reported sleep outcomes. However, with the average person experiencing a multitude of positive and negative emotions within any given day, we hypothesized that a PA/NA ratio would be an important predictor of sleep; specifically, that those individuals with higher overall levels of PA than NA would have better sleep outcomes in general and before a stressful examination. Students ($N=100$) completed online questionnaires assessing demographics, trait affect, and sleep quality and quantity 1-3 weeks before an exam as well as the morning of the exam. Results indicated that a higher PA/NA ratio was associated with better self-reported sleep [measured by the Pittsburgh Sleep Quality Index (PSQI) and Pittsburgh Sleep Arousal Scale (PS Arousal)]. Controlling for sex and race, a higher baseline PA/NA ratio was associated with better sleep quality at baseline ($B=0.43$, $p<0.01$), better baseline sleep efficiency [ratio of minutes asleep/minutes lying in bed] ($B=0.25$, $p<0.05$), and lower sleep arousal [thoughts/feelings causing changes from sleep to wakefulness] at baseline ($B=-0.30$, $p<0.01$) as well as the night before a stressful exam ($B=-0.35$, $p<0.01$). In addition, a higher PA/NA sleep ratio was associated with less self-reported stress in general [measured by the Perceived Stress Scale] ($B=-0.30$, $p<0.01$) and less self-reported stress about an upcoming exam ($B=-0.20$, $p<0.05$). Future research should consider whether inducing PA to increase the PA/NA ratio prior to stressful events might be protective.

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NEGATIVE AFFECT PATTERNS IN TOBACCO-DEPENDENT CANCER PATIENTS: ASSOCIATION WITH ABSTINENCE AT HOSPITALIZATION

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Among smokers recently diagnosed with operable cancer, impending surgical treatment and medical advice to quit smoking may engender strong negative affect (NA). Research using ecological momentary assessment (EMA) has shown complex relationships between negative affect and abstinence in non-medically ill smokers. This study examined NA and smoking behavior among newly diagnosed cancer patients participating in a multi-component, randomized trial to help them quit smoking prior to cancer surgery.

EMA data were collected from 76 patients in one study arm who were instructed to taper their smoking over 7-21 days prior to quitting before hospitalization. Most were not using cessation medication during EMA. Negative affect (6 PANAS items) was assessed randomly thrice daily. Growth curve modeling with individual linear trajectories of NA was fitted over time. Each growth curve represented: 1) NA changes before hospitalization (slope), and; 2) NA at hospitalization (intercept centered at hospitalization). Recursive partitioning and regression trees identified clusters of patients' NA profiles that best predicted abstinence at hospitalization. The highest abstinence rate (78%) was among patients with very low NA (mean NA between "not at all" to "a little") at hospitalization, regardless of slope. The lowest abstinence rate (27%; $p=.007$) was among patients whose NA increased abruptly from the 'not at all' level to 'a little' as hospitalization drew near.

These findings in cancer patients trying to quit smoking prior to hospitalization suggest that a low level of NA may facilitate quitting, while both high NA and low but accelerating NA interfere with quitting. Cessation support for this population of smokers should entail monitoring patterns and levels of NA and intervening accordingly prior to hospitalization.

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ON THE GENETIC AND ENVIRONMENTAL RELATIONSHIP OF BODY MASS INDEX, SMOKING INITIATION AND NICOTINE DEPENDENCE IN A POPULATION-BASED SAMPLE OF TWINS

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Genetic factors have consistently been demonstrated to influence individual differences in body mass index (BMI) and nicotine dependence (ND), with twin and family studies estimating heritabilities in the order of 0.70 and 0.60 respectively. While cross-sectional studies of ND are typically supportive of a negative relationship between smoking and BMI, a positive association is supported by the observations that, within smoking cohorts, heavy smokers tend to be of increased bodyweight compared to light smokers. Elucidation of the genetic and environmental mechanisms underlying these associations remains an important public health endeavor. It is possible that these traits share common liability influenced by genetic and/or environmental factors. The purpose of this study was to examine phenotypic associations between BMI, smoking initiation and ND and subsequently test for shared genetic and environmental liability in a population-based sample of twins from the Virginia 30,000 study ($n=14{,}177$, 63.9% female). Results indicated that males had significantly greater BMI, daily cigarette consumption and rates of ND than females ($p<0.001$). Nonparametric correlations revealed small but significant negative associations of BMI and cigarette consumption ($r=-0.023$, $p=0.029$) and smoking initiation ($r=-0.025$, $p=0.005$) in females. However, in males, there were small but significant positive associations of BMI and cigarette consumption ($r=0.062$, $p=1.04E-5$) and smoking initiation ($r=0.060$, $p=1.29E-7$). A small but significant positive association was found between BMI and ND ($r=0.018$, $p=0.037$). Univariate analyses estimated the additive genetic effects as 0.753 for BMI and 0.435 for average number of cigarettes consumed. Bivariate analyses indicated a significant genetic correlation between BMI and cigarette consumption, $rG=0.166$. Results support the possibility of familial factors to predispose to both body composition and nicotine-use.

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RECRUITMENT AND RETENTION OF LATINOS IN A COUPLES-BASED SMOKING CESSATION TRIAL

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Latino expectant fathers who smoke may be receptive to couple-based smoking cessation. A potential teachable moment, intervening with couples during pregnancy may increase effectiveness and sustainability of the intervention. However, recruiting couples is challenging. We present strategies to recruit Latino couples into the on-going Parejas RCT. We also examine predictors of enrollment and completion of follow-up surveys to assess sampling and retention biases.

Strategies included partnering with the local Latino Community Center, hiring bilingual staff, culturally adapting materials, and convening a Community Advisory Panel. We screen Latinas at prenatal clinic visits and also recruit from churches, community events, and grocery stores. We advertise via flyers and spots on Latino radio stations.

To date, we have screened 2246 women. Eligible women must be>16 years, currently pregnant, not smoking, and partnered to someone >16 who smokes. Staff has identified 262 (12%) potentially eligible women at initial contact; of those, 172 couples were eligible, and 133 couples enrolled. Most (80%) couples were identified at clinics. There appears to be no recruitment bias as enrollment in the study was unrelated to age, education, socioeconomic status, and marital status, years in the United States, or recruitment site. Two factors were related to completing the follow-up survey. Women with 2 or more children and couples who were living together were less likely to complete the follow-up survey than those with less than 2 children ($p=.025$) or those who were married ($p=.02$).

Although recruitment is challenging, no apparent systematic recruitment bias is occurring. Not surprising, couples with more children were less likely to complete the follow-up survey, likely because their lives are more complicated and also because pregnancy may be less of a teachable moment for them. Couples who were not married may not be as stable as and harder to follow than married couples.

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NEW PROBLEMS AND SOLUTIONS TO RELYING ON CELL PHONES FOR BEHAVIORAL TRIALS

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Disconnected and difficult to reach telephone numbers impede recruitment, retention, and intervention delivery in behavioral trials. Typical solutions to such problems include strategic calling times, getting multiple numbers at first contact, use of online tracing, and providing toll-free numbers or prepaid calling cards to participants. Increased use of cell phones, particularly temporary cell phones, adds obstacles to conducting telephone-based interventions. These problems include cost of minutes, changing phone numbers, and people sharing phones. New solutions are needed for these problems.

We are halfway through recruitment for a postpartum relapse prevention trial (Quit for Two) with pregnant women ($n=215$). We have implemented several new solutions to reach participants who we are unable to contact by phone. First, we send or email women a letter offering them $10 if they contact us with new phone numbers. There is no limit on the number of times participants can receive the incentive over the course of the trial. Second, we text, email, and send messages on Facebook to participants when we are unable to reach them on the phone.

To date, we have mailed letters to approximately 45 women and paid 5 women the incentive. We have made 131 contacts (via text message, email, Facebook) with women unreachable by phone and approximately 47 (36%) have resulted in successful contact with a participant. Although difficult to determine independent effects, these strategies appear to be working as we have excellent follow-up rates (88% at 6 weeks, 87% at 6 months, and 93% at 12 months) and satisfactory intervention penetration women receiving a mean of 6.5 sessions (0 - 11) over the 1 year intervention period.

New approaches for reaching hard to reach participants have had some success. It is likely that most of these participants would have been categorized as “unable to reach” prior to enacting these strategies. As technology and communication continue to change, it is important that researchers also adapt to reach participants.

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WEIGHT-RELATED CONSTRUCTS AND TRAJECTORIES OF ADOLESCENT CIGARETTE SMOKING OVER TIME

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Body weight and associated beliefs and behaviors are among factors suggested to contribute to the initiation and maintenance of adolescent smoking. The current study examined: 1) the association between several weight-related constructs (i.e. BMI, weight perception, dieting, and weight-control expectancies) and trajectories of adolescent smoking over a two-year period; and 2) whether smoking trajectories were associated with changes in BMI. Participants were 1263 9th and 10th graders at baseline (56.6% female; 56.5% white) in a longitudinal study of smoking patterns that oversampled for ever and recent smoking. Data for this study come from the baseline, 6-, 15-, and 24-month assessments. Growth Mixture Models identified five trajectories of smoking (based on cigarettes/day across time) that served as the dependent variable. Multinomial logistic regression models tested relationships between weight-related variables collected at baseline and trajectories of smoking. The only baseline variable associated with smoking patterns among girls [chi-square (4, 577)=90.39, $p<.01$] and boys [chi-square (4, 428)=37.63, $p<.01$] was the belief that smoking could control weight. However, and most importantly, the vast majority of adolescents did not believe that smoking aids weight control; therefore weight-control expectancies were only relevant for a minority of adolescents (15.4% of girls; 7.1% of boys). Controlling for baseline BMI, smoking patterns were not associated with changes in BMI at 24 months. However, given the relatively light rates of smoking, even among the more frequent smokers, it may not be surprising to see a lack of association with BMI. It seems that weight-related constructs do not present risk for the progression from experimentation to regular smoking among most adolescents. Further, smoking does not aid weight control in the immediate years following initiation. Results suggest that future tobacco prevention efforts should target risk factors other than weight-related constructs for smoking.

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NEW TOBACCO PRODUCTS:WHAT DO YOUNG ADULTS THINK?

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Recent research has provided insights for cigarette use among young adults. However, little is known about young adults'perceptions of new tobacco products (NTPs) such as snus, dissolvable tobacco products(DTPs) and nicotine delivery devices such as electronic cigarettes(e-cigarettes). We conducted focus group discussions to evaluate young adults'perceptions of these products and their intentions to try them. Four sessions were conducted between July and Aug. 2010, with 26 participants(13 males, 13 females) aged 19-26, who had smoked and/or seen tobacco advertisements 30 days prior to recruitment, and were either attending a four year institution or had obtained a bachelor's degree. They were asked about their awareness of the NTPs and their opinions on packaging, design, potential health risks, usage as quitting aids, and willingness to try the products if offered by a friend. While none of them had heard of DTPs, most participants had heard of snus and e-cigarettes, and described these products as colorful, modern and attractive. Most participants thought the NTPs were "healthier" than regular cigarettes while some thought the health impact would be different from cigarettes but equally harmful. Some participants thought the NTPs may help quit smoking while some thought they could spark some interest in tobacco use among non-users and subsequently lead to cigarette use. Most participants would try the NTPs if offered by a friend; yet most of those who smoked would not use them as a replacement for cigarettes but would consider using these products when they cannot smoke. Overall the results show that young adults are interested in trying the NTPs and these products could be a gateway to cigarette smoking for non-smokers and could hinder quitting among smokers. Both consequences would hamper further decline in the prevalence of tobacco use among young adults. This study will benefit prevention efforts by highlighting the current lack of information among young adults regarding the health risks of the NTPs and their likely role in generating and maintaining tobacco addiction.

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ANTI-SMOKING MESSAGE GENERATION BY ADOLESCENTS: A CONTENT ANALYSIS OF ANTI-SMOKING POSTERS

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Exposure to anti-smoking messages is strongly associated with lower smoking initiation by adolescents. However, few anti-smoking efforts have involved message generation by adolescents themselves. Understanding how smoking prevention messages should be framed from the perspective of young teens will provide us with formative information about different kinds of smoking prevention messages teens think are effective. This study presents a content analysis of anti-smoking posters created by 260 middle school students, working in groups of 4-5 students/group. The data analysis is primarily descriptive given the usefulness of description in the early phases of research in a given topic area. Fifty anti-smoking posters created by adolescents (11-14 years; 60% female; 74% Hispanic) were content analyzed by four independent coders, with a focus around three broad areas: effects of smoking portrayed in posters, specific ways of message depiction in posters, and use of slogans. Reliability coefficient values (Krippendorff's alpha) for each coded variable ranged from .74 to 1.00. Results of content analysis revealed that appearance-related factors (44%) were most commonly used to convey harmful health effects of smoking, followed by messages about death and dying (30%), before-after effects of smoking (22%), other sickness-related effects of smoking (20%) and cancer (12%). Message depiction in posters included use of both pictures and words (98%), multiple colors (84%), human figures (80%), and use of slogans (54%) primarily. Qualitative analysis of stand-alone slogans used in the posters resulted in following categories: don't smoke messages, health effects warnings, humor, and other effects (including social effects and second-hand effects). The findings reported here provide information about anti-smoking messages/themes perceived as efficacious by young adolescents, and have implications for anti-smoking message design for adolescent target groups.

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PSYCHOMETRIC PROPERTIES OF THE SENTINEL EVENTS MODEL (SEM) ASSESSMENT SCALE

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The Sentinel Events Model (SEM) proposes that a combination of affective and cognitive factors associated with an acute negative consequence of a health behavior influence health behavior change subsequent to the event. As part of a study examining the SEM to predict short and long-term smoking behavior after a health event, scales were created to measure the SEM's primary constructs, including perceived event severity, event related emotions, causal attributions, and intentions to quit smoking. Patients being treated for chest pain or other cardiac related symptoms were asked to provide ratings for perceptions of health event severity and related emotions in reference to three time anchors: 1) at symptom onset, 2) at presentation to the hospital, and 3) at discharge. In addition, causal attributions and intentions to quit smoking were measured. The purpose of this study was to examine the psychometric properties of the scales, present scale reduction results, and examine changes in scale scores/ratings over time for perceived severity and emotional reactions. The items from the scales hung together well and a stable factor structure was shown for each construct, which supported theoretical expectations. Scale reduction techniques resulted in shorter empirically derived scales. Preliminary analyses suggest that perceived event severity and event related emotions have good psychometric properties across all three time anchors (alphas ranging from .81 to .83). Finally, perceived severity showed a quadratic trend across the 3 measurements with the highest severity perception level at time 2, and event related emotions showed a decreasing quadratic trend as demonstrated by a quick drop at time 3. Results support the strong psychometric properties of the scales and reinforced the need for assessment at multiple time anchors, versus aggregate measures.

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Meritorious Poster

B-176

THE RELATIONSHIP BETWEEN NICOTINE DEPENDENCE AND CUE-INDUCED CIGARETTE CRAVING

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Most models of dependence posit that dependence is related to background craving - a tonic state of craving when deprived. Theory and research are conflicted about how dependence relates to cue-induced craving - phasic increases in response to cues. Some models consider cue-induced craving part of dependence, and others imply that cue-responsivity disappears with dependence. These associations are further complicated by the a variety of measures of nicotine dependence, which take different theoretical approaches to the conceptualization of dependence. Participants (n=198, 57% men) were daily smokers averaging 16.01 (6.71) cigarettes per day. Participants were not trying to quit smoking. We examined data from 4 cue-reactivity sessions, with cue sets (smoking, negative affect, positive affect, neutral) counter-balanced across sessions. In each session, after a 30-minute deprivation period, participants viewed 30 cue-relevant photos validated for content and shown over 3 minutes (6 seconds each). Participants rated their craving before and after cues (QSU-Brief, scaled as 1-49). Participants completed measures of nicotine dependence (FTND, NDSS, WISDM-68), which were used to predict craving. Multivariate and univariate regression models were used to predict background craving (pre-cue) and cue-induced craving (pre-post cue change scores) for QSU Factors 1 and 2. Dependence measures predicted background craving, both factors 1 and 2. They did not predict cue response (controlling for session number and change in response to the neutral cue) for any cue. Cue-induced craving is unrelated to nicotine dependence, as traditionally assessed. Models and measures of dependence must take into account cue-induced craving. Future studies should examine the relationship between reactivity to cues and actual smoking behavior, in order to better understand how reactivity to cues and nicotine dependence may function independently or synergistically to influence smoking behavior.

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B-178

GLOBAL MEANING AND HEALTH OUTCOMES AMONG PRIMARY CARE PATIENTS

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Increased attention has focused on meaning-making processes and their health correlates. However, concerns have been expressed about conceptual ambiguity, and about use of measures that may be confounded with outcomes.

This study examined one theoretically coherent aspect of meaning– global meaning. We evaluated associations between global meaning and health outcomes among 175 adult women treated in a large gynecology practice. Mean age of participants was 43.1; most were white and well-educated. Global meaning was assessed using a revised version of the meaning subscale of the Sense of Coherence Scale. Outcomes included emotional distress (Taylor Manifest Anxiety Scale), relationship cohesion (Dyadic Adjustment Scale), perceived coping efficacy, and self-reported health (general health from SF-36). Global meaning was significantly associated with each of the study outcomes, after controlling for significant demographic and medical covariates and social desirability response bias: distress (β=-.47, p<.00001); relationship cohesion (β=.45, p<.00001); coping efficacy (β=.30, p<.0001); self-reported physical health (β=.23, p<.01). When other psychosocial resource variables were added to the model (social support, intrinsic religiousness, emotional control), global meaning remained a significant predictor of each outcome: concurrent emotional distress (β=-.47, p<.00001), relationship cohesion (β=.39, p<.0001), coping efficacy (β=.29, p<.0001), and self-reported physical health (β=.23, p<.01). Results suggest that a conceptually important dimension of meaning (i.e., global meaning) may have salient relationships with health outcomes and merit further attention.

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B-179

ASSOCIATIONS BETWEEN GLOBAL MEANING AND HEALTH OUTCOMES AMONG PATIENTS IN A STEM CELL TRANSPLANT CENTER

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Personal meaning is thought to serve as an important resource among individuals struggling with severe illness. However, some of the work in this area has been marked by vague conceptualization, or by use of assessment instruments that are confounded by psychosocial well-being.

This investigation evaluated relationships between health outcomes and one theoretically important dimension of meaning—global meaning. Participants were 104 patients undergoing treatment in a stem cell transplant center. Mean age was 56.1. Most patients (82%) had multiple myeloma, and time since initial diagnosis was variable. Global meaning was measured using a revised version of the meaning subscale of the Sense of Coherence Scale. Study outcomes included emotional distress (Taylor Manifest Anxiety Scale), relationship cohesion (Dyadic Adjustment Scale), perceived coping efficacy, and self-reported health (general health from SF-36).

Global meaning was significantly related to 3 of the 4 study endpoints, after controlling for demographic and medical covariates and social desirability response bias: lower distress (β=-.31, p<.01); better relationship cohesion (β=.25, p<.05); and higher coping efficacy (β=.24, p<.05). After adjusting as well for the effects of other psychosocial resource variables (i.e., social support, intrinsic religiousness, emotional control), global meaning remained significantly associated with reduced emotional distress (β=-.43, p<.0001) and enhanced coping efficacy (β=.26, p<.05). Global meaning warrants further scrutiny in longitudinal investigations.

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B-180

CONTRASTING WORSHIP EXPERIENCES, FORGIVENESS, AND EMOTIONS

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Understanding key spiritual experiences, such as worship, that occur as people participate in church services, may help illuminate the relationship between spirituality and health. The relationships among contrasting worship experiences, forgiveness, and emotions were examined as 74 participants recalled past worship experiences. Participants were selected from African American, Caucasian, Korean, and Latino Pentecostal and Presbyterian churches. Participants responded to interview questions about three different worship experiences: close to God (worship experiences where they felt close to God), struggling (worship experiences where they experienced struggle), and transformation (worship experiences that had changed them that were not conversion experiences). In describing their transformational experience, participants were asked whether forgiveness and/or confession played a role in this experience. It was hypothesized that spiritual struggle and a sense of being forgiven would be significantly different emotional experiences. It was expected that being forgiven would be associated with more positive and less negative emotion than spiritual struggle and spiritual transformation in general. More positive emotion as well as less anxiety and anger (ps<.05) were associated with transformational worship experiences where forgiveness played a role as compared to experiences of spiritual struggle. Within transformational worship experiences, those experiences where forgiveness had played a role were associated with more affective expression in general as well as more positive emotion (ps<.05). The emotional experience of forgiveness was distinct from the experience of spiritual struggle and transformation. Specifically, the experience of forgiveness was associated with positive affect and negatively associated with negative affect. These findings provide insight regarding specific worship experiences that may contribute to positive health-related outcomes.

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B-182

PSYCHOPHYSIOLOGICAL EFFECTS OF COPING IMAGERY AS A FORM OF ALTERNATIVE MEDICINE

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OBJECTIVE: The effectiveness of coping imagery has been widely discussed in the context of sport psychology, though the research into its application in behavioral medicine is still at its preliminary stage. The present study examined the psychophysiological effects of coping imagery as it pertains to its stress reduction component.

SUBJECTS: Twenty-five healthy male baseball players were randomly assigned to three groups: 1) 8 subjects to Coping Imagery Group (combining relaxation image & mental rehearsal), 2) 9 subjects to Mental Rehearsal Group (without relaxation image), and 3) 8 subjects to Control Group (sitting quietly with eyes closed). The ball throwing performance was chosen as the mental rehearsal image.

PROCEDURE: All the subjects went through 1) Rest (5 minutes), 2) Diaphramic breathing (5 minutes), 3) Treatment: coping imagery; mental rehearsal; or control (5 minutes), and 4) Rest (5 minute). Skin conductance level (SCL), pulse wave, and respiration pattern were monitored throughout the experiment. Fast Fourier Transformation was applied to the pulse rate variability in an attempt to identify the cardiac sympathovagal activities.

RESULTS & DISCUSSIONS: ANOVA for the group comparison demonstrated the significant group difference in SCL parameter during the rest period after the treatment (F<.05). The Fisher's Post-Hoc LSD test demonstrated the significantly lower SCL in Coping Imagery Group than in Mental Rehearsal Group (p<.01) during this period, which indicated the effectiveness of Coping Imagery in reducing sympathetic activity and hence achieving the higher state of relaxation. The non-significant result in power spectra of pulse rate variability was carefully interpreted as we considered the underlying effects of respiratory sinus arrhythmia. Overall, the present study suggested the potential effectiveness of coping imagery technique as a form of alternative medicine when its relaxation imagery component was extracted and utilized for reducing the sympathetic nervous system activity.

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B-183

STRESS, DRUG USE, SELF-CONTROL AND RISKY SEXUAL BEHAVIORS AMONG LOW INCOME WOMEN

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The objective of this study was to examine pathways to elucidate how drug-use, self-control and stressors might lead to high risk sexual behaviors. This cross-sectional study included 592 women aged 18 to 30 years who were receiving care at a community based family planning clinic between December 2006 and May 2009. Drug abuse/dependence was assessed by Composite International Diagnostic Interview (CIDI). Stress coping was measured using the brief 13-item version of the Self-Control Scale (SCS). Our study revealed that, overall stress level was found to be high among the low income adult women. In both drug-addicted and non-addicted groups, bi-variate analyses showed that multiple stressors were associated with risky sexual behaviors. The results of structural equation modeling showed that stress was higher in drug addicts and lower in persons who have high self-control, and that stress further leads to adopting risky sexual behaviors. This study suggests that stress is a mediating factor in the relationship between drug use and high risk sexual behaviors, as well as in the relationship between self-control and high risk sexual behaviors. Future in-depth studies are needed in other settings to confirm and furthering our understanding of this relationship.

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B-184

AFFIRMATION OF PERSONAL VALUES AND SOCIAL RELATIONSHIPS: EFFECTS ON STRESS REACTIVITY

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Studies have found that affirmation of personal values buffers the physiological increases associated with stress. However, these studies convolute different types of values making it impossible to determine if some are more stress-protective. Given the known stress-buffering effects of social support, social affirmations may be the most powerful at reducing detrimental stress responses. This study examined whether there are differential influences of social versus non-social affirmation writing tasks on cardiovascular reactivity to the Trier Social Stress Task.

Participants were 33 college undergraduates randomly assigned to write for 3 minutes about either a personal non-social value (affirmation), a relationship (social affirmation), or what they did the previous day (control). After the writing task, subjects completed two stress tasks (speech and math) in front of an evaluator. Prior to the tasks, participants completed an appraisal scale to assess stress expectations. Systolic and Diastolic blood pressure (SBP and DBP) were recorded approximately every 1.5 minutes during baseline, tasks and stress recovery.

Given our small sample size (study still underway), results were only suggestive of a between-subjects effect of condition on SBP reactivity during the math stressor after controlling for baseline SBP, age, sex, and race [F(2,27)=2.75, p= 0.08]. Both experimental groups had lower reactivity with the social affirmation group having the lowest SBP levels (M, control=126.85; M, affirmation=124; M, social affirmation=122.63). There were no effects on DBP during the math task or blood pressure during the speech task. Analyses revealed a between-groups effect on psychological stress appraisals [F(2,32)=3.13, p=0.06] with the social affirmation group reporting the lowest stress appraisal (M=-.92) compared to the affirmation and control groups (Ms=.44 and -.87 respectively).

These findings suggest that affirmation, especially affirmation of relationships, is beneficial for reducing stress appraisals and reactivity. These results may have implications for future work in stress management interventions. Data collection continues and we hope to strengthen these findings with additional subjects.

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B-185

RELIGIOUS ATTENDANCE VERSUS RELIGIOUS SURRENDER AS A MEASURE OF PRENATAL STRESS

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Objective: The main focus of our study was to compare the predictive utility of a specific aspect of religiosity, Surrender, defined as an active giving up of one's desires and actions to what one believes to be God's will (Wong-McDonald & Gorsuch, 2000) with Religious Attendance Frequency, which is a commonly used measure of religiosity in health research, on reported Perceived Stress in pregnant women.

Methods: Participants included 113 pregnant women who were enrolled in a state funded project for pregnant smokers (Tennessee Intervention for Pregnant Smokers [TIPS]) who, as a part of a larger study, completed measures of Perceived Stress (Prenatal Psychosocial Profile (PPP; Curry et al., 1994), Surrender to God (The Surrender Scale; Wong-McDonald & Gorsuch, 2000), and answered a question about their frequency of attendance at religious services.

Results: Multiple regression, entering control variables age and marital status in the first step, Religious Attendance Frequency in the second step, and Surrender in the third step revealed that both Religious Attendance Frequency and Surrender are significant predictors of perceived stress in a pregnant population, but the direction of the relationship was inverse. Religious Attendance Frequency is predictive of higher perceived stress ($\beta=.301$, $p<.001$) and Surrender is predictive of lower perceived stress ($\beta=-.238$, $p=.015$).

Discussion: Although both Religious Attendance Frequency and Surrender were significantly predictive of self-reported perceived stress, those relationships were in opposite directions. Those women who reported high levels of Surrender to God reported lower perceived stress, while high religious attendance was associated with higher levels of stress. These findings contribute to our understanding of the R/S-health relationship in three ways. First, they offer support for Surrender to God and its associated lower stress response to be explored as a mechanism by which religiosity influences health.

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B-187

ALCOHOL ABUSE, ACCULTURATION, AND HEALTH OUTCOMES IN LATINOS LIVING WITH HIV/AIDS ON THE U.S./MEXICO BORDER

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Previous research has documented increased risk for alcohol abuse among HIV patients, and associated implications for poor health outcomes. We administered the Alcohol Use Disorders Identification Test (AUDIT) to 170 Latinos (79% male, 98% of Mexican descent) living with HIV in the U.S.-Mexico border region, and found substantially greater alcohol abuse than in other samples of HIV-positive U.S. adults. Hazardous drinking (operationalized as a score of 8 or more on the AUDIT) was positively associated with acculturation to U.S. American culture ($t=1.97$, $p<.05$), assessed via the Abbreviated Multidimensional Acculturation Scale. There was no main effect for gender or sexual orientation on hazardous drinking, and there was no statistically significant interaction between gender and acculturation, as has been demonstrated in other samples of Latino adults. Hazardous drinking was positively associated with internalized HIV stigma (the Multidimensional Measure of Internalized HIV Stigma; $t=2.65$, $p<.05$), and was negatively associated with both religious practices (the Duke Religiosity Index; $t=-2.10$, $p<.05$) and spirituality (the Functional Assessment of Chronic Illness Therapy; $t=-2.10$, $p<.05$). Alcohol abuse was also strongly associated with poor health outcomes, including depressive symptoms (the Beck Depression Inventory; $t=5.01$, p<.05), anxiety (from the Hospital Anxiety and Depression Scale; $t=4.64$, $p<.05$), and multiple self-report measures of medical regimen adherence (all ps<.05). These results emphasize the need for culturally and linguistically appropriate alcohol intervention with this greatly underserved population.

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B-188

RESPONSIBLE DRINKING FOR EMPLOYEES: PRELIMINARY OUTCOMES OF AN INTERNET-DELIVERED TAILORED INTERVENTION

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Excessive alcohol use is related to a range of harmful health consequences for the drinker, as well as problems for society including accidents, heath care expenditures, and lost productivity at work. Due to significant costs faced by employers, there is a demand for evidence-based, prevention programs that can be easily distributed to employees. An computer-tailored intervention for employees who exceed the low-risk drinking guidelines set by NIH will be described. The approach includes interactive technology that delivers immediate, individualized guidance with perfect fidelity, reliance on empirically-based decision rules, and a strong theoretical foundation in the Transtheoretical Model of Behavior Change.

Findings from a pilot test with 166 employed adults across four states and 6 employers will be presented (90.4% White, 68.7% female, average age=38.78). Upon completing the intervention, participants rated their acceptability of the program and reported their intention to change on drinking variables.

Participants were classified across the Precontemplation (34.3 %), Contemplation (19.3%), Preparation (20.5%), and Action (5.9%) stages. They reported drinking on average 8.49 drinks per week and exceeding the daily limit on 3.69 days in the last month.

The accessibility of the program was one of its most valuable characteristics with a majority of participants ‘strongly agreeing’ or ‘agreeing’ that the program was easy to use (97.8%), and that the questions (92.5%) and feedback (95.6%) were easy to understand. Most importantly, 94.3% indicated that they would recommend the program to others. After completing the computer-tailored intervention, participants reported intending to drink on average 2.9 drinks fewer each week and to reduce the number of times they exceeded the daily limit in the next month. Presented data will focus on examining differences by demographics, level of problems, productivity, and well-being. Discussion will highlight strategies on how to engage employees and employers in preventing risky drinking.

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B-189

DEMOGRAPHIC DIFFERENCES AMONG ADOLESCENTS FOR DECISIONAL BALANCE AND SITUATIONAL TEMPTATIONS INVENTORIES FOR ALCOHOL PREVENTION

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Alcohol use by middle school-aged students is common and is recognized as a public health concern. To alleviate this problem, prevention programs need to effectively intervene before alcohol use begins. A tailored, computer-based prevention program for the prevention of alcohol use was developed and a series of new Transtheoretical Model measures were developed, including Situational Temptations for Prevention of Alcohol Use and Decisional Balance (Pros and Cons) for Prevention of Alcohol Use. This study investigated if there were any demographic differences on these measures in a sample of 6th grade Rhode Island middle school students from 20 schools (N=3565) at baseline. Six analysis of variance tests were conducted to explore the impact of race (White vs. Non-White), ethnicity (Hispanics vs. Non-Hispanics) and gender (Males vs. Females). Statistical significant main effects were observed for the three demographic variables on the Pros: (1) gender, F (1, 4135)=44.4, p=.001; η2=.003, (2) race, F (1, 3771)=16.0, p=.001; η2=.004, and (3) ethnicity, F (1, 4068)=30.6, p=.001; η2=.007. Cons for Prevention of Alcohol Use differed significantly for (1) gender, F (1, 4131)=44.4, p=.001; η2=.001, and (2) ethnicity, F (1, 4068)=24.6, p=.001; η2=.006. Cons for prevention of alcohol use did not differ between Whites and Non-Whites, F (1, 3771)=2.4, p=.098). Significant main effects for Situational Temptation for Prevention of Alcohol Use were found for each of the three demographic variables: (1) gender, F (1, 4135)=9.6, p=.002; η2=.002, (2) race, F (1, 3771)=34.4, p=.001; η2=.009, and (3) ethnicity, F (1, 4068)=33.0, p=.001; η2=.008). While significant effects were found between demographic groups for these measures, mainly because of the very large sample sizes, their small effects (all below η2=.01) suggest that they are not important differences for alcohol use prevention in this age group.

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B-190

AN EXAMINATION OF POST-BARIATRIC PATIENTS WHO DEVELOP PROBLEMATIC SUBSTANCE USE AFTER SURGERY: NEW ONSET USERS COMPARED TO CONTROLS

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Our laboratory has documented that post-bariatric surgery patients are overrepresented in substance abuse treatment programs (Saules et al., in press). Notably, about half of such patients first develop onset of heavy substance use *after* surgery (Wiedemann et al., 2010). We refer to these patients as New Onset Users (NOU’s); this report will examine how NOU’s differ from non-bariatric substance abuse patients (Controls, N=42). A sample of bariatric patients (N=41) from a substance abuse treatment program were interviewed about the timeline of their substance use, and classified as either NOU’s (n=22, 54%) or Relapsers (i.e., onset of substance abuse was prior to surgery and subsequently relapsed, n=19, 46%). All participants provided data on first ages of regular alcohol use, regular drug use, first concern of drug/alcohol use, and age of first drug/alcohol treatment; chart review data was also obtained to identify type of substance use and diagnoses. Control patients used significantly more substances than NOU’s (p<.05) and were more likely to use marijuana, crack/cocaine, and heroin (all p’s<.05). NOU’s, however, were more likely to be diagnosed with a depressive disorder (p<.05). Despite no differences in current age, NOU’s first used alcohol (33.37±13.47 vs. 18.18±6.66, p<.001), drugs (32.25±13.24 vs. 19.03±9.77, p<.01), became concerned about their substance use (41.94±10.97 vs. 27.45±13.50, p<.001, and entered treatment (44.18±10.38 vs. 34.19±14.95, p<.05) at significantly later ages than controls. NOU’s also experienced a shorter latency from age of concern to age of treatment (1.71±1.99 vs. 6.74±9.16, p<.05). Results suggest that bariatric patients who experience new onset post-surgical substance use may differ from “typical” substance abuse patients and may have unique treatment needs. Future research should examine psychological risk factors associated with the development of new substance use among post-bariatric patients.

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B-191

CRACK USE AMONG HIV-POSITIVE ADULTS IS ASSOCIATED WITH SYMPTOMS OF PAIN AND FATIGUE

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Compared to the general population, individuals with HIV have a significantly higher incidence of substance abuse disorders. Khantzian’s (1985) self-medication hypothesis asserts that individuals tend to use substances to alleviate their psychiatric symptoms. This longitudinal study examined the relationship of mental health and health-related quality of life factors to crack cocaine use in a diverse sample of 162 adults living with HIV/AIDS attending an urban ambulatory care center. The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID) was administered to participants during their initial baseline visit. Participants then completed measures of quality of life (SF-36) and substance abuse (The Addiction Severity Index Lite; ASI LITE) at baseline and six months later.

Mixed linear modeling was used to test the hypothesized role of self-medication in the longitudinal association between mental health, quality of life, and crack cocaine use. The dependent variable in this model was crack use in the last 30 days, measured at baseline and six months later. Covariates were first entered into univariate models. Significant predictors - vitality and bodily pain - were then entered into a final multivariate model including time. Vitality predicted crack use at baseline; each point of vitality was associated with a .16-day decrease in crack use (p<.001). Bodily pain predicted increased crack use over time; each point of bodily pain predicted a .12 increase in the slope of crack use (p<.05). Vitality predicted decreased crack use over time; each point of vitality predicted a .16 decrease in the slope of crack use (p<.05). These findings suggest that individuals may be using illicit substances to decrease suffering and increase functionality. Public health providers treating persons living with HIV/AIDS must focus on the interconnection between quality of life and self-medication behaviors in order to maximize their impact on health risk behavior.

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Friday
April 29, 2011
8:45 AM–10:15 AM

Symposium 10 8:45 AM–10:15 AM 3000

EVIDENCE-BASED PREVENTION AND HEALTH REFORM: OPPORTUNITIES AND CHALLENGES FOR BEHAVIORAL MEDICINE AND SBM

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New health reform legislation placing evidence-based clinical and community prevention at the center of the national policy agenda represents a huge success for behavioral medicine research and practice. Over the past three decades, the field of behavioral medicine has moved from establishing the critical role of behavioral risk factors for chronic disease to identifying evidence-based individual (clinical), community (policy and environmental), and linked clinical-community interventions for preventing and changing these risks. This symposium will review the big-picture opportunities and challenges for evidence-based behavioral medicine under health reform and in our next decade. Drawing from their experiences on the US Preventive Services Task Force and CDC Task Force on Community Preventive Services, and from their work advancing health and healthcare policy, presenters will highlight strengths and limitations of current clinical and community behavioral prevention research, focusing on lessons learned re: important research gaps and needs including those related to research design, measurement, reporting standards, and strategies for linking, spreading and scaling-up effective interventions. The discussion will identify ways that behavioral medicine researchers, practitioners, policy leaders and SBM itself (e.g., including our SIGs, journals, meetings, communications) can capitalize best on our growing influence over national health and healthcare practice and policy.

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Symposium 10A 3001

BEHAVIORAL MEDICINE INTERVENTIONS AND THE USPSTF: OPPORTUNITIES AND CHALLENGES FOR SBM

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Integration into primary care of evidence-based health behavior change interventions has tremendous potential to decrease morbidity and mortality. Behavioral patterns are the largest contributor to premature death, outpacing genetic predisposition, social circumstances, environmental exposures and health care. The U.S. Preventive Services Task Force (USPSTF) provides rigorous synthesis of evidence-based interventions using state of the art meta-analyses to develop preventive care guidelines for primary care practice. The Task Force is focusing increasingly on health behavior change interventions. Recent health care reform legislation pulls these guidelines through to policy by encouraging inclusion of A and B recommendations as components of basic health insurance coverage. This presentation will briefly outline the USPSTF's process of evidence-based guideline development followed by discussion and of five key opportunities and challenges for SBM members: conceptual clarity in the design and reporting of our interventions; continued implementation of well-designed and implemented RCT's; further development and articulation of non-randomized trials methodologies; standards of research reporting; and common definitions and metrics for key behavioral outcomes. The opportunities and challenges will be illustrated using a recently conducted evidence review for behavioral counseling interventions for prevention of CVD.

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Symposium 10B 3002

BEHAVIORAL MEDICINE INTERVENTIONS AND THE TASK FORCE ON COMMUNITY PREVENTIVE SERVICES: OPPORTUNITIES AND CHALLENGES FOR SBM

Shawna L. Mercer, MSc, PhD

Community Guide, CDC, Atlanta, GA.

The focus on helping communities to achieve their prevention and public health goals has brought heightened prominence to the Task Force on Community Preventive Services (Community Task Force). The Community Task Force assesses evidence about the effectiveness of population-based prevention interventions and makes recommendations about policies and practices that are effective in reducing morbidity, mortality, and disability and increasing quality of life. SBM members are active in conducting research related to all interventions types considered by the Task Force: a) informational, b) behavioral and social; c) environmental and policy; and d) health systems. Nonetheless, some of the biggest challenges the Community Task Force faces in reviewing systematic review evidence stem from the lack of adequate primary research to serve as the substrate for systematic reviews. This presentation will discuss key challenges faced by the Task Force as they try to summarize the evidence and make recommendations, and it will highlight opportunities for SBM members to help address the challenges. These include: difficulty in assessing the applicability of systematic review findings to different populations and settings due to a paucity of such data in primary research studies; lack of recognition of the value of evaluation components and studies as an important means of assessing applicability and practice-based evidence; over-reliance on the randomized controlled trial as the gold standard design in all situations; the lack of sufficient data in primary research publications to enable adequate assessment of study quality, design suitability, and important outcome variables and effect modifiers; and the lack of consensus between researchers as to common measures of key variables, thus hampering combination of data across studies. The presentation will conclude by discussing current efforts by the Community Task Force—in response to a Congressional directive—to encourage greater participation by researchers and funding agencies in highlighting key research gaps identified by the Task Force.

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Symposium 10C 3003

LINKING EVIDENCE-BASED CLINICAL AND COMMUNITY INTERVENTIONS: OPPORTUNITIES AND CHALLENGES FOR BEHAVIORAL MEDICINE AND SBM

Judith K. Ockene, PhD, MEd, MA, Kristin L. Schneider, PhD, Stephenie C. Lemon, PhD and Ira S. Ockene, MD

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Maximizing our impact on population-wide health behavior change will require linking evidence-based clinical and community interventions such as those recommended by the United States Preventive Services Task Force (USPSTF) and the Community Task Force (CTF), respectively. Linked systems offer a "win-win" arrangement: clinicians can have help to benefit their patients and connect their patients to comprehensive programs including counseling; patients can obtain intensive and comprehensive support; community resources can receive more referrals/clients and have a greater reach and impact. While clinical and community interventions are often viewed as discrete, they should be viewed as synergistic and integratable. Best practices for these types of linkages have yet to be established. The Primary Care Medical Home is an example of an effort to successfully link healthcare system approaches and community efforts to increase prevention reach and impact. In this presentation the importance of linkage for increasing access to preventive interventions will be briefly outlined as will other examples where linkage has worked. Four key opportunities and challenges to the field of behavioral medicine and SBM will be discussed: develop and test evidence-based strategies, including technologies, for linking clinical and community interventions; develop policies that support linkage; develop research designs, metrics and reporting standards for evaluating how well linkage is implemented and its impact; develop funding sources for research and practice for linking evidence-based clinical and community interventions.

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Symposium 11 8:45 AM–10:15 AM 3004

BEYOND WEIGHT LOSS: MAKING EXERCISE MORE COMPELLING FOR WOMEN DURING THE MENOPAUSAL TRANSITION

Michelle Segar, PhD, MPH, MS,[1] Steriani Elavsky, PhD,[3] Jennifer Huberty, PhD,[4] Ellen Evans, PhD[2] and Sara Wilcox, PhD[5]

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Increasing physical activity (PA) levels in women is a top public health priority. Regular physical activity decreases the risk of developing numerous illnesses and helps control weight. Yet, after numerous years of research, physical activity interventions have not produced behavioral outcomes that are generally sustained overtime. It is logical to promote physical activity as a way to help women lose weight. Despite this, there are key issues, related to motivation and gender, that may undermine on-going participation if women's motive for being physically active is to lose weight. Long-term behavioral success might remain elusive until we begin to address the intersection of gender- and life-stage specific issues that can inhibit PA participation for women. This symposium will address concerns about targeting weight loss as the primary outcome for women traversing menopause, from an integrative physiological, socio-psychological, and intervention perspective. Novel solutions for shifting the focus away from losing weight to alternative outcomes from physical activity will also be presented. This symposium will include time for a large group discussion and debate about the presenters' recommendations.

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Symposium 11A 3005

PHYSICAL ACTIVITY IS KEY TO WEIGHT LOSS CONUNDRUM AT MENOPAUSE

Ellen M. Evans, PhD

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It is well established that reductions in sex hormone that occur during the menopausal transition impact bone status, increasing the risk of osteoporosis. What is less appreciated is that the menopausal transition also increases adiposity, putting women at greater risk for metabolic diseases. Weight loss, although highly encouraged in overweight and obese women, typically causes reductions in bone and lean mass. Thus, paradoxically, reductions in weight can reduce risk for some diseases (e.g. type 2 diabetes mellitus) while concomitantly increasing the risk for others (e.g. osteoporosis). Physical activity can play a pivot role in protecting women from the negative body composition changes that occur during this life stage. This presentation will (1) examine the evidence for the change in body composition components during the menopausal transition; (2) discuss the magnitude of the effect of weight loss on bone and lean mass status and the clinical implications of such changes, and importantly, (3) consider the rationale of the exercise and physical activity prescription for optimal "body composition" management during this life stage.

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Symposium 11B 3006

WINDOW OF OPPORTUNITY: PHYSICAL ACTIVITY AS A KEY PATHWAY TO MENTAL HEALTH AND ENHANCED QUALITY OF LIFE

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For some women, the menopausal transition represents a time of increased vulnerability to psychological disturbances and decrements in wellbeing and quality of life (QOL). Physical activity may attenuate these adverse outcomes. Yet, the majority of middle-aged women fail to achieve the recommended amounts of daily physical activity to obtain these benefits. An integrative framework for studying the reciprocal associations among the body, mind, and behavior will be presented. Evidence will be reviewed suggesting physical activity is a key lifestyle factor for enhancing mental health and wellbeing during the menopausal transition, and the implications of the psychological benefits of exercise for sustained physical activity participation and compliance will be discussed. Specifically, observational and experimental data will be presented to (1) demonstrate the effects of exercise and daily physical activity on enhancing key wellbeing indicators in perimenopausal women, (2) discuss the ways in which psychological and physiological factors interact to impact wellbeing during the menopausal transition, and (3) consider the ways in which psychological effects and wellbeing motives impact physical activity engagement.

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Symposium 11C 3007

BECOMING FIT MINDED: EXPLORING THE USE OF INNOVATIVE STRATEGIES TO PROMOTE PHYSICAL ACTIVITY IN WOMEN

Jennifer Huberty, PhD

HPER, University of Nebraska Omaha, Omaha, NE.

Little progress has been made toward increasing women's physical activity levels over the past ten years. A number of strategies have been recommended to help women participate in regular physical activity, however, adherence remains problematic. This presentation will address the barriers and correlates to physical activity from available empirical evidence. Physical self-worth has been well established as a correlate to physical activity participation. This presentation will explore new and innovative ways to promote new women-centric aspects of self-worth as a possible strategy to overcome barriers and improve physical activity adherence in women. Findings from feasibility and qualitative studies will be presented that support the need to develop interventions that focus on alternative aspects of self-worth to empower women to maintain their physical activity participation.

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Symposium 11D 3008

REBRANDING EXERCISE: CHANGING WOMEN'S REASONS FOR EXERCISING FROM WEIGHT LOSS TO WELL-BEING IMPROVES MOTIVATION, SELF-REGULATION AND BEHAVIOR

Michelle Segar, PhD, MPH, MS

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There is a convention within health care and the media to promote physical activity and exercise as a means for women to lose weight. This prescription is medically-based and logical. Unfortunately, what is effective in our controlled laboratory studies often does not translate well into real life. There are practical, theoretical and evidence-based reasons why promoting physical activity/ exercise to women primarily for weight loss is problematic and not likely to lead to long-term engagement or adherence. This presentation will review data from two studies showing that women in midlife who initiated physical activity aiming to lose weight reported the lowest levels of autonomous motivation, self-regulation, and participation, and the highest levels of ambivalence and introjected regulation compared to those who initiated it for other reasons. Quantitative follow-up data will also be presented from a convenience sample of midlife women who participated in a physical activity intervention that reframed physical activity and promoted it for reasons related to enhancing quality of life. The presenter will overview an evidence-based, integrated theoretical framework that explains why improved motivation, self-regulation and behavioral adherence result when women transform their reasons for physical movement from weight loss to well-being. She will also review specific techniques to help individuals convert their reasons for being physically active from externally prescribed ones to reasons that are autonomously determined and more likely to be internalized and pursued.

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Symposium 12 8:45 AM–10:15 AM 3009

BRINGING BEHAVIORAL HEALTH INTERVENTIONS TO THE POPULATION IN A MEDICAL HOME MODEL

Margaret Dundon, PhD,[1] Mark Vogel, PhD,[2] Katherine Dollar, PhD,[1] William Sieber, PhD[3] and Jeffrey Goodie, PhD[4]

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In response to the growing challenges in primary care, many healthcare systems are implementing a medical home model which replaces episodic illness and complaint-based care with coordinated, proactive, preventive care and a long term healing relationship with the healthcare team. In this model, the primary care team focuses on the whole person, including psychosocial aspects of functioning. Many programs, including the VHA and DoD, have worked to embed behavioral health providers (BHPs) into the medical home; however, few BHPs have the appropriate training to effectively integrate into these settings. National behavioral health program leaders from across healthcare systems, including the VHA, the DoD and the private sector will discuss how they have effectively and efficiently trained Primary Care Providers (PCPs) and Behavioral Health Providers (BHPs)to provide evidence-based behavioral health assessments and treatments within the medical home. These experts will discuss the environment and unique challenges of providing behavioral health care within the medical home and how integrated/collaborative care models were developed in each of these healthcare systems. To meet the behavioral health needs of the population, it is critical to provide PCPs with appropriate behavioral health training as well as train BHPs how to function in the medical home. An overview of the medical home model, integrated care structures within diverse settings, and an introduction to population-based behavioral medicine contrasted with traditional behavioral health approaches will be provided. Two presenters will describe best practices for training PCPs and BHPs for optimal team functioning and efficient behavioral health delivery. The third presenter will describe training and supporting medical teams to successfully collaborate and intervene within a medical home model. Discussion will focus on what has been learned and the future needs for establishing integrated/collaborative care and for training providers to deliver behavioral health care in the medical home.

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Symposium 12A 3010

THE PREPARED MEDICAL HOME BEHAVIORAL HEALTH PROVIDER (BHP): TRAINING NEEDS AND COMPETENCIES FOR SUCCESS

Katherine M. Dollar, PhD

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Many healthcare systems are implementing medical home models and are embedding behavioral health providers (BHPs) into medical teams; however, few BHPs have the appropriate training to effectively integrate into these settings. Within the context of the medical home, BHPs detect and address the broad spectrum of behavioral health needs within the population, with the aims of early identification, quick resolution, long-term problem prevention, and wellness promotion. This approach involves resolving problems in a collaborative framework with multi-disciplinary team members. Behavioral health visits are brief (generally 20–30 minutes), limited in number (1-6 visits with an average of between 2 & 3), provided in the primary care practice area, and structured so that the patient views meeting with the behavioral health provider as a routine primary care service. This approach to providing service is vastly different from traditional behavioral health service delivery, and few academic programs are structured to prepare clinicians for these contemporary and collaborative roles. In order to meet the needs of the population and to maximize behavioral medicine impact on the public's health, effective, competency and skill-based training must occur. Training should be structured around attainment of core competences within specific content domains, including clinical practice, practice management, documentation, consultation, administrative responsibilities, and team performance. Information about the distinct skills within each domain will be discussed. Through the acquisition and implementation of these distinct practice patterns, BHPs become essential team members and accelerate the impact of behavioral medicine by providing population-based care.

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Symposium 12B 3011

THE PREPARED MEDICAL HOME PROVIDER: USING PROFESSIONAL TRAINING SEQUENCE TO TEACH COLLABORATIVE ATTITUDES AND BEHAVIORS

Mark Vogel, PhD

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Physician training has historically been focused on independent responsibility of outcomes, which does not encourage shared accountability for patient care. Similarly, behavioral health providers often enter into the PCMH/IPC environment believing they know how to “fix” the medical system, but lack the appreciation of the medical culture to be effective. The collaborative nature of the Patient Centered Medical Home (PCMH) and Integrated Primary Care (IPC) requires primary care providers (PCP) and behavioral health providers to function in a more team oriented approach than training programs have traditionally emphasized. Core PCMH staff need to develop a capacity to routinely function in a transdisciplinary way. Our program has a long history of a collaborative training model between family medicine residents (FMR) and health psychology fellows (HPF). In this IPC setting, HPFs provide clinical services in close collaboration with the medical team. HPFs also have a teaching role within the residency and instruct FMR on the psychosocial aspects of care. FMR in turn teach HPF about common physical problems. Together they link the physical with the emotional, social, and behavioral aspects of care. Through this and other combined experiences (medical rounds, on-call experiences, etc.) they begin to share an understanding of each profession’s culture. This model of training has translated into FM and HP providers who move on to practice settings where this same type of collaborative model is continued. The implementation of a structured collaborative teaching model has broad applications for preparing other PCMH providers.

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Symposium 12C 3012

TEAM TRAINING: DELIVERING INTEGRATED CARE TO MAXIMIZE IMPACT OF BEHAVIORAL MEDICINE ON THE PUBLIC’S HEALTH

WIlliam Sieber, PhD

UCSan Diego, LaJolla, CA.

In order to maximize the impact of our collaborative care program on public health, we use assessment systems and treatment approaches similar to the three levels of preventive medicine - primary, secondary, and tertiary. Each level presents opportunities to teach primary care providers and behavioral health specialists team approaches for optimal patient care. At a primary prevention level we have developed systems to survey a large proportion of family medicine patients across our three practices; patient self-report survey information is then used to identify patients who may benefit from proactively delivered services (e.g., stress management groups, group medical visits). In addition, data mining of the electronic health records may also be used to identify patients in need. At a secondary prevention level most of our currently referred patients are identified and referred to collaborative services by their primary care physician during a clinic visit. In addition to offering short and long-term psychotherapy, such patients may be encouraged to participate in psycho-educational groups as either a substitute for such services or as a temporary support until patients can be seen if a waiting list exists. Tertiary prevention, service delivered to those substantively suffering from mental health distress, includes ongoing collaboration with a behavioral health consultant several hours per week at each clinic. ‘Hallway consultations’ and ‘warm hand-offs’ for brief crisis intervention work serve as a final ‘backstop’ for the various behavioral health needs of our entire patient population. Educational and training goals overlay all these services, given that our program serves as a training ground for medical residents and multiple mental health disciplines. Each level presents opportunities to increase team collaboration and dissemination of behavioral medicine practices. Data supporting this three-level model and outcomes associated with the primary and secondary levels will be presented.

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Symposium 13 8:45 AM–10:15 AM 3013

EVALUATING STRATEGIES TO OPTIMIZE MINORITY RECRUITMENT IN HEALTH BEHAVIOR CHANGE RESEARCH

Susan D. Moore, PhD,[1] Cynthia M. Castro, PhD,[1] Rebecca E. Lee, PhD[2] and Diane K. King, PhD[3]

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Eliminating racial and ethnic health disparities requires successful reach to underserved populations, starting with effective representation in health-related research. The need for ethnically inclusive research continues to grow, as minorities are projected to comprise approximately half of the US population within the next 40 years. While efforts to recruit minorities have increased since the National Institutes of Health issued policies mandating inclusion of these populations, the evidence base for specific recruitment approaches remains limited. The shortage of systematic, methodologically rigorous research addressing efficacy and cost-efficiency leaves investigators struggling to improve their efforts. This symposium pragmatically addresses the recruitment of minority populations to health behavior change trials. The presentations describe multiple recruitment strategies employed in a variety of health behavior change trials and highlight several benchmarks for success and failure, such as response and participation rates, cost, and the extent to which recruited samples were representative of target populations. Populations and types of trials include 1) older Latino adults recruited to participate in three physical activity trials, 2) African-American and Latina women recruited to participate in a physical activity and nutrition trial, and 3) ethnically diverse women recruited to participate in a weight management trial. By systematically evaluating varied approaches to minority recruitment, the objectives of this symposium are to stimulate discussion of 1) potential solutions to successfully reach diverse populations, and 2) critical areas for future recruitment research.

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Symposium 13A 3014

RECRUITMENT EFFORTS TO ATTRACT OLDER LATINO ADULTS TO PHYSICAL ACTIVITY TRIALS

Cynthia M. Castro, PhD, Leslie A. Pruitt, PhD, M. Ines Campero, MA and Abby C. King, PhD

Stanford University School of Medicine, Stanford, CA.

This study examines the outcomes of recruitment methods to attract older Latinos to 3 physical activity clinical trials. Study #1 had a broad catchment area and a goal to enroll 180 adults ages 55+ years, 10% of Latino ethnicity. Twelve recruitment methods were used including bilingual newspaper, radio, and television advertisements, direct mail, community presentations, and personal referrals. Nine methods resulted in 177 Latinos screened for eligibility; most from direct mail (41%) and radio/TV (36%). Six sources produced 52 eligible individuals, with mail and radio/TV being the biggest sources. Only 4 sources (mail, radio/TV, one newspaper, and family/friend referrals) resulted in 27 individuals randomized into the trial. Most randomized participants came from direct mail (52%). Study #2 sought physically frail adults ages 70+; a small pilot segment targeted a community center in a Latino neighborhood. Two recruitment methods were used: center-based presentations followed by “meet and greet” discussions, and bilingual letters mailed to 2,600 homes near the center. Combined, 96 people were identified, 66% from mailings and 34% from in-person meetings. Both methods resulted in similar numbers of eligible people (7 vs. 6) but in-person methods resulted in more randomized (6 vs. 4). Study #3 was situated in the same community center as Study #2, and used 4 recruitment methods (direct mail, in-person presentations with “meet and greets”, presentations at other neighborhood locales, personal referrals). From these sources, 171 older Latinos were screened for eligibility, primarily from direct mail (51%) and in-person communication (42%). Both methods produced similar numbers of eligible and randomized adults (mail=19, in-person=16). Overall, direct mail and in-person communication performed comparably to attract older Latino adults. While mail is less burdensome on staff, in-person communication may bring greater specificity and efficiency in identifying eligible individuals who are likely to enroll. The trade-offs give researchers 2 viable options depending on available resources.

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Symposium 13B 3015

REACH AND RETENTION OF MINORITY WOMEN IN THE HEALTH IS POWER (HIP) STUDY

Rebecca E. Lee, PhD,[1] Kristin L. Wolfe, N/A,[1] Jacqueline Reese-Smith, PhD,[1] Ygnacio Lopez, MS,[1] Scherezade K. Mama, MPH[1,2] and Ashley V. Medina, BS[1]

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Purpose: African American (AA) and Hispanic or Latina (HL) women are vulnerable to obesity and related health compromising conditions and are also difficult to reach in health promotion studies. Health Is Power (HIP; 1R01CA109403) was a randomized controlled community trial, conducted in two cities to promote physical activity and vegetable and fruit consumption among AA and HL women. This study examined the reach and retention of HIP.
Method: Women were recruited using active and passive recruitment methods. In Houston, 691 AA (M=35 kg/m2, M=44.8 yrs) and 99 HL (M=33.8 kg/m2, M=44.1 yrs) women were screened. In Austin, 176 HL women (M=34.3 kg/m2, M=46.7 yrs) were screened. All completed the Exercise Self-Efficacy Questionnaire and the Multi Ethnic Identity Measure. Chi-square analysis was used to determine whether reach differed significantly between AA and HL women at screening, baseline (T1), randomization, and post-intervention (T2).
Results: In Houston, of the 691 AA, 257 AA eligible to participate, 226 (33%) were randomized, and 162 (23%) completed T2. Of the 99 HL women, 50 were eligible, 33 (33%) were randomized, and 21 (21%) completed T2. Of the Austin women, 98 (56%) were eligible, 70 (40%) were randomized, and 35 (20%) completed the post-intervention. Participation rates did not differ significantly by ethnicity, city or recruitment method. Women who completed T2 had higher exercise self-efficacy, and lower ethnic identity (ps<.05).
Conclusion: Approximately one in three women screened were randomized and one in five women completed the intervention. HIP showed moderate levels of reach, regardless of ethnicity or recruitment strategy. Psychosocial factors may impact retention and are important to address in intervention content. Future studies should determine how to increase participation rates among AA and HL women in interventions, and explore use of other RE-AIM constructs.

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Symposium 13C 3016

USING DIRECT MAIL TO ENHANCE MINORITY RECRUITMENT TO CLINICAL TRIALS: EXPERIMENTAL FINDINGS AND PRACTICAL RECOMMENDATIONS

Susan D. Moore, PhD,[1] Katherine Lee, MA,[1] Danielle Schoffman, BA,[1] Abby King, PhD,[1] LaVera M. Crawley, MD, MPH[2] and Michaela Kiernan, PhD[1]

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Racial and ethnic minorities in the US suffer disproportionately from obesity as compared to non-Hispanic Whites, and greater attention to these populations is needed in the clinical intervention literature. Yet research on strategies to improve minority recruitment to clinical trials is limited, being largely descriptive rather than experimental. To inform recommendations for minority recruitment, we conducted experimental and observational studies within an 18-month randomized weight management trial for overweight/obese women. Study 1 (N=30,000) tested whether two characteristics of direct mail recruitment letters yielded higher response and randomization rates: 1) ethnically-targeted content, i.e., an additional sentence noting increased risk among ethnic minority groups with which recipients might identify; and 2) personalization, i.e., letters addressed to recipients by name and hand-signed in blue ink on high-quality letterhead. Women sent ethnically-targeted letters were 1.4 times more likely to respond, p=.03, though no more likely to be randomized, p=.18, than those sent generic content letters. Women sent personalized letters were no more likely to respond, p=.53, or be randomized, p=.99, than those sent non-personalized letters. Study 2 (N=267) assessed which of five recruitment methods yielded the most randomized minority participants to the trial. Letters yielded the most minority participants, 52%. An additional 17% were recruited through friends/family who had received letters. Letters thus accounted for a total of 69% of randomized minority participants. Reflecting an emerging US demographic, 30% of randomized minority participants were multiethnic. Practical recommendations include 1) using direct mail letters to reach ethnically diverse prospective participants, 2) using ethnically-targeted, non-personalized letters, and 3) capitalizing on recruitment through friends/family.

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Symposium 14 8:45 AM–10:15 AM 3017

GENOMICS, ACRONYMS, AND UNDERSTANDING: TRANSLATING GENETICS RESEARCH FROM FAMILY CANCER REGISTRIES TO BEHAVIORAL MEDICINE

Sherri Sheinfeld Gorin, PhD,[1] Behavioral Working Grp. of the CGN, CGN,[2] Louise Keogh, PhD,[3] Jan Lowery, PhD,[4] Dennis Ahnen, MD,[5] Pam Sinicrope, PhD[6] and Kristi Graves, PhD[7]

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Genetics and genomics findings will create a positive impact on public health only if genetic information is translated for disease prevention, early detection, and/or adoption of risk management behaviors. Family cancer registries, offering case ascertainment, validated family histories, and follow-up data, provide unique opportunities across the translational research continuum. The aims of this symposium are to examine studies that have translated the findings from family registries to empirically-based recommendations for cancer care, assessing clinical outcomes, and population health. We will highlight the contributions to behavioral medicine of two established international cancer genetics research consortia, the Colon Cancer Family Registry (CCFR) and the Cancer Genetics Network (CGN). X will describe the findings from systematic cohort recruitment and retention of minorities to population-based trials in the CGN that undergird translating genetics research into practice. X will describe the process and outcomes of systematic protocols for returning genetic testing results to individuals and their families across the C-CFR. X will report the colorectal cancer screening findings from an RCT in high risk families using both the C-CFR and the CGN for recruitment. X will discuss best practices in clinical care for gene carriers, including recognition of Lynch Syndrome and informing decisions with patients. X will describe the impact of telephone-based gene disclosure on risk perception, decision satisfaction, and screening among high risk individuals. X will explore the findings from a qualitative study of of individuals who decline genetic testing in Australia. X will highlight the implications of these papers to translational behavioral medicine.

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Symposium 14A 3018

RECRUITMENT AND RETENTION INTO THE CANCER GENETICS NETWORK

Behavioral Working Group of the Cancer Genetics Network, CGN

Community Health Sciences, Boston University, Boston, MA.

Background: Recruitment to registries is of critical importance to populate a registry with participants that are valuable for future study. In 1998, the National Cancer Institute (NCI) funded an innovative national Cancer Genetics Network (CGN). This paper will describe the recruitment and retention methods used to populate the registry.
Methods: As of May 2002, the CGN contained data on 15,007 participants and 241,948 family members. The majority of CGN participants were of Non-Hispanic White/Caucasian ethnicity (90%), with few numbers of Hispanic (4%), Black (3%), Asian (1%), and other ethnicities (2%).
Results: One center conducted a randomized trial of a recruitment brochure targeting the content for potential African American enrollees. Other centers increased minority yield by offering of personal risk feedback as an incentive to join CGN. Efforts at one center focused on working with African American sororities as community contacts to enhance enrollment. The group in the Southwest conducted a randomized trial to test the effects of a targeted print media product, a magazine, to enhance recruitment of Hispanic participants into the CGN. Finally, a group found that telephone cards as an incentive increased enrollment of Asian participants,. . The enrollment of Black, Hispanic, and Asian participants increased over the period of this focused minority recruitment effort, from 1315 participants to 1942 participants. Follow-up retention was relatively high in the registry (83%), supported by multiple efforts across the centers to keep people in the registry.
Conclusions: This collaborative activity represented a combined effort to produce enrollment into the CGN that would serve the science of the registry, by identifying issues that would produce higher enrollment and by enhancing the attractiveness of participating in a cancer registry for both White and minority individuals. We hope that the data collected and presented here will be useful as we translate genetic findings to clinical and public health practice.

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Symposium 14B 3019

DISCLOSING GENETIC RESEARCH RESULTS: EXPERIENCES OF THE COLON CANCER FAMILY REGISTRY

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Literature on the ethics of returning research-generated genetic results to research participants has not reported on the practical experience of this activity. Our objective is to report on this experience in an international cancer registry. The Colon Cancer Family Registry (Colon CFR) has recruited participants from the US, Canada, Australia and New Zealand and has identified deleterious germline mutations in a DNA mismatch repair (MMR) gene for members of 424 families (153 MLH1, 206 MSH2, 39 MSH6, 26 PMS2). Carriers of mutations in these genes are at high risk of colorectal, endometrial and other cancers. When a deleterious MMR gene mutation is identified in a family member, a letter offering to disclose this information is sent to all family members. Sites vary in who provides genetic results and how they are returned to participants. Uptake of genetic testing by participants of families with MMR gene mutation results available ranged from 53-78%, differing significantly by site (p=0.0001). For example, In Australia, 805 participants were eligible for counseling. Of these, 504 underwent counseling and 483 received results, for an uptake rate of 61%. The variation in uptake of genetic information could be related to concern about insurance discrimination and/or the differences in the cost of genetic testing in the research and clinic setting. Delivering research-generated genetic results in the CFR setting provides challenges and opportunities that help inform clinical translation efforts.

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Symposium 14C 3020

THE FAMILY HEALTH PROMOTION PROJECT (FHPP)

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A family history of colorectal cancer (CRC) is a major risk factor for CRC and colonoscopy screening is recommended for these high risk groups. Little is known about colonoscopy rates or attitudes about CRC screening in high risk groups and few interventions to improve colonoscopy rates have been reported.
Aim: To assess screening behaviors, attitudes and beliefs about CRC and test an intervention to increase colonoscopy screening in high risk families.
Methods: FHPP is a randomized intervention trial to promote colonoscopy screening in CRC families. The Colon Cancer Family Registry and Cancer Genetics Network registry were used to recruit unaffected members of families that met clinical criteria for Lynch Syndrome (the most common form of hereditary CRC) and non-Lynch, high risk (HR) families. 632 participants (165 Lynch and 467 HR, 58% female, 94% white, median age 56) completed a baseline questionnaire and were randomized to a control group or to a telephone-based counseling intervention.
Results: Over 80% of participants knew that they were at high CRC risk and 75% were concerned about their risk. Over 90% thought that colonoscopy screening was effective but only 46% were adherent to colonoscopy screening guidelines at baseline (increased with age, income and risk perception) and only half identified the correct colonoscopy surveillance interval for their risk level. Over 75% of the Lynch group thought that genetics was an important cause of their CRC risk but only 31% had been advised to get gene testing and only 7% had been tested. The intervention significantly increased colonoscopy rates at 2 years follow up compared to the control group (HR:1.26, p=0.04).
Conclusion: Despite positive attitudes and beliefs about CRC screening, members of high risk families had surprisingly low levels of colonoscopy adherence and knowledge of appropriate surveillance intervals. Despite their known genetic risk, few participants in the Lynch group had genetic testing. A telephone based behavioral intervention can substantially increase colonoscopy screening rates in high risk populations.

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Symposium 14D 3021

LYNCH SYNDROME

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Lynch Syndrome is the most common form of hereditary colorectal cancer (CRC) accounting for about 5% of all CRCs but it is woefully under-recognized.
Aims: To illustrate how information routinely collected by the Colon Cancer Family Registry (CFR) could be used to identify families with Lynch Syndrome and to identify a series of important questions that need to be answered before this type of approach could be widely used clinically.
Methods: The CFR has enrolled over 8000 patients with CRC, has analyzed almost 4,600 tissue blocks for microsatellite instability (MSI; a genetic profile of Lynch cancers) and performed gene testing on essentially all MSI positive patients and a sample of controls.
Results: About 18% of the CRCs had MSI and essentially all of the gene-test positive Lynch patients fell into the MSI group. The CFR has thus shown that a subset of patients with CRC who should have genetic counseling and gene testing for Lynch Syndrome could be routinely identified by the pathology laboratory performing MSI analysis. Such an approach would solve the problem of under-recognition of Lynch Syndrome but since neither the provider nor the patient necessarily know that molecular testing has been done, it raises serious clinical and behavioral questions including: 1. What is the best way to communicate the molecular information to the provider and to the patient? 2. How best to ensure that the patient and their provider understand the meaning of the molecular information. 3. How to assess whether the patient and their provider use the molecular information appropriately? 4. How to provide genetic counseling and gene testing for patients identified through this approach. 5. How to ensure state of the art care is provided to Lynch Syndrome gene carriers?
Conclusion: The CFR is a useful cohort to answer important clinical and behavioral questions about the routine molecular diagnosis of Lynch Syndrome that could help to improve identification of and clinical care for these high-risk families.

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Symposium 14E 3022

EVALUATION OF THE GENE DISCLOSURE PROCESS TO COLON CANCER FAMILY REGISTRY (CFR) PARTICIPANTS

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Mutations in the MLH1, MSH2, MSH6 and PMS2 genes are responsible for the most Lynch Syndrome cases. A subset of Mayo CFR participants received genetic testing for these mutations. Families with these mutations had all enrolled relatives tested. We disclosed this information, knowing the presence or absence of familial mutations is clinically significant. Participants were offered the choice to learn their test results via a standardized two-part telephone counselling process. We evaluated the feasibility and acceptability of the disclosure process. Letters explaining HNPCC were sent to participants with both positive and true negative results (N=230). Participants filled out a pre/post survey and were given a letter to share with their primary healthcare provider. The survey measured a variety of psychosocial and behavioral variables. The study counselors qualitatively discussed the pros and cons of the process. To date, 86 individuals have been counseled. Those with negative results report a lower level of perceived risk and concern from baseline to follow-up in comparison to those who test positively with no changes in reported quality of life. All reported high levels of satisfaction with decision making preparation, and low levels of decisional regret. 86% communicated test results to family members and 63% to primary healthcare providers. Over half reported screening following this disclosure process. Challenges included counseling the "true negative," explaining results in families that did not communicate test results to other family members, and using the telephone. The telephone counseling process appears acceptable, and is generating communication with family and healthcare providers.

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Symposium 14F 3023

HOW DO INDIVIDUALS DECIDE WHETHER TO ACCEPT OR DECLINE AN OFFER OF GENETIC TESTING FOR COLORECTAL CANCER?

Louise A. Keogh, PhD,[1] Belinda McClaren, PhD,[2] Judith Maskiell, BSc,[2] Heather Niven, BA,[2] Alison Rutstein, PhD,[2] Louisa Flander, PhD,[2] Clara Gaff, PhD,[3] John Hopper, PhD[2] and Mark Jenkins, PhD[2]

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When a genetic mutation is identified by Victorian Colorectal Cancer Family Study (VCCFS), participants are offered the chance to have genetic testing. Up to half of individulas decline the offer, providing a unique opportunity to conduct research on the decision to undertake genetic testing.

A sample of participants who were offered genetic testing were invited to take part in a qualitative interview about genetic testing decision-making; those who declined genetic testing (decliners) and those who accepted genetic testing (acceptors).

A total of 15 interviews were conducted, six with decliners, and nine with acceptors. All participants could describe the decision they had made. There were four types of decliners; 1) Lynch Syndrome had been confirmed by other means; 2) fear about insurance implications; 3) genetic testing 'wouldn't change anything' or 4) a positive result would cause too much worry. There were three types of acceptors, for the sake of; 1) their children; 2) their own health; or 3) research.

Conclusions: The key perception informing the genetic testing decision was the consequence of receiving results. This research highlights the need to further explore this decision in order to better understand the barriers to testing and to increase the uptake of genetic testing in this group.

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Symposium 15 8:45 AM–10:15 AM 3024

BEHAVIORAL RESEARCH AT NCI: OUR PORTFOLIO UNMASKED

William Klein, PhD, Hall Kara, PhD, Brooke Stipelman, PhD, Dikla Shmueli, PhD, Sarah Kobrin, PhD, MPH and Yvonne Hunt, PhD, MPH

National Cancer Institute, National Institutes of Health, Rockville, MD.

What kind of science has the Behavioral Research Program (BRP) at the National Cancer Institute been supporting in recent years, and what priorities have emerged in funding patterns? In this symposium, we feature an overview of an extensive set of portfolio analyses we have conducted of grants funded by BRP over the past ten years. The BRP is housed within the Division of Cancer of Control and Population Sciences (DCCPS), and supports substantive areas of research characterized by a wide array of disciplines and methodological approaches. Behavioral research funded by BRP cuts across the entire cancer continuum from prevention, detection, diagnosis, treatment, survivorship, and end-of-life. Populations represent all stages of human development from early childhood to aging adults. To date, BRP has identified and supports five primary areas of behavioral research including: (1) applied cancer screening, (2) basic and biobehavioral research, (3) health communication and informatics, (4) health promotion, and (5) tobacco control.

Using the portfolio analyses as a data platform, we provide here a general overview of the state of funded behavioral research in cancer control over the past decade and its implications for future areas of growth and funding. Specifically, the papers presented in this symposium will address the following questions: (1) What have been some of the major areas of behavioral science over the past decade and how represented are these areas within the BRP portfolio; (2) What are some of the key emerging areas in behavioral research moving forward and how do the results from these portfolio analyses illuminate these research priorities; (3) What are some of the investigator and institutional level patterns with respect to funding across the various behavioral research domains; and (4) How has behavior theory been used in applied research over the past decade and what strategies can be implemented moving forward to advance the use and applicability of these theories. Ample time for discussion will be provided, moderated by the director of BRP.

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Symposium 15A 3025

WHO, WHAT, AND WHERE IN THE WORLD OF FUNDING: ANALYSIS OF THE PAST FIVE YEARS OF THE NCI BEHAVIORAL RESEARCH PROGRAM RESEARCH PORTFOLIO

Rebecca Ferrer, PhD, Brooke Stipelman, PhD, Kara Hall, PhD, Dikla Shmueli, PhD, Deborah Greenberg, MS, Gina Tesauro, MSW, Mary O'Connell, MA, Hannah Bergman, BA, Gary Roberson, None and William Klein, PhD

National Cancer Institute, National Institutes of Health, Rockville, MD.

The Behavioral Research Program (BRP) supports a comprehensive portfolio of behavioral research related to cancer control ranging from basic laboratory studies to large epidemiological surveillance networks. This presentation will showcase findings from a recently completed portfolio analysis that included all BRP-primary funded grants, active between 2005 and 2009 (N=689). A novel multiple method approach was used in this analysis that leveraged existing data sources along with manual coding of the grant applications and state-of-the-science inductive analytic procedures.

We will provide a general overview regarding longitudinal patterns of the various areas of behavioral research funded by BRP (e.g., nutrition, tobacco, health communication, cancer screening, and basic biobehavioral research) with a particular emphasis on cross-cutting and emerging themes (e.g., adherence, policy, stress, social support, special populations). Implications of these funding patterns and their role in highlighting new and emerging priority areas in behavioral research will be discussed. This presentation will also highlight important administrative level patterns in research funding such as the role of certain investigator level characteristics (e.g., new investigators, disciplinary area) and institutional level factors (e.g., geographic location, type of institution) on funding success across the different areas of behavioral research. We will also present a brief analysis on the relationship between certain behavioral research topics and their success among the various study sections.

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Symposium 15B 3026

TOBACCO-RELATED RESEARCH FUNDING WITHIN THE NATIONAL CANCER INSTITUTE'S BEHAVIORAL RESEARCH PROGRAM

Yvonne Hunt, PhD, MPH,[1] Hannah Bergman, BS, BA,[1] Dikla Shmueli, PhD[1] and Gary Roberson, college student[2]

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Funding nicotine and tobacco research is critical to advancing the state of the science and reducing tobacco-related morbidity and mortality, especially in a changing tobacco landscape that presents new research priorities for tobacco control. We undertook the current portfolio analysis in an effort to describe the breadth of tobacco-related research projects currently being funded through the National Cancer Institute's Behavioral Research Program (BRP). This was an update of a previous portfolio analysis conducted in 2003. Thus, a secondary aim was to assess changes in the portfolio composition over time; specifically, how these changes might relate to changing research priorities in the field. The analysis focused on BRP funded tobacco-related grants from fiscal year 2009. Abstracts were categorized into one of nine categories representing key areas of tobacco control research, according to the type of research question being investigated. Abstracts were also coded on a number of other study dimensions including study population (i.e., human, animal), tobacco type (i.e. menthol, smokeless), and intervention approach (i.e., behavioral, pharmacological). To determine the presence of emerging research areas in the BRP tobacco portfolio, we coded for studies involving special populations (i.e. light smokers, comorbid), novel tobacco products, or FDA regulation. Results of the portfolio analysis indicated that tobacco-related grants were represented across all branches of BRP, with the majority being funded by the Tobacco Control Research Branch. Increases were observed in funding of emerging research areas, including smokeless tobacco and special populations grants. Detailed results will be presented, including total funding amounts; the relative proportion of funding dedicated to each category of research; changes in portfolio composition from 2003 to 2009; and representation of behavioral interventions and emerging research areas. Implications will be drawn for future funding priorities at NCI's BRP and in the larger research community.

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Symposium 15C 3027

USE OF BEHAVIORAL THEORY IN GRANT APPLICATIONS: WHAT CAN WE LEARN FROM FUNDED CANCER SCREENING INTERVENTION RESEARCH?

Sarah Kobrin, PhD, MPH,[1] Alex Rothman, PhD,[2] Helen Meissner, PhD,[4] Jasmin Tiro, PhD,[3] Kara Hall, PhD,[1] Rebecca Ferrer, PhD[1] and Dikla Shmueli, PhD[1]

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Grant applications seeking NIH funding for intervention research are increasingly expected to rely on theories to develop, implement, and evaluate interventions to change behavior. We reviewed funded R01 applications (2000-2008) that proposed to change five recommended behaviors (colonoscopy, sigmoidoscopy; FOBT, mammogram, Pap). Previously we reported on the data abstraction tool and preliminary results (Kobrin et al, 2010). We will provide final results: details of theories and constructs most commonly used; where in applications they are described; how theory is used across application sections; and whether use of theory varies by screening behavior. The most commonly used formal theories (in frequency order) - Transtheoretical Model, Health Belief Model, Social Cognitive Theory, Precaution Adoption Process Model, and Theory of Reasoned Action/Planned Behavior - are often used in combination. Of these, HBM was most frequently combined with others. Thirty-five of 38 applications provided a conceptual framework for the project, including constructs from these and other formal theories as well as other constructs. Constructs selected from the most commonly used formal theories included (in order): knowledge, self-efficacy, perceived barriers, behavioral intentions, and attitudes. Most common constructs from other sources included (in order): physician recommendation, culture, fatalism, worry, preferences, and social support. Discussion will address questions about usefulness of current theories in intervention research, need for advancing theories to make them more useful in applied settings, and the role(s) intervention researchers can play in improving available theories and their applicability to specific settings, behaviors, and populations. Implications will be drawn for writing successful applications, with special consideration to adapting findings to new application length and format.

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Symposium 16 8:45 AM–10:15 AM 3028

SUSTAINABILITY: WHAT DOES IT MEAN?

Russ Glasgow, PhD[1] and Robert Kaplan, PhD[2]

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The newly emerging science of dissemination and implementation has made important advances, but there are several remaining areas of definitional ambiguity. One of these is the concept of sustainability of programs and policies once they are adopted and implemented. All concur that sustainability is important and challenging, but there is little agreement as to exactly what sustainability means.

This symposium explores different perspectives on sustainability by four prominent figures in dissemination research, followed by a brief integrative discussion and audience participation. David Chambers will begin the discussion by briefly reviewing published definitions of sustainability and some of the difficulties with these conceptions. He will then present his thinking on the issue, focusing on the importance of program evolution, or thinking longitudinally, and address an alternate hypothesis to sustainability–that sustainability must be viewed as dynamic, and that adaptation is not the enemy of fidelity.

Russ Glasgow will present his conceptualization of sustainability, drawn from the RE-AIM model and discuss concepts of capacity, adaptation, ability to respond to changing circumstances and organization problem solving. Abe Wandersman will then present his perspective on sustainability, drawn from his Getting To Outcomes (GTO) model, and stress that the focus should be on sustaining outcomes- not on mindlessly repeating the same set of implementation strategies, independent of their impact. The accountability questions in GTO are applied to sustainability to determine what needs to be sustained, what are the specific desired outcomes for sustainability, and to develop, implement and evaluate a sustainability process. Finally, Bob Kaplan will provide commentary on each of these perspectives, as well as offer his own thoughts about key factors in sustainability. Importantly, we will reserve at least 20-30 minutes for interaction with audience members around these issues.

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Symposium 16A 3029

A RE-[|#16#|]AIM PERSPECTIVE ON SUSTAINABILITY

Russ Glasgow, PhD

NCI, DCCPS, Rockville, MD.

The RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) framework has been used for planning, implementing, evaluating, and reviewing programs and policies intended to translate into practice. From a RE-AIM perspective, sustainability is approached at multiple levels: participant outcomes; staff implementation, and setting level maintenance/adaptation.

Patient level maintenance issues concern patterns of change over follow-up intervals across multiple outcomes, including behavior change, biological impact/risk reduction markers and quality of life.

At the staff level, sustainability from a RE-AIM perspective refers to levels of implementation over time and adaptations that are made to programs or policy delivery.

Finally, at the setting level, sustainability concerns the customization and policy/program changes that occur over time following the initial implementation and evaluation period. In RE-AIM, (setting level) sustainability refers to the capacity, readiness, and problem-solving ability of a setting to respond to changing conditions and challenges, rather than more traditional conceptualizations of rigid adherence to a predetermined, fixed protocol.

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Symposium 16B 3030

BEING ACCOUNTABLE ABOUT SUSTAINABILITY: THE GETTING TO OUTCOMES® (GTO) APPROACH

Abraham Wandersman, PhD

Psychology, U of South Carolina, Columbia, SC.

Not all programs and initiatives needs to be sustained. There should be an accountability approach taken to sustainability. GTO is a best practice process that uses literatures from a variety of domains to help practitioners and others to plan, implement, evaluate, improve, and sustain interventions.

By answering and asking 10 questions with quality, we are developing a results-based accountability approach to sustainability.

1. What conditions must be assessed to determine if sustainability is possible?
2. What are the sustainability goals and desired outcomes?
3. What promising sustainability practices can be used to achieve goals and desired outcomes?
4. How do the promising sustainability practices fit?
5. What capacities are needed to implement the promising sustainability practices?
6. What is the plan for sustainability?
7. How will the implementation quality of sustainability plans be assessed?
8. How well did the sustainability plan work?
9. How can the sustainability process be continuously improved over time?

1 Getting To Outcomes and GTO are trademarks registered by the U. of South Carolina and RAND.

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Symposium 16C 3031

A DYNAMIC APPROACH TO SUSTAINABILITY OF EFFECTIVE INTERVENTIONS

David Chambers, DPhil, MSc

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Traditionally, the fields of services and interventions research have taken a largely static approach to the challenge of how to sustain effective interventions within health care and community settings. Interventions are developed and fixed in design once effectiveness is demonstrated; fidelity to those interventions determines how consistently the interventions are delivered according to that initial development process. Sustainability is thus defined as the freezing of intervention delivery over time; deviation from this “freeze” is considered a negative outcome.

While this reductionist approach allows for easier study, sustainability as a static construct flies in the face of the dynamism inherent in care settings; practitioners and systems evolve, and the needs of populations alter over time. Anecdotally, we are aware of a great deal of adaptation, and evolution, that occurs within real-world use of effective practices; scientifically we try to screen this out.

This presentation will explore efforts to apply a dynamic view toward sustainability, reflecting on organizational theory, quality improvement, systems approaches, and lessons from dissemination and implementation research. We will discuss new ways of thinking about sustainability, and offer research questions to stimulate the next generation of studies.

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Symposium 17 8:45 AM–10:15 AM 3032

COMPARATIVE EFFECTIVENESS RESEARCH IN CARDIOVASCULAR BEHAVIORAL MEDICINE

Catherine M. Stoney, PhD,[1] James A. Blumenthal, PhD,[2] Bonnie Spring, PhD,[3] Derek W. Johnston, PhD[4] and Denise Bonds, MD, MPH[1]

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Comparative effectiveness research (CER) provides evidence for health care providers, consumers, caregivers, and policy makers regarding the relative benefits and risks of two or more prevention, treatment, or diagnostic strategies for specific medical conditions, under specific circumstances, and for particular populations. There are several design strategies that can provide critical comparative effectiveness information, but a balanced portfolio of methodologies will be most informative. In CER research, patients are studied within the context of real-world clinical settings. The Institute of Medicine (IOM) has recently developed national priorities for comparative effectiveness research, and has also established a working definition for CER. The IOM also underscored the importance of identifying infrastructure and resources necessary for sustaining CER research. Importantly, among the national priorities identified, a number of recommendations included behavioral interventions (including but not limited to exercise treatments, social support, family issues in caregiving, dietary interventions, improving the built environment, symptom management, cognitive behavioral therapy, biofeedback, and many others) related to cardiovascular and other diseases and conditions. There are many opportunities for cardiovascular behavioral medicine studies to contribute important information in CER. The purpose of this symposium is to highlight examples of some of the early behavioral medicine studies that have been conducted in CER, for the purpose of encouraging advances.

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Symposium 17A 3033

COMPARATIVE IMPACT OF ALTERNATIVE APPROACHES TO DIET AND ACTIVITY CHANGE

Bonnie Spring, PhD

Preventive Medicine, Northwestern University, Chicago, IL.

As much as 40% of premature mortality is attributable to unhealthy lifestyle behaviors. To be maximally effective, therefore, efforts to improve population health need to address health risk behaviors. Poor quality diet and sedentary lifestyle are well-established behavioral risk factors for cardiovascular disease and cancers. Four unhealthy behaviors are especially prevalent in industrialized cultures: eating a high-fat diet, consuming few fruits and vegetables, extensive television viewing, and low moderate-vigorous physical activity. Public health guidelines advise correcting all of these lifestyle behaviors, but little guidance is available about the best approach. Comparative treatment development research can be especially useful when scientific equipoise exists about alternative intervention approaches. The Make Better Choices (MBC) study was a randomized clinical trial involving a head-to-head comparison (n=200) of four interventions, all of which entailed guideline-recommended behavior change. In each condition, participants modified one diet and one activity behavior, while effects on all four behaviors were evaluated as an aggregated healthy lifestyle score. Results indicated that the conventional practice of increasing physical activity and decreasing fat intake produced the least improvement in overall healthy lifestyle. Conversely, a novel approach suggested by behavioral economic theory (increase fruits/vegetables; decrease recreational screen time) maximized across-the-board healthy lifestyle change. To fulfill its full potential , comparative research needs eventually to extend beyond determining only what works best for the average patient. Comparative research holds potential to undergird personalized, evidence-based behavioral medicine. The aim is for intervention decisions to be guided by research that conveys what works best for particular types of individuals or communities and in different settings and circumstances.

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Symposium 17B 3034

COMPARATIVE EFFECTIVENESS OF EXERCISE IN THE TREATMENT OF DEPRESSION

James Blumenthal, PhD

Psychiatry, Duke University, Durham, NC.

Depression is a very common and disabling condition. Prevalence rates of major depressive disorder (MDD) have been estimated to be a high as 25%, with point prevalence rates estimated at up to 45% for patients with minor depression (mDD) or elevated depressive symptoms. Moreover, depression in cardiac patients has been associated with greater than a 2-fold increase in risk for adverse clinical events, including death. Although effective treatments for depression are available, the optimal ways to manage depression in cardiac patients are not known. This presentation will briefly review the prior randomized clinical trials for treating depression using cognitive behavioral therapy (CBT) and pharmacotherapy. Recent studies of exercise in treating depression also will be reviewed, and data examining the comparative efficacy of exercise, medication and CBT will be examined. The added physical and mental health benefits of exercise training in treating depression in cardiac patients will be highlighted and directions for future research in the area will be discussed.

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Symposium 17C 3035

BEHAVIOUR CHANGE PLUS PEDOMETER IN INCREASING PHYSICAL ACTIVITY IN SEDENTARY OLDER WOMEN

Derek Johnston, PhD,[1] Falko F. Sniehotta, PhD,[2] Jacqui Sugden, PhD,[3] Ishbel Argo, RGN,[3] Paul Boyle, PhD,[4] Peter T. Donnan, PhD[3] and Marion E. McMurdo, MD[3]

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Older people are the least active segment of the population. This contributes to their high level of disease (including cardiovascular disease), disability and healthcare usage. Practical and effective interventions are needed to increase activity in this population. A brief behavioural change intervention consisting of goal setting, planning, self monitoring delivered with or without a pedometer was compared with no treatment in a 3 arm prospective study of 204 sedentary community dwelling women aged≥70 years (average age 77 years). The primary outcome was daily activity counts assessed by accelerometer over 7 days prior to treatment, at 3 months and at 6 months. Secondary outcomes included lower limb function, health related quality of life, anxiety, depression and falls. 179 women completed the trial with most dropouts from the behaviour change alone condition (15/68). Over the first 3 months activity increased reliably more in the intervention groups than the control (which did not change). Pedometers did not add to the effects of the behaviour change techniques. The increase in activity was not maintained at the 6 month assessment. The secondary outcomes were not affected by the intervention. The psychological and behavioural processes assessed did not appear to mediate the change in activity. This and the failure to sustain increased activity will be discussed.

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Symposium 18 8:45 AM–10:15 AM 3036

POLICY AS A TOOL TO CHANGE SCHOOL NUTRITION AND PHYSICAL EDUCATION ENVIRONMENTS

Frank M. Perna, PhD,[1] April Oh, PhD,[1] Tanya Agurs-Collins, PhD, RD,[1] Jamie F. Chriqui, PhD, MHS,[2] Sarah M. Lee, PhD[4] and Louise C. Mâsse, PhD[3]

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A policy approach to combat childhood obesity has been advocated as individually targeted interventions, while effective, may have limited population reach. Given interest in using policy to combat childhood obesity and the lack of uniform enactment of school-related laws, the purpose of this symposium is to review recent changes in school nutrition and physical education state laws affecting middle schools. Changes in school policy may be particularly relevant at the middle school level when the largest decrease in physical activity occurs and many dietary changes evolve at this time when children have increased opportunity to select foods outside those brought from home.

Specifically, Dr. Mâsse will overview of school policy assessment, its role in addressing childhood obesity, and describe the policy classification systems in C.L.A.S.S.: Classification of Laws Associated with School Students. In Presentation 2, Dr. Agurs-Collins will present a 5-year analysis of change in competitive food laws affecting middle schools that have occurred among the 50 states and the District of Columbia in the USA. Next, Dr. Perna will provide an example of physical education policy analysis by empirically comparing change in PE laws over a 5-year period and present data on the relative concordance between changes in competitive food and PE laws across the 50 States and the District of Columbia. Finally, a short presentation will be made by Dr. Oh who will demonstrate the utility of a publicly available policy analysis tool and database (C.L.A.S.S.) which is supported by the National Cancer Institute to conduct rigorous policy analysis. Our discussant, Dr. Lee, will end the symposium by addressing the relevance of policy approaches in combating childhood obesity followed by providing directions for future research in this area.

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Symposium 18A 3037

SCHOOL POLICY TO PREVENT CHILDHOOD OBESITY: A THEORETICAL LOOK

Louise C. Masse, PhD[1] and Jamie F. Chriqui, PhD[2]

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Dramatic increases in the prevalence of childhood obesity have been observed in the US and other industrialized nations. As a result a broad spectrum of policy strategies that influence the school environment has been proposed and many of these policies have been recently enacted. The purpose of this presentation is: 1) to provide an overview of policies that have been enacted in the US at the state level to influence the school nutrition and physical activity environment; 2) to review how policies may be classified to examine the range of policies that have been enacted; 3) to briefly discuss how current policy classification systems have been developed and changed with emerging evidence; and 4) to discuss the challenges that currently exists in understanding the mechanisms through which policy can influence behavior change and the prevalence of childhood obesity. Key highlights include providing specific examples of statutes and regulations that were recently enacted to show the broad range of policies that are currently in effect in the US at the state level and to demonstrate how the policy would be coded and classified utilizing a systematic policy classification system. Nutrition and physical education/activity examples will be provided with a specific focus on foods and beverages sold A La Carte and in vending machines as many changes in classification have emerged from recent evidence. Finally, the presentation will highlight key challenges researchers face in examining policy impact including a discussion on: lack of empirical evidence; experimental design are not practical; difficulty in controlling for endogenous confounders; importance of identifying intermediate markers that can influence behaviors given the complexity of these studies; and discussing overall measurement challenges. The issues discussed in this overview will help researchers understand the challenges in evaluating the impact of school policies on students' nutrition and physical activity behaviors and ultimately impact the prevalence of childhood obesity.

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Symposium 18B 3038

FIVE-YEAR CHANGE IN US STATE COMPETITIVE FOOD LAWS AFFECTING MIDDLE SCHOOLS

Tanya Agurs-Collins, PhD, RD,[1] Frank Perna, PhD,[1] April Oh, PhD,[1] Jamie F. Chriqui, PhD[2] and Louise C. Masse, PhD[3]

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Legislative efforts to prevent obesity have targeted the school food environment and limited the availability of competitive foods as a strategy to address overweight and obesity. The purpose of this study is to describe changes in competitive food laws over 5 years in US middle schools.

The National Cancer Institute developed the School Nutrition Environment State Policy Classification System (SNESPCS) to assess changes in school nutrition state laws. The SNESPCS is comprised of several nutrition categories including fundraisers, a la carte, vending, and canteen competitive foods and beverages. For 2003 and 2007, the presence or absence of laws regulating these categories of competitive foods were dichotomously coded for 50 states and the District of Columbia. Three SNESPCS Competitive Foods Aggregate scores were calculated: total competitive food, snacks and beverages. Friedman non-parametric tests compared changes in Competitive Foods Aggregate scores over time.

The number of states with any law requiring a restriction on competitive foods increased from 14 to 22 and the SNESPCS total Competitive Food Score increased significantly ($p=.005$). When examined separately, a similar trend was observed for SNESPCS Competitive Foods snack ($p=0.035$) and beverage ($p=0.007$) scores, both of which increased from 13 to 20 states. There were no significant increases in the SNESPCS score or in the number of states that required laws for competitive food entrees, marketing/advertising and preferential pricing.

Since 2003, state competitive food laws and regulations have increased significantly in middle schools. Most of the improvement in competitive food laws centered on increasing stringency of competitive beverage laws. Conversely, few laws were enacted in the area of food entrees, marketing/advertising and preferential pricing, which are also important school-based strategies to help prevent overweight and obesity among children.

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Symposium 18C 3039

FIVE-YEAR CHANGE IN STATE PHYSICAL EDUCATION LAWS AND CONCORDANCE WITH COMPETITIVE FOODS LAWS IN US MIDDLE SCHOOLS

Frank M. Perna, PhD,[1] April Oh, PhD,[1] Tanya Agurs-Collins, PhD,[1] Jamie Chriqui, PhD[2] and Louise Mâsse Mâsse, PhD[3]

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Federal law requires states to address school nutrition and physical education (PE), but enactment of state laws regarding PE and competitive foods has varied. The National Cancer Institute developed scoring systems, based on National Association of School Physical Education and the Institute of Medicine recommendations, to evaluate state-level PE and school nutrition policies, respectively, that have been codified into law. This study empirically assessed changes over a five year period in codified law affecting four domains of PE, and determined the relative concordance between changes in competitive food and PE laws affecting US middle schools.

The stringency of PE and Competitive Food laws for each state and the District of Columbia was determined using the Physical Education Related Policy Classification System (PERSPCS) and the School Nutrition Environment State Policy Classification System (SNESPCS), respectively. Friedman non-parametric tests compared change in PERSPCS scores in 4 policy areas (Time, Staffing, Curriculum, and Fitness Assessment) over time. Next, initial PERSPCS Time score was dichotomously coded to form two groups (states Requiring/Not-Requiring PE). Mann-Whitney U tests compared changes in Competitive Food scores between states with and without PE requirements.

Analyses found negligible improvement in the number of states adopting laws requiring PE-Time, but PERSPCS PE-Time and Curriculum scores increased marginally over time (p's<.05 and .083, respectively). Further, Competitive Food score increased significantly more among states initially requiring PE than among states without initial PE requirement laws (p<.05).

Data suggest marginal increase in the stringency of PE laws over time. However, initial PE law status may presage favorable change in competitive food laws affecting US middle schools as states eventually enacting competitive food laws were more likely to have initially stringent PE-time laws.

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Symposium 18D 3040

CLASSIFICATION OF LAWS ASSOCIATED WITH SCHOOL STUDENTS (CLASS): AN EVALUATION TOOL OF STATE PHYSICAL EDUCATION AND NUTRITION POLICY

April Oh, PhD, MPH, Frank M. Perna, PhD, Tanya Agurs-Collins, PhD and Linda Nebeling, PhD, MPH, RD

NIH/NCI, Rockville, MD.

State-level school physical education and nutrition policies are a potential mechanism to curb childhood obesity. C.L.A.S.S. (Classification of Laws Associated with School Students) is a scoring system that monitors and evaluates state-level school physical education (PE) and nutrition policies that have been codified into law. Policies are defined to include both statutory laws as enacted by the state legislatures and administrative laws promulgated by state administrative agencies. This presentation will: 1) Present state and national profiles of how states are scoring on physical education and nutrition policies ; 2) Demonstrate the C.L.A.S.S. state policy mapping tool and how state policy profiles can be generated as well as data downloaded for policy research. State laws were coded between 2003-2008 following an empirical coding system that can be used to assess changes in state laws over time or allow easy linkages with other data sources. Scores are based on national standards for physical education and nutrition. National maps comparing policy scores across states for each physical education and nutrition policy topic will be presented. The results of this project will demonstrate the utility of using C.L.A.S.S. data to better understand and evaluate physical education and nutrition policies across and within US states. The applied example of a combined analysis using the C.L.A.S.S. data and other nationally representative data will address analytic challenges and opportunities in applying and analyzing these data with other datasets. Finally, we will discuss ways in which the available data can enhance and promote context and public health policy research and practice.

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Friday
April 29, 2011
2:00 PM–3:30 PM

Symposium 19 2:00 PM–3:30 PM 3048

EARLY ADULT REDUCTION OF WEIGHT THROUGH LIFESTYLE INTERVENTION (EARLY) TRIALS; USING INNOVATIVE TECHNOLOGIES IN RANDOMIZED CONTROLLED TRIALS TARGETING WEIGHT CONTROL AMONG YOUNG ADULTS

Catherine Loria, PhD,[1] S.Sonia Arteaga, PhD,[1] Steven Belle, PhD,[2] Caroline Signore, MD[3] and William Riley, PhD[1]

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Early adulthood is a time of weight gain yet there is a paucity of evidence about how best to prevent weight gain or promote weight loss in this age group. Data from the Coronary Artery Risk Development in Young Adults (CARDIA) study show that young adults (18-40y) gain an average of 1-2 pounds per year with the largest weight gain (about 3 pounds a year) during the ages of 20-29. Excess weight gain in early adulthood is associated with later more adverse levels of cardiovascular risk factors such as hypertension, dyslipidemia, and diabetes. To address this issue, in 2009 the National Heart, Lung, and Blood Institute, along with the Eunice Kennedy Shriver National Institute of Child Health and Human Development funded seven separate randomized controlled trials to refine and test behavioral approaches for weight control among young adults (18-35y) at high risk for weight gain. All studies needed to focus on prevention of weight gain or weight loss among young adults, conduct formative research, conduct a two-year randomized controlled trial, and use innovative technologies (i.e., social media, texting, smart phones). This symposium will provide an overview of these studies, describe the challenges and strategies associated with recruitment and retention of young adults, and report on a strategy to maximize knowledge gained across the studies through the use of common measures/protocols and cross-site analyses. The symposium will also feature three grantees who will discuss findings from their formative research regarding the use of innovative technologies and young adults. The findings from the EARLY trials will help inform strategies to address weight control among young adults.

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Symposium 19A 3049

SMART: A SOCIAL/MOBILE APPROACH TO REDUCE WEIGHT IN YOUNG ADULTS

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The SMART study (Social/Mobile Approach to Reduce Weight) aims to develop and test an intervention to prevent weight gain in normal weight, and promote weight loss in overweight, young adults. The problem of weight gain and retention of gained weight is important for young adults. As individuals traverse life paths from adolescence into early adulthood, they encounter multiple stressors and influences that contribute to weight gain. Weight gain in turn leads to increased risk of cardiovascular disease, diabetes and other health problems. SMART is based on theoretical principles and behavioral strategies known to be effective in weight-control. SMART will be delivered via mobile phones (text messages, phone apps), Facebook and the web and will involve minimal contact with case managers. In the formative research phase of the study, an online survey, focus groups, and interviews are being conducted to understand usage of social and mobile technologies and perceptions of health among the target population, college students. Concurrent prototyping and testing of apps by students is being done at both UCSD and Stanford with the intent to discover novel, yet theory driven approaches to promote behavior change through social and mobile technologies. Evaluation of the full SMART intervention will be performed via a randomized controlled trial among 406 college and university students from four campuses in the San Diego region. Two nested sub-studies will be performed to address weight loss and weight gain prevention. Assessments will be conducted on all participants at baseline, 6, 12, 18 and 24 months. The primary outcome will be weight status at 24 months. Secondary and exploratory assessments will focus on the relationship between weight outcomes, use of behavioral strategies, and patterns of use of mobile and social access to intervention content.

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Symposium 19B 3050

CELL PHONE INTERVENTION FOR YOU (CITY): RANDOMIZED TRIAL OF BEHAVIORAL INTERVENTIONS FOR WEIGHT LOSS IN YOUNG ADULTS

Leonor Corsino, MD,MHS,[1] Pao-Hwa Lin, PhD,[1] Bryan C. Batch, MD,[1] Stephen Intille, PhD,[2] Steven Grambow, PhD,[1] Hayden Bosworth, PhD,[1] Corrine Voils, PhD,[1] Gary Bennett, PhD,[1] Jonathan Lester, PhD,[2] Yi Han, MS[2] and Laura P. Svetkey, MD, MHS[1]

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The obesity epidemic has spread to young adults, in whom early evidence of cardiovascular (CVD) risk factors predicts future evidence of CVD pathology. As part of the EARLY network trials, the Cell Phone Intervention for You (CITY) study (National Heart, Lung, and Blood Institute grant U01 HL096720-01) tests an innovative cell phone intervention for weight loss in young adults. During the formative phase of CITY, we conducted qualitative research to design the cell phone intervention and develop recruitment and retention strategies. The intervention design was informed by a series of interviews and focus groups in the target population, with feedback on the software design and behavioral issues such as social support delivered by phone. To investigate recruitment and retention strategies, we conducted 6 focus groups using the Nominal Group Technique. We enrolled 31 participants in the target population who discussed their concerns about overweight/obesity; their understanding of weight loss strategies; and factors influencing participation in weight loss research. The results of the formative phase were used to design a randomized trial of 24 months of 1) a behavioral intervention delivered almost exclusively by innovative cell phone technology; 2) a behavioral intervention delivered by personal coaching, or 3) a usual care, advice-only control group. Study participants are age 18-35 yrs with BMI>25 kg/m2. The primary outcome is weight change. Secondary outcomes include dietary pattern, physical activity, blood pressure, insulin resistance, psychosocial variables, implementation costs, and effects in subgroups. We hypothesize that each active intervention will lead to more weight loss than occurs in the control group. A secondary analysis will compare outcomes in the cell phone intervention to the personal coaching intervention.

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Symposium 19C 3051

THE IDEA STUDY: INNOVATIVE APPROACHES FOR DIET, EXERCISE AND ACTIVITY IN YOUNG ADULTS

John M. Jakicic, PhD

University of Pittsburgh, Pittsburgh, PA.

The IDEA Study focuses on the evaluation of weight loss interventions for young adults (18-35 years of age). This presentation will highlight findings from the formative phase and describe how they will be incorporated into the IDEA trial. A formative phase has been conducted to understand how to apply technology (text messaging and wearable technology) to improve the effectiveness of weight loss interventions in this population. Results show that preferred times to receive text messages are between 7-11 AM and 12-5 PM with the least preferred time between 6-9 PM. Randomly receiving 1-3 text messages per day was preferred; however, more than 3 messages per day was not preferred. 82% reported that feedback provided by the wearable technology was motivating and the software made it easier to track exercise behaviors. This information is informing the clinical trial of the IDEA Study that is examining whether an enhanced weight loss intervention (EWLI) that includes advanced technology components results in improved weight loss in 480 overweight and obese young adults compared to a standard behavioral weight loss intervention (SBWP) over 24 months. Additional outcomes include body composition, fitness, physical activity, dietary intake, psychosocial measures, and risk factors. Assessments will occur at 0, 6, 12, 18, and 24 months. SBWP includes reduced energy intake and moderate-to-vigorous intensity exercise, and from months 7-24 subjects will access a study website that will contain intervention information and will receive weekly text messages related to their participation in the study (e.g. intervention session reminders, etc.). EWLI includes all the components of SBWP plus technology enhancements that includes tailored daily text messages to reinforce adherence to the intervention from months 13-24, and will wear a monitor from months 7-24 that provides real-time feedback on energy expenditure and achievement of physical activity goals. It is hypothesized that EWLI will significantly improve weight loss and other outcomes compared to SBWP.

Funded by the National Heart, Lung, and Blood Institute (U01 HL096770)

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Symposium 20 2:00 PM–3:30 PM 3052

RANDOMIZED TRIALS OF LIFESTYLE INTERVENTIONS FOR PREGNANT AND POSTPARTUM WOMEN: IMPACT ON MATERNAL/FETAL OUTCOMES

Danielle S. Downs, PhD,[1] Lisa Chasan-Taber, ScD,[2] SeonAe Yeo, PhD, RCN, FAAN[3] and Jennifer Leiferman, PhD[4]

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The purpose of this symposium is to present the current state of science on the design, implementation, and impact of lifestyle interventions on: 1) risk of maternal pregnancy complications, 2) adoption and maintenance of PA and healthy dietary habits, 3) serum biomarkers associated with insulin resistance and oxidative stress, and 4) risk of adverse fetal outcomes.

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Symposium 20A 3053

DETERMINANTS AND OUTCOMES OF PHYSICAL ACTIVITY IN PREGNANCY: FINDINGS FROM ACTIVE MOMS, A RANDOMIZED PHYSICAL ACTIVITY INTERVENTION FOR PREGNANT WOMEN

Danielle S. Downs, PhD

Kinesiology, The Pennsylvania State University, University Park, PA.

Physical activity (PA) offers health benefits to mothers and their offspring; however, little is known about how to intervene to effectively motivate pregnant women to be active. The purpose of this symposium presentation is to discuss the determinants and outcomes of PA in pregnancy and present findings from Active MOMS: A Randomized Physical Activity Intervention for Pregnant Women. The determinants and outcomes of PA in pregnancy will be discussed, including prior literature on randomized interventions with pregnant women and the correlates of PA within the context of the TPB. Findings from Active MOMS will also be discussed. The purpose of Active MOMS was to deliver a PA intervention using 2 approaches: semi- intensive, structured exercise and minimum-contact, lifestyle PA. The structured group received face-to-face PA education, motivational support, and engaged in moderate PA on 2d/wk for 70 min/d with an instructor. The lifestyle group received PA education and motivational support every 3 weeks by mail/phone from an instructor, and were encouraged to engage in lifestyle PA on their own. These approaches were compared to a standard of care control group. Preliminary findings from the trial will be discussed. In general, as predicted, the structured group outperformed the control group on PA behavior (accelerometer min of moderate-vigorous PA, total leisure-time PA). In contrast to the hypothesis, the lifestyle group did not outperform controls on either measure. Also, the structured group had higher scores for TPB constructs of attitude, subjective norm, perceived control, and intention than controls and the lifestyle group had higher attitude, perceived control, and intention scores than controls. These preliminary findings suggest that a PA intervention, delivered in a structured approach, can positively impact pregnant women's PA behaviors and motivational determinants. NIDDK-07586702.

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Symposium 20B 3054

B.A.B.Y. STUDY: AN EXERCISE INTERVENTION TO PREVENT GESTATIONAL DIABETES

Lisa Chasan-Taber, ScD

Division of Biostatistics & Epidemiology at the School of Public Health & Health Sciences, University of Massachusetts Amherst, Amherst, MA.

Physical activity during pregnancy is associated with reduced risk of adverse maternal and fetal outcomes. However, the majority of pregnant women are inactive and, to date, few interventions have been conducted to increase exercise in pregnant women. The purpose of this symposium presentation is to discuss the relationship between PA and gestational diabetes and present findings from the B.A.B.Y. Study. Overview. We randomized prenatal care patients (58% Hispanic) in the ongoing B.A.B.Y. Study to an individually tailored 12-week exercise intervention group, or to a health and wellness control group in early pregnancy (mean=11.9 weeks). The exercise intervention was based on the goal of increasing walking and encouraging a more active lifestyle. A baseline session assessed stage of change, facilitators and barriers to exercise, and determined goals for increased exercise. During follow-up, stage-matched manuals, tip sheets, and booster calls reviewed progress towards goals. Activity was assessed via the Pregnancy Physical Activity Questionnaire. Preliminary findings from the trial will be discussed. In general, at baseline, the intervention and control groups did not differ according to age, weight, or exercise level. After 12 weeks, the mean increase in exercise was greater in the exercise arm vs. the control arm. Similarly, the exercise group experienced a smaller decrease in total physical activity (e.g., exercise, household, occupational, and transportation combined) as compared to the control arm. These findings support the efficacy of a tailored exercise intervention in increasing exercise in a diverse sample of pregnant women. NIDDK-074876.

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Symposium 20C 3055

MY BABY, MY MOVE: AN ANTENATAL COMMUNITY-BASED PHYSICAL ACTIVITY INTERVENTION

Jennifer Leiferman, PhD

Colorado School of Public Health, University of Colorado Denver, Aurora, CO.

Antenatal physical activity is associated with numerous maternal and child health outcomes and recommended by both the American Congress of Obstetricians and Gynecologists (ACOG) and Department of Health and Human Services (DHHS). In spite of this, pregnant women engage in less moderate-intensity physical activity (MPA) than their nonpregnant counterparts and levels of MPA decrease throughout the course of pregnancy. The primary purpose of this symposium presentation is to discuss the results from a randomized-controlled physical activity intervention trial in the antenatal period. Findings from the randomized-controlled trial of the My Baby, My Move (MBMM) program will be discussed. The MBMM program is an 8-week community-based program that involves both didactic and experiential components. Peer leaders are instrumental in the delivery of the community-based program. Process evaluation data suggest the intervention had high adherence, fidelity, and overall participant satisfaction. The MBMM program was also very effective in changing mediators of physical activity such as behavioral skills and social support as well as overall minutes per week of moderate-intensity physical activity. These findings suggest that implementing community interventions to increase antenatal physical activity are well-received and show promise in ultimately changing physical activity behavior. More research is necessary to better understand these relationships. This work was funded by CDC 1K01 DP001127-01.

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Symposium 20D 3056

PREECLAMPSIA AND EXERCISE STUDY

SeonAe Yeo, PhD, RCN, FAAN

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Preeclampsia is a serious complication of pregnancy that has negative implications for both a mother and her fetus. Recent evidence suggests that exercise interventions may offer beneficial health effects for high-risk populations such as pregnant women at risk for or with preeclampsia. Purpose. The primary purpose of this symposium presentation is to discuss the relationship between physical activity and preeclampsia within the context of physical activity interventions. Overview. Findings from the recently completed study, “Regular Exercise Among Women at Risk for Preeclmapsia” will be discussed along with an overview and expected outcomes from the currently ongoing study, “Mothers Moving to a Healthy Future” and pilot research testing the effect of stretching among sedentary pregnant women. This work was funded by NIH R01 NR005002 and H59 MC07461.

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Symposium 21 2:00 PM–3:30 PM 3057

SUCCESSFUL DISSEMINATION FROM START TO FINISH: INNOVATIVE STRATEGIES FOR ACHIEVING SUCCESS IN RECRUITMENT, DELIVERY, AND RETENTION OF BEHAVIOR CHANGE PROGRAMS

Leanne M. Mauriello, PhD, Kerry Evers, PhD and Deborah F. Van Marter, MPH

Pro-Change Behavior Systems, Inc., West Kingston, RI.

The work and challenges of delivering a successful health behavior change program does not end upon determination of efficacy at the conclusion of a clinical trial. In fact, the real work of reaching people to achieve meaningful impact has just begun at that point. Broad, effective, and feasible dissemination requires careful consideration and implementation of strategies to foster recruitment, delivery, and retention. In this symposium scientists from three different companies will present cutting-edge and innovative strategies they are using to 1) recruit and engage people in health behavior change programs; 2) develop and disseminate effective and feasible interventions; and 3) sustain and retain individuals in the process of adopting healthy behaviors. The first presentation will focus on the use of social networking sites and mobile applications to recruit and engage participants in well-being programs. The second presentation will provide best practices utilized for intervention development and successful implementation across three computer-tailored health behavior change programs. The final presentation will describe the use of behavioral economics to motivate individuals to adopt and sustain healthy behaviors with a spotlight on outcomes in diabetes management. The presentations will include data and analytics to showcase the success experienced in impacting participant engagement and influencing behavior change in varied populations and through varied delivery channels. Discussion will center on how to most effectively leverage emerging technologies within behavioral medicine while remaining grounded in theoretical and science-based foundations.

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Symposium 21A 3058

INNOVATION IN RECRUITMENT: LESSONS LEARNED IN ENGAGING PARTICIPANTS

Chris Cartter, BA

MeYou Health, Boston, MA.

Recruitment and engagement of participants is a critical piece of successful intervention delivery. As people are increasingly using social networking sites and mobile applications to connect and interact with friends, these tools can be used to recruit and engage in health behavior change programs as well. In this presentation, we will discuss the strategies through which MeYou Health is recruiting and engaging participants in well-being programs. Recruitment barriers and solutions discovered during MeYou Health's launch of multiple products, including Daily Challenge (web, email and mobile apps), Monumental (iPhone app) and ChangeReaction (Facebook app) will be explored. Daily Challenge suggests a small healthy behavior that can be done every day. These small daily actions, delivered via email, the web and mobile apps, teach individuals about the many facets of well-being, all while earning points, achieving levels and interacting with friends. Leveraging the iPhone's internal accelerometer, with Monumental, you climb the monuments of the world, as you seek out and climb stairs in the real one, interacting with friends along with way. ChangeReaction leverages the Facebook social graph to propagate the spread of healthy behaviors across networks of friends. All three programs integrate with Facebook Connect, providing a common platform for assessing cross-application utilization. Recruitment and engagement metrics, user demographics, and social network analytics will be presented.

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Symposium 21B 3059

DESIGNING AND IMPLEMENTING BEHAVIOR CHANGE PROGRAMS FOR DISSEMINATION ACROSS A VARIETY OF DELIVERY CHANNELS

Deborah F. Van Marter, MPH, Leanne M. Mauriello, PhD and Janice M. Prochaska, PhD

Pro-Change Behavior Systems, West Kingston, RI.

Successful delivery of behavior change programs requires thoughtful consideration of dissemination concerns from project inception. Significant formative research with outreach to various key stakeholders and innovation in intervention design are critical to developing a program that is acceptable, feasible, and effective. In demonstrating best practices in formative research and intervention design, three computer-tailored behavior change programs will be presented: 1) a multiple behavior change program focused on stress management, healthy eating, and smoking cessation for pregnant women delivered in community health clinics; 2) a responsible drinking program offered to adults via employers; and 3) a program to prevent obesity among middle and high school students implemented in schools. Despite utilizing a wide range of delivery channels, similar steps were taken to ensure that the respective projects were engaging to potential participants, welcomed by potential buyers, and found to be an acceptable and effective means of affecting behavior change. These programs encompass innovative best practices for intervention development including optimal tailoring on theoretical constructs, co-variation with multiple behavior changes, and the development of intervention adjuncts including corresponding websites and manuals. Results and findings from formative research, pilot studies, and clinical effectiveness trials will be presented to highlight the success with intervention design and delivery. Challenges and benefits related to each of the delivery channels, as well as difficulties found in engaging key stakeholders (e.g., clinic staff, employers, and school personnel) during the recruitment and delivery phases will be discussed. In addition, considerations related to the populations under study and matching and tailoring the interventions to their needs, as well as strategies used to engage and retain participants will be examined.

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Symposium 21C 3060

BEHAVIOR SUSTAINMENT THROUGH BEHAVIORAL ECONOMICS

Yun Lee, PhD and Murat V. Kalayoglu, MD, PhD

HealthHonors - a Healthways Company, Braintree, MA.

Nonadherence to healthy behaviors is an enormous burden to the US healthcare system. Many people do not adopt and engage with healthy behaviors on a regular basis, even when they know that not doing so will likely harm them in the future. Such irrational decision-making is particularly common with daily health activities such as adherence to medications, exercise routines, weight loss regimens, and smoking cessation programs. Principles from behavioral health care economics - the study of irrational decision-making around health-related choices - reveal that specific cognitive biases affect our ability to make accurate decisions around our health. These cognitive biases may be applied to "nudge" individuals to adopt healthier behaviors. This presentation will discuss the application of behavioral economics to motivate individuals to adopt and sustain healthy behaviors. Application of specific behavioral economics principles will be discussed in the context of reinforcement theory, and data will be presented on the efficacy of applied behavioral economics on outcomes for diabetes.

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Symposium 22 2:00 PM–3:30 PM 3061

RACE AND MISTREATMENT: DISPARITIES IN HEALTH AND MEASURMENT

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Research supports health risks and impairment to quality of life related to racism, discrimination, and perceived mistreatment. Racism and perceived mistreatment have been linked to high blood pressure, psychological distress, low infant birth weight, and lower satisfaction with breast cancer care. This symposium ventures into new areas of research and new methodologies for studying health disparities and racism/discrimination/mistreatment. The first paper used an intensive daily diary methodology to discern the emotional and cognitive mechanisms that account for the link between perceived racism and smoking for African Americans and Latinos. The focus is on mood and social conflict as mediators of the relation between perceived racism and smoking. The second paper reports that for African Americans avoidant coping (e.g., distancing) was a strong mediator between mistreatment and quality of life, which yields implications for culturally relevant interventions. The third paper took a longitudinal perspective on the connection between perceived unfair treatment and metabolic syndrome. Finally, in the last presentation the authors offer state-of-the-art psychometric methodology to assess disparities in the measurement of health-related constructs in African Americans and Caucasians with cancer. Accuracy in assessment is a basic premise of all work on perceived racism and mistreatment. In sum, this symposium presents an innovative approach to the study of health disparities and the effects of racism, discrimination, and perceived mistreatment across a number of disease entities. Collectively, these studies a) make a strong case for the need to continue to study racism, discrimination, and unfair treatment as health risk factors and b) to assure accuracy in measurement in order to assess disparities in an unbiased manner.

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Symposium 22A 3062

RACISM/ETHNIC DISCRIMINATION AND SMOKING: AFFECTIVE AND INTERPERSONAL PATHWAYS

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Perceived racism (PR) has been consistently associated with cigarette smoking; however, the mechanisms through which racism affects smoking are not yet known. The study examines the role of both between- and within-person variations in mood and social conflict in the racism-smoking relationship. Participants completed a daily diary every 20 minutes for 1 testing day. The diary assessed current smoking status (yes/no),mood,talking at the time of the reading, and the quality of the exchange (i.e., perceptions of being harassed, treated unfairly, or excluded). PR was assessed with the Perceived Ethnic Discrimination Questionnaire (PEDQ-CV) Lifetime Exposure Scale. Complete diary data are available for 624 American born Black and Latino(a) adults aged 24-65 years, 340 (180 Black, 157 Latino(a), 207 men) of whom smoked on the day of monitoring. Among smokers, 36.4% of the diary recordings (range 24% to 100%) were accompanied by smoking. Logistic regression analyses controlling for age, gender and race, indicated that PR was a significant predictor of smoking on the day of testing (OR=1.28, CI 1.01 to 1.62, $p<0.05$), as well as the overall frequency with which diary readings were accompanied by smoking ($t=3.20$, $p=0.0014$). PR also predicted higher daily levels of negative emotion (composite of anger, sadness and nervousness, scored on a VAS scale from 1-100). In turn, for every 20 point increase in daily negative mood, the participant was 54.1% more likely to smoke. Within smokers, momentary levels of sadness (but not anger or nervousness) were related to smoking at the time of diary reading ($t=3.95$, $p<0.0001$). The more harassed individuals felt when communicating with others, the more likely they were to smoke at the time ($t=2.08$, $p<0.0390$). Both mood and social conflict partly mediate the relationship of racism to smoking, and may provide targets for intervention.

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Symposium 22B 3063

PERCEIVED MISTREATMENT, SELF-EFFICACY AND AVOIDANT COPING STRATEGIES IN THE QUALITY OF LIFE OF AFRICAN AMERICAN AND CAUCASIAN CANCER SURVIVORS

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Perceived mistreatment (PM), particularly racial and ethnic mistreatment, has been associated with negative health outcomes and is tantamount to a health risk factor. With the diagnosis of cancer the effects of PM may be exacerbated by the combination of minority status and stigmatizing illness, resulting in compromised quality of life. Studying the mechanisms in the mistreatment - quality of life relationship is important for understanding the process involved and paving the way for culturally tailored interventions for minority patients. The current study investigated coping self-efficacy (CSE) and avoidant coping (AC) as mediators of the relationship of PM and quality of life (QOL). As part of a larger longitudinal study, 188 African American (AA; 83% women) and 108 Caucasian American (CA; 60% women) with mixed cancer diagnoses completed measures of a) PM and noted the causes of PM (e.g., race, sex, income), b) coping self-efficacy , c) avoidant coping, and c) quality of life. AAs reported significantly higher PM scores (M=19.25) than CAs (M=16.25). Differences on the causes of PM were also found: a) racial (AA,54.4%; CA,2.5%), b) ethnic (AA,17.1%;CA,0.8%), and age (CA,24%;AA,14.9%). Regression was used to test mediation. In AAs, the direct path between PM and QOL was significant (B=-.210**) but attenuated to non-significance (.054 ns) with the inclusion of the mediators. For AAs AC and CSE fully mediated the relationship between PM and QOL, though the path through AC was far stronger (Sobel:-4.146,$p<.0001$) than through CSE (-1.959,$p<.05$). For CAs the AC path was marginally significant (Sobel: −1.855,$p<.06$) compared to the stronger path through CSE (-2.678, $p<.007$); For CAs the direct (PM-QOL) path remained significant (B=-.192). The negative experience of PM for AAs may evoke avoidant coping, which compromises QOL; however, coping self-efficacy may be a countervailing force. These results call for tailoring interventions to include mistreatment issues that may be critical part AAs' cancer experience.

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Symposium 22C 3064

UNFAIR TREATMENT AS A PREDICTOR OF THE METABOLIC SYNDROME OVER A 7-YEAR PERIOD: THE STUDY OF WOMEN'S HEALTH ACROSS THE NATION (SWAN)

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The term metabolic syndrome (MetS) refers to a cluster of risk factors - including, elevated waist circumference, triglycerides, blood pressure, and fasting glucose and reduced HDL cholesterol - associated with cardiovascular disease (CVD). Research has suggested that MetS may serve as a pathophysiological pathway via neuroendocrine alterations linking psychosocial stressors experienced in everyday life and CVD. Few MetS studies exploring everyday stressors have been prospective and, of these none have explored stressors such as unfair treatment that may be particularly salient for ethnic minorities in the U.S. Using data from SWAN, a multi-site, epidemiologic study of middle-aged women, we examined whether unfair treatment predicts greater risk for MetS and whether the associations varied as a function of ethnicity over a 7-year period. Analyses are based on 2,023 women of Caucasian, Chinese, Hispanic, Japanese, and African American ethnicity who were free of MetS at study entry. The SAS LIFEREG procedure was used to calculate risk for MetS across the follow-up period based on self-reported unfair treatment at baseline. Unfair treatment predicted greater MetS incidence (HR, 1.03; 95% CI, 1.0-1.1) over time in the full sample, independent of ethnicity, age, education, physical activity, menopausal and smoker status, alcohol consumption, medication use (anticoagulants, heart medication, and/or birth control pills), and negative emotions. There were no significant interactions (HR, 1.00; 95% CI, .96-1.0) between ethnicity and unfair treatment scores when ethnic minorities (Black and Hispanic) were compared with non-ethnic minorities (Caucasian, Chinese, and Japanese). Additional analyses to assess role of socioeconomic status will be presented. Thus far, we conclude that unfair treatment predicts future MetS in middle-aged women of diverse ethnic backgrounds.

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Symposium 22D 3065

IDENTIFYING TRUE DIFFERENCES IN COPING SELF-EFFICACY BETWEEN AFRICAN AMERICAN AND WHITE CANCER PATIENTS

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In order to fully investigate the variables contributing to health disparities for African Americans, integrative and comprehensive statistical models need to be established and tested. Such methodologies rely on the use of adequate measures of constructs across domains of health, particularly those that have been deemed appropriate for use with African Americans. In psycho-oncology, relatively little attention has been paid to the invariance of measurement for psychosocial constructs across minority groups. In this project, an Item Response Theory (IRT) approach to examining Differential Item Functioning (DIF) was conducted on the Cancer Behavior Inventory (CBI), a 33-item measure of self-efficacy for coping with cancer. DIF was tested across groups of African Americans (N=245) and Whites (N=407) with cancer. Analyses were conducted using the Graded Response Model (GRM; Samejima, 1969) and were implemented using IRTLRDIF (Thissen, 2001). For each item, the null hypothesis of item parameter invariance was tested and effect sizes were computed. Note that no prior hypotheses about differences on the basis of race/ethnicity were made. Cumulative Boundary Response Functions (CBRFs) and Item Category Response Functions (ICRFs) were examined for three items flagged as exhibiting DIF. Results suggest that each of these three items of the CBI exhibit only a small magnitude of DIF, and this differential functioning at the item level cancels out at the score level when comparing responses across groups of African American and White patients with cancer. Thus, the CBI does not appear to exhibit bias at the test score level and observed differences in endorsed levels of coping self-efficacy may be related to actual differences between the two groups and not an artifact of bias in the measure. This project provides a modern methodological approach to validating health related constructs and allows for the interpretation of differences between the two groups as, not an artifact of DIF, but true difference.

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Symposium 23 2:00 PM–3:30 PM 3066

MULTIPLE HEALTH BEHAVIOR CHANGE FOR ADOLESCENTS AND YOUNG ADULTS: INTERVENTION SCIENCE

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The leading causes of morbidity and mortality in the U.S. are linked to multiple health risk behaviors that are often initiated early in life, such as tobacco and alcohol use, poor diet, and physical inactivity. These unhealthy behaviors may cluster together, accelerating disease risk processes. Consequently, there is a growing need to address multiple risk factors in the context of comprehensive cancer and chronic disease prevention. Multiple health behavior change (MHBC) interventions are designed to address two or more health behaviors concurrently or sequentially. Early deployments of these interventions have shown promise, but many conceptual and practical challenges remain to demonstrating their efficacy. To date, a majority of work on MHBC has been conducted with adults—scant evidence exists among young people. This is a missed opportunity to capitalize on primary prevention at a time when lifestyle behaviors are less entrenched. This symposium will present empirical evidence from three MHBC interventions targeted to adolescents and young adults. Presentations will include findings from an evidence-based theoretical model developed to inform brief MHBC interventions, and analyses of intervention adherence and longitudinal intervention outcomes. The studies address diverse health behaviors commonly encountered among young people, including tobacco and alcohol use, diet, and physical activity. The interventions utilize varying delivery formats, exposing participants to brief in-person consultations, telephone- and computer-based counseling, and adjustable session lengths. All have a focus on MHBC outcome oriented toward primary prevention of cancer risk. After reviewing empirical evidence from each study, future directions for MHBC research will be discussed, including implications for prevention of adult-onset cancer and chronic disease.

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Symposium 23A 3067

IMAGE AS A MODEL FOR BRIEF MULTIPLE BEHAVIOR PREVENTION INTERVENTION

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Background: Conceptual models for guiding the development of multiple behavior interventions have been lacking in the literature. The Behavior-Image Model (BIM) is an emerging paradigm for planning brief multiple behavior interventions by targeting positive social and future images.

Objectives: To examine the use of image in developing multiple behavior interventions and outcomes from a trial of a brief prevention intervention among high risk adolescents.

Method: A total of 413 high school students with a school infraction participated in a randomized controlled trial with adolescents assigned to either the brief intervention or usual care control with baseline and three-month follow-up. The intervention consisted of a single 30-minute session involving an in-person screen, tailored consultation, and goal plan based on BIM.

Results: Adolescents receiving the brief intervention increased their fruit and vegetable consumption, frequency of relaxation activities, and behavior goal setting, and reduced their frequency of skipping school and total school referrals, compared to control adolescents, p's<05. All effects were small in size (d's=.21–.25). No effects were found on exercise and drug use. Marijuana using participants receiving the brief intervention reduced their frequency of marijuana use, and increased their cessation of frequency and quantity of marijuana consumption, p's<05, B's=.56, 1.17, .93, respectively. Alcohol and cigarette use did not moderate drug use behavior effects.

Conclusions: These data support the use of image in constructing prevention interventions for affecting multiple concurrent health and academic behaviors, with current marijuana use moderating marijuana use behavior outcomes.

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Symposium 23B 3068

CORRELATES OF ADHERENCE TO A TELEPHONE-BASED MULTIPLE HEALTH BEHAVIOR CHANGE CANCER PREVENTIVE INTERVENTION FOR TEENS

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Background: Behavioral risks for cancer (tobacco use, physical inactivity, poor diet) typically initiate during childhood and track into adulthood. However, few pediatric multiple health behavior change (MHBC) interventions have been developed, with little attention paid to intervention adherence.

Objectives: To examine factors associated with teens' adherence to a telephone-based MHBC cancer preventive intervention.

Method: Eligible teens were asked to complete a trial run-in (behavioral assessments) and up to 8 intervention sessions. Analyses identified predictors of trial enrollment, run-in completion, and adherence (intervention initiation, number of sessions completed).

Results: Of 104 teens screened, 73% (n=76) were trial-eligible (39% white, 64% female, M age=19.4). White teens were significantly more likely to enroll than non-whites (χ2 [1] df=4.49, p=0.04). Among enrolled teens, 76% (n=50) completed the run-in; there were no demographic differences between run-in completers and non-completers. Among run-in completers, 70% (n=35) initiated the intervention. Younger teens were more likely to initiate the intervention than older teens (Odds Ratio=1.37, 95% CI=1.02, 1.80). The M number of sessions completed was 5.71 (SD=2.56). Controlling for age, teens with better session engagement (more cooperation, less distraction) completed significantly more sessions (B=1.97, p=0.003, Adj R2=0.24).

Conclusions: Racial minority and older teens may be difficult to reach for MHBC intervention studies. A trial run-in was successful, especially among younger teens. Trial adherence was influenced by practical and participant engagement attributes. Motivational strategies to enhance recruitment and engagement among minority and older teens for MHBC intervention studies should be explored.

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Symposium 23C 3069

PROJECT BEST: TAILORED INTERVENTIONS FOR MULTIPLE RISK FACTOR PREVENTION FOR ADOLESCENTS

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Substance abuse prevention programs have reported limited evidence of efficacy. Potential problems include the wrong delivery system and a lack of intervention fidelity. This paper will describe the development of two new computer-based interventions for tobacco and alcohol prevention. The Transtheoretical Model provided the structure and pilot data provided the empirical basis for the decision rules. Most students were classified in the Acquisition Precontemplation stage of change (aPC; not currently using the substance, not planning to start in the next six months). Within the aPC group, four subgroups have been identified: (1) Most Protected from substance use; (2) High Risk for substance use; (3) Ambivalent about staying substance free; and (4) Risk Denial about substance use. The profiles served as the basis for two multimedia computer-based interventions. A sample of 6th graders from 20 schools (N=4152) were randomly assigned to treatment or comparison. 96% were classified as aPC for alcohol use and 97% for smoking. The comparison group was given similar existing interventions for energy balance behaviors (diet and exercise). Each intervention involved five in-class contacts over a three year period with assessments at 12, 24, and 36 months. This paper reports preliminary outcome data at 24 months. There were significant differences in the substance abuse treatment group in the degree to which members of the Most Protected group remained in that group compared to the comparison group for both smoking (94.8% vrs 90.3%) and alcohol (87.8% vrs 82.1%). In the comparison condition, strong effects were found for both diet (27.9% at criteria vrs 11.6%) and exercise (48.3% vrs 37.4%). The substance abuse interventions have the potential to prevent acquisition of both smoking and alcohol. The two energy balance interventions have replicated previously reported effects. The next data point (36 months) will also involve the transition from middle school to high school.

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Symposium 24 2:00 PM–3:30 PM 3070

EVALUATING THE IMPACT OF SMART GROWTH PLANNING ON PHYSICAL ACTIVITY: EFFECTS OF CONTEXT

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This symposium will consider three contextual factors as they affect the evaluation of effects of residence in a smart growth community on child physical activity: economic downturn since 2008; parent perceptions of neighborhood safety; and interpretation of neighborhood audit inventory indices. The presentations draw from a parent study, Healthy PLACES, an obesity prevention trial involving 6 cities. In the first presentation (Pentz), results showed main effects of economic downturn on increased consolidation of car trips and for Hispanics, more walking.

The second presentation (Durand), evaluated the effects of parent perceived neighborhood safety, actual safety, and child perceived safety, on child physical activity. Results showed that parent perceived safety was significantly related to child physical activity, regardless of objective physical activity features. The third presentation (Alfonzo), developed a conceptual and empirical rating method to yield scores from an audit inventory that would be meaningful for evaluation of smart growth principles (e.g., connectivity, walkability), and conducted simple t-tests to examine whether these scores differed between the intervention and control communities. Results showed some reverse relationships representing principles that are not yet fully articulated in the community build out. Dr. Aleta Meyer, NIDA, will discuss the implications of these presentations for evaluating future population-based prevention trials that target physical activity.

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Symposium 24A 3071

EVALUATING EFFECTS OF SMART GROWTH ON PHYSICAL ACTIVITY: ECONOMIC DOWNTURN AS CONTEXT

Mary Ann Pentz, PhD,[1] Jimi Huh, PhD,[1] Jennifer Wolch, PhD,[2] Michael Jerrett, PhD[2] and Genevieve Dunton, PhD[1]

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The present study analyzed effects of economic downturn on the first wave of data on 385 parents of parent-child pairs who are being followed longitudinally as part of Healthy Places, a trial evaluating the effect of smart growth community residence on physical activity and obesity prevention among primarily low to low middle income Hispanic families. The research design is a 3 group hybrid design (smart growth community, randomized control, demographically matched control). Measures include a self-report survey of transport, physical activity, demographic characteristics, an economic hardship score, job loss within the last year, and sedentary and physical activity behaviors from the Arizona Activity Frequency Questionnaire, converted to total MET hours and kcal. The mean age of participants was 39, median household income $60,000, mean household size 4.8 persons, 54.5% Hispanic, 37.4% white, 8.1% other. Regression analyses were conducted on frequency of walking, sedentary activity, and multiple stops made for vehicle transport. There were no experimental group differences in hardship or job loss. The intervention group showed greater walking than either control group ($p<.02$) and a non-significant trend toward greater MET Hours. Hispanic parents reported less hardship ($p<.03$), greater MET hours ($p=.05$), greater walking ($p<.09$), and less sedentary activity ($p<.001$) than other parents or groups. Job loss predicted lower MET hours and kcal ($p<.05$). Hardship was associated with greater number of vehicle transport stops per trip ($p<.05$). Results suggest that regardless of economic downturn, residence in a smart growth community is associated with more walking for physical activity. Hispanic families may have coped with the economic downturn in positive ways that promote physical activity.

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Symposium 24B 3072

PERCEIVED SAFETY AS CONTEXT FOR PHYSICAL ACTIVITY

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Background: While the focus of much built environment research is on structural features of the neighborhood, such as sidewalks, park availability, and housing density, which are potentially amenable through environmental interventions and policy change, there has been less focus on non-structural features which may be less straightforward to modify. These include perceptions of crime and the social environment of the neighborhood.

Methods: 365 families, defined as one parent and one child in grades 4th-8th residing in multiple cities in San Bernardino County, CA, were assessed. 85 reside in a smart growth community, which has design features which make it more conducive to physical activity. Parent perceptions were assessed using the Neighborhood Environment Walkability Scale. Children self-reported whether they typically actively commute to school (i.e. walk, bike, skate, etc).

Results: Parent perceived social interaction and crime were significant predictors of whether a child actively commutes to school. However, while social interaction exhibited only main effects (OR for cubic term=1.03; 95% CI=1.01-1.04), there were significant differences on the parent perceived crime factor between those who live in the conventional communities (OR=1.06 95% CI=0.74-1.53), and those who live in the smart growth community (OR=0.19 95% CI=0.04-0.85).

Conclusions: Non-structural features of the environment, including perceived crime and social interaction with neighbors, have important associations with active commuting behaviors in children. Environmental interventions focused on improving availability of physical activity infrastructure in neighborhoods may also need to account for these other factors which could potentially curb benefits of any changes. This is made clear by the moderated results, which show that even when a neighborhood has desirable physical activity infrastructure, perceptions of crime can interfere and make active commuting less likely, thereby negating the effects of those features.

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Symposium 24C 3073

STREAMLINING WALKABILITY AUDITS FOR SMART GROWTH-PHYSICAL ACTIVITY ASSESSMENTS

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Over the past decade, the Active Living research community developed several built environment audit tools designed to measure the link between the physical environment and physical activity. Such tools offer a potential vehicle by which to operationalize Smart Growth and better understand its impacts. However, to date, audits have been used primarily as "exploratory" tools to identify built environment items related to physical activity and only recently has one of these tools (the Irvine Minnesota Inventory - IMI) been tested for validity. Few systematic or standardized methods for analyzing audit data (e.g. range from bivariate to composite analysis) exist, which may lead to inconsistent or invalid findings, and inability to adequately measure the real, "on the ground" contexts that are assumed to be represented by built environment interventions and planning principles such as Smart Growth. Drawing from a larger study of the health impacts of Smart Growth, this paper developed a rating system to categorize the 162 IMI items into seven built environment "domains" designed to assess adherence to Smart Growth principles. Using this methodology, we evaluated the study's Smart Growth intervention ($N=105$ segments) and control communities ($N=1063$). Simple t-tests showed the intervention community had higher scores for pedestrian amenities ($t=2.758$, $p=.006$) safety ($t=7.319$, $p<.001$) and aesthetics ($p=6.975$, $p<.001$), while the control communities had higher scores for proximity of uses ($t=-4.008$, $p<.001$), distance to destinations ($t=-3.254$; $p=.001$), connectivity ($t=-5.350$, $p<.001$), and traffic ($t=-2.251$; $p=.026$). We discuss the research and policy implications of these findings as well as the utility of the I-M Inventory for providing a comprehensive measure of environmental contexts.

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Symposium 25 2:00 PM–3:30 PM 3074

UNDERSTANDING PATTERNS IN HEALTH RISK AND HEALTH PROMOTION BEHAVIORS: PERSPECTIVES FROM NATIONALLY-REPRESENTATIVE SURVEYS

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The major causes of morbidity and mortality in the US are influenced by multiple health behaviors including smoking, physical activity, diet, and sun safety. Understanding how these behaviors cluster and mutually influence each other and key psychosocial variables such as risk perception is important. Using data from nationally-representative surveys (NHANES, NHIS, and HINTS), these presentations examine the co-occurrence of multiple health risk behaviors and patterns in health behavior recommendation adherence. Tobacco use and obesity are the two leading causes of preventable death in the US. Thus, research has begun to examine the co-occurrence of these health risks and their associations with other obesogenic behaviors such as exercise and diet. Increasing rates of skin cancer have drawn attention to the importance of sun protection practices, though little research has examined how sun exposure and sun protection are related to other health risks such as tobacco use. Further, research is limited on national studies of population adherence to multiple health behavior recommendations. Little is understood about multiple health behavior adherence among ethnic minorities and how acculturation and other sociodemographic characteristics are associated with health behavior patterns. Finally, limited research has examined the associations between multiple health behaviors (e.g., smoking status, physical activity) and perceived risk for important health consequences such as cancer. It is also unclear whether perceived cancer risk changes similarly as a function of health-promoting and health risk behaviors. Together, these presentations serve to inform our understanding of multiple health behaviors and provide insight into the potential for identifying populations at greatest risk and developing multiple health behavior change interventions.

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Symposium 25A 3075

THE INFLUENCE OF SEDENTARY ACTIVITY ON THE RELATIONSHIP BETWEEN CIGARETTE SMOKING AND BODY WEIGHT: RESULTS FROM THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (1999-2008)

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Tobacco use and obesity are leading causes of death and disease in the U.S. In 2008, 20.6% of adults were current cigarette smokers and 33.8% were obese. Research has shown that current smokers have a lower body mass index (BMI) than never and former smokers. Thus, weight gain may be a barrier to smoking cessation. Smoking cessation benefits are well known, yet little research has examined factors that may minimize weight gain among former smokers in a national study. Sedentary activity (SA) is one such factor. Data from the National Health and Nutrition Examination Survey (NHANES) 1999-2008 were utilized to examine the relationship between smoking status, SA, and BMI. Smoking status was defined as being a current, former or never smoker. SA reflected average hours of daily TV, video, and computer use in the past 30 days. BMI measurements were obtained through a physical exam. Individuals under 20 years of age or pregnant were excluded. Mean BMI for never smokers was 28.47 ($SE=.12$), former smokers was 28.90 ($SE=.13$), and current smokers was 27.23 ($SE=.10$) ($\chi2(6)=35.28$, $p<.0001$). SA was significantly higher among current smokers compared to never ($t=-10.23$, $p<.0001$) and former smokers ($t=-3.62$, $p<.001$); former smokers had higher levels of SA compared to never smokers ($t=-7.46$, $p<.0001$). BMI was regressed onto the product term of smoking status and SA controlling for the main effects of smoking and SA, gender, ethnicity, age, and education. This interaction predicted BMI ($F(12)=2.83$, $p<.01$), thus the relationship between smoking status on BMI varies at different levels of SA. Major changes in both smoking and obesity prevalence have occurred in the last ten years in the U.S. These results suggest that post-cessation weight may be related to an "unmasking" of the negative effects of SA. So, former smokers who report lower levels of SA may be less likely to experience cessation related weight gain. These findings have key implications for interventions.

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Symposium 25B 3076

SUN EXPOSURE, SUN PROTECTION, AND SMOKING

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Despite decades of public health efforts regarding the importance of sun safety, millions of Americans continue to engage in behaviors that increase their UV radiation exposure. As a result, the past 30 years have seen alarming increases in the incidence of skin cancers, including malignant melanoma. Skin cancer risk behaviors may co-occur with other health risk behaviors, as part of a more general "unhealthy lifestyle". Specifically, the co-occurrence of tobacco use with skin cancer risk behaviors may be of interest for interventionists, as both behaviors are typically established during adolescence, influenced by social norms, and associated with powerful industry forces. Little research has systematically examined how skin cancer risk behaviors are related to tobacco use. The current study used nationally representative data from the 2005 and 2007 Health Information National Trends Survey to examine associations between smoking status, sun exposure, and sun protection practices. Bivariate analyses showed that current smokers were significantly less likely than never smokers and former smokers to engage in sun protection behaviors (i.e., seeking shade, using sunscreen). Logistic regression analyses showed that current smokers were about half as likely as never smokers to use sunscreen regularly, even after adjusting for other demographic and behavioral risk factors. Further, the odds of indoor tanning were 40% higher among current smokers than never smokers, after adjusting for other known correlates of indoor tanning. Results suggest that high-risk sun exposure practices frequently co-occur with smoking, making current smokers important targets for sun safety interventions. Shared mechanisms for these two risk behaviors may exist, including emerging research in the sun exposure literature suggesting an addictive component to indoor tanning. Future research may further elucidate these similarities, offering the potential for combined intervention approaches.

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Symposium 25C 3077

ADHERENCE TO MULTIPLE HEALTH BEHAVIORS: EXAMINATION OF TOBACCO USE AND PATTERNS OF ADHERENCE IN US HISPANICS

April Oh, PhD, MPH, Heather Patrick, PhD, David Berrigan, PhD, MPH and Frank M. Perna, EdD, PhD

NIH/NCI, Rockville, MD.

Although historically health behaviors have been studied in isolation, recent attention has focused on patterns of multiple behaviors, as people who engage in one health risk (e.g., smoking) are likely to engage in others (e.g., poor diet). This study aims to identify patterns of health behavior adherence as a function of tobacco use status and acculturation in adult Hispanics. Data are from the National Health Interview Survey. An adherence index was calculated whereby respondents were assigned a value of 1 for each behavior for which they were adherent and a 0 for each behavior for which they were non-adherent to tobacco, alcohol, fruit and vegetable intake and exercise recommendations. To better understand health behavior patterns, respondents were stratified on the basis of tobacco use status. They were then assigned a value of 1 for each behavior for which they were adherent and a 0 for each behavior for which they were non-adherent to recommendations for alcohol, fruit and vegetable intake and exercise. Acculturation level was divided into tertiles based on responses to an 8-item measure. Multinomial logistic regression models found that, among non-tobacco users, the odds of adherence to alcohol, fruit and vegetable and exercise behaviors were greater among those with greater than a high school education (OR=1.79, 95% CI=1.30, 2.48), medium acculturation ((OR=1.60, 95% CI=1.17, 2.21), and higher socioeconomic status (OR=1.73, 95% CI=1.18, 2.55). However, the odds of multiple behavior adherence were lower among non-tobacco users who were overweight or obese and among women. Findings suggest while being adherent to tobacco use recommendations is health-protective, these benefits could be diminished among those who are overweight or obese Study findings support the importance of considering multiple health behaviors and the value of examining variations in patterns of adherence by sociodemographics, culture and weight status.

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Symposium 25D 3078

HEALTH RISK AND HEALTH PROMOTION: DO PEOPLE PERCEIVE RISK-ENHANCING AND RISK-PROTECTIVE BEHAVIORS SIMILARLY?

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Multiple health behavior research and interventions have increased dramatically in recent years. However little is understood about whether laypeople perceive risk differentially as a function of health risk versus health promoting behaviors. This research examined (1) the associations among weight status, smoking status, physical activity (PA), and fruit and vegetable intake and (2) the role of these health behaviors in perceived cancer risk using nationally-representative data from the 2007 Health Interview National Trends Survey. Consistent with previous research, health behaviors were found to cluster. Compared to current smokers, former and never smokers ate more fruit and vegetables ($t=7.72$, $p<.0001$; $t=7.95$, $p<.0001$), and former smokers were more likely overweight or obese ($t=5.43$, $p<.0001$). Weight status was associated with PA ($r=-.10$, $p<.0001$) and fruit and vegetable intake ($r=-.07$, $p<.0001$), and PA was associated with fruit and vegetable intake ($r=.15$, $p<.0001$). Interestingly, being a former ($t=-4.56$, $p<.0001$) or never ($t=-7.33$, $p<.0001$) smoker was associated with lower perceived cancer risk, as was higher fruit and vegetable intake ($t=-7.33$, $p<.0001$). Being overweight or obese was associated with higher perceived cancer risk ($t=3.68$, $p<.001$). There was no association between PA and perceived cancer risk. Importantly, in a simultaneous regression analysis, each variable (except PA) uniquely predicted perceived cancer risk, as described above. Together, these findings suggest that people correctly perceive reduced cancer risk as a function of quitting smoking and eating fruits and vegetables and increased cancer risk as a function of being overweight or obese. Despite an impressive body of research demonstrating the health-protective effects of PA, these data indicate that the public may not view PA as cancer-reducing. Understanding how people view multiple health behaviors with respect to particular health risks is important for developing communication messages and interventions targeting multiple behaviors.

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Symposium 26 2:00 PM–3:30 PM 3079

PROGRESS IN UNDERSTANDING AND ADDRESSING THE IMPACT OF CANCER TREATMENT ON COGNITIVE FUNCTIONING

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Reports of memory and concentration problems by cancer survivors first raised awareness that chemotherapy might adversely affect cognitive functioning. Studies using standardized cognitive tests subsequently corroborated these reports. This early work has been succeeded by research that draws on neuroscience, behavioral medicine, and other disciplines to gain a deeper understanding of the problem and develop effective treatments. The presenters will each describe how progress is now being driven by transdisciplinary approaches that bridge diverse areas of knowledge. The first presenter will report on the prevalence, characteristics, and course of cancer- and chemotherapy-related cognitive dysfunction in women with early stage breast cancer based on prospective, longitudinal studies. He will also describe efforts by an international transdisciplinary task force to develop recommendations for addressing methodological challenges in this area of research. The second presenter will review research that examines predisposing factors (e.g., genetic polymorphisms) and potential mechanisms (e.g., changes in brain structure and function) for chemotherapy-induced cognitive changes. The third presenter will describe research on the development and evaluation of a brief cognitive-behavioral treatment for chemotherapy-related cognitive dysfunction. Elements drawn from the treatment literature on mild traumatic brain injury and postconcussion syndrome will be highlighted. Finally, the discussant will integrate the findings presented and identify lessons learned from his experience with transdisciplinary studies of neurological disorders that can be applied to research on the impact of cancer treatment on cognitive functioning.

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Symposium 26A 3080

COGNITIVE DYSFUNCTION ASSOCIATED WITH CANCER AND CANCER THERAPY

Jeffrey S. Wefel, PhD

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Early identification and advances in anti-cancer therapies have led to improved survival outcomes for many cancer patients. Unfortunately, most cancer therapies are not highly specific and often place normal tissues at risk. While therapies directed at the central nervous system have been known to be associated with increased risk of neurotoxicity, a growing body of evidence from neuropsychological, neurophysiological and neuroimaging investigations in humans as well as preclinical animal research suggests that systemic chemotherapy is associated with adverse effects on brain and cognitive function. Recently, evidence of late emerging cognitive decline has been identified in a subgroup of patients. These findings parallel research in preclinical animal models demonstrating the need for greater transdisciplinary collaborations. Although our knowledge about the nature, severity and course of, and risk factors for, neurocognitive dysfunction is limited, prospective longitudinal neuropsychological studies in breast cancer patients have suggested both cancer-related and chemotherapy-related cognitive dysfunction in a subgroup of patients. The reported incidence of treatment related cognitive dysfunction has been variable (15-70%); however, the domains most commonly affected include learning and memory, executive function and processing speed. Use of different cognitive tests as well as variability in comparison groups and data analytic approaches are believed to be important factors that contribute to the wide range of rates of cognitive dysfunction. Recommendations to address some of the methodological challenges in this area of research, including study design, test selection and analysis, are being developed by a multidisciplinary group under the auspices of the International Cognition and Cancer Task Force.

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Symposium 26B 3081

PREDISPOSING FACTORS AND POTENTIAL MECHANISMS OF CHEMOTHERAPY-INDUCED COGNITIVE CHANGE

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Research suggesting chemotherapy-induced cognitive changes persist in only a subgroup of cancer survivors has prompted investigators to examine factors that increase vulnerability to long-term cognitive changes. Age and pretreatment cognitive reserve have been studied, with older adults with lower levels of pretreatment cognitive reserve performing more poorly on post-treatment measures of processing speed. Variation in genes that influence neural repair/ plasticity (APOE), neurotransmitter activity (COMT), and DNA repair (MRE11A) have been associated with increased vulnerability to cognitive change in cancer survivors. Survivors who have the E4 allele APOE, the COMT-Val allele, or are homozygous for the minor allele of MRE11A and are exposed to chemotherapy demonstrate poor post-treatment cognitive performance compared to survivors with other forms of these alleles. Imaging studies utilizing MRI, PET, and DTI have identified changes in brain structure and function following chemotherapy exposure. Changes on imaging are typically seen in frontal structures that control attention, concentration, and executive function, which correspond to areas of deficit frequently reported in neuropsychological studies. Evidence for compensatory mechanisms (i.e., activation of alternate brain regions to maintain function) has been reported and may, in part, explain the lack of correlation between self-reported cognitive problems and neuropsychological test performance. Finally, animal studies are emerging that suggest chemotherapy affects biological processes critical to memory and learning (e.g., hippocampal neurogenesis) and that these effects can be blocked by certain drugs (e.g., antioxidants). Taken together, these data begin to provide a framework for understanding predisposing factors and potential mechanisms for chemotherapy-induced cognitive change and illustrate a transdisciplinary approach to conducting translational research in this area.

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Symposium 26C 3082

COGNITIVE-BEHAVIORAL MANAGEMENT OF CHEMOTHERAPY-RELATED COGNITIVE DYSFUNCTION

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Cognitive dysfunction associated with cancer chemotherapies has a deleterious effect on survivor quality of life that can persist years past treatment. Despite much research, precise estimates of prevalence and the etiologies of how chemotherapies produce cognitive dysfunction remain unknown. To date, no known biomedical treatment approach has been broadly validated. However, a brief cognitive-behavioral treatment (CBT) approach has been developed with ongoing evaluation. Memory and Attention Adaptation Training (MAAT) is a brief CBT that comprises 4 components: 1) education; 2) self-awareness training; 3) learning and applying cognitive compensatory strategies; and 4) arousal self-regulation training. These components emphasize cognitive, emotional and behavioral adaptation to mild cognitive impairment and are drawn from the treatment literature on mild traumatic brain injury (MTBI) and postconcussion syndrome (PCS). Data from a single-arm pilot study of MAAT suggested improvement in daily cognitive complaints, verbal memory and processing speed performance among breast cancer survivors. Participants rated MAAT with high satisfaction. A second study of MAAT involved a small, randomized wait-list control trial ($n=40$) with statistically significant gains in a spirituality subscale of a quality of life instrument (measuring hopefulness and optimism with survivorship; $p<.05$) and verbal memory as assessed by the California Verbal Learning Test II Total Score ($p<.05$). Effect size, subtracting control group practice effects, were, -.49 and -.50, respectively. Effect size in self-reported daily cognitive failures was .43; these effect sizes are comparable or larger than those found in the broader cognitive rehabilitation literature. Larger well-controlled studies of MAAT have been proposed with the aim of firmly establishing efficacy. Discussion of MAAT updating, future research, and emphasis on behavioral adaptation with CBT will be presented.

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Symposium 27 2:00 PM–3:30 PM 3083

WIRELESS MONITORING AND SUPPORT FOR ENHANCING ADHERENCE

Wendy Nilsen, PhD

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Increasing patient adherence to medications or behavioral interventions has proven challenging regardless of the disease or the population. Past adherence research has been limited by assessment methods, brief interventions that are inconsistent with the long-term demands of chronic health conditions and/or a high per person cost that limits sustainability. Further between theories and methods there is often a disconnect, such that exposure or cues that are hypothesized to affect adherence in real-time are only addressed or measured every few weeks or months. Mobile technology provides a method to compress timeframes from months to hours, minutes, and even seconds for accurate and rapid assessment and personalized real-time interventions. Adherence research using wireless technology has the potential to provide individualized adherence assessment and intervention tools that are scalable and sustainable. This session highlights research in wireless monitoring and support to enhance adherence from a variety of perspectives. Adherence research is often confined to specific diseases and/or populations, which limits dialogue between specialties. This panel will describe current projects that utilize expertise from multiple sectors, merging the work of academia, engineering industry, and non-profit organizations in research to evaluate wireless adherence assessment and intervention tools. This symposia includes: Bonnie Spring (adherence in obesity intervention), Jill Haberer (HAART adherence in South Africa), David Gustafson (adherence in interactive health communication) and Kevin Volpp (adherence and behavior change in patients with multiple conditions).

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Symposium 27A 3084

MOBILE HEALTH ADHERENCE SYSTEMS FOR ASTHMA, COLON CANCER AND ALCOHOLISM. THEY AIN'T THE SAME

David H. Gustafson, PhD

Center for Health Enhancement, University of Wisconsin, Madison, WI.

This presentation will examine three NIH-funded randomized trials to study the impact of mobile health systems on adherence to medication and behavioral expectations, specifically: inner city teens with asthma needing to adhere to controller medication, colon cancer survivors needing exercise, and alcoholics needing to stay on the wagon. In this presentation we will describe and compare the technologies being used, their acceptance, implementation and early results. Clearly, one size does not fit all. Implications for design, operation and evaluation will be discussed.

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Symposium 27B 3085

REAL-TIME HIV ANTIRETROVIRAL THERAPY ADHERENCE MONITORING IN A RESOURCE-LIMITED SETTING

Jessica Haberer, MD

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Current adherence assessments typically detect missed doses long after they occur. Real-time, wireless monitoring strategies for antiretroviral therapy may provide novel opportunities to proactively prevent virologic rebound and treatment failure. Our group has pursued two technologies for real-time adherence monitoring in rural Uganda: 1) automated self-report via interactive voice response (IVR) and short message service (SMS); and 2) a wireless pill container that transmits a cellular signal when opened. Initial pilot work revealed many challenges with IVR and SMS data collection, including misunderstanding of a personal identification number used for participant verification and proper responses to the automated queries. We also found technical challenges with the wireless pill containers, such as battery failures and signal transmission errors. We have, however, largely overcome these problems and are receiving reliable adherence data that is comparable to traditional, in person data collection. We have also developed robust methods for management and analysis of real-time data, such that it is available for real-time response. Ongoing work includes integration of these technologies to deploy real-time adherence support interventions, as well as linkage with electronic health records in the clinical setting.

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Symposium 27C 3086

HANDHELD TECHNOLOGIES TO IMPROVE ADHERENCE TO DIET AND ACTIVITY INTERVENTIONS

Bonnie Spring, PhD, Megan Roehrig, PhD, Arlen C. Moller, PhD, Michael Coons, PhD and Jennifer Duncan, PsyD

Preventive Medicine, Northwestern University, Chicago, IL.

Poor adherence to prescribed diet and physical activity regimens represents a significant public health challenge. By undermining healthy lifestyle changes, treatment non-adherence increases morbidity, mortality, societal burden, and cost. Evidence consistently indicates that regular self-monitoring predicts successful, long-term behavior change. However, adherence to self-monitoring is typically poor, and current self-monitoring methods (i.e., paper and pencil monitoring) are burdensome and not easily integrated into daily routines. Handheld technologies hold the potential to revolutionize behavioral interventions by overcoming several key barriers to adherence. Smartphones are becoming increasingly ubiquitous because of their appealing multi-functionality (phone, planning, web browsing, gaming). Consequently, smartphones provide a unique and promising channel for incorporating behavioral interventions into daily life. Specifically, the smartphone's built-in capabilities can reduce burden by automating the process of self-monitoring and can provide just-in-time assessment and intervention. By providing interactive decision support tools, real-time feedback on progress toward diet and activity goals, and personalized virtual support from coaches and peers, smartphones can augment and reinforce the key components of lifestyle interventions. The presenter will describe a series of studies that used handheld technologies to improve adherence and outcomes in diet, activity, and weight loss interventions. She will highlight the ENGAGED study (E-Networks Guiding Adherence to Goals in Exercise and Diet), a theory-based intervention that integrates emerging mobile technologies, persuasive design elements, and peer social support to foster behavioral adherence to weight loss treatment among obese adults.

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Symposium 27D 3087

A NEW INTERACTIVE PLATFORM FOR BEHAVIORAL ECONOMIC INTERVENTION STUDIES

Kevin Volpp, MD, PhD

Leonard Davis Institute of Health Economics, University of Pennsylvania School of Medicine and the Wharton School, Philadelphia, PA.

Employers and insurers are increasingly turning to financial incentives for healthy behavior in an attempt to improve health behaviors and reduce the rate of increase in health care costs. However, insights from behavioral economics have suggested that the mode, frequency, and timing of delivery all may have a big impact on effectiveness of such interventions. In this presentation, I will describe current work using a new web-based platform that provides a vehicle for establishing linkages with study participants via Bluetooth enabled biometric measurement devices or other devices that communicate automatically with the system as well as through social media of various types. This will be discussed within a variety of health care delivery settings and clinical contexts including obesity, smoking cessation, and medication adherence.

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Friday
April 29, 2011

Symposium 28 3:45 PM–5:15 PM 3088

METHODS FOR INCREASING BROAD PARTICIPATION IN BEHAVIORAL SCIENCE: EXAMPLES OF CONSTRUCTING, FIELDING, AND HARMONIZING USE OF BEHAVIORAL MEASURES

Ellen B. Beckjord, PhD, MPH,[1] Ruth Rechis, PhD,[2] Richard P. Moser, PhD[3] and Bradford W. Hesse, PhD[3]

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There is an effort within behavioral science to leverage collaborative web technology to improve research. With the development of the cancer biomedical informatics grid (caBIG), there are numerous opportunities for increasing broad participation in behavioral research and for capitalizing upon the resulting harmonized data. In this symposium, presenters will show concrete examples of innovation in behavioral science via use of collaborative web technology to construct, field, and harmonize use of behavioral measures.

The first presentation will provide a detailed overview of how an Internet-based tool (HINTS-GEM) was developed and used to galvanize a community of researchers to collaboratively build the fourth iteration of the National Cancer Institute's (NCI) Health Information National Trends Survey.

The second talk will outline how a cancer advocacy organization partnered with cancer centers around the country to field a survey and how these partnerships were mutually beneficial and advanced behavioral research and clinical care.

The third presentation will focus on promoting use of shared measures and harmonized data and showcase how the NCI's Grid Enabled Measures (GEM) portal facilitates a virtual community of researchers to drive consensus on the use of standardized measures and how GEM can be used to share data among researchers to build a cumulative knowledge base in behavioral medicine.

Finally, a discussion titled Science 2.0 and the Future of Collaborative Research will link these three presentations together and highlight how Science 2.0 will be instrumental to the future of behavioral medicine.

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Symposium 28A 3089

USING SCIENCE 2.0 TO CONSTRUCT A SURVEILLANCE TOOL: BUILDING A BETTER HEALTH INFORMATION NATIONAL TRENDS SURVEY

Ellen B. Beckjord, PhD, MPH,[1] Richard P. Moser, PhD,[2] Lila J. Finney Rutten, PhD, MPH,[3] Kelly Blake, ScD[2] and Bradford W. Hesse, PhD[2]

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Background: Since 2003, the Health Information National Trends Survey (HINTS) has been a surveillance vehicle for tracking cancer-related attitudes, knowledge, and use of health information technology among American adults. For the fourth iteration of HINTS (HINTS 4; to be fielded in 2011), the Health Communication and Informatics Research Branch (HCIRB) at the National Cancer Institute (NCI) developed a tool to enable technology-mediated social participation in survey development. This tool is called HINTS-GEM..

Methods: HINTS-GEM was populated with 540 items that had appeared in prior versions of HINTS. HINTS-GEM was implemented in phases; first, HINTS "champions" (n=40; selected by the HINTS Management Team) used HINTS-GEM to recommend whether existing items should be included in or excluded from HINTS 4 and to propose new HINTS items. In Phase II, HINTS-GEM was advertised to researchers who had previously used HINTS data and/or who had previously attended a HINTS Data Users Conference. These HINTS-GEM users were invited to comment upon and rate any items within HINTS-GEM and to submit new items for consideration for inclusion in HINTS 4.

Results: The process of using HINTS-GEM to build the HINTS 4 survey instrument will close in December 2010. In this presentation, we will discuss the results of the HINTS-GEM process, such as how different dissemination strategies were/were not successful; which items received the most comments and highest ratings; other examples of how HINTS-GEM generated survey content for HINTS 4; and how HINTS-GEM will continue to be used as a way to keep a community of researchers engaged over time.

Conclusions: HINTS-GEM is an experiment in how to galvanize a community of behavioral researchers and leverage the "wisdom of the crowd" to create a timely and high-quality surveillance tool.

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Symposium 28B 3090

ENLISTING PARTNERS IN DATA COLLECTION AND SHARING DATA WITH COMMUNITIES: THE 2010 LIVESTRONG SURVEY FOR PEOPLE AFFECTED BY CANCER

Ruth Rechis, PhD and Stephanie Nutt, MPA

LIVESTRONG, Austin, TX.

Background: In 2006, the Lance Armstrong Foundation ("LIVESTRONG") fielded a survey to post-treatment cancer survivors (n=2307). In 2010, a second iteration of the survey was launched to a broader population of people affected by cancer. For the 2010 survey, LIVESTRONG enlisted cancer centers from around the country as partners for data collection.

Methods: LIVESTRONG created a toolkit for survey partners and created a unique survey link for each partnering cancer center. In exchange for the cancer center's participation, LIVESTRONG agreed to provide the cancer center with the data collected from their institution, as well as from the entire survey sample. Cancer centers could then use the LIVESTRONG survey as a way to measure key outcomes among their own population and these to those from the entire survey sample.

Results: The LIVESTRONG survey opened in June 2010 and will close December 31, 2010. As of September 2010, 11 cancer centers had signed-on to partner in data collection. In this presentation, we will discuss lessons learned, analyze strategies to enlist partners, and present an overview of how our partners are using their site-specific data to better understand the concerns of their patients. Finally, we will discuss how this experience will inform the next iteration of our survey in 2012.

Conclusions: LIVESTRONG's strategy was an experiment in partnerships between a cancer advocacy organization and cancer centers. The partnerships were mutually beneficial, and this model of data collection may serve as a template for how advocacy organizations and healthcare settings can collaborate to conduct better behavioral research than either entity could in isolation.

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Symposium 28C 3091

PROMOTING THE USE OF HARMONIZED MEASURES AND SHARING DATA TO CATALYZE PROGRESS IN BEHAVIORAL SCIENCE: THE NATIONAL CANCER INSTITUTE'S GRID-ENABLED MEASURES (GEM) PORTAL

Richard P. Moser, PhD,[1] Bradford W. Hesse, PhD,[1] Abdul R. Shaikh, PhD,[1] Paul Courtney, MS,[3] Glen Morgan, PhD,[1] Erik Auguston, PhD, MPH,[1] Kerry Levin, PhD,[2] Cynthia Helba, PhD,[2] David Garner, CPC[2] and Marsha Dunn, MPH[2]

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Background: The Grid-Enabled Measures (GEM) portal has been conceptualized by the National Cancer Institute (NCI) and developed by Westat Inc. with two overarching aims for behavioral research: 1) promote the use of standardized measures and 2) facilitate the ability to share harmonized data. GEM provides a home for the behavioral research community to search, download, submit and provide feedback on measures and associated data in a centralized manner.
Methods: A GEM protocol was developed to guide a virtual community of researchers through the process of submitting and providing meta-data about measures and constructs to GEM; for providing ratings and feedback about measures; and for sharing datasets. Additionally, NCI derived a process for deciding which measures should be curated for use on the Cancer Bioinformatics Grid (caBIG) based on information provided by GEM users. These curated measures have the greatest potential for shared use, and thus, for generating harmonized data.
Results: The presentation will demonstrate the functional capabilities of GEM. We will describe a process wherein subject matter experts were enlisted as GEM "champions" through a coordinated outreach plan. Finally, we will discuss lessons learned from the process of vetting and selecting measures for curation and for creating a viable "business model" to incentivize behavioral researchers to engage with GEM and sustain it over time.
Conclusions: GEM has the power to cultivate a community of researchers to use standardized measures and to facilitate sharing harmonized data, thereby facilitating transdisciplinary research through "prospective meta-analyses" and moving science forward by creating a cumulative knowledge base.

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Symposium 29 3:45 PM–5:15 PM 3092

PATIENT-REPORTED OUTCOMES MEASUREMENT INFORMATION SYSTEM (PROMIS): USING NEW THEORY AND TECHNOLOGY TO IMPROVE MEASUREMENT OF PATIENT-REPORTED OUTCOMES IN CLINICAL RESEARCH

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Interest in assessing self-reported outcomes in individuals with chronic disease has increased dramatically over the last 30 years. Health-related Quality of Life (HRQL) is now an accepted outcome of interest in both NIH and industry-funded clinical research studies, and patient-reported outcomes (PROs) are increasingly being used by health care providers and patients to make decisions regarding treatment options. With this explosion of interest, has come new challenges to measuring, analyzing and interpreting patient-reported outcomes, and translating data from HRQL and related measures from the research to the clinical arena. The Patient-Reported Outcomes Measurement Information System (PROMIS) is an NIH Roadmap initiative designed to develop, validate and standardize patient-reported outcome tools for clinical research and practice. Goals of PROMIS include developing and testing item banks in five broad domains: fatigue, pain, physical function, emotional distress and social health. These item banks enable computerized adaptive testing (CAT) to derive valid, efficient and tailored PRO assessments that are more precise than those developed using classical approaches and less burdensome to both patients and staff. This symposium will describe PROMIS methods and tools available to behavioral researchers and will feature the development of patient-centered assessments of depression, anxiety, anger, alcohol use and sexual functioning; the use of PROMIS in DSM-5 field trials; and the ability of PROMIS to describe the effectiveness of treatment for depression and low back pain.

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Symposium 29A 3093

PROMIS OVERVIEW: DEVELOPMENT OF NEW TOOLS FOR MEASURING HEALTH-RELATED QUALITY OF LIFE AND RELATED OUTCOMES IN PATIENTS WITH CHRONIC DISEASES

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The NIH Patient-Reported Outcomes Measurement Information System (PROMIS) Roadmap initiative is a cooperative program of research designed to develop, validate and standardize item banks to allow measurement of patient-reported outcomes (PROs) that are relevant across a variety of common medical conditions. Specific objectives include: (1) development and testing of item banks measuring PROs; (2) creation of a computerized adaptive testing system that allows for efficient, psychometrically robust assessment of PROs in clinical trial research involving a wide range of chronic diseases; (3) creation of a publicly available system that can be added to and modified periodically and that allows clinical researchers to access a common repository of items and computerized adaptive tests. Construction of PROMIS measures has involved a comprehensive instrument development process that included archival data analysis, expert consensus on the underlying conceptual model, and qualitative item review. Item Response Theory (IRT) was used to evaluate items and calibrate item banks measuring pain, fatigue, physical function, social function, emotional distress, sleep/wake disturbance, sexual function, and other aspects of health for both adults and children. This presentation will: (1) summarize the instrument development process used in PROMIS, the data collected and analyzed during this process, and the resulting tools now available to researchers for measuring PROs in their own research; (2) describe Assessment Center, a free online software application developed by PROMIS Investigators that allows researchers to create study-specific websites to administer CAT and short form instruments to research participants; and (3) describe ongoing item development and research efforts during the second funding phase of PROMIS.

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Symposium 29B 3094

ITEM BANKS FOR MEASURING EMOTIONAL DISTRESS FROM THE PATIENT-REPORTED OUTCOMES MEASUREMENT INFORMATION SYSTEM (PROMIS): DEPRESSION, ANXIETY, AND ANGER

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We report on the development of item banks for the constructs of depression, anxiety, and anger as part of the Patient-Reported Outcomes Measurement Information System (PROMIS™). Comprehensive literature searches yielded an initial bank of 1,404 items from 305 instruments. After qualitative item analysis (involving focus groups and cognitive interviewing), 168 items (56 for each construct) were written in a 1st-person, past-tense format with a 7-day recall and 5 frequency response options ("never" to "always"). The calibration sample included nearly 15,000 respondents (community residents and psychiatric outpatients). Final banks of 28, 29, and 29 items were calibrated for depression, anxiety, and anger, respectively, using item response theory (IRT). Test information curves showed that the PROMIS item banks provided more information than conventional measures in a range of severity from approximately −1 to +3 standard deviations (higher scores indicated greater distress). Short forms (7-8 items) provided information comparable to legacy measures containing substantially more items. Conceptual and practical challenges that we confronted will be discussed. In addition, we will provide an update on the most recent PROMIS work relevant to the area of emotional distress: the performance of the PROMIS item banks as outcome measures in a 3-month prospective, observational study of outpatients being treated either for depression or lower back pain; the application of the PROMIS short forms as generic (transdiagnostic) measures of symptom severity in the DSM-5 field trials; and the development and calibration of item banks for alcohol use that assess consumption, positive and negative expectancies, and positive and negative consequences.

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Symposium 29C 3095

THE PROMIS© SEXUAL FUNCTION MEASURE: DEVELOPMENT AND EARLY VALIDATION

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This presentation will review the work to date of the PROMIS© Sexual Function domain working group. The goal of the working group was to develop a comprehensive and sensitive measure of sexual health that was broadly applicable with respect to age, gender, sexual orientation, partner status, and literacy. The group has developed a version of the sexual function measure intended for cancer populations, the PROMIS© Sexual Function-Cancer (SF-Ca), which is available to all researchers via the PROMIS© Assessment CenterSM. The SF-Ca consists of 65 items in 5 collections of stand-alone items (Sexual Activities, Orgasm, Interfering Factors, Therapeutic Aids, Anal Discomfort) and 5 latent variable subdomains (Interest in Sexual Activity, Lubrication (women), Vaginal Discomfort (women), Erectile Function (men), Global Satisfaction with Sex Life). Latent-variable subdomains were unidimensional and internally consistent; comparative fit indices >.98 and Cronbach's alphas >.90. All 5 latent variable subdomains plus Orgasm discriminated between cancer patients who had and had not asked a health care provider about problems with sex. Furthermore, the PROMIS© SF-Ca discriminated between these groups better overall than the Female Sexual Function Index and the International Index of Erectile Function. Current qualitative and quantitative work is focusing on developing the PROMIS© SF, which will be applicable across chronic disease and healthy populations. In this presentation, we will review the development work and early validity data for the PROMIS© SF-Ca and report on progress toward development of the more generic measure.

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Symposium 30 3:45 PM–5:15 PM 3096

ADVANCES IN INFORMATION TECHNOLOGY FOR INCREASING DISSEMINATION AND ENGAGEMENT

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During the last 25 years, computer-based interventions for intervening on health-related behavior change have been effective in promoting change at the population level. The first generation, often called tailored interventions or expert system interventions, used the computer to tailor interventions to the individual. However, the interventions were typically linear and limited to a single communication channel such as print or telephone. The second generation, primarily internet based, used multimedia and permitted lateral movement. Both generations greatly increased dissemination beyond the clinic setting with direct communication to general populations. Advances in intervention systems technology are continuing to create new channels for dissemination and are also increasing our ability to engage individuals with the interventions in their natural environment. Presenters in this symposium will provide examples of the advances in information systems technology that are increasing both dissemination and engagement of computer-based interventions in the behavioral medicine area. The first presentation will describe how a new technology, Relational Agents, can simulate face-to-face conversations between health care providers and patients leading to increased trust in the therapeutic alliance, increased engagement, and increased use over time. The second presentation will describe how Relational Agent technology can be combined with an existing tailored intervention in an internet environment to increase exercise and the use of UV protection. The third presentation will describe the development of advances in mobile phone technology that employ event-triggered prompts to increase intervention engagement and real time feedback for exercise interventions. The use of advances in information technology allows the development of health-treated interventions that engage people in their own environment in real time.

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Symposium 30A 3097

RELATIONAL AGENTS FOR PROMOTING INTERVENTION ENGAGEMENT WITH UNDERSERVED POPULATIONS

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Relational agents are computer animated characters that simulate face-to-face conversation between health providers and patients, including both verbal and nonverbal channels of communication. The agents can be designed to emulate best practices in human face-to-face health counseling to provide a clear channel of communication for individuals with a wide range of reading, health and computer literacy. The social and relational behaviors used by these agents (such as empathy) serve to increase user trust in and therapeutic alliance with the agents, leading to increased engagement and use over time. In this talk I'll describe the dialogue systems and animation technology used to implement these agents, and results from a series of longitudinal design studies that demonstrate intervention techniques and agent behaviors that lead to increases in intervention engagement and use over time. Preliminary results from two clinical trials involving relational agents will be presented–one for patient education at the time of hospital discharge and the other for promoting physical activity in geriatrics patients–demonstrating engagement with this technology by individuals with low health and computer literacy.

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Symposium 30B 3098

USING RELATIONAL AGENTS IN INTERVENTIONS FOR MULTIPLE RISK FACTORS

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Multimedia computer-based multiple risk factor interventions using the internet represent low cost, easily disseminated methods of reaching a general population. A large number of studies have demonstrated the effectiveness of this approach. However, such interventions have produced only small effect sizes, partially due to a lack of subject engagement. Relational Agents, a computer-based virtual person who can establish a continuing personal relationship, have the potential to greatly increase engagement. In this study, two multiple risk factor multimedia expert system interventions (sun protection and exercise adoption) are combined with relational agent technology. The study design is a 3 Group (Control, Expert System Only Intervention, Expert System plus Relational Agent Intervention) x 3 Occasions (0, 12, 24 Months) with intervention occurring during the first 12 months. A representative national sample of 1639 individuals at risk for both behaviors will be recruited. The goal of this presentation is to demonstrate the relational agent technology with a sample video of the Expert System plus Relational Agent intervention. Preliminary data supports the aim of increasing engagement. The average number of sessions viewed per week for subjects in the Expert System Only group was 0.12 compared to a rate of 0.49 in the Relational Agents group. Expert system interventions, enhanced by a relational agent, have the potential to greatly increase subject engagement and intervention effectiveness.

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Symposium 30C 3099

SENSOR-DRIVEN AUTOMATIC FEEDBACK ON MOBILE DEVICES FOR IMPROVING BEHAVIORAL MEASUREMENT AND INTERVENTION: DESIGN EXPERIENCES FROM TWO PILOT PROJECTS

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Mobile phones are increasingly capable of sophisticated, real-time information processing using internal sensors in the phone, such as accelerometers and GPS, and external sensors that communicate with phones using wireless networks. Drawing on two small pilot projects where we have developed mobile phone systems that use automatically-detected, event-triggered prompts to encourage engagement, we will highlight some opportunities and practical challenges created when developing sensor-based mobile phone technology for health behavior measurement and intervention. These challenges include dealing with noisy sensors to automatically detect certain types of physical behaviors, unanticipated and variable end-user behavior that impacts user interface system design, power-management issues on mobile devices, and effective remote management and interpretation of data and subject behavior as a study is running. In one pilot project, a mobile application measures bouts of motion of the phone and dispenses real-time, tailored, positive reinforcement designed to encourage increased brisk walking. In the other pilot project, miniature wireless sensors called Wockets send limb motion data to the mobile phone, which continuously measures physical activity or sedentary behavior for extended periods of time and presents real-time feedback to encourage proper use of the measurement system.

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Symposium 31 3:45 PM–5:15 PM 3100

BEHAVIORALLY-BASED INTERNET INTERVENTIONS FOR PEDIATRIC POPULATIONS

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Although the Internet has been shown to be an effective delivery mechanism for many behaviorally-based interventions, the majority of attention has, to this point, been focused on adult programs. However, a small but growing literature is centered on pediatric populations. This symposium will concentrate on a variety of pediatric Internet interventions, all provided to the parent-child dyad as the user. The first presenter will highlight needs assessment data that will inform the development of a new online program for school-age children and their parents focused on 'jointly' managing arthritis. The second presenter will focus on data from an RCT comparing the efficacy of a family problem solving Internet intervention to an Internet resource comparison treatment as means to facilitate teen and family adaptation following traumatic brain injury. The third presenter will review an innovative study examining the utility of two parent-focused Internet interventions aimed at decreasing child overweight. The discussant will offer a perspective on issues specific to Internet interventions for pediatric populations and use examples from research trials of a pediatric encopresis Internet program.

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Symposium 31A 3101

JOINTLY MANAGING ARTHRITIS ONLINE: INFORMATION NEEDS OF CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS (JIA) AND THEIR PARENTS

Jennifer Stinson, RN, PhD

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This study explored the information needs of children with JIA and their parents in order to develop a web-based program focused on managing arthritis. A qualitative study design was used. A purposive sample of children (n=41) between 8 and 11 years of age with JIA and one of their parents (n=48), was recruited from 4 Canadian tertiary care centers. Parent-child dyad interviews (n=29) and 4 separate child and parent focus group interviews were conducted using semi-structured interview guides. Audio-taped interviews were transcribed verbatim. NVivo 8.0 was used to assist with sorting, organizing and coding data. Data were organized into categories that reflected the emerging themes. Findings uncovered two major themes: "Living with Arthritis" and "Jointly Managing Arthritis". Major subthemes for "Living with Arthritis" were: pain, maintaining friendships, communicating about the disease, and worry/distress. Two further sub-themes were found under worry/distress: parents expressed concern about their child's future, and children wondered "why me?" Two sub-themes were identified under "Jointly Managing Arthritis" where managing JIA was viewed as being a joint responsibility between the parent and child. The first sub-theme, "desire for information and disease management strategies", highlighted the need for further information on JIA, medications, tests and procedures, managing pain and emotions, and advocacy and communication strategies. The second sub-theme was staying strong and seeking social support. Participants explained that staying strong as a family was essential, and they also wanted the opportunity to connect with others with JIA to help them feel that they are not alone. Finally, children and their parents felt that an online program of JIA information, disease management strategies and opportunities for social support would be the ideal way to meet their information needs. Findings from this study are being used to develop and test an online program to help children and their parents jointly manage arthritis.

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Symposium 31B 3102

WEB-BASED FAMILY PROBLEM SOLVING THERAPY FOR TEENS WITH TRAUMATIC BRAIN INJURY (TBI)

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Internet-based therapies may provide a viable way to facilitate teen and family adaptation following brain injury. Engaging the parent-teen dyad allows parents to scaffold and reinforce changes in the teen's behavior. We report the results of a randomized clinical trial (RCT) comparing the efficacy of Counselor-Assisted Problem Solving (CAPS), a web-based family problem solving intervention, to an internet resource comparison treatment (IRC). CAPS paired self-guided web sessions with synchronous videoconferences with a trained counselor. The web sessions provided didactic information about target skills, videoclips modeling skills or discussing common brain injury consequences, and exercises allowing parents and teens to practice the skills together. The videoconferences included review of the website content and implementation of the problem-solving process with a family-identified goal. Participants included 120 adolescents, ages 12-17, with moderate to severe TBI and their families. Primary outcomes included teen behavioral adjustment and caregiver depression. Treatment effects were moderated by the teen's age and pre-treatment behavior problems. Specifically, older teens receiving CAPS demonstrated greater improvements in behavior regulation than younger teens. With respect to parent depression, treatment effects were greatest among those in the CAPS group whose children had high levels of behavior problems initially. These findings suggest that internet-based treatment can be an effective approach for improving adaptation following adolescent TBI, particularly among older teens and those with higher levels of dysfunction.

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Symposium 31C 3103

A PILOT STUDY COMPARING TWO PARENT-FOCUSED INTERNET INTERVENTIONS FOR REDUCING PEDIATRIC OVERWEIGHT

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By changing the family food and physical activity environments though parental behavior changes, it may be possible to produce changes in child weight without directly involving the child in treatment. Internet programs may be a convenient delivery modality for busy families. Our pilot study compared the efficacy of two internet-based, exclusively parent-targeted, programs designed to reduce or stabilize weight among overweight children. The first focused on general parenting skills and applying those skills to encourage healthier nutrition and physical activity behaviors in children (Parenting Skills). The second focused on weight loss in the overweight parent (Parent Weight Loss). Parents were overweight (BMI 25-50) with at least one child aged 8 to 13y with a BMI≥85th percentile. Each intervention group had a separate website which included 20 weekly lessons, behavioral check-in form, message board, and weekly synchronous chat group led by either a parenting expert (Parenting Skills) or a weight loss counselor (Parent Weight Loss).

Twenty families were recruited and randomized to one of the two interventions. At baseline parents were age 42.70±5.9 y, 68% married, 37% minority, 74% college degreed, with BMI of 35.1±6.5 kg/m^2. Children (11 M, 9, F) averaged 10.8±1.6 years and at the 96±4.4 BMI percentile for age and gender. Objective measures were obtained in the clinic after the 5 month Internet program; parents in the Parenting Skills intervention gained 1.2±7.0 lbs, whereas those in the Parent Weight Loss group lost −11.7±8.0 lbs (t(13)=3.3, p=.006). Both interventions produced a small reduction in percent overweight for age and gender in children. Average logins to the website were 30.6 Parenting and 41.2 for Parent Weight Loss (t (18) -.43, p=.67).

Results from this pilot study are encouraging as a first goal for overweight children is to stabilize weight. Both approaches appear worthy of continued investigation.

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Symposium 32 3:45 PM–5:15 PM 3104

LEVERAGING THE AFFECTIVE RESPONSE TO EXERCISE TO INCREASE EXERCISE BEHAVIOR

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Exercise is a complex behavior motivated by a number of factors including affective responses experienced during and after an acute bout of exercise. In general, more positive affective responses predict greater motivation to exercise, future exercise behavior, and greater adherence to exercise programs. Given the association of affective response with exercise outcomes, it is important to elucidate under what situations and for whom positive affective responses to physical activity are most likely to occur. These three talks will explore how positive affective responses may be integral for future exercise behavior. Kwan and colleagues explore within- versus between-subject variability in affective response to exercise across time and setting to explore affect response as a potential target of intervention. They find that individuals typically report positive affective experiences during exercise for both laboratory and non-laboratory exercise sessions. Moreover, affective responses varied between- and within-subject providing evidence for affective response to exercise as an individual difference that may be optimized during exercise interventions. Schneider and August investigate the relationship between affective and cortisol response among adolescents. They find that adolescents who respond more positively to moderate-intensity exercise typically have higher baseline cortisol values and experience a decline in cortisol during exercise compared to adolescents with no change or a decline in affect. Finally, Focht focuses on the role of self-paced exercise and its relation to affective responses to exercise. He argues that self-selected intensity, versus imposed-intensity exercise results in more favorable affective responses and is associated with greater exercise adherence. Together, these investigations highlight the utility of focusing on affective responses to exercise in regard to exercise promotion and intervention development.

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Symposium 32A 3105

AFFECTIVE RESPONSE TO EXERCISE: INDIVIDUAL DIFFERENCE OR MALLEABLE CONSTRUCT?

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The affective response to exercise predicts exercise behavior and adherence to exercise interventions, but it is unclear how to incorporate these findings into the design of interventions. If affective response is malleable, it becomes a potential target of intervention. For insight, we examine within- versus between-subject variability in the affective response to exercise across time and setting. Participants (N=98) were asked to exercise every day for eight consecutive days (20mins/day at 90-100% of their heart rate at ventilatory threshold, using heart rate monitors). Affective responses to exercise (Feeling Scale: −5 = very bad to +5 = very good) and ratings of perceived exertion (RPE) were assessed for both laboratory (day 1) and non-laboratory (days 2-8) exercise. For non-laboratory exercise, participants on average reported feeling fairly good while exercising (M=2.09, SD=1.25). Unconditional multilevel regression showed that 37.6% of the variance in affective response to non-laboratory exercise was between-subject, and 62.4% of the variance was within-subject. The average within-subject standard deviation for affective response was 1.22 (SD=0.69), demonstrating that participants' affective responses were generally within about 1 scale point of their average. On average there was a significant negative within-subject relationship between daily RPE and daily affective response, b=−0.24, p=.0002. Affective responses for non-laboratory exercise were strongly associated with, but generally less positive than, affective responses for laboratory exercise (b=0.43, p=.004). Affective responses varied significantly within-subject (indicative of a malleable construct), but was limited to within about 1 scale point of an individual's average rating, even when comparing laboratory and non-laboratory exercise. Thus, the affective response to exercise is likely an individual difference that can be optimized, but only within a limited range, for any given person.

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Symposium 32B 3106

THE RELATIONSHIP BETWEEN EXERCISE INTENSITY, AFFECTIVE CHANGE, AND CORTISOL RESPONSES IN ADOLESCENTS

Margaret Schneider, PhD and Kristin August, PhD

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Individuals with a more positive affective response to an acute bout of exercise are more likely to adhere to an exercise program, intend to be physically active, and engage in more physical activity. Little is understood about whether the affective response to acute exercise is a trait characteristic and, if so, whether it is rooted in physiological processes. Individuals also vary in hormonal responses to exercise, yet little is known about how hormonal and affective responses to exercise are related. We investigated the relationship of hormonal and affective responses to acute exercise among healthy adolescents. Adolescents (N=102; 53% Male, 67% non-Hispanic white) engaged in two 30-minute exercise tasks (moderate and hard intensity), with change in both affective valence (Feeling Scale: −5 to +5) and salivary cortisol assessed at baseline and every 10 minutes during (10 and 20 minutes) and after (30, 40 and 50 minutes) the tasks. Cortisol decreased during moderate-intensity exercise and remained lower after the exercise session, but increased following hard-intensity exercise. Repeated measures ANCOVA revealed that change in affect moderated the change in cortisol in response to the moderate (interaction term p<.05), but not hard, intensity task. Adolescents with improved affect during the moderate-intensity task had higher baseline cortisol values (p<.05) and a steep decline in cortisol during exercise (p<.05), whereas adolescents with no change or a decline in affect during the task had lower baseline cortisol values and no change in cortisol during exercise.

The results suggest a correspondence in individual differences in cortisol and affective response to moderate exercise. Adolescents who report feeling better during moderate exercise are more likely to manifest elevated cortisol prior to the task followed by normalization of cortisol in response to the exercise session. The findings are consistent with the hypothesis that exercise offers a self-regulatory benefit to some individuals, but perhaps not to all.

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Symposium 32C 3107

SELF-PACED EXERCISE, AFFECT, AND ADHERENCE: IMPLICATIONS FOR EXERCISE PROMOTION

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Successfully promoting adherence to regular exercise participation remains a pressing public health challenge. The affective responses one experiences when engaging in exercise prescriptions advocated in modern physical activity guidelines represent an integral, yet often overlooked factor, that may contribute to the poor adherence rates observed for physical activity. Traditional approaches to exercise prescription focus upon imposing exercise characteristics that are safe and yield optimal improvement in health and fitness outcomes while placing considerably less emphasis upon individuals' activity tolerances and preferences. While relatively neglected in the past, there is growing recognition of the motivational implications of affective responses to exercise with emerging evidence supporting links between self-paced exercise, pleasant affective responses, and exercise adherence. This presentation will attempt to illustrate the potential importance of the psychological beneficence of self-paced exercise in physical activity promotion efforts. Key points of the presentation will be to demonstrate that: (a) when participants are asked to select their exercise intensity, they typically choose levels consistent with those recommended in contemporary physical activity guidelines; (b) self-paced exercise consistently results in more favorable affective responses relative to imposed-intensity exercise; and (c) the more pleasant affective responses accompanying self-paced exercise are associated with theory-based correlates of physical activity behavior and superior adherence. The presentation will conclude with discussion of the potential utility of integrating affect into exercise self-regulation strategies as well as the feasibility and merit of progressing towards a modified exercise prescription paradigm in which resultant health and fitness outcomes, safety, and motivational implications of prescribed activity stimulus characteristics are given equal consideration in the exercise prescription process.

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Symposium 33 3:45 PM–5:15 PM 3108

QUALITATIVE ACCOUNTS OF FEARS OF CANCER RECURRENCE

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Fears of recurrence are frequently documented as being one of the most important issues that those who have been treated for cancer have to deal with. Evidence shows that fears of recurrence have been related to emotional distress, intrusive thinking, and lower vigour. It has also been shown to be associated with lower quality of life of family members.

In this symposium, we will present evidence and discussion from qualitatively-oriented approaches (analyses of interviews, focus group discussions, and answers to open-ended questions) to examine these fears in a broad range of people who have been affected by cancer, including data from ethnic groups. This symposium aims to bring the evidence together so that we can improve our understanding of how these fears develop and impact the lives of people affected by cancer and how they manage these fears in their daily lives.

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Symposium 33A 3109

FEAR OF RECURRENCE AS A CHALLENGE REPORTED BY YOUNG ADULT CANCER SURVIVORS

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With fear of recurrence (FoR) increasingly identified as a major factor in quality of life of longer-term cancer survivors, it is important to examine when and how survivors address it. One way to do so is to allow them to talk generally about challenges of having had cancer.

Participants. As part of a larger study of young to middle adult cancer survivors, 250 survivors (age range 20-55, mean 45) were included. 42% were breast cancer survivors, 12% prostate, and smaller numbers of other cancers.

Instruments and Measurement. Open-ended questions at the end of a questionnaire given at about 2 years after diagnosis asked for reports of biggest challenges and changes due to cancer. Responses ranged from a sentence to several paragraphs for each question. Responses were subsequently examined for all FoR related statements, which were then coded for type of fear.

Results. Twelve percent of responses to challenges and some to changes were coded as primarily concerned with FoR. More qualitative analysis revealed that FoR was also an underlying theme in many of the responses that were given primary codes related to family effects, emotional impact, and sense of control. The descriptions of fears found in all answers revealed several main types: belief recurrence would mean death from cancer, concern about bother and side effects of new treatments, concern about financial and work impact, and negative effects on spouse and children, especially sense of abandonment of children. Although FoR was mostly connected to expressions of negative changes, some reported positive changes as one addressed those fears. Each major type will be illustrated with verbatim reports.

Discussion. Even when not specifically asked, a significant number of cancer survivors report FoR as major factor in their challenges and changes. Different individuals have different FoR, from those that focus on self to negative impact on others. These are in turn connected to major life roles and other aspects of the cancer experience.

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Symposium 33B 3110

FEARS OF RECURRENCE AMONG BREAST AND COLORECTAL CANCER SURVIVORS: A QUALITATIVE ACCOUNT OF SIMILARITIES, DIFFERENCES AND CONFLICT

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Fear of recurrence (FoR) is often the most frequently ranked concern for people treated with cancer and has been related to distress, intrusive thinking, and lower vigour as well as lower quality of life of family members. In this study, we aimed to capture an in-depth account of FoR in people treated for breast (Br) or colorectal (Cr) cancer using focus group discussions (FGDs) guided by Leventhal's Self-regulation model. Participants were randomly selected from a cohort of participants (from a previous study). We conducted 6 separate FGDs (3 Br and 3 Cr) with 18 people classified having either low, moderate, or high FoR (12 women; aged 49+; time since diagnosis 1-12 years) in community settings. Participants were asked to talk about their cancer history: events up to diagnosis, past experiences of cancer in family and friends, treatment experiences, and impact on family and work. Triggers of FoR, how they are managed, and how their view of their future is affected by their cancer experience and the possibility of cancer coming back were discussed. Constant comparative technique was used to analyse the data. Similar themes emerged in both cancer site groups: importance of symptom-related triggers (e.g., general aches) and ways of dealing with FoR (e.g., distraction). Participants described a conflict between looking to the future and having to manage the reminders of cancer. FoRs were expressed irrespective of time elapsed since end of treatment. Differences emerged in events leading up to diagnosis, treatment experience and follow-up time-line between Br and Cr cancer groups. The findings speak to the similarities in the experience of people who have been treated for cancer and can be transferred to other illnesses involving uncertainty about future. This work showed the significance of assessing people's FoR following completion of treatment and symptom-related triggers for FoR and can be used in development of interventions.

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FEAR OF RECURRENCE ACROSS CANCER SITES

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Background. Fear of recurrence has been cited as a potential factor in decreased quality of life for cancer survivors. The purpose of this paper is to understand the relationship between fear of recurrence in cancer survivors (breast, prostate, and colon) and its relationship to stress and quality of life in a largely minority population.
Methods. Survivors of one year or more, aged 50 and over, were recruited from breast, prostate, and colon patients diagnosed at a major urban safety net hospital.
Results. Fear of recurrence did exist to varying degrees. Four themes were identified that described FOR as either increasing or decreasing stress and quality of life. The themes were: FOR and coping strategies, FOR connected with physical reminders, FOR interfering with care team/treatment and FOR related to stoicism. Coping strategies positively impacted quality of life in our participants through decreasing fear of recurrence. Coping strategies used by participants included resilience/positivity and keeping busy. Physical reminders such as changes in body, lost relationships, coping of others, and negative comments/interactions with others served to change the appraisal process and increase fear of recurrence and decrease quality of life. Relationships and interactions with their care team (doctors, nurses) either increased or fear of recurrence respectively, through providing links with supportive others or cutting off those links. Stoicism, which included not worrying about breast cancer recurrence, having other problems to worry about therefore not thinking about cancer, and moving forward, decreased fear of recurrence through changed appraisal, and resulted in increased the quality of life of participants.
Conclusions. We found that FOR positively or negatively influenced QOL in four separate ways, each related to the stress and appraisal process. Our study was able to identify the components of FOR and was among the first to focus on FOR in a largely minority population.

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Symposium 33D 3112

FEARS OF RECURRENCE AMONG BREAST CANCER SURVIVORS FROM DIFFERENT RACIAL/ETHNIC GROUPS

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Method: The sample consisted of 45 African Americans, 52 API (API), 54 Caucasians, and 25 Latinas who completed an interview asking quality of life, social support, mood, and spirituality. While there were no specific questions about fear of recurrence the women were asked about what they did to prevent recurrence.
Results: Most of the women had some worries about recurrence, which seemed to be equivalent across ethnic groups. While some of the women stated that their worries had decreased over time, many women talked about constant worry. Some women tried not to worry, feeling as if they were doing all they could to prevent recurrence. Half of the Caucasian women, 46% of the API and 36% of the Latinas and 33% of the African Americans made diet changes. Forty-four percent of the API but only 27% of the African Americans and 20% of the Caucasians made exercise changes. Some women talked about stress reduction, more commonly from API (22%) than the other groups (range 6-16%). A few women from each ethnic group except for the Latinas mentioned that they avoided chemicals, used alternative/complementary medicine and/or Western medications.
Conclusions: There were few racial/ethnic differences among the women. Even though the women were on average two years post treatment, most still had worries about recurrence. Women from all of the racial/ethnic groups were open to diet and exercise changes, but less than 50% mentioned these changes. However, differences were evident for less common changes. While a few women said that they had not made any changes, it is possible that they already engaged in healthy behaviors before their diagnosis. Fears of recurrence should be assessed among long-term survivors and diet and exercise changes should be encouraged for women in general, especially exercise among Latinas.

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Symposium 34 3:45 PM–5:15 PM 3113

OPPORTUNITIES FOR TRANSLATIONAL RESEARCH USING THE DECISIONS STUDY: A CONVERSATION BETWEEN SBM'S DECISION MAKING SIG AND THE SOCIETY FOR MEDICAL DECISION MAKING

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Several national organizations have recognized patient involvement in health care decisions as central to quality care. However, few data exist from representative samples to inform how patients make medical decisions, how these vary across clinical contexts, or how these insights translate into applied behavioral medicine settings. This symposium is designed to stimulate novel translational decision research in applied behavioral medicine settings. We will present data from the DECISIONS study, a large, nationally-representative survey of adults age 40 and older and their experiences with nine common medical decisions: 1) initiation of hypertension, hypercholesterolemia, or depression medication; 2) screening tests for colorectal, breast, or prostate cancer; and 3) surgeries for knee or hip replacement, cataracts, or lower back pain. The first speaker will provide an overview of the DECISIONS study and present data on deficits and variations in decision processes and communications with health care providers. The second speaker will compare and contrast the decision processes across cancer screening tests. The third speaker will present data demonstrating that feeling that one has made an informed decision is unrelated to actual knowledge. Three distinguished members of the SBM Health Decision Making SIG will provide brief commentary at the end of each of the DECISIONS talks regarding the clinical and policy implications of the data. The session will conclude with a panel discussion, identifying cross-cutting themes, translational opportunities for applying these decision data to behavioral medicine contexts and ways to use the DECISIONS data for future research. This symposium is a collaboration between SBM'S Health Decision Making SIG and the Society for Medical Decision Making.

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Symposium 34A 3114

DEFICITS AND VARIATIONS IN PATIENTS' EXPERIENCE WITH MAKING NINE COMMON MEDICAL DECISIONS

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Although many researchers have examined patient involvement and patient-provider interactions within specific clinical environments, no nationally representative data exist to characterize patient perceptions of decision-making and patient-provider communications across multiple common medical decisions. In this analysis, we identified deficits and variations in the patient experience of making common medical decisions and identified factors associated with patient confidence in their decisions. Respondents were 2,473 English-speaking adults who took part in the DECISIONS study, a large, nationally-representative survey of adults age 40 and older who had undertaken one or more of the following nine common medical decisions in the past 2 years: 1) initiation of prescription medications for hypertension, hypercholesterolemia, or depression; 2) screening for colorectal, breast, or prostate cancer; and 3) surgeries for knee or hip replacement, cataracts, or lower back pain. The proportion of patient-driven decisions varied significantly across decisions (16% for blood pressure to 48% for knee/hip replacement). Most patients (78-85%) reported that providers made a recommendation, generally favoring taking medical action. Fewer patients reported that providers asked them about their preferences or discussed reasons not to take action. Decision confidence was higher among patients who reported primarily making the decision themselves ($OR=1.46$, $p<0.001$) or having been asked for their preference ($OR=1.32$, $p=0.01$) and was lower among patients whose discussions included cons ($OR=0.74$, $p=0.008$). The wide variations in the proportion of discussions that included patient preferences or reasons not to take action appear directly related to patients' confidence in their decisions.

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Symposium 34B 3115

DECISION-MAKING PROCESSES FOR BREAST, COLORECTAL, AND PROSTATE CANCER SCREENING: RESULTS FROM THE DECISIONS STUDY

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Patients should understand the risks and benefits of cancer screening in order to make informed screening decisions. In this analysis, our objective was to evaluate the extent of informed decision making in patient-provider discussions for colorectal (CRC), breast (BrCa), and prostate (PCa) cancer screening. Respondents were 1,082 English-speaking adults age 50 and over who took part in the DECISIONS study, a large, nationally-representative survey. Each had discussed cancer screening with a health care provider within the previous two years. Although participants generally considered themselves well informed about screening tests, half or more could not correctly answer even one open-ended knowledge question for any given module. Participants consistently overestimated the risks of being diagnosed with and dying from each cancer and overestimated the positive predictive values of PSA tests and mammography. Providers were the most highly rated information source, usually initiated screening discussions (64-84%), and often recommended screening (73-90%). However, participants reported providers elicited their screening preferences in only 31% (CRC women) to 57% (PCa) of discussions. While over 90% of the discussions addressed the pros of screening, only 19% (BrCa) to 30% (CaP) addressed the cons of screening. Cancer screening decisions reported by patients who discussed screening with their health care providers consistently failed to meet criteria for being informed. Given the high ratings for provider information and frequent recommendations for screening, providers have important opportunities to ensure that informed decision-making occurs for cancer screening decisions.

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Symposium 34C 3116

HOW DOES FEELING INFORMED RELATE TO BEING INFORMED? RESULTS FROM THE DECISIONS STUDY

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An important part of delivering high quality, patient-centered care is making sure patients are informed. In this analysis, we examined whether patients' perceptions about how informed they were about common medical decisions are related to their ability to answer factual knowledge questions. Respondents were 2,575 English-speaking US adults who took part in the DECISIONS study, a large, nationally-representative survey of adults age 40 and older and had made one of nine medication, cancer screening, or elective surgery decisions within the past two years. Participants rated how informed they felt on a scale of 0 (not at all informed) to 10 (extremely well-informed), answered decision-specific knowledge questions, and completed standard demographic questions. Overall, 36% felt extremely well-informed (10), 41% felt moderately informed (7-9), and 22% felt poorly informed (0-6). Multivariate logistic regression analyses showed no overall relationship between knowledge scores and perceptions of being well-informed (OR=0.94, 95% CI 0.63, 1.42; p=0.78). Three patterns emerged for decision types—a negative relationship for cancer screening decisions (OR= 0.58, CI 0.33, 1.02; p=0.06), no relationship for medication decisions (OR=0.99, CI 0.54, 1.83, p=0.98) and a positive relationship for surgery decisions (OR 3.07; 95% CI 0.90, 10.54; p=0.07). Trust in the doctor was associated with feeling extremely well-informed for all three types of decisions. Lower education and lower income were also associated with feeling extremely well-informed for medication and screening decisions. Our results suggest that patients facing common medical decisions are not able to accurately assess how much they know. Clinicians need to be proactive in providing adequate information to patients and testing patients' understanding to ensure informed decisions.

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Symposium 35 3:45 PM–5:15 PM 3117

PEER SUPPORT ACROSS CULTURAL, NATIONAL AND ORGANIZATIONAL SETTINGS: COMMON FUNCTIONS AND SETTING-SPECIFIC FEATURES

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What is an offer of help in one culture may be intrusive in another or too reserved in a third. Additionally, varying attitudes and cultural influences related to health, fate, health behaviors like diet, life and death add complexity to efforts to promote peer support in different countries. To address these challenges, Peers for Progress, a global program of the American Academy of Family Physicians Foundation, has followed a strategy of "standardization by function, not content." This identifies key functions of peer support which, at the same time, allow for considerable flexibility in local implementation. Key functions currently include 1) assistance in daily management, 2) social and emotional support, 3) linkage to clinical care, and 4) ongoing availability of support. This approach has been realized in peer support programs in nine countries in which Peers for Progress has funded projects. In particular, speakers will present a) working with a Mexican/Mexican-American community along the U.S.-Mexico border and their efforts to build social capital to confront economic disadvantage and support diabetes control, b) challenges and successes of a peer support program in severely under-resourced villages in Uganda, and c) enhancement of well established support groups of Diabetes Australia-Victoria and initial plans for dissemination in the Australasian region. Each will address how implementation of the four key functions noted above is tailored to their populations and settings. Discussion will include global perspectives and those of other diseases for which peer support has been a prominent approach, notably HIV/AIDS.

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Symposium 35A 3118

WORKING TO IMPROVE PEER SUPPORT FOR DIABETES ALONG THE CALIFORNIA-MEXICO BORDER: PUENTES HACIA UNA MEJOR VIDA

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The "Puentes hacia una mejor vida" program is a collaboration between the Institute for Behavioral and Community Health in San Diego, CA and Clinicas de Salud del Pueblo, Inc in Brawley, CA. "Puentes" stemmed from our interest to test a volunteer-based peer support model to promote diabetes control. Volunteer models compliment paid models of peer support and both are essential for adequate reach by community clinics in rural and resource-poor communities. Intervention content and support modalities were selected based on our theoretical assumption that diabetes control is influenced by multi-level factors. Peer supporters are trained to reflect on how each of these levels of influence are associated with various aspects of diabetes management and how to provide peer support using three different modalities that recognize these different contexts: family home visits, clinic visits, and support groups. Peer supporters are asked to track intervention delivery using a visit form or a group attendance sheet. To-date 25 peer supporters (lideres) have been trained and supporting six patients (known as peers) for a minimum of one year. Patient outcomes assessed at baseline, 6- and 12-mos post baseline include HbA1c and quality of life. Tracking forms indicate that a substantial amount of peer support is provided by telephone given the distances between lideres and their peers. Modifications to peer support suggested by the lideres reflect a strong emphasis on savings out-of-pocket expenses, they also reflect on emphasis on the importance of contact in whatever form it is delivered, and ensuring that each contact has the maximum amount of impact. Efforts to build social capital between lideres and peers are notable. The integration of volunteer-based models of peer support is a necessary activity for clinics across the country. If successful, the Puentes program may serve as one model for improving diabetes management.

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Symposium 35B 3119

PEER SUPPORT FOR ADULTS WITH DIABETES IN RURAL UGANDA

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The purpose of this study was to test the feasibility of a peer support program for persons with type 2 diabetes. Using a pre- post-intervention design, data were collected on A1C, perceptions of social and emotional support, diabetes self-care behaviors, and linkages with healthcare providers. Peer champions were patients who attended the Mityana diabetes clinic, could speak and read English, and agreed to contact another patient with diabetes (partner) at least weekly. Champions were educated in diabetes self-care and supportive communication skills. At a second community meeting champions (n=19) and partners (n=27) received diabetes self-care education and were assigned to pairs or triads. Telephones linked to a pre-paid network were given to link participants and healthcare providers. At a post-intervention meeting 4 months later, 16 champions and 25 partners completed measures and shared experiences. There was no change in scores on a 5-item diabetes coping scale, a 14-item barriers scale, reported physical activity or missing medications. Perceptions of social support from family and friends and ratings on "confidence in managing diabetes" significantly decreased (p=.03 and p=.02 respectively) while eating behaviors improved (p<.001); 77.8% reported contacting the clinic and healthcare providers more often than prior to the intervention. The mean A1C significantly dropped (p<.05) from 9.8% to 6.8%. Eighty percent of participants indicated that the most helpful aspects of peer support were 'advice about taking care of diabetes' and 'encouragement to contact the clinic'. Participants liked using pre-paid telephones and receiving written material about diabetes self-care, despite 92% reporting difficulty reading because of poor eyesight. In conclusion, both providers and partners were actively engaged in a program that resulted in improved A1C and linkages with healthcare providers. Other results may be explained by cultural and contextual factors present in a resource-poor setting.

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Symposium 35C 3120

THE AUSTRALASIAN PEERS FOR PROGRESS DIABETES PROGRAM: IMPORTANT FEATURES AND POTENTIAL FOR TRANSFER TO OTHER COUNTRIES

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Diabetes Australia-Victoria (DA-Vic) is a very well established NGO that has sustained a community network (ComNet) of support groups for people with diabetes for more than a decade. They aim to convey expert information about diabetes and to provide social support to members. Building on this experience, the Australasian Peers for Progress Diabetes Program (PfP-DP) is implementing and evaluating a peer-led program to improve daily management, social and emotional support, and linkage to clinical care for people with type 2 diabetes (T2DM). The intervention trial involves 12 groups of 8-12 people led by lay peer leader(s), who receive training in group facilitation, communication, goal setting and motivational skills. More than 250 group participants and 35 group leaders have been recruited so far. Groups are meeting monthly for 12 months, during which time participants review difficulties with their diabetes care, discuss successes and achievements. Support is sustained through individual contact and interaction between sessions. The control (waitlist) arm comprises 12 "virtual" groups of similar composition who do not meet and receive their usual care until after the first 12 months. All study participants, and peer leaders, receive 1-day of basic diabetes self-management education prior to intervention groups commencing. Primary outcome is based on cardiovascular risk score (using the UKPDS equations) at baseline, 12 and 18 month follow up. Secondary outcomes include self-care behaviors, psychosocial functioning and quality of life. The program is also undergoing an economic evaluation. The program partnership with an NGO and program delivery by volunteer, lay peer leaders trained to support behavior change in people with T2DM could enhance program transfer to other countries within the Asia Pacific region, where lay workers and community health workers are already integral to delivery of primary health care services.

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Symposium 36 3:45 PM–5:15 PM 3121

SCALING-UP EVIDENCE-BASED HEALTH PROMOTION/DISEASE PREVENTION INTERVENTIONS

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Over the past few decades, researchers, funding agencies, and community organizations have worked together to develop evidence-based health promotion/disease prevention interventions with the potential to achieve considerable impact in public health. Moreover, recent work in dissemination and implementation science has begun to identify effective strategies for spreading interventions beyond research trials and into real-world settings; such efforts, however, have been limited in size and scope. Despite advances in intervention development and dissemination and implementation science, evidence-based programs will fail to improve population health unless they are scaled-up at the national level. The objective of this symposium is to highlight key issues involved in advancing the science and practice of scaling-up evidence-based health promotion/disease prevention interventions. Specifically, this symposium will include: (1) a review of the evidence-base on scaling-up health promotion/disease prevention interventions; (2) a description of an ongoing, multi-agency initiative and set of research, practice, and policy activities to advance scale-up, including a recent state-of-the-art conference; (3) a description of methods, results, challenges and lessons learned from scale-up activities initiated by researchers and agencies; and (4) a discussion of next steps for advancing scale-up in public health. These objectives will be accomplished through an introductory presentation on the topic, two case study examples, and a facilitated discussion with panelists and session attendees led by representatives from key research, funding, and health delivery organizations.

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Symposium 36A 3122

SCALING-UP HEALTH PROMOTION/DISEASE PREVENTION INTERVENTIONS: RECENT PROGRESS AND ONGOING ACTIVITIES

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Researchers, practitioners, funding agencies, and delivery organizations have made substantial progress in developing evidence-based health promotion/disease prevention interventions with the potential to achieve considerable improvement in public health. Despite the availability of effective programs, however, few are disseminated widely and routinely implemented into everyday settings. To reduce this research-to-practice gap, the past decade has witnessed a steady increase of research in dissemination and implementation. Systematic efforts to achieve more rapid, more reliable implementation of effective programs, however, have focused largely on individual organizations and small communities of adopters. The potential of interventions to have an impact at the population level will remain unrealized unless scale-up at the national level is achieved and sustained.

This presentation will provide an introduction to the topic of scale-up, including a review of existing (albeit limited) literature, frameworks, and definitions. Next, we will describe a set of activities that were launched during 2010 as part of an ongoing, multi-agency initiative to advance the science and practice of scale-up. These activities will be described in detail, and include a state-of-the-art conference with 100 research, practice, and policymakers; a webinar series; listserv discussions; publications; and associated meetings and presentations with stakeholder agencies in the U.S. and abroad. We will also discuss some of the key challenges in scale-up research (e.g., methods, funding, and grant timeframes) and scale-up practice (e.g., multi-agency collaboration, prioritizing and bundling interventions, political support, infrastructure, training, and sustainability), as identified by state-of-the-art conference attendees. Finally, we will provide suggestions for ways in which researchers, policymakers, and practitioners can become more involved in the initiative and work collectively to advance the field.

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Symposium 36B 3123

SCALE-UP RESEARCH: CHALLENGES AND LESSONS LEARNED FROM THE POOL COOL DIFFUSION TRIAL

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Skin cancer is highly prevalent but is preventable. Pool Cool is a multi-component, evidence-based intervention that has shown significant positive effects on children's sun protection behaviors and on sun-safety environments at swimming pools. From 2003 to 2006, the Pool Cool diffusion trial evaluated the effects of two strategies for program diffusion on: 1) implementation, maintenance, and sustainability; 2) sun-safe policies and environments; and 3) sun protection habits and sunburns among children. The study used a three-level nested experimental design at over 400 pools in the US. Regions were randomized to Basic or Enhanced (reinforcement plus feedback) diffusion conditions. Survey data were collected at the beginning and end of each summer. An independent process evaluation was conducted each year, using site visits and telephone interviews with key informants at 120 participating pools. Process evaluation data provided information about program implementation, pool environments and staff sun-safety practices.

There were many challenges associated with conducting this large-scale dissemination research trial. First, a long-term commitment to engage with national and local community partners was at the foundation of this work. Second, we were committed to using the research support to achieve multiple aims - not just to accomplish widespread dissemination. Thus, we sought to learn as much as possible about multiple aspects of dissemination and implementation research; to benefit communities and researchers; and to facilitate training of the next generation of health researchers during the study. Key challenges to conducting research with hundreds of sites across the U.S. included obtaining a good response rate and high quality data; ensuring integrity of the data; prompt data processing; and triangulating the process and outcome evaluations. Based on our experience, we provide suggestions for research teams that are interested in pursuing this challenging yet critical type of work.

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Symposium 36C 3124

SCALE-UP PRACTICE: CHALLENGES AND LESSONS LEARNED FROM CDC'S DIFFUSION OF EFFECTIVE BEHAVIORAL INTERVENTIONS PROJECT

Charles B. Collins, PhD

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Implementation of evidence-based HIV prevention plays a role in reducing HIV. The CDC's Division of HIV/AIDS Prevention initiated a project to (1) identify efficacious interventions, (2) translate them into user-friendly formats, and (3) disseminate them into practice. The CDC identified 59 efficacious interventions for HIV prevention through meta-analysis and is disseminating 26 interventions through the Diffusion of Effective Behavioral Interventions (DEBI) Project. The interventions address prevention needs of gay men, heterosexuals, at-risk youth, prisoners, HIV positive persons, and injecting drug users. The presentation will provide: rationale of the project; summary of assessments conducted to assess interests and capacities; description of the diffusion products needed for dissemination, their purpose, approach employed to develop the products, and explanation of how they were used; description of the training and technical assistance activities; and overview of evaluation. Accelerators to scale-up include a customer-oriented approach, incentives, and adaptation guidelines. Challenges scaling-up implementation of evidence-based prevention practice at prevention agencies and clinics in the US included difficulty selecting interventions for risk populations, the need to build capacity of a diffusion system within the public health delivery system, and intervention complexity. Project successes include collaboration with over 950 city, county, state and territorial health departments as well as other federal agencies; translation of materials into languages other than English and dissemination to international settings. Future challenges include the task of reaching significant portions of at-risk US citizens and the need to integrate behavioral interventions with structural and biomedical interventions. The presentation has implications for scaling-up other disease prevention interventions.

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Friday
April 29, 2011
6:30 PM–8:00 PM

Poster Session C C-001

PREDICTING NON-COMPLIANCE AMONG AUTOLOGOUS HEMATOPOIETIC STEM CELL TRANSPLANT PATIENTS

Sarah Thilges, MS,[1] Patricia B. Mumby, PhD,[2] Cara Hurley, PhD,[2] Mekhala Samsi, PhD,[2] Mala Parthasarathy, MS[2] and Patrick J. Stiff, MD[2]

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BACKGROUND: AHSCT treatment regimens require a high degree of patient self-care including medications, dietary restriction, caloric goals, exercise, and avoiding crowds. Pre-transplant negative emotions have been associated with worse survival among transplant patients (Hoodin, 2006), possibly due to distress and non-compliance (Lee et al., 2005).

METHODS: This study examined non-compliance predictors of 151 AHSCT outpatients (M=65, F=86) at a Midwestern hospital. Prior to AHSCT patients completed the Symptom CheckList-90-Revised to assess mood and a clinic form collected psychosocial demographics. Compliance was documented by medical staff during treatment and was retrospectively reviewed to calculate total non-compliance.

RESULTS: Results indicate 80% (n=121) of the sample were non-compliant on one or more days, with significantly more non-compliance post than pre-transplant, $t(143)=-8.80$, $p<.000$. Overall, men were more likely to be non-compliant than women, $t(149)=2.43$, $p<.05$. This relationship was even more significant when looking at the influence of distress. Global distress, measured by the SCL-90-R, significantly interacted with gender to predict non-compliance, adjusted R2=.107; F3,135=6.54, $p<0.000$. Paranoid ideation interacted with gender to predict non-compliance, adjusted R2=.101; F3,135=6.17, $p<0.001$. The interaction of phobic anxiety and gender demonstrated a strong relationship with non-compliance, adjusted R2=.183; F3,135=11.29, $p<0.000$.

CONCLUSIONS: The results of this study are an important step in the process of understanding the relationship between gender, psychological distress and non-compliance in AHSCT patients. Research is necessary to further understand factors predicting non-compliance. Findings are of importance to medical practioners who work with AHSCT patients and highlight the need for early intervention for patients with psychological distress and those at increased risk for non-compliance.

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C-002

IMPACT OF TRANSIENT TREATMENT-RELATED APPEARANCE CHANGES FOR WOMEN WITH RECURRENT CANCER

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Objectives: Few studies have investigated the unique needs of recurrence cancer patients. Past research has explored the effects of appearance changes during cancer, but studies have not explored their impact at recurrence, when women often undergo multiple rounds of treatment and face a worsened prognosis. This qualitative study uses data from semi-structured interviews to describe the relevance of appearance changes for patients' experiences, as well as coping strategies. Results were used to aid in designing a psychological intervention tailored for recurrence patients.
Methods: Interviews were conducted with women (N=35; mean age=61; 89% Caucasian) diagnosed with recurrent breast (n=17) or gynecologic (n=18) cancer. Participants were asked to describe the challenges they faced after their recurrence and the coping strategies they found helpful. Relevant comments were identified in transcripts (using coding in Atlas.ti) and reviewed for analysis. A theme that emerged in analyses involved transient appearance changes, such as hair loss, dry skin, puffiness, swelling, or other visible signs of current treatment.
Results: Women described treatment-related appearance changes as reminders of their illness. Because their appearance made them look ill, women felt that others treated them as if they were sick or even dying. Some women stated that visible changes violated their privacy, publicizing their disease. The most common coping techniques included: preparation through pre-treatment education; wearing wigs; and communicating with others about the discordance between appearance changes and health.
Conclusion: Because they are transient and unrelated to mortality, the medical community may dismiss the impact of treatment-related appearance changes. In fact, these changes can force a shift in women's self-views and in interpersonal dynamics. Our qualitative analyses identified (1) preparation and understanding of appearance changes and (2) management of others' reactions as treatment targets for psychological intervention.

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C-003

EXAMINING CANCER RISK PERCEPTIONS AMONG PATIENTS WITH NEUROFIBROMATOSIS

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INTRODUCTION. Neurofibromatosis (NF1) is the most common neurogenetic disorder worldwide, affecting 90,000 people in the U.S. Benign cutaneous neurofibromas are the hallmark of this disease, but compared to the general population patients with NF1 are at 100 times increased risk for developing malignant peripheral nerve sheath tumors (MPNST) and brain cancer. Study objectives are to examine 1) NF1 patients' perceived risk of developing MPNST and brain cancer and 2) the psychometric properties of a perceived cancer risk measure.
METHOD. This study is part of an ongoing survey of patients at the NF Clinic at Massachusetts General Hospital. We assessed patients' perceived personal and comparative risk for MPNST and brain cancer using 8-items scored on a 5-point likert scale. A principal components analysis (PCA), with varimax rotation, was conducted. A total risk score was computed from a sum of the items (low-high; range=8-40) and compared to emotional distress [depression (CESD), stress (PSS), and anxiety (STAI)].
RESULTS. To date, 84 patients with NF1 (M age=39.9 years; 60% female) have participated. 35% and 47% of patients disagreed that they were at increased risk for MPNST and brain cancer, respectively, because they had NF1. Results of the PCA yielded a 2-factor solution with an MPNST and brain subscale (subscale alphas each=.89). The total perceived risk score did not differ between men and women [21.7 (SD=8.0) vs 21.4 (SD=6.8); p=.85]. For females, perceived risk was associated with emotional distress; those with elevated stress, anxiety and depression had higher perceived risk ($ps<.05$).
CONCLUSIONS. NF1 patients underestimate their risk of developing MPNST and brain cancer, malignancies for which they are at high relative risk. NF1 patients' risk perceptions were not knowledge-based and, for females, appeared influenced by emotional distress. We developed an 8-item perceived risk cancer measure that demonstrated internal consistency and could be used as a clinical tool to facilitate provider-patient risk communication.

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C-004

PRE-SURGICAL PERCEIVED STRESS PREDICTS FEBRILE STATUS FOLLOWING ONCOLOGIC SURGERY

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Elevated pre-surgical psychosocial distress is associated with less favorable clinical surgical outcomes among heterogeneous surgical populations. However, research examining these relations in oncologic surgical populations, whose surgical recovery trajectories may differ from benign surgical populations, has been limited. For example, women with endometrial cancer are at an elevated risk for complicated post-surgical recovery due to high rates of medical comorbidities. Thus, the present study prospectively examined the relationship between pre-surgical perceived stress and post-surgical febrile status, a clinically meaningful index of surgical outcome, in women undergoing total abdominal hysterectomy with bilateral salpingo oophorectomy (TAH-BSO) for endometrial cancer, the most common gynecologic cancer. 73 women scheduled to undergo TAH-BSO for suspected endometrial cancer underwent pre-surgical assessment of perceived stress. Data on febrile status were abstracted from inpatient medical records. Participants were a mean of 60.90 (SD=9.26) years old and the majority of participants (63.0%) were diagnosed with stage I tumors. 12.3% of participants experienced a febrile episode during acute post-surgical hospitalization. Logistic regression revealed that, when controlling for age and medical comorbidity score, greater perceived stress significantly predicted greater likelihood of post-surgical febrile episode, odds ration (OR)=1.13 (95% CI=1.02-1.24), $p<.05$. The findings provide support for the relationship between pre-surgical psychosocial functioning and febrile status, a clinically meaningful index of post-surgical outcome following oncologic surgery. Given that fever is the most commonly reported complication among women undergoing hysterectomy, as well as its association with less favorable and more costly surgical outcomes, future research should explore potential biological mechanisms of this relationship. Future research examining pre-surgical psychosocial stress management interventions may also be warranted.

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C-005

GENETIC SENSITIVITY TO BITTER TASTE, DIETARY INTAKES, AND COLORECTAL ADENOMA RISK

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Genetic sensitivity to bitter-tasting compounds (6-n-propylthioracil; PROP) is linked with a decreased preference for fruits/vegetables and hypothesized, consequently, to increase colorectal adenoma risk. The aim of our study was to test the association of genetic sensitivity to bitter taste with fruit, vegetable, and alcohol intakes, and colorectal adenoma risk. To assess genetic sensitivity to bitter-taste we evaluated five variants in three genes in the TAS2R bitter-taste receptor family; TAS2R50 (rs1376251), TAS2R38 (rs713598, rs1726866, rs10246939), and TAS2R16 (rs860170) in a case-control study (cases/controls=914/1188) comprised of Whites, Japanese, and Hawaiians from Hawaii. Analysis of covariance was conducted to detect trends in mean dietary intakes across TAS2R genotypes/haplotypes. Odds Ratios and 95% Confidence Intervals were estimated by logistic regression to evaluate the association between TAS2R genotypes/haplotypes and adenoma risk. All analyses were adjusted for age, sex, and race. Contrary to the hypothesis, the genotypes conferring increased sensitivity to bitter taste were associated with higher intakes of all vegetables and cruciferous vegetables (TAS2R50, p trend=0.005 and TAS2R38, p trend=0.047). However, among never smokers, lower intakes of white wine were associated with increasing sensitivity to bitter taste (TAS2R16; p=0.001). Overall, null associations were observed between TAS2R genetic variants and adenoma risk. Among Hawaiians, who were never smokers, the TAS2R16 heterozygous genotype was associated with a 62% reduction in adenoma risk versus those with the non-bitter taster genotype (95% CI, 0.20-0.73; p=0.004). This effect remained significant after adjusting for alcohol, fruit, and vegetable intakes (p=0.003). Our findings do not support the hypothesis that those who are sensitive to bitter taste are at a greater colorectal adenoma risk through a decreased fruit/vegetable intake. In contrast, we found that sensitivity to bitter taste might influence dietary intakes in a way that could decrease colorectal adenoma risk in some populations.

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C-006

LONG-TERM BREAST CANCER SURVIVORS: DIFFERENCES BY SEXUAL ORIENTATION

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Health-related quality of life, anxiety, and depression after diagnosis and treatment for breast cancer are important indicators of survivors' adjustment and recovery. In the general population, sexual minority women, defined as lesbians or bisexuals and women who report a preference for a female partner, have worse mental health compared to heterosexual women. In the context of breast cancer survivorship, sexual minority status has hardly been researched as an explanatory factor for poor adjustment. We used a cancer registry and convenience recruitment methods to recruit long-term healthy survivors of primary non-metastatic breast cancer for a telephone survey. Anxiety and depression was determined by the Hospital Anxiety and Depression Scale, and health-related quality of life by the SF-12 derived physical and mental summary scores (PCS, MCS). Linear regressions via stepwise variable selection were used to identify significant predictors for each outcome. There was no significant bivariate association between sexual orientation and any of the outcomes. After forcing sexual orientation into the model, age, personal income, and neighborhood income were negatively, mood stabilizing medications and surgical treatment positively associated with anxiety. Similarly, depression was negatively associated with age, income, employment, but positively with comorbidities and mood stabilizing medications. After controlling for sexual orientation, PCS was negatively associated with hormone therapy, comorbidities, living in neighborhoods with greater poverty levels, but positively with education and personal income. Controlling for sexual orientation, MCS was positively associated with age and employment. These findings indicate that adjustment and recovery of survivors of different sexual orientations is associated with treatment-related factors and individual characteristics, but not sexual orientation. Future research is needed to examine why sexual minority women are similar to heterosexual women in their adjustment and recovery from breast cancer, whereas differences by sexual orientation exist among non-cancer populations.

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C-007

ASSESSMENT OF CANCER CARE NEEDS IN HARLEM COMMUNITIES

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BACKGROUND: In the largely Hispanic and African American communities of East and Central Harlem in New York City (NYC), health inequities and the social inequities that contribute to them are glaring. For example, the mortality from cancer and overall mortality rates are 30% and 45%, respectively, higher than rates of NYC's general population. From an epidemiological perspective, it is critical to explore factors affecting the disparate rates of cancer screening and early detection and how they translate into cancer-related diseases for African American and Hispanic populations in the U.S, including the Harlem communities of NYC, where strikingly disparate rates of cancer continue to be evident.
PURPOSE: While previous studies have been thorough in their attempt to measure and determine the prevalence of problems and focused on testing interventions for their effectiveness, they have also been limited in their scope. This study sought to work in partnership with East and Central Harlem community leaders and residents to understand the problems at a local level with the goal of developing innovative ways to overcome cancer disparities, thereby reducing the burden of cancer.
METHODS: Guided by community-based participatory research principles and practices, a needs-based assessment was conducted. Key informant interviews with community leaders were used to identify and establish priorities for reducing cancer disparities in the context of community strengths and resources. A number of common themes emerged as areas of importance, including a need for more cancer supportive services and addressing the challenges of navigating the medical system and follow-up after receipt of a diagnosis.
SIGNIFICANCE: Despite the many advances in cancer, individuals in Harlem and similar low-income urban communities are not benefiting proportionately from these advances. This study serves as an important first step in understanding the range of factors that impact the disparate rates of cancer screening and early detection in the East and Central Harlem communities of NYC.

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C-008

VISITORS TO PERSONAL WEBPAGES OF WOMEN WITH BREAST CANCER: WHO, WHY, AND WHAT COMES NEXT?

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PURPOSE: Survey data were collected from visitors to personal webpages (i.e., blogs) written by breast cancer patients to examine who visited the websites, primary reasons for reading the webpages, and whether visitors planned to take any specific action after visiting the websites.
METHODS: Self-report data were collected from 66 visitors to websites written by breast cancer patients (n=46) who participated in a randomized, controlled intervention to develop personal webpages (Project Connect Online).
RESULTS: 72.7% of visitors were first time visitors; of those returning, visitors had viewed the website on average 4.53 times previously (range=1-20). Visitors were 92.3% female and 83.3% of visitors knew the website author personally. Relationships to the website author were 49% friends, 14% extended family member, 11% sibling, 11% acquaintance, 11% woman with breast cancer, 2% daughter/son, 2% co-worker, 0% parent, 0% spouse/partner, and 2% other relationship. On Likert-type scales ranging from 1 to 5, visitors reported that the websites were "very useful" for providing an update on the author's health (M= 4.29, SD=.81) and for helping the visitor feel close to the author (M=4.18, SD=.89). Visitors reported being "very likely" to visit the website again (M=4.44, SD=.90), to write an email/post to the author (M=3.97, SD=1.11), to contact the author through other means such as phone call or letter (M=3.82, SD=1.24), and to offer help to the author (M=3.86, SD=1.16).
CONCLUSION: Breast cancer websites were most commonly read by female friends of the authors who valued the websites as a way to connect with the authors and receive information about their health.
RESEARCH IMPLICATIONS: Visitors to breast cancer websites can provide an additional source of data about the consequences of personal website use as an intervention to increase social support for cancer patients and survivors.
CLINICAL IMPLICATIONS: Personal websites may aid women with breast cancer by fostering connection with individuals outside the family and bolstering social support during treatment and survivorship.

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C-009

FEASIBILITY OF PROMOTING COLORECTAL CANCER SCREENING IN AN ONLINE COMMUNITY THROUGH NARRATIVES

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Narrative communication may be a useful tool for promoting colorectal cancer screening (CRCS) among members of online communities, but the feasibility of this strategy has not been evaluated. Therefore, we surveyed members of an online weight loss community who were eligible for CRCS to assess their interest in sharing and receiving narratives for CRCS. We conducted multivariable models with demographics and CRCS attitudes (strongly agree, agree, disagree, strongly disagree) as predictors; and interest in sharing and receiving narratives as outcomes. The 2508 respondents were 92% female and 90% white; 68% were up-to-date with CRCS. Among those who were up-to-date, interest in sharing their CRCS narratives (39%) was associated with perceived susceptibility to CRC (OR 1.2, 95%CI 1.0-1.5), self-efficacy for CRCS (OR 1.2, 95%CI 1.0-1.5), and African American race (OR 1.9 compared to white, 95%CI 1.0-3.3); and inversely associated with CRCS worries (OR 0.7, 95% CI 0.6-0.9), age (OR 0.8 per year, 95%CI 0.7-0.9), and being married (OR 0.7, 95%CI 0.6-0.9). Among those not up-to-date, interest in receiving CRCS narratives (63%) was directly associated with perceived salience of CRCS (OR 1.9, 95%CI 1.3-2.7), CRC worries (OR 1.2, 95%CI 1.0-1.6), social influence of others (OR 1.5, 95%CI 1.0-2.3), and inversely associated with age (OR 0.9, 95%CI 0.7-1.0). In conclusion, we identified members of this online community who were up-to-date with CRCS and interested in sharing CRCS narratives, as well as members who were not up-to-date and interested in receiving narratives. Knowledge of CRCS attitudes in both groups will help us coach the narrators to develop engaging and relevant stories for members who are not up-to-date with CRCS.

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Meritorious Poster

C-010

EFFICACY OF THE SURVIVOR HEALTH AND RESILIENCE EDUCATION (SHARE) PROGRAM TO INCREASE SUN SAFETY PRACTICES AMONG ADOLESCENT SURVIVORS OF CHILDHOOD CANCER

Elissa Gerfen, BA,[1] Darren Mays, PhD, MPH,[1] Jessica Donze Black, MPH, RD,[2] Revonda Mosher, MSN, CPNP,[3] Kenneth P. Tercyak, PhD[1] and Aziza Shad, MD[1]

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Survivors of childhood cancer are at increased risk for developing secondary cancers, and many young survivors engage in behaviors that further enhance cancer risk. Interventions are needed within this population to promote cancer risk-reducing practices, such as sun safety behaviors. However, little evidence of intervention program success exists for this special population.

To describe sun safety practices of a sample of adolescent survivors of childhood cancer relative to healthy peers, and to test the efficacy of the Survivor Health and Resilience Education (SHARE) program on sun safety outcomes.

Survivor teens (M age=14.2, 74% white, 52% female) were randomly allocated to a group-based health behavior intervention (n=38) or wait-list control (n=37), completing pre-treatment and 1-month follow-up assessments examining multiple health behaviors including sun safety. Repeated measures ANCOVA was used to examine differences between study groups in change in sun safety practices over time, controlling for potential gender and seasonal effects.

Survivors' pre-treatment sun safety practices (M=24.8, SD=4.9) were comparable to a demographically matched sample of healthy peers (M=23.2, SD=6.0). After adjusting for gender and season of treatment (fall/winter vs. spring/summer), a significant group x time interaction was observed (F 1,61=8.82, p=0.004): participants in the SHARE intervention evidenced significantly greater increases in sun safety at follow-up relative to control participants.

Adolescent survivors of childhood cancer display suboptimal sun safety practices, similar to the general teen population. The SHARE program was efficacious at producing short-term increases in adolescent survivors' sun safety. Research is needed to examine the lasting effects of this promising intervention approach on young cancer survivors' health promotion.

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C-011

HOW CAN WE MOVE FORWARD IF WE DON'T KNOW WHERE WE ARE IN PROVIDING MENTAL HEALTH SERVICES (MHS) TO HEMATOPOIETIC CELL TRANSPLANT (HCT) PATIENTS?

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In light of many studies documenting psychological distress among HCT patients, the Joint EBMT/CIBMTR/ASBMT Recommendations (2006) created a new standard of care calling for routine screening for psychological difficulties during transplant and at key intervals thereafter. However, little is known about the care that is currently being delivered. The aim of our study was to provide a framework for improving care to meet the Joint Recommendations by determining where, when, and from whom survivors actually receive MHS. Recruited via websites frequented by HCT patients, a cross-sectional nation-wide US sample (n=478) completed our online survey. Participants (*m* age=52.8 years) were predominantly female (58.3%), white (92.3%), and well educated (52.3%≥16 years). Participant MHS utilization was examined over a variety of treatment types and service providers before, during (days 0 - 90), shortly after (days 91 - 730), and long after transplant (>731 days). MHS use was reported by 39.5% of the sample at some point in time. Of this subset, 26.6% reported seeking the help before transplant, 11.9% during, 24.8% after, and 36.7% long after HCT. MHS recipients most frequently received services from social workers before (19.2%) and during transplant (20.3%), but from support groups (13.2%) after transplant, and from both support groups (8.6%) and psychologists (8.6%) long after transplant. Among MHS recipients, 57.7% reported using more than one professional. Of these multiple providers, psychologists were rated the most helpful by 43%; social workers by 24%; psychiatrists by 20%; other MHS professionals by≤7%. The majority of the most helpful providers (67.1%) were reported to be community- rather than hospital-based. Overall, our findings suggest MHS utilization patterns change throughout the transplant process. Thus, the most cost effective approach to enhancing MHS delivery in order to meet the Joint Recommendations may be to target types of services to the unique needs of each stage in the transplant trajectory.

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C-012

BREAST, CERVICAL AND PROSTATE CANCER SCREENING BEHAVIOR AMONG AFRICAN IMMIGRANTS IN MINNESOTA

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Introduction: National cancer screening guidelines for breast, cervical and prostate cancer are currently established to decrease the morbidity and mortality from these cancers. Immigrant populations are known to have decreased screening rates compared to non immigrant populations in the United States (US). Minnesota has the ninth largest population of African immigrants nationally estimated 80,000 to 98,000.

Methods: A cross sectional survey of a community based sample was conducted to determine a variety of health behaviors among African immigrants (Somali, Oromo and Liberians). The survey was conducted by New Americans Community Services (NACS) from 2006 to 2007. One adult≥18 years was interviewed from a total of 1009 households. Participants were asked about whether or not they have ever been screened and when they were last screened for breast, cervical or prostate cancer. The main outcome screening measures were Papanicolau smear (Pap) test, mammography and digital rectal examination (DRE). Logistic regression was performed to assess the relationship between no cancer screening and the potential factors associated with screening.

Results: Among eligible women, 42% never received a mammogram and 40% never received a Pap test. 52% of males never received a DRE within the recommended guidelines. Over 48% of Somali African immigrants never screened for breast, cervical or prostate cancer. Approximately 60% of the participants prefer to discuss health issues in languages other than English. Duration of residence in the US, cost of health insurance premium, age and ethnicity were significant predictors associated with non-screening.

Conclusion: Results obtained in this study suggest alarming low rates of breast, cervical and prostate cancer screening among African immigrants in Minnesota. Programs to enhance screening rates among this population must begin to address barriers identified by the community.

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C-013

PREDICTING OUTCOMES FROM CLUSTER PROFILES WITHIN STAGES OF CHANGE FOR SUN PROTECTION BEHAVIOR

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Transtheoretical Model-based tailored interventions can be developed using cluster subtypes within each stage of change as a basis of tailoring. The subtypes within the Precontemplation (PC), Contemplation (C), and Preparation (PR) stages were established and replicated in a series of studies. This study investigated the predictive validity of subgroups at 12 and 24 months. The ability of the profiles to predict outcomes was measured by identifying stage transitions to Action or Maintenance stages after the intervention. The sample (N=1042) is a portion of data collected from a larger, multiple behavior intervention study of primary care patients. Participants selected were at risk of sun exposure. The stage distribution at baseline was N=570 for PC, N=213 for C, and N=259 for PR. The stage distribution at 12 months was N=380 for PC, N=127 for C, N=146 for PR, and N=111 Action (A) and Maintenance (M). At 24 months, the stage distribution was N=344 for PC, N=115 for C, N=138 for PR, and N=118 for A and M. The Sun Protection Behavior Scale, SPF of sunscreen used, and tanning booth usage were used to assess behavioral differences between the subgroups. ANOVA and Chi-square were used to analyze differences between subgroups and stage transition at 12 and 24 months. Clusters that resembled advanced stages reported more sun protection behaviors than profiles that resembled earlier stages. Differences were in the direction expected with the exception of SPF of sunscreen reported in the Contemplation stage and no difference between subgroups in sunscreen usage within Contemplation at 24 months. There was no significant difference in tanning booth use within stages. Clusters that resembled advanced stages in general reported a greater rate of progress to Action and Maintenance than profiles that resembled earlier stages. Stage transition occurred in the direction expected with the exception of the Classic Contemplators and Early Contemplators groups. Results support the use of cluster subtypes for interventions for sun protection.

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C-014

DO ACUTE EXERCISE EFFECTS PREDICT SUCCESS IN A 14 WEEK EXERCISE-AIDED SMOKING CESSATION PROGRAMME?

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Cigarette smoking is the most preventable health problem in the developed world. It is associated with an increased prevalence of lung cancer and many other illnesses. Despite this, most smokers find it difficult to quit. An acute exercise session has been shown to temporarily relieve smoking desire, cravings and withdrawal symptoms in temporary abstainers. Evidence also suggests that an exercise-aided smoking cessation intervention increases the likelihood of quitting. However, the relationship between acute exercise relief and cessation success has not been examined. The purpose of this study was to determine whether the magnitude of smoking cravings and withdrawal relief experienced following an acute exercise session relates to future success in a 14 week exercise + nicotine replacement therapy (NRT) intervention.

Female smokers (N=60) trying to quit with the 14 week Getting Physical on Cigarettes trial took part in this study. At baseline a measure of breath carbon monoxide (CO), smoking history, nicotine metabolism, and motivation to quit was obtained. During week four, participants commenced a quit smoking attempt and started a ten week NRT programme. After abstaining for four days (confirmed by CO levels <10 ppm) they completed the Shiffman-Jarvik Withdrawal and Craving Scale pre- and post- exercise (20 minutes at a moderate intensity). Following the acute intervention participants continued with the programme. Abstinence was confirmed at week 14 (CO levels <10 ppm, 62% were smoke-free).

Repeated Measures ANOVAs were used to compare week 14 smoking status with pre- and post-exercise cravings and withdrawal. There was a significant time effect for both cravings ($p<0.001$) and withdrawal ($p<0.001$), indicating participants received relief following the acute exercise session. The interaction was not significant between smoking status and cravings or withdrawal.

Findings suggest that quit success in a 14 week exercise-aided smoking cessation intervention cannot be predicted by the degree of relief experienced during an acute exercise session.

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C-015

HEALTH GOALS OF POST-TREATMENT COLORECTAL CANCER SURVIVORS: AN INTERNET SURVEY

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Introduction: This study examines the health-related goals of post-treatment colorectal cancer (CRC) survivors.

Methods: We recruited CRC survivors via online cancer networks and organizations to participate in an Internet survey. Respondents were asked to complete a survey describing health goals, evaluating their personal relevance and importance, perceived healthcare providers' importance, and if they had taken any action to achieve the goals. Goals were ranked based on frequency and mean score. Fisher's exact test (FE) was used to evaluate proportional differences between patients taking action to achieve a goal and patient/provider importance.

Results: Subjects included 87 predominately white, female CRC survivors. The most prevalent goals consisted of health behaviors (i.e., eat a healthy diet and engage in physical activity). Goals identified as most important to the patient and perceived to be important by providers were associated with cancer care (i.e., keep up with health screenings and monitor symptoms). Patients frequently reported taking action on goals related to cancer care. The goals most frequently reported as important to patients associated with taking action included: get back to normal (FE =9.747, p=0.032), manage weight (FE=9.794, p=0.012), monitor symptoms (FE= 6.979, p=0.026), manage cancer treatment side effects (FE=8.413, p=0.011), manage/get rid of pain (FE=16.23, p<0.001), and resolve health issues (FE=9.303, p=0.008). Patients were more likely to take action to achieve the goal keep up with all health screenings if a provider told them it was important (FE=7.25, p=0.022).

Conclusions: The most prevalent health goals included health behavior change goals, although patients ranked cancer care goals as most important and took action to achieve these goals. Healthcare providers' recommendations may be a powerful resource to encourage survivors to engage in health-promoting behaviors.

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C-016

TARGETING THE TEACHABLE MOMENT: RESULTS OF A PILOT TEST OF A LIFESTYLE INTERVENTION FOR BREAST CANCER SURVIVORS

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Breast cancer (BCa) survivors remain at heightened risk of recurrence, second primary cancers, obesity, and functional decline, and most do not meet recommended levels of healthy diet and exercise. We developed a mail-based Targeted Teachable Moment Intervention (TTMI) based on social-cognitive theory and American Cancer Society guidelines (2006), to directly address physical and psychosocial issues of breast cancer survivorship and to channel motivation for healthy eating and exercise behavior change. We compared TTMI to a standard lifestyle management intervention (SLM) in 10 women following primary BCa treatment; they received bimonthly materials and reported on diet and exercise goal progress. Participants completed self-report measures at baseline, intervention end (4 mos) and follow-up (6 mos). At baseline, the sample did not meet goal behavior in daily fruit/vegetable (F/V) and fat consumption or activity. Although underpowered, preliminary findings indicate modest effects. TTMI increased F/V servings and maintained gains through follow-up, whereas SLM dropped in F/V over treatment but regained losses by follow up. Both groups were below 30% of daily calories from fat by follow up. Activity levels displayed large variability; although TTMI appeared to increase substantially, group differences were non-significant. Nearly all participants reported satisfaction with the program and felt helped and motivated to continue goal behaviors. TTMI reported greater help from the program in increasing F/V (p=.021) and activity (p=.084), and greater tangible social support (p=.082) and self-efficacy (p=.065) relative to the SLM group at follow up, and self-efficacy related to greater F/V consumption (p=.039). TTMI appears to be a highly acceptable and potentially effective intervention in promoting adaptive lifestyle change specifically targeted at BCa survivors at a teachable moment.

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C-017

EMOTIONAL PROCESSING AND SUBSEQUENT EMOTIONAL WELL-BEING IN LONGER-TERM CANCER SURVIVORS

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Cancer survivors often report high levels of social cognitive processing and expression as ways of coping with their cancer. Research findings regarding the effectiveness of these efforts at processing and expressing emotion in reducing distress have been mixed; such contradictory results may be due to issues of sample or measurement. In the present study, we examined the extent to which emotional processing and expression of one's cancer experience (Stanton et al., 2000) were related to other coping efforts (COPE; Carver et al., 1989) and their collective ability to predict positive and negative affect (PANAS; Watson et al., 1988) and well-being (Ryff, 1989). 172 young to middle-aged adult survivors (113 women, 59 men, mean age=45 years) of a variety of types of cancer who had been diagnosed approximately 2.5 years prior were assessed twice across a one year period. Results indicated that emotional processing and expression were modestly related to other types of meaning-focused and active coping (rs>.23). Emotional processing and expression were related to positive and negative affect as well as psychological well-being (rs>.27, ps<.05). In multiple regression analyses controlling for demographics and other types of coping, both emotional processing and expression predicted positive and negative affect and well-being; most effects held when controlling for Time 1 levels of affect and well-being. These results suggest that in cancer survivors segueing into longer term survivorship, emotional processing and expression are adaptive ways of coping.

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C-018

PREDICTORS OF TRAUMATIC GRIEF IN INDIVIDUALS AT HIGH RISK OF PANCREATIC CANCER

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Traumatic grief (TG) has been examined in close family members of individuals who have died from cancer, however few studies have examined TG in individuals at high-risk of hereditary cancers. Pancreatic cancer, which has a survival rate of less than 5%, is recognized to run strongly in families (Grover & Syngal, 2010). This study examined psychosocial and contextual predictors of TG in a sample of high-risk individuals participating in a pancreatic cancer screening intervention. Psychosocial and contextual variables were predicted to contribute to TG, beyond the contribution of demographic variables. Participants (N=120), who were part of a larger screening study, completed self-report questionnaires one year after their initial screening visit. A hierarchical multiple regression was performed with TG as the outcome variable (assessed by the Texas Revised Inventory of Grief- Present Feelings). Demographic predictors included age, gender and level of education; 'time since death' was examined as a contextual predictor; and psychosocial predictors included cancer-related distress, family communication, and cancer worry, as measured by the Impact of Events Scale, McMaster Family Assessment Device and Lerman's Cancer Worry scale, respectively. The final model accounted for 33% of the variance in TG (R2 adj=.326, p=.000). In step one, gender, age and level of education were entered; only less education predicted greater TG (β=-.312, p<.05) (R2adj=.088, p<.05). Step two included the psychosocial and contextual predictors. Less education (β=-.261, p<.05), female gender (β=.215, p<.05), less effective family communication (β=.26, p<.05), greater cancer worry (β=.241, p<.05) and less 'time since death' (β=-.308, p<.05) significantly contributed to greater TG, while cancer-related distress, interestingly, did not. The current study suggests that future interventions might target those with recent losses and address cancer worry and family communication.

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C-019

SUN PROTECTION REACTIONS TO UV PHOTOGRAPHY AMONG YOUNGER VERSUS OLDER WOMEN: EMOTIONAL REACTIONS VERSUS COGNITIVE THINKING

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Several research studies have demonstrated the positive impact of ultraviolet (UV) photography on sun protection cognitions (e.g., Gibbons et al., 2005; Mahler et al., 2003). However, previous research has not examined the impact of having younger and older participants focus on their emotional versus cognitive reactions in response to viewing their UV photo. The present study randomly assigned 80 women between the ages of 30 and 70 to write about either their cognitive/logical thoughts or their emotional reactions/feelings after seeing their UV photo. Perceived vulnerability (PV) to skin cancer, absent-exempt endorsement related to skin cancer, willingness to engage in sun-risk behaviors, and the number of sunscreen packets taken were then examined.

Multiple regression analyses were conducted to examine Age X Condition interactions on absent-exempt endorsement, sunscreen packets taken, PV, and willingness, controlling for past sun protection behaviors, skin type, and reports of skin cancer diagnoses. For absent exempt endorsement, the Age X Condition interaction (B=.46; p<.01) revealed that older women in the feelings condition reported the highest levels of the belief that if they have not gotten skin cancer by now, they will not in the future. This 2-way interaction was also significant for number of sunscreen packets taken and revealed that the older women in the feelings condition also took the lowest number of packets while those in the thoughts condition took the greatest number of packets (B=-.39, p<.05). The Age X Condition interaction was also significant for PV and willingness to engage in sun-risk behaviors (Bs=-.37, 32, ps<.05): older women in the feelings condition reported lower PV and higher willingness to engage in sun-risk behaviors compared to those in the thoughts condition. The opposite effect was found among younger women: participants in the feelings condition reported higher PV and lower willingness compared to those in the thoughts condition. These findings demonstrate the importance of examining the impact of both age and affective versus cognitive reactions to UV photographs on sun protection cognitions.

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C-020

PREDICTORS OF PSYCHOLOGICAL DISTRESS IN MOTHERS DIAGNOSED WITH CANCER

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Approximately 1.5 million individuals were estimated to be diagnosed with cancer in 2009. For women, particularly mothers who balance the demands of motherhood and family, the diagnosis and treatment of cancer may lead to significant distress. An estimated 24% of women diagnosed with cancer have children. Factors, such as demographic and illness-related variables, that may contribute to these elevations merit investigation. Research has found that family functioning is related to distress in pediatric cancer patients and family members of cancer patients, suggesting that family functioning may also be a factor related to distress in a maternal cancer population. Research is needed to identify how family functioning is related psychological discomfort in mothers diagnosed with cancer in order to inform prevention and intervention.

The current study examined the relationship between family functioning and psychological distress in mothers diagnosed with cancer. The sample consisted of 75 mothers who were diagnosed with cancer and had at least one child between the ages of 5-18 years. Mothers completed an assessment packet including demographic and illness-related questions, the Family Assessment Device (FAD), and the Hospital Anxiety and Depression Scale (HADS). Correlational analyses revealed that, among demographic and illness related variables, stage of cancer (r=.28, p=.03) and income (r=-.38, p=.001) were significantly related to scores on the HADS, with lower income and higher stage of cancer related to more distress. Furthermore, regression analyses revealed that the communication subscale of the FAD significantly predicted distress scores on the HADS when controlling for stage of cancer and income, Δ R2=.15, p=.001, F(3, 55)=9.60, p<.001, with higher levels of healthy communication predicting less distress. Marital status, race, age, and perceived social support were not significantly correlated with scores on the HADS. The results of this study point to the importance of evaluating family communication when mothers are diagnosed with cancer.

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C-021

PREDICTORS AND PATTERNS OF CANCER-SPECIFIC DISTRESS ACROSS THE CANCER TRAJECTORY

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A substantial portion of cancer patients develops cancer-specific, post-traumatic stress disorder-like symptoms, including intrusive thoughts, avoidance, and physiological arousal related to their cancer diagnosis and treatment during the early phase of survivorship. The extent to which this cancer-specific distress (CSD) becomes apparent independent of general distress (GD) and its correlates, however, remains unknown. Thus, this study aimed to examine the predictors of CSD and GD at the 6-month and one-year mark of the cancer trajectory.

Participants included 110 colorectal cancer patients recruited from five community hospitals. Participants were diagnosed with colorectal cancer within two months prior to participation in the study (T1). A total of 64 patients provided valid data on the study variables for all time points: T1, 6- (T2), and 12-month post-diagnosis (T3). Demographic (age, gender, ethnicity, and education) and medical (cancer stage) information was gathered at T1. CSD and GD were measured at 6 and 12 months post-diagnosis using the Impact of Events Scale-R and the POMS-SF, respectively.

Regression analyses revealed that none of the demographic and medical variables were related to CSD at T2 (all ps>.05), whereas higher GD at T2 was related to younger age (β=-.34, t(78)=−2.9, p<.01) and white ethnicity (β=-.22, t(78)=−2.0, p<.05). Furthermore, results from general linear modeling predicting CSD and GD at T3 simultaneously showed that CSD at T3 was only related to CSD at T2 [F(1,55)=36.7,p<.01] and GD at T3 was only related to GD at T2 [F(1,55)=57.1,p<.01], controlling for demographic and medical variables.

Findings suggest that predictors and patterns of cancer-specific distress and general distress during the early phase of survivorship are distinct. While general distress can be predicted primarily by demographic characteristics, predicting cancer-specific distress requires a more nuanced approach. Findings are informative to better guide development of programs designed to ameliorate different types of psychological distress during the period of early cancer survivorship.

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C-022

UNDERSTANDING POSTTRAUMATIC GROWTH AMONG INDIVIDUALS WITH CANCER: THE ROLE OF SOCIAL SUPPORT AND UNSUPPORTIVE INTERACTIONS

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A cancer diagnosis has the potential to be an extremely stressful experience for many individuals. Historically, the literature on stress and coping has focused on negative outcomes in relation to one's experience with cancer. Under-represented in the literature has been a theoretical framework that examines transformative experiences that may occur throughout the cancer experience. The current study assessed interpersonal variables that rarely have been investigated in relation to one's experience with cancer (i.e., received social support and unsupportive interactions) and their association with depressive symptoms, positive emotion, and posttraumatic growth (PTG) in a sample of men and women recently diagnosed with cancer. The research design was cross-sectional and self-report data were collected from 60 participants diagnosed with cancer on average 5.68 months prior to data collection (SD=3.34). Contrary to hypotheses, hierarchical regression equations indicated that received social support was not related to any of the outcome variables. However, even after controlling for time since diagnosis, unsupportive responses from a main support person were found to be significantly and positively related to participants' reports of depressive symptoms [ΔR2=.12, p =.01], and PTG [ΔR2=.13, p=.01] within the context of their cancer experience. A major contribution of the present study is that it called attention to the importance of studying unsupportive interactions separately from social support. Moreover, to our knowledge, this is the first study to investigate the relationship between unsupportive interactions and PTG in a sample of recently diagnosed cancer patients. Findings were surprising in that the more unsupportive responses individuals with cancer received from a main support person, the more PTG they reported in relation to their cancer experience. Important research and clinical implications for understanding the relationship between unsupportive interactions and PTG among individuals diagnosed with cancer are addressed.

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C-023

UNCERTAINTY PREDICTS DEPRESSIVE SYMPTOMS AND PERCEIVED STRESS IN LUNG CANCER PATIENTS

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More than 200,000 people are diagnosed with lung cancer in the U.S. annually. For most patients, treatments are not curative, with disease progression often occurring without notice or with vague symptoms. Given this unpredictability, we hypothesized that patients' depressive symptoms and perceived stress would be associated with higher general level of intolerance for uncertainty (GIU), higher perceptions of cancer-specific ambiguity (CSA), and the interaction of these variables. Lung cancer patients who were diagnosed at least 6 months previously completed the Center for Epidemiologic Studies-Depression Scale (CES-D), the Perceived Stress Scale (PSS), the Intolerance of Uncertainty scale (measure of GIU), the Mishel Uncertainty in Illness Ambiguity Subscale (measure of CSA), and Short-scale Eysenck Personality Questionnaire-Revised (neuroticism subscale). The sample (N=37) was 73% female, 72% white, and 43% married or living as married. Average age was 63.4 years (standard deviation [SD]=11.4). Average time since diagnosis was 29.9 months (SD =38.7), with 88% reporting advanced disease. Illness was rated as stressful by 76% of respondents, and 43% reported symptoms suggestive of clinical depression. Regression equations including GIU, CSA, the centered interaction term, and neuroticism reached significance in predicting CES-D and PSS, R^2s=.53 and .60, respectively. Specifically, high scores on the PSS were associated with high GIU (p =.021). Depressive symptoms were associated with the interaction (p=.035), such that patients high in both GIU and CSA reported more depressive symptoms than those with low GIU or low CSA. Findings suggest that individuals with lung cancer might benefit from interventions directed toward reducing or tolerating uncertainty. Given the high levels of distress reported, future research is needed on the psychosocial concerns of this understudied cancer population.

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C-024

FEASIBILITY OF LONGITUDINAL RESEARCH WITH DISTRESSED FAMILY CAREGIVERS OF LUNG CANCER PATIENTS

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Although cross-sectional studies have found high rates of significant distress (30% to 50%) among family caregivers of cancer patients (e.g., Kim et al., 2005; Siegel et al., 1996), the feasibility of conducting longitudinal research with distressed caregivers is largely unknown. Below, we document feasibility indicators from an ongoing study of psychosocial needs, barriers to accessing support services, and service preferences among distressed family caregivers of lung cancer patients.

Of the 140 lung cancer patients who were approached regarding this study, 97% (n=136) had a family caregiver. Most patients (96%, n=131) allowed the study team to contact their caregiver. The majority of caregivers (80%) agreed to complete the Hospital Anxiety and Depression Scale (HADS) to determine their eligibility status, 18% declined to participate, and 2% were unable to be reached via phone. Almost half of caregivers (46%, n=48 of 105) met the clinical cutoff (score >=8) for significant anxiety or depressive symptoms on the HADS. Most eligible caregivers (96%, n=46) consented to participate in this study.

Participating family caregivers were primarily women (74%) and Caucasian (85%), and the average age was 55 years (SD=11). The majority (65%) cared for patients with stage III or IV lung cancer. To date, 43 of 46 caregivers have completed a 1-hour baseline phone assessment, 24 have completed a 30-minute phone assessment 3 months later, and 6 have withdrawn from the study. Reasons for withdrawal have included time constraints, personal illness, and bereavement. Our high rate of completion of the screening assessment (80%) and relatively low attrition rate (13%) support the feasibility and acceptability of conducting a phone-based study for caregivers of lung cancer patients. Findings also point to high rates of significant distress in this population that warrant clinical and research attention.

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C-025

THE UTILITY OF IN-DEPTH INTERVIEWS IN THE DEVELOPMENT OF A TOOL TO REDUCE CANCER CAREGIVER DISTRESS

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Cancer caregivers have unmet needs that often persist beyond the acute treatment phase, including understanding their caregiving role, communicating with their loved one, managing their loved one's distress, and learning self-care and emotional coping skills. Research has shown that caregivers with fewer unmet needs report less cancer-related distress and better quality of life. To address commonly unmet needs, we developed an informational kit that included content about the caregiving role, basics of cancer, communication strategies, coping, self-care, and resources. In August, 2010, 45-minute in-depth interviews (IDIs) were conducted with 18 caregivers who had provided care to a cancer patient within the past 2 years. IDIs were conducted to determine if the kit met their needs and to identify modifications to the content and layout of materials. Two different designs and layouts were tested. Several days prior to the interviews, 11 caregivers were sent a kit in a 3-ring binder with color images and tabs, while 7 caregivers were given the same information in a stapled, black and white, straight-text version to review upon arrival at the interview center. Participants were predominately African American (n=11), female (n=15) and had an average age of 51 years (range 30-66 years), and varying levels of education (n=11 attended some college). Thematic analysis of the IDIs indicated that caregivers reported a number of positive outcomes from the materials. Besides gaining useful information, participants felt validated and more confident in their role. Results suggest the impact of the materials is dependent upon its design and format, the timing of delivery, and the source of the information. This study demonstrates that qualitative research methods are useful to evaluate content, design, and delivery of tools intended to meet the needs of cancer caregivers. The next phase of this caregiver intervention research will include a multi-group, repeated measures study to determine the impact of the intervention on key caregiver outcomes (i.e. efficacy, knowledge, and target behaviors).

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C-026

CANCER-RELATED PAIN IN A NATIONWIDE SAMPLE (N=961) OF PATIENTS UNDERGOING CHEMOTHERAPY AND RADIATION

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Pain is a side-effect experienced by patients undergoing cancer treatment that negatively impacts quality of life (QOL). The purpose of this study is to characterize the pain experienced by cancer patients prior to, during, and six-months after treatment. A nationwide sample of 961 outpatients (age 20-92 years) being treated with chemotherapy and/or radiation therapy for breast, lung, prostate, hematologic, gastrointestinal, or head and neck cancers was recruited through the University of Rochester Cancer Center (URCC) Community Clinical Oncology Program (CCOP) Research Base. Patients rated their pain at each time point using a question on the URCC Symptom Inventory (11-point scale ranging from 0 [not present] to 10 [as bad as you can imagine]). 52.7% of patients reported pain at baseline (M=1.94, SD=2.64), 71.2% during treatment (M=3.55, SD=3.31), and 43.8% at follow-up (M=1.51, SD=2.40). Linear mixed modeling was used to analyze the change in pain over time and the effects of treatment type (i.e., any chemotherapy vs. radiation alone) and gender on pain over time, with age as a covariate. There were significant changes in pain over time, F(2, 765)=13.71, p<.001, with pain increasing during treatment and returning to baseline levels at 6-month follow-up. There were significant main effects for treatment type, F (1, 791)=3.85, p<.05, and age, F(1, 815)=9.32, p<.01, with patients receiving chemotherapy and younger patients reporting more severe pain. However, significant interaction effects indicated that younger patients and those receiving chemotherapy reported a greater increase in pain during treatment, F(2, 765)=3.20, p<.05, and F(2, 738)=4.03, p<.05, respectively. Further, males reported lower levels of pain compared with females on radiation therapy but not chemotherapy, F(1, 790)=8.32, p<.01. In conclusion, younger patients, those undergoing chemotherapy, and women undergoing radiation therapy are at-risk to experience more severe pain during treatment and may require more aggressive pain management programs for better QOL.

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C-027

FEAR OF RECURRENCE AND BLADDER CANCER SURVIVORSHIP

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Anxiety about cancer recurrence is a significant factor affecting health-related quality of life (HRQOL). To date, few studies have explored the impact of fear of recurrence (FOR) among nonmuscle-invasive bladder cancer (NMIBC) survivors. These survivors have 5-year recurrence rates of 31-78%, requiring frequent, invasive monitoring. We report results from a 5-item fear of recurrence measure (0=none, 5=high FOR) from quantitative surveys and qualitative interviews with NMIBC survivors (n=143).

Five recurrence anxiety items were dichotomously scored based on survey participants' responses; transcripts of qualitative interviews were coded using similar methods. Survivors were diverse: ages 29-87 years, female (25%), non-White (8.4%), and had intact bladders (87%). Data were analyzed using t-tests and stepwise regression.

Survivors averaged 2.8 points (SD=1.4), indicating moderate FOR. Those who underwent cystectomy (n=18) had significantly lower FOR than those with intact bladders (p<.001). Additionally, after adjusting for demographics and time since diagnosis, intact bladder predicted higher FOR (OR=5.6, p<.001). In the qualitative study, survivors reported views corresponding with low to high FOR. For example, a low FOR female with cystectomy stated "I don't have a bladder anymore so I can't get (it)." In contrast, a high FOR male who with intact bladder stated "Every day you can't get rid of that thought. The simple stress of living with it and knowing that it's coming back." Higher FOR manifested as survivors struggled with returning to former hobbies or making plans. These survivors also reported persistent fears about future bladder removal. Bladder removal and its association with being "cured" substantially reduced FOR among cystectomy patients.

NMIBC survivors with intact bladders report higher FOR; this result may stem from having more frequent monitoring, an intact bladder, or a combination. Tailored patient psychoeducation may aid intact survivors in incorporating concepts such as recurrence risk into treatment and monitoring decisions. These programs may also relieve the persistent anxiety and FOR that appears prevalent among subgroups of NMIBC survivors.

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C-028

DEPRESSION IN LUNG CANCER PATIENTS: THE ROLE OF PERCEIVED STIGMA

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Previous research has shown that lung cancer patients are at an increased risk for depressive symptomatology; however, little is known about factors contributing to depression in these patients. This study focused on the possible association between perceived stigma related to a lung cancer diagnosis and depressive symptomatology. It was hypothesized that greater perceived stigma would be related to greater depressive symptomatology and would account for variance in depressive symptomatology above and beyond that accounted for by relevant clinical, demographic, and psychosocial variables. A sample of 95 participants (59% female; age M=64.04, SD=8.79) receiving chemotherapy for stage II-IV non-small cell lung cancer was recruited during routine outpatient chemotherapy visits. They completed self-report measures assessing perceived stigma (Social Impact Scale), depressive symptomatology (CES-D), dyadic adjustment (Dyadic Adjustment Scale), dysfunctional attitudes (Dysfunctional Attitudes Scale), avoidant coping (Coping Responses Inventory Cognitive Avoidance Subscale) and social support (ENRICHD Social Support Instrument). As hypothesized, there was a positive association between perceived stigma and depressive symptomatology, r=.46, p<.001. Perceived stigma also accounted for significant unique variance in depressive symptomatology (β=.19, p<.05) above and beyond other variables found to be significantly (p<.05) related to depressive symptomatology (history of Major Depressive Disorder, time since lung cancer diagnosis, dyadic adjustment, dysfunctional attitudes, avoidant coping). These findings suggest that stigma is an important contributing factor to depressive symptomatology in patients with lung cancer. Future studies should explore whether lung cancer patients' depressive symptomatology can be ameliorated by targeting perceived stigma.

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C-029

PSYCHOLOGICAL FACTORS ASSOCIATED WITH SELF-REPORTED BREAST PAIN PRIOR TO ROUTINE MAMMOGRAPHY IN BREAST CANCER SURVIVORS AND WOMEN WITHOUT A HISTORY OF CANCER

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Prospective studies have indicated that many breast cancer survivors continue to report breast pain following curative treatment. Comparisons to the levels of breast pain in women without a personal history of breast cancer are rarely made at the time of routine mammography screening when thoughts about cancer are likely to be high. In this study, we examined levels of ongoing breast pain (i.e., breast pain occurring in the past month) in a sample of breast cancer survivors (N=64) and aged-matched women with no cancer history (N=72) immediately prior to routine mammography screening. Participants completed standardized questionnaires assessing breast pain, mammography-related anxiety, beliefs about mammography, and perceived risk of breast cancer. Breast cancer survivors were more likely to report breast pain than women without a cancer history (70% vs. 25%, chi-square=27.98, p<.001). Breast cancer survivors also reported more frequent breast pain, as well as higher levels of breast pain intensity and unpleasantness (p's<.001). Breast pain was not associated with perceived benefits or barriers to mammography in either group of women. Multiple regression analysis showed that perceived risk of breast cancer was positively associated with breast pain among women without a cancer history, but this association was not found in breast cancer survivors [Perceived Risk: Group x Breast Pain B=−2.06, SE=.97, p=.04]. In contrast, mammography-related anxiety was positively associated with breast pain in breast cancer survivors, but this relationship was not present in women with no cancer history [Mammography-Related Anxiety: Group x Breast Pain B=3.38, SE=1.26, p=.01]. Taken together, these findings underscore the higher prevalence of breast pain in breast cancer survivors and suggest that the impact of breast pain varies based on breast cancer history.

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C-030

MEDICAL MORBID CONDITIONS AMONG CAREGIVERS OF LONG-TERM CANCER SURVIVORS

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Although cancer is considered as a chronic disease and the evidence about the long-term sequelae of cancer treatment on the patients' physical health, such as comorbidity, has begun accumulated in recent years, the similar knowledge for their family caregivers does not exist to date. This study aimed to fill the gap by examining the associations between caregiving burden and caregivers' morbidity at five years after the initial cancer diagnosis of their relatives. A total of 414 who participated in a national longitudinal survey for cancer caregivers at both two- (T1) and five-year (T2) post-diagnosis provided valid data for the study. Cancer survivors' health status (remission status and self-reported health status) at T2 served as indicators of caregiving burden. Age and caregivers' morbidity at T1 served as covariates. The number of caregivers' medical morbid conditions was measured using a list of 40 conditions. Five years after the initial diagnosis, approximately half of the survivors were in remission (45.1%) and evaluated their health as excellent or very good (56.2%). Hierarchical regression analysis revealed that after controlling for the covariates, caregivers' morbidity at T2 was related to the survivors' self-reported health status (β=-.097, t (790)=−2.915, p=.004), whereas it was not related to survivors' remission status (p=.189). Cancer caregivers, whose survivor's health was poorer at five years post-diagnosis, reported a greater number of morbid conditions. Results suggest that the scope of cancer care should be expanded not only to cancer survivors years after the initial diagnosis but also to their family caregivers. Future studies need to investigate the biobehavioral and psychological factors that might be associated with development of medical morbid conditions of cancer caregivers at the long-term survivorship phase.

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C-031

THE EFFECTS OF AN EXPRESSIVE WRITING INTERVENTION FOR NEWLY DIAGNOSED PROSTATE CANCER PATIENTS: PRELIMINARY FINDINGS

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Prostate cancer, which is the leading cancer diagnosis and second-leading cause of death in males has been found to be associated with significant psychological distress. At the time of this heightened distress newly diagnosed prostate cancer patients need to choose between various management options which offer comparable survival but vary in side effects which can greatly affect patients' quality of life. There is considerable evidence that patients that can express their cancer concerns have lower levels of distress but unfortunately, many individuals feel constrained in expressing their emotions and concerns, due to perceived unsupportive or negative reactions of others or due to sensitivity of issues. To address this issue the proposed study examined if expressive writing intervention decreased distress and improved decision making. Newly diagnosed prostate cancer patients (n=30) were randomly assigned to the intervention group (wrote about their deepest thought and feelings regarding their cancer) or to the control group (wrote about neutral topic or how they spend the day) . Both groups wrote three days for 20 minutes at home. Intrusive thoughts about the cancer, depression, anxiety and decisional conflict regarding the treatment were assessed before the intervention (baseline) and three months following the intervention (follow-up). Decisional satisfaction with the treatment decision was assesses at the 3 month follow-up assessment. Results suggest that at the three month follow-up (controlling for baseline) patients randomized to the expressive writing intervention have lower levels depression and intrusive thoughts about their cancer and they have higher levels of decisional satisfaction and lower levels of decisional conflict compared to the control group. No differences were observed for anxiety. These preliminary finding are in the expected direction: the experimental group reported less distress and higher levels of decisional satisfaction. The results are promising, and if they hold, the findings can easily be implemented and disseminated. However, the N is small and all findings need to be interpreted with caution.

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C-032

WEIGHT GAIN NEGATIVELY IMPACTS HEALTH-RELATED QUALITY OF LIFE: IMPLICATIONS FOR PHYSICAL ACTIVITY IN BREAST CANCER SURVIVORS

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Weight gain, a common long term side effect of treatment, negatively affects breast cancer outcomes (Chlebowski et al., 2002). While adjuvant chemotherapy is thought to be the primary cause of weight gain in breast cancer survivors, decreased physical activity may also play a role, particularly in women who undergo adjuvant chemotherapy. The purpose of this study was to examine the longitudinal effect of a physical activity intervention on weight maintenance and to analyze the relationship between body weight and health-related quality of life (HRQL) in breast cancer survivors. Women who had been surgically treated for Stage I-III breast cancer (N=104) were randomized into either a comprehensive tailored exercise program (CTEP) including both aerobic exercise and resistance training, or a usual care group (UC) receiving patient education. Body mass index (BMI), self-reported physical activity, and HRQL (FACT-B) were collected at baseline, 6, 9, 15, and 18 months. Pearson correlations demonstrated a significant negative correlation between physical activity and BMI. Likewise, repeated measures ANCOVA revealed that CTEP participants had a significant decrease, and that UC participants had a significant increase, in BMI ($p<0.01$). Analyses also revealed that post-baseline BMI was significantly lower in the CTEP group when compared to the UC group ($p<0.01$). Pearson correlations demonstrated a significant association between BMI and FACT-B over the course of 18 months ($p<0.05$). These results not only suggest that physical activity is related to BMI in breast cancer survivors but also show that BMI is negatively correlated with HRQL. Consequently, weight management should be one of the primary goals in the rehabilitation of breast cancer, and health care providers should consider the role of physical activity in the treatment regimen.

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C-034

PSYCHOLOGICAL RESPONSES TO HIGH AND LOW EXERCISE FREQUENCY ADHERENCE IN PATIENTS WITH HEART FAILURE

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Background and Aims: Exercise is a recommended treatment for heart failure (HF) but little is known about the exercise frequency needed for improvement in psychological symptoms. The purpose of this study was to: Describe weekly exercise adherence patterns for two levels of exercise participation, high frequency (HI-F) and low frequency (LW-F); Evaluate frequency groups' perception of exercise adherence strategies; Compare frequency groups and an attention control (AC) group on changes in psychological outcomes (mood states and exercise self-efficacy) during two, 12-week phases, a structured phase and a self-managed phase, of a 24 week exercise training protocol.
Methods: A total of 42 patients with HF were randomized into an exercise group (n=22) and an AC group (n=20). Frequency of completed exercise sessions was calculated at conclusion of the study. Completion of more than 75% of the prescribed 120 sessions was used to establish two frequency groups: high frequency, n=13, and a low frequency, n=8.
Results: This study found differences in psychological outcomes for the frequency groups. During the 24 weeks, the HI-F group completed a mean of 90% of the recommended sessions, maintained frequency during the self-managed phase, and demonstrated gains in psychological outcomes. The HI-F group improved in depression and total mood disturbance ($p<0.05$). The LW-F group completed a mean of 55.5% of the sessions ($p<.001$), declined in frequency after three weeks and further declined during the self-managed phase ($p<.001$). Depression and confusion in the LW-F group worsened over the 24 week period as compared to no change for the AC group. Frequency groups differed in helpfulness ratings for the five adherence strategies.
Conclusion: Patients with HF demonstrate different psychological responses to different exercise frequency levels. Patients who do meet exercise frequency goals report negative psychological responses as compared to positive responses by high frequency exercisers.

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C-035

EXAMINING EXERCISE THERAPY IN CARDIAC REHABILITATION THROUGH THE LENS OF COMPLEMENTARY THEORIES

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New information about adherence to exercise therapy may be gained through the complementary use of more than one theory. Top-down theories (Social-Cognitive Theory: SCT) outline cognitive processes that affect behavior. Bottom-up theories (Common Sense Model: CSM) consider individuals' appraisals that influence behavior. Both SCT and CSM were used to examine psychological aspects of cardiac rehabilitation (CR) initiates' exercise experience during the 3-month initiation phase of a standard CR program. We first determined if CSM illness perceptions (IP) could classify CR initiates to stronger/weaker IP groups. A prospective design was used to examine differences between IP groups and change over time. Our main purpose was to detect any differences between IP groups on SCT variables, health status, and exercise adherence during the 3-month CR program. Participants (N=49) completed the IP Questionnaire, measures of self-regulatory efficacy, outcome expectations (OEs), HRQL (health status) and CR exercise. At CR onset, cluster analysis successfully classified participants to weaker (less perceived symptoms: n=21) and stronger (more perceived symptoms: n=28) IP groups. ANOVAR revealed that the stronger IP group had higher negative OEs at study onset (p=.03). The stronger IP individuals were less adherent to CR exercise than weaker IP individuals after 3 months (p=.04). Physical HRQL improved over time for stronger IP individuals (p=.0001) but not weaker IP counterparts. Negative OEs decreased for both groups over time (p=.02). This study identifies new psychological differences relative to CR initiates' adherence to exercise by using complementary theories.

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C-036

ETHNIC DIFFERENCES IN CARDIOVASCULAR RESPONSE TO STRESS IN ASIA

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Background: South Asians have particularly high rates of CHD. This research examined ethnic differences in cardiovascular reactivity (CVR) among Chinese, Malays and Indians in Singapore as well as a sample of Indians living in India.
Methods: Study I examined ethnic and sex differences across 303 Chinese, Malay and Indian undergraduates in Singapore, while Study compared Indian participants from Singapore, and 145 Indians living in India. Blood pressure (SBP, DBP), heart rate (HR), cardiac output (CI) and vascular resistance (TPRI) were measured at baseline and during a series of laboratory tasks including anger recall, cold pressor, mental arithmetic, and harassment.
Results: Study I obtained significant task effects for all the five cardiovascular parameters with anger recall task leading to the greatest blood pressure and heart rate reactivity. An ethnicity main effect was noted for SBP and CI reactivity, with Indians showing significantly lower BP and CI reactivity than the Chinese and Malays. Significant main effect of sex found females showing lower reactivity than males for TPRI, and greater reactivity than males for HR and CI, but no significant differences were noted for BP reactivity. Study II results found similar task related effects as were seen in Study I. Participants from India showed higher reactivity for SBP, HR and CI, while participants from Singapore showed higher TPRI reactivity. Significant task by nationality effects found participants from India exhibiting higher SBP, HR and CI reactivity during anger recall and mental arithmetic tasks as well as higher SBP reactivity during the harassment task. For cold pressor, participants from Singapore showed greater reactivity.
Conclusions: These results point to differences in CVR among ethnic groups in Singapore as well as between Indians living in India and those living in Singapore. These differences need to be explored further with respect to their relationship to different rates of CHD among these groups.

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C-037

PERCEIVED INTERPERSONAL SUPPORT IS ASSOCIATED WITH LOWER CHOLESTEROL LEVELS IN HEALTHY OLDER ADULTS

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Studies demonstrate relations between inadequate social support and poor health outcomes. Lower levels of social support are associated with enhanced risk for cardiovascular disease, yet little is known about its association with cardiovascular risk factors. We examined whether perceived interpersonal support was associated with cardiovascular risk factors in 172 healthy, community-dwelling older adults (56% male; mean age=66 years; mean education=16.2 years) free of major medical, neurological, or psychiatric diseases (other than hypertension). Participants had completed a larger investigation of cardiovascular risk factors, brain, and cognitive function. They underwent a medical history, physical examination, blood chemistries, an oral glucose tolerance test, clinical assessment of blood pressure, completion of the Interpersonal Support Evaluation List (ISEL), and the Beck Depression Inventory (BDI). Outcome variables included average systolic and diastolic blood pressure, glucose levels at baseline and two hours, waist circumference, triglycerides, and total, HDL, and LDL cholesterol. Multiple regression analyses adjusted for age, education, sex, race, and use of antihypertensives revealed a significant negative association between ISEL scores and LDL cholesterol levels (b=-.51.55, p=.005) and a marginally significant relation with total cholesterol levels (b=−40.61, p=.053).Thus, in healthy older adults, low perceived interpersonal support is associated with higher LDL and total cholesterol. Interpersonal support may be an important factor in maintaining cardiovascular health in older adults, at least in part, via this cholesterol pathway.

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C-038

REDEFINING COMPLIANCE WITH MEDICAL RECOMMENDATIONS AMONG STUDENTS WITH HIGH CHOLESTEROL AND HYPERTENSION: RELEVANCE OF NUTRITIONAL HABITS AND EXERCISE

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To promote improved health, particularly among patients with high cholesterol and hypertension, the National Institutes of Health (2009) have recommended enhanced nutritional habits and increased physical activity. The present study investigated differences in the nutritional habits and physical activity levels of college students with high cholesterol and hypertension (N=99) who differed in perceived compliance with medical recommendations to dieting. Specifically, this study hypothesized differences would be found in relevant nutritional habits and exercise behavior as a current strategy to weight loss between compliant and non-compliant students. Results showed 52% of students reported complying with medical recommendations to dieting, and 21.4% to be trying to lose weight. No significant age, gender, or ethnic differences were found between the groups. One way between-groups MANOVA showed no significant differences were found in the nutritional habits of students reporting compliance versus those reporting non-compliance. An evaluation of mean differences showed both groups to "rarely" or "sometimes" buy low sodium foods, and read ingredients lists and nutritional labels. In terms of physical activity, results from Chi squares showed significant differences were found in exercising as a current strategy to weight loss between the groups (χ2 (1, n=97) =9.38, p=.002, phi=.311.The aforementioned results suggest that although increased physical activity may be a behavior associated with reported compliance to medical recommendations among at risk students, relevant changes in nutritional habits remain questionable. Discussion will consider findings in terms of the need for interventions to help redefine, promote, and improve compliance with medical recommendations to healthy dieting among at risk students, limitations of the study, and directions for future research.

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C-039

DOES TYPE-D PERSONALITY PREDICT OUTCOMES AMONG PATIENTS WITH CARDIOVASCULAR DISEASE? A META-ANALYTIC REVIEW

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Objective: Research generally indicates that psychological variables are stronger predictors of cardiovascular outcomes in healthy populations than in those with preexisting illness. Studies of Type-D personality, however, suggest it may also be predictive of negative health outcomes in cardiovascular patient populations. Type-D or "distressed" personality is characterized by the combination of two stable personality constructs: negative affectivity and social inhibition. To date, no meta-analyses have been published that integrate this literature and provide quantitative estimates of these relationships. The present meta-analysis investigated the associations between Type-D personality and (a) major adverse cardiac events (MACE); (b) health related quality of life (HRQOL); and (c) biochemical markers of cardiovascular disease among cardiovascular patients.
Method: Two independent reviewers abstracted data from 13 separate studies for inclusion. A random effects meta-analytic model was utilized to calculate omnibus effect sizes (ESs) for each set of related studies, i.e., for the MACE (N of patients=2,066), HRQOL (N of patients=1,263), and biochemical marker (N of patients=305) measures.
Results: A positive association was found between Type-D and MACE (OR=3.42; p<.001) whereas a negative association was observed between Type-D personality and HRQOL (d=−1.0, p<.001). There was a trend toward significance in the association between Type D personality and cardiovascular disease biomarkers (d=−1.24; p=.07).
Conclusion: Type-D personality is a promising construct for understanding psychological relationships with relevant outcomes among cardiovascular patients. Subsequent investigations undertaken by a more diverse group of unaffiliated scientists are important for further development in this line of research.
Keywords: Cardiovascular disease; Type-D personality

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C-040

BLOOD PRESSURE CONTROL IN HYPERTENSIVE BLACKS: THE ROLE OF CONTROL BELIEFS

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Purpose: Blacks are less likely than whites to have their blood pressure under control but reasons for this disparity are not fully understood. The primary purpose of this study was to explore the predictors of blood pressure control in hypertensive blacks age 50 and older.
Theoretical Framework: The study was informed by an extensive literature review of psychosocial and cultural antecedents of blood pressure control and our prior research associated with hypertensive blacks.
Methods: For this cross-sectional study, we conducted a secondary analysis of the 2006 wave of the Health and Retirement Study (HRS). The HRS is a biennial longitudinal national population-based study that has tracked U.S. adults age 50 and older for a 12-yer period. We restricted our sample to participants (n=659) who: (1) were self-described as black; (2) who self-reported being diagnosed with hypertension; and (3) who completed measures of social support, spirituality, control beliefs, and perceived stress. The outcome, blood pressure control, was self-reported by study participants and treated as dichotomous (controlled/not controlled). Descriptive statistics and logistic regression were used to analyze the data. Controlled blood pressure was the reference category.
Results: Study participants were mostly women (65.4%) and high school graduates (49.87%). A high rate of participants (93.7%) reported that their blood pressure was under control. Of the four factors examined, the only significant predictor of blood pressure control was study participants' control beliefs (p=0.023). Study participants who indicated greater control of their lives were 1.34 times more likely to have their blood pressure under control (OR=1.34; 95% CI=1.040-1.713).
Conclusions and Implications: Our study's findings support the need for future research that better understands how to develop interventions that targets the control beliefs among hypertensive blacks age 50 and older. Since prior research has seldom examined these factors, more research will need to be established, particularly in longitudinal investigations.

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C-041

WEIGHT, DIETARY, AND QUALITY OF LIFE CHANGES FOLLOWING CABG SURGERY

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Objective: While reduction in mortality and morbidity after CABG surgery has been well studied, less is known about health related quality of life (HRQL), dietary, and weight changes. It is recommended that CABG patients maintain a balanced diet and attend cardiac rehab after surgery. The purpose of this study was to examine weight, dietary, and HRQL changes in CABG surgery patients.
Methods: Patients who underwent CABG surgery from Sept 2005 to Feb 2008 and had completed an HRQL survey (SF-12) prior to surgery were eligible. Surveys to assess diet and anthropometric measures were mailed to 952 patients and 416 responded (83% male). Patients were split into 3 groups based on pre-operative BMI: Normal (N=97), Overweight (N=188), Obese (N=131).
Results: Mean time from surgery to survey completion was 25.7 +/− 11.8 months and similar across BMI groups (F=2.40, p=0.09). BMI change from baseline to follow-up was significantly different between pre-op BMI groups (F=9.82, p<0.001) with Obese and Overweight patients decreasing more than the Normal group. Weight change was not significantly different between the BMI groups (F=1.59, p=0.21). Obese and Overweight groups were 3+ times more likely to have changed a lot in diet compared to the Normal group (p values <0.01). Regression analysis of BMI change found that Cardiac Rehab (t=−2.66, p<0.01) and Diet Changed A Lot (t=−2.20, p<0.03) significantly predicted reductions in BMI after controlling for age, gender, length of stay, and time to survey. There was also a significant interaction of time by BMI group on changes in Physical HRQL (F=5.06, p<0.008). The Overweight group had the most HRQL improvement, the Obese group improved somewhat, and the Normal group had no improvement.
Conclusions: Obese and Overweight patients reported significant dietary changes resulting in BMI reductions. Cardiac rehab showed benefits for BMI reduction as well. Both Obese and Overweight groups improved in HRQL. These results suggest that lifestyle changes are successful in reducing BMI after CABG surgery and these changes may be related to improved quality of life.

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C-043

EXAMINING THE PROSPECTIVE IMPACT OF STRESSFUL LIFE EVENTS ON ADOLESCENT GLYCEMIC CONTROL

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Evidence in pediatric type 1 diabetes highlights the negative impact of stressful life events (SLE) on glycemic control. However, the mechanisms that explain this link are unclear. In this study, we aimed to examine whether disease management is a mediator between SLE and glycemic control. SLE was hypothesized to disrupt management, subsequently promoting suboptimal glycemic control. In a sample of 146 adolescents, we obtained a retrospective report of SLE from the 6 months prior to the baseline visit, downloaded blood glucose meters at baseline, and then obtained their A1c value, the indicator of glycemic control, 6 months later. The frequency of blood glucose monitoring (BGM) served as the disease management index. The sample had a mean age of 15.5±1.4 years, was primarily Caucasian (86%), had married parents (76%), and had private insurance 85%. Most used an insulin pump (63%) and had an average diabetes duration of 6.0±3.8 years. Three multivariate models in the Baron & Kenny framework showed that more SLE predicted less frequent BGM, F(1,145)=4.79,p<.05, and higher A1c 6 months later, F(1,145)=9.17,p<.01. When BGM was entered as a mediator with SLE to predict A1c, the overall model was significant, F(1,145)=19.68,p<.0001,R2=0.21, as the association between SLE and A1c decreased (p=0.02;p=0.003 in the zero-order model). Examination of indirect and direct effects supported BGM as a partial mediator, accounting for 29% of the link between SLE and A1c (Sobel z=2.04,p<.05). A parallel modeling sequence was replicated with inclusion of demographic and diabetes-specific covariates. The partial mediation effect was no longer detected, as age (p<.01) attenuated the impact of SLE on BGM. SLE appears to detrimentally affect adherence and A1c over time; yet, the strong link between age and BGM likely adds to model complexity. Future studies should consider these associations within a developmental context, as the negative impact of SLE on A1c may increase with age. Early detection and intervention to address the detrimental effects of SLE on BGM and A1c are warranted.

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C-044

THE ROLE OF SELF-EFFICACY RELATED TO DEPRESSION AND SELF-MANAGEMENT IN TYPE 2 DIABETES

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Background: Depression is consistently associated with worse diabetes self-management (SM), and self-efficacy (SE) has been proposed as a mediator of this relationship. This study evaluates the relationships between depression, SE, and diabetes self-care and tests for a mediating role of SE.
Methods: One hundred twenty one participants [Mage=56.0(SD=9.4),56.2% male] with poorly controlled type 2 diabetes (T2D) completed a clinician-administered measure of depression (Montgomery Asberg Depression Rating Scale) and self-report measures on demographics, general health & diabetes-specific SE, and diabetes SM (Summary of Diabetes Self-Care Activities). Correlation and multiple regression analyses were used to assess relationships among depression, SE and five SM areas.
Results: Lower depression was associated with greater SE (r=-.24,p=.01). Greater SE was associated with greater medication adherence (r=.21,p=.02) and foot self-care (r=.23,p=.01), but was not associated with SM for diet, exercise, or blood sugar testing. SE remained a significant predictor of medication adherence (b=.02,t=1.98,p=.05) and foot self-care (b=.03, t=2.24,p=.03) independent of age, gender, and education. Multiple regression analysis including both DS and SE failed to show evidence of significant independent relationships with medication adherence. DS was not associated with foot care.
Conclusion: SE is negatively associated with depression and positively associated with medication adherence and foot self-care in T2D patients. Although SE did not explain a pathway from DS to poor diabetes SM, the independent effects of SE and depression are likely to be less important than the overlap between these constructs in relation to medication adherence. Future research should investigate this overlap between low SE and greater depression and its association to SM.

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C-045

THE RELATIONSHIP AMONG SLEEP DISTURBANCES,FEAR OF HYPOGLYCEMIA, AND ANXIETY IN PARENTS OF YOUNG CHILDREN WITH TYPE 1 DIABETES

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For young children with type 1 diabetes (T1D), daily management often falls to parents. Prior research has indicated that the burden of daily T1D care may impact parent emotional functioning, increasing risk for depression and anxiety and decreasing quality of life. Caretaking responsibilities also impact parents' sleep, both directly via nighttime checking of children for hypoglycemia and indirectly via heightened stress and/or anxiety. However, few studies have explored the relationship among parent sleep disturbances, hypoglycemia fear, and anxiety. It was hypothesized that greater fear of hypoglycemia and anxiety would be related to more parent sleep difficulties. Using baseline data from an ongoing RCT, 88 parents (92% mothers; M age=37.52±5.63 yrs) of children (52.3% female; M age=5.68±1.16 yrs) with T1D (M illness duration=2.29±1.38 yrs) completed the Pittsburg Sleep Quality Index (PSQI), the Hypoglycemia Fear Survey-Parents of Young Children (HFS-PYC), and the State-Trait Anxiety Inventory - State Subscale (STAI-S). Forty percent of parents reported at least weekly difficulty sleeping due to attending to child's health care needs, and 28% reported at least weekly difficulty sleeping due to stress related to their child's health. Fear of hypoglycemia (r=.41, p<.01) and general anxiety (r=.23, p<.05) were both positively correlated with difficulty sleeping due to stress related to their child's health. Controlling for parent education, general anxiety was associated with a significant portion of the variance in parent sleep disruption (F (3,84)=4.17, p<.01). These preliminary data show that parents of young children with T1D report sleep disturbances, specifically related to the stress of their child's health, and that they may reflect their fear of hypoglycemia as well as their current anxiety level. Further studies assessing parental sleep difficulties, fear of hypoglycemia, and anxiety over time are warranted, and may indicate need for parent-based intervention.

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C-046

THE PROTECTIVE EFFECT OF SOCIAL SUPPORT ON DIABETES SELF-CARE IN ADULTS WITH TYPE 1 AND TYPE 2 DIABETES

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Diabetes patients often struggle to follow recommended health behaviors and achieve glycemic targets. Psychosocial factors, such as lack of social support and frustration with diabetes treatment, are associated with poor glycemic control and may also explain some patients' difficulties in managing the complex demands of diabetes self-care. In this study, we examined the potential protective effect of social support on diabetes self-care and the negative effect of caring for others on diabetes self-care in 322 adult patients with diabetes (A1c=7.9±1.5%, range 5.0-13.7%; age =55±14 years; female=47%; white=88%; type 2 diabetes=57%; duration=18±13 years; education=16±3 years). Using the Social Provisions Scale we assessed social attachment - feeling a strong bond with others (Attachment subscale) and feeling that others depend on you and feeling responsible for others (Opportunity for Nurturance subscale). We also assessed frustration with diabetes treatment (Problems with Diabetes Self-Management) and frequency of self-care (Self-Care Inventory-R). Multiple regression analyses found feeling a strong bond with others (standardized b=0.13, p<0.01) was associated with more self-care while caring for others (standardized b=−0.13, p<0.01) was associated with less self-care after controlling for glycemia (standardized b=−0.24, p<0.001), frustration with diabetes treatment (standardized b=−0.45, p<0.001), age (standardized b=0.20, p<0.001), and gender (standardized b=0.10, p<0.05). This model accounted for 42% of the variation in self-care. Our findings suggest that feeling a strong bond with others has a protective effect while feeling responsible for others has a negative effect on diabetes self-care. The differential impact of social support needs careful consideration when treating patients with type 1 and type 2 diabetes.

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C-047

AN INVESTIGATION OF THE PSYCHOSOCIAL CORRELATES TO OPTIMAL HEALTH MANAGEMENT IN YOUNG PEOPLE WITH TYPE 1 DIABETES

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Objectives: The medical consequences of poorly managed Type 1 diabetes in children and adolescents can be life-threatening. While a substantial body of literature exists regarding psychosocial factors and diabetes management in adults, these areas remain relatively underexplored in young people with Type 1 diabetes, especially in the years post-diagnosis. The objectives of this study were to investigate the role of specific psychosocial factors as barriers to optimal diabetes management in children and adolescents with Type 1 diabetes. It was hypothesised that elevated depressive and anxiety symptoms would be associated with poorer glycaemic control (as measured using HbA1c), whilst more helpful coping strategies, higher levels of self-efficacy and higher levels of diabetes knowledge would be associated with improved glycaemic control. Improved family functioning was also predicted to be associated with improved glycaemic control.
Methods: Participants were recruited from the Diabetes Ambulatory Care Service at Monash Medical Centre, Melbourne, Australia. Inclusion criteria included (i) aged 7-15 years and (ii) a minimum of one year since Type 1 diabetes diagnosis. Screening was completed at the clinic or during a home visit, and involved questionnaire administration of the Children's Depression Inventory, Revised Children's Manifest Anxiety Scale-2, Coping with Diabetes Scale, Diabetes Management Self-Efficacy Scale, Diabetes Family Behaviour Scale, Diabetes Knowledge Scale and Summary of Diabetes Self-Care Activities. HbA1c levels and school functioning data were also collected.
Results: A preliminary sample (N=53) has been recruited to date. Final results (N=120) will be available at the conference.
Conclusions: The present study provides a basis for the development of psychological interventions to improve Type 1 diabetes management, through the modification of identified relevant factors.

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C-048

THE IMPORTANCE OF PATIENTS' VALUES IN TYPE 2 DIABETES CARE

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Type 2 diabetes is highly prevalent and costly; effective care may reduce the physical, emotional, and financial toll of diabetes and its complications. Recent diabetes guidelines recommend individualized care based on patient characteristics; patients' values for care were identified as important components of individualized care. Values represent an enduring belief that a specific behavior or ideal is personally or socially preferable. Given limited research on the topic, we examined: (1) older adults' values for diabetes care; and (2) their perceptions of how often their doctors asked about their values for care. Following on our qualitative study of older adults' values for diabetes care, we conducted telephone interviews on values for diabetes care with 91 older adults living in Central Pennsylvania (95% White, 51% Women, 71±7 years, 78%≥high school education, 12±7 years with diabetes, A1c=7.0%±1.0%). We also collected information on demographics, health status, and attitudes about diabetes. Leading values for desired diabetes outcomes included "staying as healthy as possible" and "having an enjoyable quality of life." Leading values for desired diabetes lifestyles included "being thankful for current health" and "living life as one wants to." Nearly half (49%) of the participants reported that their doctors almost never or generally did not ask about their values for care. Interestingly, these same adults reported significantly lower A1c levels (p=0.025) compared to those who reported that their doctors asked at least sometimes about their values for diabetes care. This finding suggests that doctors may ask about values for diabetes care more frequently in patients with poorer glycemic control, or that patients with poorer control may have care values that differ from those of their doctors. Additional longitudinal research is needed to illuminate the relationship between patient values for care, physician recommendations for care, and subsequent clinical outcomes and overall well-being.

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C-049

PATIENTS' PERCEPTIONS OF FACTORS IMPACTING THEIR HBA1C LEVELS

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Diabetes is among the most common and costly chronic diseases. Although early and proactive treatment can lower glycemic levels and thereby reduce complications, many patients do not achieve recommended HbA1c (A1c) targets. Patients' views of barriers to and supports for achieving optimal A1c are not fully understood. Thus, this qualitative study explored diabetes patients' perceptions of factors that impact their A1c. A purposive sample of 33 type 1 and type 2 diabetes patients participated in semi-structured interviews. Interviews were transcribed, coded, and categorized using NVivo8. Content analysis was used to interpret the data. Patients were 52% female, aged 61±10 years, 91% white, 58% type 2 diabetes, 24±16 years diabetes duration, BMI=29±6, and A1c=8.0±1.2%. We found that most patients viewed poor self-control with food as the major barrier to achieving optimal A1c levels. They described how not "paying attention" to or "being aware" of their eating resulted in higher glucose levels. Some patients also discussed how depression and stress seemed to affect their A1c possibly through decreased activity, overeating, fewer social interactions, and bodily responses of higher glucose levels. Further, they discussed how their reluctance to exercise was an additional barrier. Conversely, patients described their increased awareness and understanding of how food and insulin affected their body's glycemic responses supported an improved A1c. The findings of this study suggest that patients' increased attention and awareness may impact A1c levels positively by helping to modulate eating and exercise. Patients' increased understanding of their body's glycemic reactions also may support improved A1c. However, the mechanisms underlying the effects of depression and stress on A1c are not clear. Quantitative exploration of these findings is necessary in order to develop interventions that promote diabetes patients' achieving recommended A1c levels.

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C-050

GENDER AND AGE DIFFERENCES IN BARRIERS TO MONITORING BLOOD GLUCOSE IN TYPE 2 DIABETES

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Self monitoring of blood glucose(SMBG) is considered by many to be a cornerstone of Diabetes self-care. However, recent studies of Type 2 Diabetes(T2DM) have shown little association between SMBG and medical outcomes(e.g., HbA1) even when ADA recommendations for SMBG are met. A comprehensive 2010 review decried a one-size-fits-all approach, noting that several critical key person factors are rarely considered(e.g. age, sex, insulin use). The present study aims to address this gap and to encourage investigation of the complexity of SMBG. Participants were adults with T2DM(N=589) at an outpatient diabetes clinic. Physiological data (HbA1c, BMI) from the day of survey was collected via chart review. Participants self-reported SMBG behaviors, perceptions, and barriers(PDQ). Participants were grouped by Insulin status (31.9%), sex (men 47.0%) and age(M=55.4(13.03)); under 60 yrs(63.8%) or 60 yrs and over. SMBG frequency did not differ by age(H=3.212,p =.073), sex(H=1.243,p=.265), or insulin status(H=3.072, p=.080). Levels of SMBG barriers(F=16.531,p=<.001; F=11.584,p=.001) and satisfaction with blood glucose control (F=28.027,p<.001;F=6.784,p=.009) varied by both age and sex. HbA1c varied by age(F=11.980, p=.001). Higher SMBG barrier scores(indicating greater frequency and problems) were associated with both lower blood glucose control(BGC) satisfaction(Spearman's Rho=.205,p=.012) and higher HbA1c(Rho=.164, p=.029) in younger women and a higher BMI in older women (R=.222,p=.044). HBA1c was higher in young patients on insulin and lower in old patients not on insulin(F=9.624,p=.002). BGC satisfaction is higher in men(t=−2.203, p=.028). With these differences, it is surprising that the frequency of SMBG and the specific barriers to SMBG (the 3 barriers related to schedule are the most commonly experienced) are similar across groups. Findings suggest age and sex are critical person factors in the complex experience of SMBG and are important considerations in outcome research. Future research should further explore these differences and look for possible mediators.

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C-051

RISK PERCEPTION AND SELF-MANAGEMENT IN TYPE 2 DIABETES: THE IMPROVING DIABETES OUTCOMES STUDY

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This study assesses the relationships between perceived risk, diabetes self-care and glycemic control in individuals taking part in a behavioral intervention that, as previously shown, improved dietary adherence and glycemic control.

The Improving Diabetes Outcomes study was a randomized controlled trial of a telephone-delivered behavioral intervention in a diverse sample of adults with poorly controlled type 2 diabetes (n=526). Baseline and change scores were evaluated for measures of self-care adherence (Summary of Diabetes Self-Care Activities), risk perception (Risk Perception Survey-Diabetes Mellitus, which assesses 6 components of perceived risk), and glycemic control (HbA1c). Parametric tests were used.

Participants were: mean age 56±7.3 years, 67% female, 62% Black, 23% Hispanic. Results indicate significant baseline inverse associations between HbA1c and composite risk (r=-.13, p<.01), exercise adherence and risk knowledge (ρ=-.11, p=.04)

Post-intervention mean (±) SD changes in A1c, general dietary adherence and days of exercise were significantly greater in the telephone group (-.23±.11, 1.66±.18, .70±.22) than the print group (.13±.13, 1.12±.19, -.03±.24), p<.05. No statistically significant intervention effects were found for risk perceptions, yet changes in composite perceived risk and general diet were correlated (r=.12, p=.01). The same pattern emerged in the telephone group (r=.18, p<.01), while associations weren't significant in the print group.

Results indicate modest associations between risk perceptions and diabetes self-care behaviors. The inverse association between risk knowledge and exercise adherence requires further review to determine what is driving the relationship. Although the intervention did not significantly influence risk perceptions, improvements in dietary adherence were associated with changes in composite perceived risk, overall and in the telephone group. Further research is necessary to explore the origins of perceived risk and if changes in the construct may be a useful mechanism to impact diabetes self-management.

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C-052

THE EFFECTS OF INCREASED PARENTAL MONITORING ON QUALITY OF LIFE FOR ADOLESCENTS WITH TYPE 1 DIABETES

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Parent monitoring of adolescents' Type 1 Diabetes management has been linked to better adherence and more positive health outcomes. Additionally, family factors such as conflict and support have been linked to better quality of life in adolescents with diabetes. However, few studies have examined the relationship between perceived levels of parent monitoring and quality of life for adolescents with Type 1 Diabetes. Using baseline data from an ongoing RCT to promote adolescent T1D adherence, the current study explored the association between levels of parent- and child-reported parental monitoring of diabetes management and child-reported quality of life. Participants were 172 parent-youth dyads, youth 11 to 14 years, of whom 69% were Caucasian, 51% were male, and 36% were on a conventional "fixed" insulin regimen. A linear regression model was tested, controlling for ethnicity, child gender, and diabetes regimen. Both parent and child reports of greater parent monitoring were associated with child reported higher quality of life with regard to diabetes treatment ($F(5,166)=10.57$, $\beta=0.107$, $p<0.05$; $F(5,166)=4.52$, $\beta=0.187$, $p<0.03$). Additionally, parent reports, but not child reports, of higher levels of parent monitoring were also associated with higher quality of life with regard to worry ($F(5,166)=3.51$, $\beta=0.263$, $p<.01$) and communication ($F(5,166)=4.23$, $\beta=0.244$, $p<.01$). Results suggest that whether or not adolescents perceive the effects of parent monitoring, increased monitoring does have a positive relationship with several aspects of quality of life. These findings have implications for the importance of promoting parent monitoring, especially for parents of adolescents: although parents may worry that teens might resent their efforts to monitor diabetes, findings indicate that more monitoring is associated with higher child reported quality of life.

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C-054

DEGREE OF COMFORT IN PATIENT COMMUNICATION PRE AND POST ON-LINE EDUCATIONAL PROGRAM AT THE DREXEL-HAHNEMANN UNIVERSITY PHYSICIAN ASSISTANT PROGRAM: 2008-2009

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Purpose: The purpose of this study was to evaluate the effectiveness of the Drexel University College of Medicine doc.com website which utilizes standardized patient vignettes that encourage the development of communication skills to a diverse range of patient encounters. The technology was used in the Patient Communication course at the Drexel University Physician Assistant Program in 2008 and 2009. The curriculum requires students to collect histories and physicals in inpatient and long term care facilities. Exposure to different patient encounters through this technology is hoped to improve student skills in patient-provider communication.
Methods: One hundred and fifty six students participated. The degrees of student comfort regarding varied communication topics were collected by questionnaire utilizing a likert scale both pre and post exposure to the doc.com vignettes. The liker scale included as follows: Extremely Uncomfortable, Very Uncomfortable, Slightly Uncomfortable, Comfortable, Very Comfortable, and Extremely Comfortable. Comfort level was assessed for the following; Introducing myself to a patient for the first time; Establishing rapport with a patient; Allowing a patient adequate time to express their concerns; Asking a patient intrusive questions; Guiding the flow of the patient interview; Responding to a patients strong emotions; Interacting with someone from a different culture or background; Providing closure to a patient interview. Frequency and inferential statistics were used to summarize the data.
Results: From the 2008 and 2009 questionnaires, mean comfort levels significantly improved for all topics after exposure to the doc.com website, $p=0.00$. There was an average 24.8% increase of students who were extremely comfortable post exposure to the vignettes.
Discussion: The differences in these outcomes suggest that the experience with the clinical scenarios at this institution had a positive influence on student's comfort when communicating with patients.

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C-056

ILLICIT DRUG USE, ALCOHOL USE AND NICOTINE DEPENDENCE AS PREDICTORS OF ANTIRETROVIRAL ADHERENCE IN A SAMPLE OF HIV POSITIVE SMOKERS

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Tens of thousands of Americans become infected with HIV annually and over one million are currently living with HIV/AIDS in the United States alone. The introduction of combination antiretroviral therapies (ART) in the 1990 s has greatly helped to extend life expectancy for these individuals. However, ART is an extremely demanding treatment regimen requiring near perfect dose adherence for optimal benefits. The objective of this study is to investigate predictors of non-adherence to ART in a population of low-income, multiethnic, HIV-positive smokers. A secondary data analysis was conducted using baseline data collected from 326 patients currently prescribed ART and enrolled in a randomized clinical trial assessing smoking cessation interventions. Variables evaluated include demographics, stress, depression, nicotine dependence, illicit drug use and alcohol use. The average age of participants was 45.9 years (SD=7.6). The majority of participants were male (72.1%), Black (76.7%), reported sexual contact as the method of HIV exposure (heterosexual (43%) and men who have sex with men (MSM) (27%)) and were ART adherent (60.4%). Results from unadjusted analyses indicated that higher levels of depression (OR=1.02; 95% CI=1.00-1.04), illicit drug use (OR=2.39; 95% CI=1.51-3.79) and alcohol consumption (OR=2.86; 95% CI=1.79-4.57) were associated with non-adherence. However, further multivariable analyses indicated that nicotine dependence (OR=1.13; 95% CI=1.02-1.25), illicit drug use (OR=2.10; 95% CI=1.27-3.49) and alcohol use (OR=2.50; 95% CI=1.52-4.12) were associated with non-adherence. In conclusion illicit drug use, alcohol use and nicotine dependence are formidable barriers to ART adherence in this population of HIV-positive smokers. Future research is needed to assess how to best address these variables in the context of improving ART adherence for individuals living with HIV/AIDS.
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C-057

MEDICATION-TAKING ATTITUDES AND BELIEFS AMONG HIV-POSITIVE ADULTS WITH COMORBID DEPRESSIVE DISORDERS: A QUALITATIVE STUDY

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Strict adherence to antiretroviral medications (ARV) is required for optimal medication effectiveness. Depression, which is highly prevalent among HIV+ people, has been identified as an important predictor of medication nonadherence. Yet, no studies to date have examined how depression influences medication adherence among depressed HIV+ patients. Several reasons for nonadherence have been hypothesized, including negative disease and medication attitudes. The aim of the current study was to investigate how beliefs about ARV and medication-taking attitudes influence adherence in the context of depression.
Semi-structured interviews were conducted with 21 HIV+ adults with comorbid depressive disorders. The data were part of a larger qualitative study investigating mechanisms by which depressed mood may influence adherence. Data were analyzed according to principles of Grounded Theory.
Analyses indicated that beliefs about and personal attitudes toward taking ARV guide participants' adherence decisions. Themes related to medication-taking attitudes include the unequivocal need to take them in order to survive, respect for doctor's orders, perceiving medication-taking as a "job" to do, experiencing "pill fatigue," perceiving loss of free will, mindful nonadherence, and regret about how taking ARV has changed one's self concept as a "healthy person." Decisions to take medications were facilitated by adherence-promoting beliefs about ARV efficacy. Adherence-diminishing beliefs about medication include dosing flexibility, permissiveness regarding adherence lapses, ARV toxicity ineffectiveness, and frustration with the inability of ARV to improve momentary mood.
Within a sample of depressed HIV+ individuals, attitudes and beliefs about ARV and health care providers likely influence medication decision-making. Given that cognitive factors may be amenable to change, clinicians should assess such attitudes and consider empirically supported interventions (e.g., motivational interviewing, CBT) designed to modify them.

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C-058

INTERNALIZED HIV STIGMA AND DEPRESSED MOOD AMONG HIV-POSITIVE ADULTS WITH COMORBID DEPRESSIVE DISORDERS: A QUALITATIVE INVESTIGATION

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Internalized HIV stigma has been associated with depression and medication non-adherence among those living with HIV. Research indicates that mental health may mediate the relationship between stigma and medication adherence (Sayles et al., 2009). However, little is known about the broad effects of internalized HIV stigma among depressed HIV+ patients. Understanding their experiences is critical because HIV+ individuals are at greater risk for nonadherence. Thus, an aim of the current study was to examine patients' experience of internalized HIV stigma in relation to depressed mood and well-being.

In-depth interviews were conducted with 21 HIV+ adults diagnosed with comorbid depressive disorders recruited from outpatient specialty HIV clinics. The data were part of a larger qualitative study investigating mechanisms by which depressed mood may influence adherence. Data were analyzed in accordance with principles of Grounded Theory.

Participants' experience of internalized HIV stigma was characterized by shame, punishment, guilt and fear. Stigma affects participants at individual, interpersonal and structural levels. At the individual level stigma acts as a trigger for depression, exacerbates body dissatisfaction, facilitates negative health behaviors, and precludes participation in activities once enjoyed by participants. Stigma influences interpersonal relationships as a result of diminished support-seeking, decreased desire for intimacy, inhibited disclosure and increased self-monitoring. At the structural level stigma impedes health care engagement.

These results suggest internalized HIV stigma affects multiple social ecological systems. While results indicated that stigma itself was a trigger for depression, the effects of stigma extend to broad areas of social functioning and well-being, implicating additional risk factors for depression. When conducting interventions with depressed HIV+ patients, an examination of the impact of internalized stigma in these systems is warranted.

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C-059

ACCULTURATION AND POST-TRAUMATIC STRESS SYMPTOMS IN LATINOS LIVING WITH HIV/AIDS

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Past research has shown that PTSD symptoms are common among those living with HIV, and that these symptoms have implications for poor medication adherence. Meanwhile, the results of research on ethnic and cultural differences in the epidemiology of PTSD have been mixed, with authors disagreeing whether Latinos are at elevated risk for the disorder. We administered the PTSD Checklist - Civilian Version (PCL-C) to 170 Latinos living with HIV (79% male, 98% of Mexican descent). We found high rates of PTSD symptoms among this sample; using scoring criteria based on symptom clusters 36% of our sample met the criteria for persistently re-experiencing traumatic events, 28% met the criteria for avoiding stimuli associated with trauma/ numbing of general responsiveness, and 36% met criteria for symptoms of increased arousal. Along with these findings, we also found a modest correlation with self-reported adherence, measured on a visual analog scale (r=-.21, p=.03). PTSD symptoms were negatively correlated with acculturation to Latino culture (r=-.20, p=.02), and positively correlated with acculturation to U.S. culture (r=.21, p=.02), as measured by the Abbreviated Multidimensional Acculturation Scale. The relationship between acculturation and PTSD Symptoms was fully mediated by family cohesion (assessed with the National Latino and Asian American Study questionnaire), which also evidenced a bivariate correlation with scores on the PCL-C (r=-.46, p<.001). These data suggest that Latino culture may have a protective effect against the psychological sequelae of traumatic events, and that this effect may be realized through the supportive and enduring family bonds characteristic of the culture.

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C-060

USER-IDENTIFIED PERCEPTIONS OF VAGINAL GEL CHARACTERISTICS: A QUALITATIVE EXPLORATION OF PERCEIVED PRODUCT EFFICACY FOR SEXUAL PLEASURE AND COVERT USE

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Background: In microbicide acceptability and adherence research, a product's ability to impact sexual pleasure and be used covertly remains a challenge. Little attention has been given to the influence that a product's physicochemical properties have on users' perceptions of efficacy with respect to these functions.

Methods: 16 women (32 interviews) experienced one of two gels across 2 sessions: they manipulated the gel in their hands, inserted gel and ambulated; then simulated intercourse. In-depth, qualitative interviews explored women's perceptions of two vaginal gels with distinct biophysical properties and "behaviors." Narrative data were conceptually and thematically analyzed.

Results: Emergent data revealed that perceptions of the product as being similar to natural vaginal secretions were associated with increased confidence in its impact on sexual pleasure and covert use. The lubricating qualities of the gels would help women feel more protected if they were otherwise dry during sex. Participants indicated that, even if they did not feel at-risk for HIV or other STIs, they would want to use products that increased sexual pleasure. Some participants indicated that they would feel more protected by a product that they could use covertly. Most participants noted that all elements of product use (e.g., gel properties, application) need to fit in a larger context of a woman's life or she would choose not to use it.

Conclusions: Perceptions of vaginal product characteristics and behavior will influence women's acceptability, use and adherence, and, ultimately, effectiveness. User perceptions are derived from products' physicochemical properties and rheological performance. In microbicide development, attention should be given to those characteristics that impact user perceptions - of product functional efficacy (intended drug effect), as well as the product's impact on sexual pleasure and covert use.

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C-061

INFLUENCES OF COPING AND COMMUNICATION STYLE ON CONDOM USE AMONG AFRICAN AMERICAN & HISPANIC COUPLES

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Little is known about factors influencing couples' decisions about condom use. While coping has been shown to be related to condom use (Smerecnik & Ruiter, 2010), the influence of coping behavior and communication patterns on condom use is understudied. The Actor-Partner-Interdependence Model, developed to study couples' data, was utilized to assess the relationships of coping and communication patterns to condom use.

Methods: Multi-ethnic HIV sero-positive and discordant heterosexual couples (n=80) in Miami, FL participated. Of these, 66% were African American and 34% were Hispanic. The majority were HIV+ (86%), high school educated (92%), unemployed (77%) and impoverished (90% income<$10 K annual). A multilevel model approach was used to analyze the influences of couples' coping (e.g., active coping, emotional support) and communication style (e.g., positive reframing) on condom use. Separate equations were run for Hispanic and African American couples with serostatus as a covariate.

Results: Males were less likely to report using condoms than females. There was an interaction of gender X level of positive communication (PCom) (p<.05), with PCom among males related to greater condom use, whereas PCom among females was related to less condom use. Among African Americans, both positive and negative communication style predicted condom use (each p<.01) with lower use of each related to greater condom use. Additionally, emotional support (ES) predicted condom use (p<.05), with greater ES related to less condom use. Among Hispanics, condom use was predicted by one's serostatus (p<.01). Negative communication style was also a significant predictor (p<.01), with a stronger effect for males than females.

Conclusions: Findings show differences in relationships among communication patterns, coping styles, and condom use across gender and ethnicities. It is important to consider the role of communication patterns and coping styles in developing interventions targeting condom use.

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C-062

SELF-EFFICACY FOR MANAGING HIV/AIDS: MINDFULNESS, LIFE REGARD AND LIFE ORIENTATION

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HIV's chronic nature leads to numerous health issues and hospital visits (Kates, 2009). Self-efficacy, belief in one's own ability to achieve a desired outcome, influences self-management skills and health outcomes in individuals living with chronic disease (Marks, Allegrante & Lorig, 2005; Brekke, Hjortdahl & Kevin, 2003; Bandura, 1997). A better understanding of self-efficacy for managing HIV/AIDS and associated variables, mindfulness (observing, describing), life orientation (dispositional optimism) and life regard (personal meaning), is important to develop interventions for managing HIV/AIDS.

We examine these variables in our current study and hypothesize that self-efficacy for managing chronic disease (SEMCD; Lorig, Sobel, Ritter, Laurent & Hobbs, 2001) is positively associated with observing and describing (Baer, Smith & Allen, 2004), life orientation (LOT-R; Scheier, Carver & Bridges, 1994) and life regard (LRI-R; Debats, 1998) and our overall model accounts for a significant proportion of the variance in self-efficacy.

After IRB approval was received and informed consent collected, data was collected from 57 HIV positive participants (African American 63%, male 51%) from the DFW area.

We conducted a regression analysis to test our model which included mindfulness skills observing and describing, life orientation and life regard as independent variables and self-efficacy for managing chronic disease as the dependent variable. The overall model was significant, $F(6, 49)=5.821$, $p<.001$, and accounted for 34.5% of the total variance in self-efficacy. Mindfulness skills, observing ($\beta=-.43$, $p<.05$) and describing ($\beta=.60$, $p<.01$), and life orientation ($\beta=-.358$, $p=.05$) were significantly associated with self-efficacy, however life regard was not.

Results suggest a link between mindfulness, life orientation scores and self-efficacy. Self-efficacy based interventions for managing HIV/AIDS may be enhanced by modules that develop mindfulness skills and life orientation. Future research with a larger sample and longitudinal design would enable us to better understand the relationship between these variables.

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C-063

TRAIT ANXIETY & RESILIENCE: CORRELATES OF HIV-RELATED PERSONALIZED STIGMA

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The Transactional Model of Stress and Coping (Lazarus & Folkman, 1984) suggests that evaluating stressful events and coping with stress involve cognitive appraisal, whereby an individual assesses the threat-level of the stressor, and determines the resources available for coping. Thus, the deficit model of stress results from more demand than available resources (Lazarus & Folkman, 1984). Stigma is associated with psychological distress (Quinn & Chaudoir, 2009) and may be conceptualized as a stressor (Lewis et al., 2003). Individuals who lack resilience may experience more stress and emotional distress (Ong et al., 2006). Anxiety is also linked to increased stigma (Alonso et al., 2008). Our study examines the extent to which resilience and anxiety are associated with HIV-related stigma.

Participants were 120 HIV-positive adults (50% men) with an average age of 46 ($SD=8.9$) and were primarily African-American (69.2%) and heterosexual (50.8%). Correlational analyses suggested significant negative relationships between trait anxiety and resilience ($r=-.70$, $p<.01$), as well as between resilience and personalized stigma ($r=-.36$, $p<.01$). A significant positive correlation between trait anxiety and personalized stigma ($r=.39$, $p=.01$) was found. A linear regression analysis established that our model accounted for 21.6% of the variance in HIV-related personalized stigma (adj. $R2=.22$, $F\ (6,\ 118)=6.41$, $p<.01$), with trait anxiety ($\beta=.34$, $t=2.96$, $p=.004$), age ($\beta=-.18$, $t=-2.10$, $p=.038$), and African-American ethnicity ($\beta=-.24$, $t=-2.84$, $p=.005$) as significant predictors. Resilience, however, was not a significant predictor of HIV-related stigma.

Our results suggest that trait anxiety is associated with the experience of HIV-related personalized stigma. Clinicians who work with HIV-positive adults should consider utilizing therapies that manage anxiety. Additionally, our results suggest that not being African American (e.g., European-American) and being younger may be associated with the experience of stigma. Thus providing more stigma-focused interventions to younger clients or people of certain ethnicities may result in improved clinical outcomes.

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C-064

A COMPUTERIZED ADAPTIVE VERSION OF THE SF-36 IS FEASIBLE FOR CLINIC- AND INTERNET-ADMINISTRATION IN ADULTS WITH HIV

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We evaluated the feasibility of administering a modified dynamic version of the SF-36 Health Survey (DYNHA SF-36) to people with HIV. Participants were adult patients ($N=100$) from the Johns Hopkins University Moore (HIV) Clinic and members ($N=101$) from an Internet consumer health panel (Polimetrix) who completed the DYNHA SF-36, modified to capture seven health domains and scored to produce two summary components [physical function (PF), role function (RF, without physical or emotional attribution), bodily pain (BP), general health (GH), vitality (VT), social function (SF), mental health (MH), Physical Component Summary (PCS), Mental Component Summary (MCS)]. Item-response theory-based response consistency, precision, mean scores, and discriminant validity were examined. A higher percentage of Internet participants responded consistently to the DYNHA-SF-36. For each domain, three standard deviations were covered with precision of $SE<3.3$ (90% reliability) without increasing respondent burden beyond five items; however, RF and SF scores were less precise at the upper end of measurement (better functioning). Mean scores were similar for the samples across domains, and with the exception of VT and MCS, were slightly higher for the Internet sample. Clinic and Internet participants reporting an AIDS diagnosis had significantly lower mean PCS and PF scores than those without a diagnosis. Additionally, significantly lower RF and BP scores were found for Internet participants reporting an AIDS diagnosis. The modified DYNHA SF-36 was feasible for use in clinic and Internet samples of adults with HIV. Next steps include a validation study to evaluate the tool's performance in relation to clinical criteria.

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C-066

INTEGRATED BEHAVIORAL HEALTH CARE IN A UNIVERSITY HEALTH CENTER

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Given increasing demands for mental health services on college campuses, student health centers provide opportunities for preventive screening and brief interventions, which increase student access to mental health services while alleviating the burden on mental health centers. Integrated behavioral health care (IBHC) involves locating behavioral health providers (BHPs) in primary care settings. The purpose of this study is to describe the implementation of an innovative IBHC program in a university health center, where advanced clinical psychology doctoral students serve as behavioral health consultants to primary care providers (Strosahl, 1998). As part of the IBHC program, all students seeing a primary care provider were offered a brief screening measure to assess depression (PHQ-9), sleep, tobacco, and alcohol (AUDIT-C). Additionally, students could be referred to BHPs for brief individual sessions to address a variety of behavioral health concerns. Across the Spring 2010 semester, 2,500 screens were completed over 86 days, with 8-13% of students screening positive for at least one of the four outcomes on the screen. BHPs saw 120 patients (62% female, 61% White, age $M=21.6$) for a total of 172 visits. The most common reasons for referral were sleep (45%), depression (13%), anxiety (12%), and adjustment (8%). Students needing longer-term treatment (13%) or reporting suicidal ideation (2.5%) were referred to campus mental health resources, whereas students reporting sub-clinical symptoms were seen in IBHC for an average of 1.4 ($SD=0.8$) visits. Most students (71%) had 1 IBHC visit, 20% had 2 visits, and 9% had 3-5 visits. IBHC offers a unique opportunity to increase access to mental health services and support screening for behavioral health problems; university health centers should consider implementing a model of IBHC to serve the health needs of their student population.

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C-067

EMOTIONAL FUNCTIONING IN COLLEGE STUDENTS: THE ROLE OF MINDFULNESS AND HEALTH BEHAVIORS

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College years are a critical time period when depression and anxiety disorders can develop. Students experience high levels of stress that affect health and well-being. Mindfulness based treatments have been found to be beneficial in reducing stress and depression among clinical populations but little is known about mindfulness in nonclinical populations. It is likely that mindfulness is a factor that is associated with emotional health among college students. The aim of the current study was to examine the relationship of mindfulness and emotional functioning among this population. In this cross-sectional study, participants (N=221) were recruited from a college campus in the northeast. Participants were (168 females, 53 males) between the ages of 18-24(M=19.8, SD=1.2) and the ethnic composition was 85% Caucasian, 5% Asian, 3% African American, 5% Hispanic and 2% other. After providing their informed consent, students completed a survey of health behaviors (sleep and substance use) as well as the Perceived Stress Scale (PSS-14), Five Facet Mindfulness Questionnaire (FFMQ) and Medical Outcomes Study Short Form Survey (SF-36). The Emotional Well-Being scale of the SF-36 was used as the measure of emotional functioning in this study. After completion of the questionnaires, participants were entered into a raffle for a gift card. Hierarchical multiple regression analyses controlling for duration of sleep, sleep quality, substance use, and stress, demonstrated a significant effect of mindfulness on emotional functioning. Higher levels of mindfulness were associated with better emotional functioning among college students ($R2\Delta=.45$, $\beta=.21$, $t=4.11$, $p=0.00$). Findings from this study provide evidence that mindfulness can be beneficial among college students. Programs to promote mindfulness on college campuses could have a significant impact on the well-being of students.

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C-068

EXPLORING THE INTERSECT OF CULTURE, TRUST, AND HEALTH LITERACY IN MENTAL HEALTH HELP-SEEKING BEHAVIORS OF INNER CITY AFRICAN AMERICANS: A CONCEPTUAL FRAMEWORK

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Each year, an estimated 26% of the United States (U.S.) adult population (18 and over) experiences a diagnosable form of mental illness (NIMH, 2009). In 1999, the Surgeon General produced the first report on mental health in the United States. The report declared mental health to be a vital component to overall health, mental disorders as being credible health conditions, and that various forms of treatment are available to individuals with mental illness. Moreover, the Surgeon General recommended that all individuals with mental health issues or that experience symptoms of mental illness - seek help.

Despite this recommendation, there are still many individuals that experience symptoms of mental illness and do not seek help. African Americans are among the groups that under-utilize the mental health system (Anglin, D. M., Alberti, J.M., et al. 2008). Previous research estimates that in comparison to Non-Hispanic Whites, African Americans are 30% more likely to report having serious psychological distress. Yet, African Americans are less likely than whites to seek professional help (Ayalon & Alvidrez , 2007).

To further understand this disparity, a conceptual framework was developed. Few studies have explicated the compounding factors of culture, trust, and health literacy that serve as barriers to help-seeking behaviors in the African American population, particularly as it relates to mental health, mental illness, and help seeking. This conceptual framework examines the intersectionality of culture, trust, and health literacy and how these combined factors contribute to mental health help-seeking behaviors of African Americans.

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C-069

USING SEGMENTATION ANALYSIS TO IDENTIFY YOUTH AT RISK FOR SELF INJURY

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Researchers have suggested that future research in the area of psychopathology and comorbidity should focus on identifying subgroups and interactions associated with comorbidity. This study represents one of the first studies to use segmentation analyses to identify mutually exclusive segments of youth who self injure (SI). Secondary analysis of data gathered using the middle school Youth Risk Behavior Survey (YRBS) from middle school students in Florida (N=1748) was conducted. CHAID (Answertree, SPSS) was selected for the study based on its use in public health, its appropriateness or match to the guiding research questions, and the ease in which potentially meaningful patterns in a dataset are identified in a dataset with a large number of variables. The analysis began with a total training sample of 901 cases (29% SI). The best predictor of having ever self-injured was suicide ($p<.0001$, Cramer's $V=.49$). The segment at greatest risk is comprised of female youth who have moderate to high levels of suicidal tendencies and used substances in the past. Over 97% of these students reported having injured themselves on purpose. In contrast, the segment with the smallest proportion of youth who have self-injured had not thought about, planned, or attempted suicide, had high belief in their possibilities, and had not used inhalants (12%, n=538). The overall model resulted in a classification accuracy of approximately 80% within the training sample and 79% within the test sample. Overall, CHAID analyses suggested large groups of youth at risk for (and not at risk) having ever tried self-injury.

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C-070

CLINICAL REMINDERS AS A SCREENING ALERT: IMPROVING UNIVERSAL SUICIDE SCREENS IN PRIMARY CARE

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Introduction: Over the past 2 years the Salem VAMC has enjoyed considerable success in its implementation of a universal suicide/homicide screen employed when veterans are seen in Primary Care (PC) for routine medical care. The initial goal of such screens was to increase access to veterans potentially at risk who would ordinarily be missed during these routine visits without such an intervention. In May of 2009 an electronic system change was implemented in order to better track screenings as well as to generate more accurate data outcomes for positive screens.

Method: During routine check-ins, intake nursing staff are electronically prompted (using the VA's electronic medical records database) to ask veterans about ideation. Responses are entered electronically for tracking purposes. When veterans screen positive, the patient's primary care provider (PCP) or a mental health provider in PC are alerted and a full risk assessment with the veteran is initiated. From there, immediate interventions are offered; from patient education about suicide to hospitalization for acute care.

Findings: From May 2009-May 2010 a total of 58,385 screens were completed with 591 veterans screening positive for ideation. Of those screening positive, approximately 88% were evaluated as being low risk, 10% as being moderate risk and 2% as high risk. High risk patients were subsequently referred to the ER for further evaluation with a total of 5 veterans subsequently being hospitalized for acute care. A total of 75 consults to specialty mental health were made with approximately 70% of those referrals being for veterans that had no previous mental health treatment. Of the 48 consults that were placed to specialty mental health by the mental health team in PC, 87% of those consults were completed compared to 45.9% by PC providers.

Implications: Known suicides, while low occurring, are high impact events within the VA system. Suicide screenings in primary care offer a population-based approach to identifying and treating high-risk veterans, particularly those with no prior mental health treatment. Furthermore, the addition of the electronic reminder is improving the ability to track screening adherence.

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C-071

THE LONELINESS-DEPRESSION LINK: EXAMINING THE MEDIATING ROLES THAT LONELINESS AND ANXIETY PLAY

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Loneliness affects many college students (Cutrona, 1982), and has been linked to depression (e.g., McGaha & Fitzpatrick, 2005). The reason for this linkage, however remains unclear. We propose, building from Cacioppo (2008) who suggested that lonely individuals may enter a downward spiral of thoughts and behaviors, that trait rumination and anxiety mediate the relationship between loneliness and depression. Across two studies, we use structural equation modeling to examine the proposed relationships and test other competing mediators that may also contribute to the loneliness-depression link (i.e., hostility and social support). In study 1, undergraduates (n=300) filled out the UCLA Loneliness Scale (Russell, 1996), the Ruminative Response Scale (Nolen-Hoeksema & Morrow, 1991), Spielberger's Trait Anxiety Inventory (Spielberger et al., 1970), and the Beck Depression Inventory (Beck et al., 1996). Loneliness predicted rumination (β=.65, p<.001) and anxiety (β =.64, p<.001) (which covaried with each other, β=.51, p<.001), and rumination (β=.42, p<.001) and anxiety (β=.38, p<.001) predicted depression explaining 54% of the variance in depression; model fit χ2(1)=2.65, p >.10; CFI=0.997; RMR=.003; C.I. RMSEA=.00 to .19. Furthermore, the link between loneliness and depression was fully mediated (direct: β=.56, p<.001; included in the model β=.09, p>.10). In study 2, the same scales were administered to another sample of undergraduates (n=218) in addition to the Cook-Medley Hostility Scale (Cook & Medley, 1954) and the Interpersonal Support Evaluation List (Cohen et al., 1985). These two variables were also included as mediators between loneliness and depression and allowed to covary with rumination and anxiety. While the rumination and anxiety results replicated, neither hostility (β=-.07, p>.18) nor social support (β=.02, p>.71) were significant. These results suggest the pivotal role that anxious, ruminative thoughts have for understanding how loneliness can impact more serious disease outcomes, such as depression.

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C-072

RACE, OPTIMISM, AND QUALITY OF LIFE IN OLDER ADULT WOMEN

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As the number of older adults in society increases and lives are extended due to medical advances, maintaining the quality of life (QOL) in older adult populations is crucial. Understanding of how health disparities impact QOL in older adults is limited and it is unclear whether personal factors such as dispositional optimism may play a role in QOL during the aging process. The present study examined the effects that race and optimism have on QOL in a sample of older (M age=68.12 years), African-American (N=41) and Caucasian women (N=138) over a 39 month period. All participants completed a questionnaire packet assessing dispositional optimism (LOT-R), QOL (Satisfaction with Life Scale), demographic data. A mixed model repeated measures 2 (race) x 2 (optimism) x 4 (time) ANOVA tested the effects of race, optimism, and time on QOL at baseline, m12, m24, and m39. There were statistically significant effects for time [F(3,173)=4.624, p=.004) with QOL decreasing linearly across time; for optimism [F(1,175)=8.075 p=.005] with more optimistic individuals reporting higher QOL across time; and for race [F (1,175)=4.538, p=.035] with Caucasian women having higher QOL than African-American women. Additionally, there was a significant time-race interaction [F(3,173)=4.717, p=.003] whereby the African-American women showed a steeper decline in QOL between m24 and m39 than did Caucasian women. Our findings support other work that has suggested optimistic individuals are more satisfied with their lives and that as the participants got older, QOL decreased; perhaps due to changes in health, functional abilities, or social structure. The differential patterns of QOL across time as a function of race are intriguing and warrant further investigations.

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C-074

TIME SERIES ANALYSIS OF ADHERENCE TO TREATMENT FOR OBSTRUCTIVE SLEEP APNEA

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Adherence is poor for positive airway pressure (PAP), the most common treatment for obstructive sleep apnea. To better understand adherence, individual patterns of change should be evaluated in addition to group-level statistics. PAP machines record nightly data that can be analyzed with time series analysis. In this study, time series analyses were run on 162 individuals with PAP devices. Each individual represents a separate study; differences in adherence patterns demonstrate the importance of the idiographic approach. Participants were recruited from five international sleep centers. The number of minutes the PAP machine was in use at the prescribed pressure was the dependent variable for adherence. All available data were used, and the number of days of use per individual ranged from N=8 to N= 230 (mean N=161). Mean use per night across all participants was 271.5 minutes. An ARIMA was employed with the General Transformation approach and maximum likelihood (ML) for missing data. Time series parameters include slope of the series (the rate of change over time) and autocorrelation (a measure of dependency). Out of the 162 participants, 76 had significant (p<.05) slope parameters. While average adherence across groups decreased over time, the time series approach reveals that some individuals increased: 20 had a positive slope, indicating more PAP machine usage over time, and 56 had a negative slope, indicating less usage. 64 out of the 162 participants had a significant autocorrelation. This indicates that PAP usage, for about 40% of the sample, was influenced by the level of usage from the previous night. Planned future analyses include cluster analyses to group individuals with similar adherence patterns, and an examination of variables that may predict adherence patterns, such attitudes toward the treatment and demographic data. Predictors of adherence patterns could be the focus of interventions to increase PAP usage.

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C-075

WHAT 2 TXT?: A REVIEW OF THE DEVELOPMENT PROCESS OF TEXT MESSAGING INTERVENTIONS FOR DISEASE MANAGEMENT AND HEALTH PROMOTION

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The use of short messaging service (SMS), also known as text messaging, for interventions in health care is rapidly gaining in popularity due to its wide application and potential to promote health behaviors and disease self-management through enhanced self-efficacy, improved social support and increased knowledge. However, little is known about the process by which the content of the text message is developed or evaluated. Most text messages are in a traditional limited format of 160 characters or less; it is therefore imperative that the content development for health information meets the needs of the target population and caters to varying literacy levels. This analysis systematically reviewed and compared the development protocol of available text messaging-based health promotion interventions. We searched MEDLINE, Google Scholar, PsycINFO, and the Cochrane Library with no restrictions placed on country or publication date. Information on the specified development criteria and methodological details was extracted using a standardized format by two independent coders. Thirty-eight studies were selected from an initial search of 77 studies. Among the included studies, we found 18 randomized trials and 13 feasibility studies; 7 were participatory designs in the early research phase.17 studies were guided by a theoretical framework. No study utilized formal literacy evaluation for message content. However, 20 studies did use participants and/or experts to evaluate the message content prior to the final execution of the intervention. This review highlights the lack of implementation of formal guidelines for developing text message content. Although randomized trials are necessary to test intervention efficacy, greater emphasis needs to be placed on the developmental design process to understand the full meaning of the outcomes. Suggestions for involving target users and communities, and employing formative evaluation methods in the design and testing as an integral part of the research plan, are discussed with the goal of increasing the likelihood of promoting the primary outcomes of a given study.

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C-076

PREVENTION OF ALCOHOL USE IN MIDDLE SCHOOL STUDENTS: PSYCHOMETRIC ASSESSMENT OF THE DECISIONAL BALANCE INVENTORY

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Alcohol use by middle school-aged students is a public health concern and the focus of prevention programs. The Decisional Balance Inventory for the Prevention of Alcohol Use was developed as part of an ongoing tailored intervention based on the Transtheoretical Model of Behavior Change (TTM). It is a 2-factor correlated model with 3 items each for the Pros and Cons of alcohol use. This study evaluated the important psychometric assumptions of factorial invariance and scale reliability with a large sample of 6th grade students from 20 Rhode Island middle schools ($N= 3565$, 82% white and 48% female). A measurement model is factorially invariant when the model is the same across different subgroups. Three levels of invariance were assessed, from least restrictive to most restrictive: 1) Configural Invariance (same structure, nonzero factor loadings unconstrained); 2) Pattern Identity Invariance (equal factor loadings); and 3) Strong Factorial Invariance (equal factor loadings and measurement errors). Structural equation modeling was used to assess invariance across two levels of gender (male, female), race (white, black), ethnicity (Hispanic, non-Hispanic), and school size (large, indicating >200 students per grade, or small). The highest level of invariance, Strong Factorial Invariance, was a good fit for the model across all subgroups: gender (CFI: 0.94; RMSEA: .06); race (CFI: 0.96; RMSEA: .06); ethnicity (CFI: .93; RMSEA: .07), and school size (CFI: .96; RMSEA: .05). In the total sample, Coefficient Alpha was 0.61 for Pros and 0.67 for Cons, suggesting that additional items would strengthen the scales. The limited number of students who are currently using or experimenting with alcohol may have reduced the reliability estimates. The consistency of the measurement model across subgroups provides strong empirical support for the construct validity of the scales. Short, psychometrically sound measures are important for developing effective prevention interventions.

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C-077

A DELPHI POLL ON CLOSING THE RESEARCH TO PRACTICE GAP IN EVIDENCE-BASED PRACTICE

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The Council on Evidence-Based Behavioral Practice (EBBP), sponsored by the NIH, creates online resources to support research to practice translation. The Council conducted a modified Delphi Poll to understand barriers to evidence-based practice (EBP). Panelists were identified from EBBP's expert Councils and Scientific Advisory Board. Candidates ($n=30$) were sent a link to an online survey presenting 5 open-ended questions to solicit opinions about barriers to implementing EBP as well as tools and actions needed to facilitate EBP in practice. Answers were condensed into discrete statements and disseminated to the panel, who used Likert scales to indicate agreement with each item and its perceived importance and/or feasibility (5=strongly disagree to 1=strongly agree). Consensus was operationalized as median rating of <2 on all measures with at least 75% of panelists agreeing on the item.

Respondents included 24 experts across disciplines. Panelists' work environments were academic settings ($n=11$), clinical/community settings ($n=7$), both ($n=2$), and no response (4). When asked what realistic actions would help to implement EBP, panelists from both academic and clinical settings cited "a need for relevant and understandable examples of well-implemented EBP" and "easily accessible training programs that utilize resources online as well as in-person meetings and conferences." Consensus was reached by those in academic settings regarding the value of incentives for practitioners to contribute to research, the importance of shared decision-making between patient and provider, and the value of education for collaboration between researchers and practitioners. Panelists from clinical settings favored including practitioners as consultants on clinical trials and increased accessibility of EBP information. This Delphi Poll indicates that across disciplines and practice settings there is a need for real-world examples of well-implemented EBP, as well as learning resources about research to practice translation.

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C-079

NUTRITION LABEL VIEWING MEASURED VIA EYE-TRACKING

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Americans consume more calories, fat, and other nutrients than necessary and obesity rates continue to rise. Nutrition labeling is a public health measure aimed at encouraging healthy food choices. However, research suggests that consumers often do not read nutrition labels and that food choices are not healthier even when they do (Cowburn & Stockley, 2005), leading to questions over whether and how consumers use labels. The present study objectively measured nutrition label use by tracking adults' eye movements while they made food purchasing decisions. 208 adults (mean age =42; 86% female) were shown a series of 64 foods on a computer. Each food photo was shown with the food's description, price, ingredients, and nutrition label. Participants were instructed to make a buy/not buy decision. An eye-tracking camera (EyeLink 1000, SR Research, Ottawa, Canada) was used throughout the task to monitor what participants viewed. The camera recorded eye position every millisecond with sufficient precision to identify exactly which line of the nutrition label a participant was viewing. Key findings include: 37% of participants read≥1 portion of almost all (>80%) nutrition labels and 13% read none or very few (<10%). The most-viewed label components (both in terms of percentage of participants and in terms of viewing time) were calories and fat; least viewed were vitamins and minerals. Participants spent more time viewing nutrition labels for "meal" foods (e.g. pizza, meat) than at labels for snack foods (e.g. chips, crackers) and dessert foods (e.g. ice cream, cookies). Time spent viewing fruit/vegetable nutrition labels was significantly lower than for meals, snacks, and desserts. Nutrition label viewing differed by several demographic variables (e.g. a higher percentage of overweight compared with normal weight participants viewed calorie content, fat content, and serving size.) This study is one of very few to objectively measure nutrition label use. Eye tracking may be a valuable tool for understanding how nutrition information relates to consumer behavior and for informing nutrition labeling policy.

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C-080

THE CORRESPONDENCE BETWEEN MOTHER-REPORTED DIETARY INTAKE AND PARENTING STYLES ON CHILD'S DIETARY INTAKE

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Fruit and vegetable intake is an important health behavior to prevent and control chronic health conditions such as obesity and cancer. Controlling the consumption of sugar-sweetened beverages is also protective. Parents, through modeling and their parenting styles, influence their children's dietary intake. However, few studies have examined the extent to which mothers and their children share opinions on the parenting style used by the mother. This study uses baseline data from an RCT to investigate whether the mother's reported intake and her parenting styles are associated with child-reported dietary intake and the child's perception of the mother's parenting style.

A convenience sample of Latino parents and their children completed the self-administered questionnaire. Eligibility criteria included: 1) mothers over 18, 2) having a child between 7-13, 3) understand Spanish, and 4) identify themselves and their child as Latino. To date 202 families have been recruited (56% of target).The mean age of mothers is 39 (SD=7.86), children is 10 (SD=1.95). The majority of mothers were born in Mexico (83%), children in the USA (81%). Over a third of mothers are overweight (36%), half are obese (50%). 15% of children are overweight, 38% are obese.

Preliminary baseline data suggest mothers report eating less fruit and vegetable (1.47 portions/day) than children (2.68, $p<0.001$), and less fast food (1.10 days/week) than children (1.49, $p<0.001$). Comparisons of parenting styles reported by mothers and children show that mothers report more limit setting of snacks and sugar-sweetened beverages ($p<0.001$), more reinforcement of healthy eating behaviors ($p<0.001$) and less monitoring of foods eaten ($p<0.001$) than their children.

Children's perceptions of their mothers' parenting styles appear to vary from the mother. These findings have implications for how family-based interventions are designed.

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C-081

THE ROLE OF EXPECTATIONS, INTENTIONS, AND MESSAGE FRAMING IN PREDICTING EATING BEHAVIOR

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Expectations have been found to be more reliable than intentions in predicting behavior, however they may simply be a reflection of a single underlying factor. The present study used temporal framing to identify whether the relative strength of expectations versus intentions can be explained by the former eliciting a more concrete representation of the behavior (e.g. reflecting self-efficacy and past behavior) and the latter eliciting a more abstract representation (e.g. reflecting response-efficacy). 362 participants were randomly assigned to read messages describing the consequences of fruit and vegetable consumption as occurring ‘every day’ or ‘every year’ to manipulate perceptions of the target behavior as concrete or abstract respectively. Measures of self-efficacy, past behavior, response efficacy, intentions and expectations for eating five portions of fruit and vegetables were recorded. Self-reported adherence to ‘five a day’ was recorded 1 week later (n=209). Intentions were significantly higher in the year than day frame (mean=4.06 vs. 3.84, p<.05), as were expectations (mean=3.76 vs. mean=3.48, p<.01), however only the latter was explained by a stronger relationship with response efficacy in the year than day frame (r=.50 vs. r=.24, p<.06). Self-efficacy and past behavior were more strongly associated with expectations (r’s=.58, 48) than intentions (r’s=.37, .24). Expectations were superior to intentions in predicting fruit and vegetable consumption in both the day (OR=4.78; 95% CI=2.46-9.29 vs. OR=1.68; 95% CI=1.00-2.81) and the year frame (OR=2.90; 95% CI=1.72-4.89 vs. OR=2.33; 95% CI=1.34-4.03). Findings suggest behavior is most accurately predicted by expectations especially in conditions which encourage forming concrete representations of the target behavior while intentions are formed using abstract representations which irrespective of environmental cues do not account for salient barriers to behavioral execution.

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C-083

DIETARY SELF-MONITORING USING PERSONAL DIGITAL ASSISTANTS (PDAS) IN A WEIGHT-LOSS STUDY: 24-MONTH RESULTS

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Adherence to dietary self-monitoring typically declines over time. Self-monitoring is typically accomplished using a paper diary, which does not record the actual times of self-monitoring. PDAs, however, can date and time stamp diary entries. As a secondary analysis, we examined: 1) the correspondence between the actual recorded dates and times of dietary entries and those self-reported in the PDA and 2) the association between recording/reporting correspondence and session attendance over the 24-month intervention for the two treatment arms using PDAs (N=138) in the SMART trial, a behavioral weight-loss study. Participants were instructed to self-report the date and time of their dietary intake in their PDAs, while PDAs recorded the actual date and time of the dietary entries. Subjects were to attend 39 group-based standard behavioral therapy sessions delivered over 84 weeks. Data were analyzed using longitudinal methods. Participants were white (78%), female (85%), aged 21 to 59 years (Mean=46.5, SD=9.3), well educated (Mean=15.5, SD=2.9 years), and full-time employed (81%), with a mean body mass index of 34.1 kg/m2 (SD=4.5). Participants tended to report recording times earlier than actual PDA-recorded entries and this temporal disparity increased linearly over time (b=0.63, t=5.22, p<.001), starting with a 14.3 hour difference and increasing to 66.8 hours by week 84. The proportion of days with at least 3 instances of dietary recording declined linearly over time (b=−0.80, t=−13.74, p<.001), starting at 80.9% and decreasing to 14.8% by week 84. The attendance at intervention sessions was associated with the proportion of days with at least 3 instances of dietary recording (z=−2.94, p=.003) and the difference between self-reported and actual recording times (z=−2.67, p=.008), suggesting that attendance may be associated with more daily recording and smaller differences between self-reported and actual recording times. These findings add to the evidence that frequency and timing of self-monitoring are significantly related to session attendance and may influence study outcomes.

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C-084

USING A SMALL CHANGES APPROACH TO TREAT OBESITY IN VETERANS: DESIGN AND RATIONALE OF THE ASPIRE-VA RANDOMIZED TRIAL

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With a lack of overall success in the behavioral treatment of obesity to date, it has been suggested that alternative approaches to treatment should be explored. Having individuals make smaller changes in nutrition and activity has been suggested as a successful way to prevent weight gain or regain across time. However, a debate currently exists as to whether a small changes approach is sufficient to promote clinically significant weight loss and maintenance across time. The primary aim of ASPIRE-VA is to examine the effectiveness of a small changes treatment program on 12-month weight outcomes of U.S. Veterans compared to the current VA center-based MOVE! program. A secondary aim will be to compare the effectiveness of phone- versus group-based delivery mode in light of known barriers to facility-based programs for veterans including lack of time, inconvenience, and logistical issues. Five hundred adult overweight or obese veterans will be randomized to one of three treatment programs: 1) ASPIRE-VA program delivered individually via phone, 2) ASPIRE-VA delivered in a group-format at a VA facility, or 3) standard VA care for weight management. Participants in the small changes treatment arms will receive weekly treatment for 3 months, bi-weekly treatment for the next 6 months, and monthly treatment for the final 3 months. To date, 200 mainly male (64%), Caucasian and African American (45%), overweight and obese Veterans have been randomized and have started treatment. Main outcomes include changes in weight, waist circumference, blood pressure, cholesterol, fasting glucose, total daily step count, and daily caloric intake. While long-term weight loss continues to be a major public health challenge, continuing to explore alternative behavioral treatment approaches is imperative.

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C-085

SIGNAL DETECTION ANALYSIS TO DETECT OBESITY RISK FACTORS IN AFRICAN AMERICAN AND CAUCASIAN WOMEN

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Obesity is a national health epidemic disproportionately affecting African American (AA) women. Using multiple linear regression (MLR) and signal detection analysis (SDA) we examined group differences in risk factors (age, body mass index (BMI), eating behaviors (EB)). Traditional assessment of eating relies on constructs based on Caucasians (CA) (e.g., drive for thinness). Measures may appear valid yet may lack construct equivalency (meaningfulness) in other groups. Until we better understand the applicability of existing measures to assess EB, we are limited to using traditional methods to understand the EB-obesity relationship across groups. SDA provides a precise means to assess risk factors by yielding groups of varying risk and providing group-specific cut points for increased risk, yet has not been widely applied. We used MLR and SDA to detect differences in fixed (demographic) and flexible (eating behaviors) risk factors for obesity among 98 women (BMI 32±6.2 kg/m^2; age 36±12y) of two racial/ethnic groups (46% AA, 54% CA). AAs had higher BMI. AAs reported less disinhibition (DI) (p<.001) and similar dietary restraint (p>.05) as CAs. Using MLR, DI predicted obesity among CAs only (p<.05). SDA identified fixed factors (ethnicity, age) as the most salient predictors of obesity. AA women of any age were at significantly increased obesity risk. CA women incurred risk over age 29. Our findings highlight the utility of SDA in detection of risk factors for obesity and support examining differential risk factors for these groups of women to tailor prevention/treatment efforts. Weight interventions currently incorporate research based on regression models emphasizing a relationship between flexible factors and obesity risk. Measures to assess EB may not have the same meaning in different cultural groups. Concurrent use of SDA, aimed at identifying groups at high-risk for obesity through detection of additional fixed factors, may further current understanding of flexible and fixed factors involved in the relationship between EB and obesity.

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C-086

DO LARGE PLATES CAUSE CHILDREN TO SERVE LARGER PORTIONS AND TO EAT MORE?

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Large portions are thought to stimulate energy intake [EI] in children through size-related visual cues, such as dishware size. Whether dishware size influences children's self-served portion [SSP] and energy intake [EI], however, is not well established. This study evaluated the effect of dishware size (i.e. plate and bowl size) on SSP and EI during lunch meals. It was hypothesized that SSPs would be greater when using larger dishware and that those who served themselves more food with the larger dishware would show greater increases in EI.
Methods: Participants, 42 primarily African American first graders, were observed weekly at school lunch meals. A within subjects design was used where children served themselves using reference or large dishware (~100% surface area/volume increase); condition order was counter balanced across classrooms. An amorphous (pasta) and unit (chicken nuggets) entrée were evaluated on separate days. Applesauce and mixed vegetable side dishes were evaluated at each meal. Fixed portions of milk and bread were provided. Weighed SSP and EI of entrée and side dishes were primary outcomes. BMI-for-age z-scores were calculated for inclusion in final models, with child gender, food preferences, and demographics as covariates.
Results: Main effects of dishware size on SSP were observed for all foods ($p< 0.05$). Children served themselves 22.5% more amorphous entrée (77 kcal), 11.6% more unit entrée (49 kcal), 12.0% more fruit (18 kcal), and 11.0% more vegetables (9 kcal) when using larger dishware. Children who served themselves more with larger dishware showed greater increases in EI for all food types ($p<0.05$) and on average, these children ate 15.8% more unit entrée (45 kcal), 4.3% more amorphous entrée (12 kcal), 10.4% more fruit (10 kcal), and 11.1% more vegetables (3 kcal).
Conclusion: Dishware size influences young children's self-served portions and children who respond to such visual cues are at risk for greater energy intake.

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C-087

THE RELATIONSHIP BETWEEN PARENTAL WEIGHT STATUS, PARENTAL LIMIT SETTING AND ADOLESCENT BODY MASS INDEX

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The increasing prevalence of obesity among adolescents is a serious health concern, especially in underserved populations (low income, ethnic minorities). Previous research suggests that parental weight status and parenting variables, such as parental limit setting of sedentary behaviors, are related to obesity in adolescents. However, limited research has investigated the interactions of these relationships in low-income, minority adolescents. Thus, the purpose of the present study was to examine the interaction of parent weight status (body mass index; BMI) and parental limit setting on adolescent weight status (zBMI). Seventy parent-adolescent dyads participated in the study, the majority of which were African-American (90.0%). The adolescent sample consisted of 41 females (58.6%) and 29 males (41.4%) ranging in age from 11 to 16 years (12.6, ±1.34 years) with 70% classified as overweight or obese. Parenting variables included limit setting, nurturance, and family organization and were assessed using already validated measures. BMI was calculated from objective measures of height and weight and transformed into zBMI based on CDC guidelines. A hierarchical regression investigating the interaction between parental limit setting and parental BMI on adolescent zBMI was significant ($F(5, 61)=4.063$, $p<.01$) and accounted for 25% of the variance in adolescent zBMI. The significant two-way interaction for parent BMI by limit setting ($\beta=-.321$, $p<.01$), indicated that at higher levels of parent BMI, and lower levels of parental limit setting, adolescent zBMI was greater. The interaction between parental variables and parent BMI on adolescent zBMI was not significant for parental nurturance and family organization. These findings suggest that parental limit setting should be considered when developing weight loss interventions for underserved adolescents and their parents.

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C-088

ASSOCIATION BETWEEN COMPUTER IN BEDROOM AND SEDENTARY ACTIVITY ADJUSTING FOR GENDER, RACE, SES AND WEIGHT STATUS IN ADOLESCENTS

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Childhood obesity has been a topic of much concern with the dramatic increase in the prevalence of obesity in children and adolescents over the past two decades. Studies have associated sedentary behaviors such as screen time with childhood obesity. Since the original explorations of screen time(ST), technology has changed, with computer usage becoming an important component of ST. To explore patterns of ST use, adolescents(n=245) were surveyed about computer presence in their bedroom, how many hours per day they spent on the computer for fun, how many hours a day they spent engaged in TV-based activities, and their height and weight. Body mass index (BMI) was then calculated and categorized into weight status groups of either overweight or (overweight or obese) or not overweight based on CDC age-gender BMI percentiles. Weight-adjusted general linear models were used to assess the relationships between ST variables and SES, race, gender and weight status. Having a computer in the bedroom was associated with both computer ST (CST; $p=.01$) and non-CST (NCST; $p=.02$), controlling for all other variables.In both cases, there were significant differences by race, with black teens having greater mean ST minutes per day (362.8 mins NCST, 143.8 mins CST) than either white teens (155.5 mins NCST, 72.9 mins CST) or teens of other races (148.3 mins NCST, 115.5 mins CST). Interestingly, the association between NCST and having a computer in the bedroom was modified by gender.Male teens with a computer in the bedroom on average reported more minutes of NCST (240.6) than did those without a computer in the bedroom, while females with a computer in the bedroom reported fewer minutes of NCST than did females without a computer (121.2 mins, 147.8 mins, respectively). Overall, having a computer in the adolescent's bedroom was associated with greater amounts of ST, with black teens reporting the greatest ST of both types regardless of the presence of a bedroom computer.

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C-089

EFFECTS OF A USER-GENERATED CONTENT-BASED WEBSITE FOR WEIGHT CONTROL: A RANDOMIZED CONTROLLED TRIAL

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Background: In our prior work, we identified 36 weight control practices that were consistently used by individuals who successfully lost weight ("positive deviants"). We conducted a randomized controlled trial to evaluate if promoting use of these habits in an interactive Internet-based program would produce weight loss among overweight adults.
Methods: Participants (n=100) were randomized to the 12-week Internet-based weight-loss intervention or a wait-list control group. Computer algorithms were used to identify two positive deviants as role models who were most similar to the intervention participant based on age, gender, education, weight, and weight goal. A list of behavioral weight control practices used by their role models for successful weight loss was provided to the participants. Participants were able to view Internet videos of their role models and set goals to use the practices. Intervention participants were also encouraged to email other participants seeking to adopt similar weight control practices. The primary outcome was weight change, measured at baseline and 12-weeks. Secondary outcomes included weight control practice use, physical activity, diet, and weight-related quality of life.
Results: At baseline, participants had a mean age of 50.3 years, a BMI of 33.2, and were 70% female. Internet-based intervention participants lost significantly more weight than control participants (-1.4 kg vs. 0.6 kg, $p<0.003$). Additional differences between groups included a 4.0 mm Hg mean decrease in diastolic BP and increased mean use of weight control practices (0 vs. 0.4; $P<0.01$) in intervention participants. An increase in self-reported practice use correlated with weight loss ($r=0.42$, $p<0.001$).
Conclusions: An Internet-based weight-loss program using a positive deviance approach increased weight control practice use and helped participants lose weight.

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Meritorious Poster

C-090

THE EFFECT OF PARENT COMMUNICATION ON WEIGHT CONTROL BEHAVIORS IN OVERWEIGHT ADOLESCENTS

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Background: Adolescent obesity can lead to increased risk for present and future health complications. It is important for overweight and obese adolescents to control their weight. Supportive parenting, as reflected in good parent-child communication, may affect whether adolescents attempt to manage their weight. This study examines whether parent-child communication modifies the relationship between adolescent weight status and weight control behaviors.
Methods: A nationally-representative sample of 7,519 US students in grades 6 to 10 completed the 2006 Health Behavior in School-aged Children survey questions on height, weight, parental communication, and weight control. Weight status was determined using CDC 2000 growth charts. Parental communication was measured with four items asking "How easy is it to talk to your father/stepfather/mother/stepmother about things that really bother you?"A question on weight control was dichotomized to indicate whether respondents were doing something to lose weight. Logistic regressions, separately by gender and controlling for age, race/ethnicity, family composition and socio-economic status, were conducted with an interaction term (father/stepfather or mother/stepmother communication*weight status).
Results: Mother communication moderated the relationship between weight status and weight control for girls and boys. Compared to normal-weight adolescents, overweight adolescents who reported that it was easy to communicate with their mother were more likely to be doing something to control their weight than overweight adolescents who did not report it easy to communicate with their mothers. Compared to normal-weight boys (but not girls), overweight boys who had good father communication were also more likely to be doing something to control their weight than overweight boys with difficult father communication.
Conclusion: For overweight adolescents, having good communication with a parent is related to more weight control behavior. Further research needs to examine the processes by which parents influence weight control behavior.

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C-091

ACCOUNTABILITY IS RELATED TO HIGHER IMPLEMENTATION RATINGS OF LOCAL SCHOOL WELLNESS POLICIES

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Background: Many local school wellness policies (LWP) have weak language, minimal impact, and lack plans for measuring implementation. To improve the quality and implementation of LWP, this study surveyed key personnel from a national sample of high schools to 1) identify factors and barriers associated with implementation and 2) assess relationships among accountability, challenges, and implementation of LWP.
Methods: The 40 item School Wellness Policy Implementation Questionnaire was sent to school administrators in 26 states.
Results: 112 (37.3%) questionnaires were returned. Most schools (83%) have taken more passive approaches (i.e. made staff aware of policy requirements/developments) to prepare for policy implementation, and fewer (25.7%) have taken more aggressive approaches (e.g. acquired funding) toward implementation. A deficiency in resources was the most common challenge to implementation, followed by a general lack of support and accountability measures. Respondents from schools that were held accountable for their LWP reported higher implementation ratings. The more challenges a school faced, the lower the rating of LWP implementation.
Conclusion: These findings suggest that accountability and improved support and resources are critical to overcoming challenges to implementation of LWP. These changes need to be made before the impact of LWP on the health of students can be accurately assessed.

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C-092

UNDERSTANDING THE ROLE OF WORKSITE SOCIAL SUPPORT IN PROMOTING CHANGES IN DIET, PHYSICAL ACTIVITY, AND BODY MASS INDEX

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Background: Higher levels of social support have been linked to greater positive changes in health behaviors. Worksite health promotion interventions may influence health behavior change directly through health education and worksite enhancement that induce lifestyle modification. Co-workers may indirectly impact these behaviors by creating a more supportive environment for one another.
Purpose: This study examined the association between worksite social support and changes in dietary behaviors, physical activity, and body mass index (BMI).
Methods: Baseline and follow-up data were obtained on a nested cohort of 1,078 employees from 33 worksites through Promoting Activity and Changes in Eating, a group randomized weight gain reduction intervention trial. Worksite social support, diet, physical activity, and BMI measures were assessed via a self-reported questionnaire. Principal components analysis was used to create a scale measuring worksite social support. To adjust for multi-level data and multiple time points, we used Generalized Estimating Equations and Logistic Mixed Models.
Results: Higher baseline worksite social support was associated with greater changes in fruit and vegetable intake ($p=0.001$). No associations were found with worksite social support and BMI, or with worksite social support and any other obesigenic dietary and physical activity behaviors.
Conclusions: This study does not support a conclusive relationship between general worksite social support and health behavior change. Social support that is behavior specific may be the critical piece needed to enhance the impact of worksite wellness programs on lifestyle risk factors.

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C-093

ENHANCING LONG-TERM WEIGHT LOSS MAINTENANCE: 6 AND 12 MONTH RESULTS FROM THE KEEP IT OFF TRIAL

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Innovative and scalable strategies are needed to address the perennial problem of weight regain. Recruiting people to a maintenance intervention after they have lost weight can provide maintenance-tailored intervention messages and support when people are at risk for weight regain. The Keep It Off trial is a randomized controlled trial of a phone-based intervention to help adults who have recently lost at least 10% of their body weight, maintain weight loss over 2 years. 419 adults were randomized to the "Self-Directed Intervention" (Self-Dir) or the "Guided Intervention" (Guided). Primary study outcomes are weight and weight loss maintenance (follow-up weight less than 105% of baseline weight). 6- and 12-month outcomes are reported here.
Results: Subjects had mean age 47 years and baseline BMI 28 kg/m2; 82% were female. Mean weight loss prior to study entry was 15% of starting body weight. General linear mixed model regression analysis predicting 6 and 12 month weight showed a significant time by treatment group interaction ($p<.01$). Self-Dir and Guided participants lost weight between baseline and 6 months ($p<.001$). Self-Dir participants gained weight between baseline and 12 months ($p<.001$) but Guided participant weight remained stable ($p=.18$) between baseline and 12 months. There were no 6 month group difference in the percent of participants considered weight loss maintainers (Self-Dir=91.7%; Guided=95.5%, $p<.14$), but, Guided participants were more likely to maintain weight loss at 12 months (Self-Dir=61.4%; Guided=75.2%, $p<.01$).
Discussion: By recruiting participants to a maintenance intervention after they have lost weight, the Keep It Off intervention holds promise for preventing weight regain. Results at 6 and 12 months suggest that the Guided Intervention shows promise for promoting long-term weight loss maintenance.

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C-094

THE EFFECTS OF WEIGHT BIAS AND WEIGHT IDENTITY ON BODY IMAGE AND SELF-ESTEEM

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Introduction: Implicit and explicit weight bias is evident in the US. Research suggests that weight bias and weight identity may be associated with poor psychological outcomes. Research has also shown that obese individuals may not always implicitly identify with being obese. This study examined the prevalence of explicit and implicit weight bias among normal weight and overweight individuals; the relationship between weight status, gender, and explicit and implicit weight identity; and the effects of weight bias and weight identity on explicit and implicit body image and self-esteem for normal weight and overweight individuals.

Methods: Participants included 85 undergraduate students (BMI: $M=27.7$, $SD=6.4$). Participants completed measures of explicit and implicit weight identity, weight bias, body image, and self-esteem, including the Obese Persons Trait Survey (OPTS), Eating Disorders Questionnaire and Stunkard Figure Rating Scales to assess explicit weight identity, Rosenberg Self-Esteem Scale (RES), Multidimensional Body-Self Relations Questionnaire (MBSRQ), and Implicit Associations Test (IAT) designed to assess implicit weight bias, weight identity, body image, and self-esteem.

Results: The current study found that implicit weight bias was prevalent among individuals, $p<.001$, and was associated with a more positive body image, $ps<.05$, and higher self-esteem, $p<.01$, for thinner individuals but a more negative body image and lower self-esteem for heavier individuals. The study also found that identifying oneself as heavier was associated with a more negative body image, $ps<.01$, and lower self-esteem, $ps<.05$.

Conclusions: While greater weight bias was associated with negative psychological well-being among overweight individuals, it was associated with positive psychological well-being among normal weight individuals. Viewing oneself as overweight was associated with comparable negative consequences as actually being overweight. Further research is needed to understand how weight status, weight bias, and weight identity affect psychological well-being.

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C-095

BEHAVIORAL MASTERY AND LONG-TERM MAINTENANCE OF LOST WEIGHT

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Little is known about the relation between initial “mastery” of behavioral self-management skills and successful long-term weight loss. Further, few studies of long-term weight change beyond two years have been conducted, and none has examined weight changes in medically underserved, rural populations. The current study involved a long-term follow-up of obese women ($N=234$, ages 50-75) from the TOURS (Treatment of Obesity in Underserved Rural Settings) trial, which included six months of group-based sessions followed by one of three 12-month extended care programs (i.e., face-to-face counseling, telephone counseling, or mail only contact). In the present study, 110 TOURS participants were assessed 48 months after the initiation of treatment. Participants lost 9.76 ± 4.9 kg from 0 to 6 months, and regained 5.83 ± 7.96 kg from 6 to 48 months. A significant proportion of participants maintained weight reductions of 5% or greater from baseline to follow-up (41.8%). Higher levels of behavioral mastery (i.e., completion of self-monitoring records of caloric intake) from month 5 to 6 were associated with weight loss from 18 to 48 months ($p=0.028$), and with increased self-monitoring of intake ($p=0.049$) and setting calorie goals ($p=0.017$) at month 48. “Successful” participants (i.e., those who maintained losses of 5% or greater at follow-up) reported weighing themselves, self-monitoring their intake and calories, planning meals in advance, and choosing lower-calorie foods with greater frequency than “unsuccessful” participants (i.e., those who lost less than 5%). Collectively, these findings indicate that a significant proportion of participants were able to maintain clinically significant weight losses posttreatment, and that self-monitoring and goal-setting were key components of successful long-term weight management.

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C-096

OBESITY AND CHILDHOOD SEXUAL ABUSE AMONG WOMEN ATTENDING A PUBLICLY-FUNDED CLINIC

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Previous studies have found an association between obesity in adulthood and childhood sexual abuse (CSA) but the nature of this relation is poorly understood. The purpose of the present study was to investigate: (a) the association between CSA and body mass index (BMI) among women attending a public clinic; (b) whether CSA is independently related to BMI after controlling for other types of childhood abuse; and (c) if CSA severity is related to BMI. Participants were 437 women attending a publicly-funded, urban STD clinic (66% African American; 56% income<\$15,000/year) who completed a computerized survey, which included items assessing childhood abuse experiences, as well as current weight and height. Forty-three percent ($n=191$) of participants met criteria for CSA (i.e., sexual contact before age 13 with someone 5 or more years older, before age 17 with someone 10 or more years older, or before age 17 involving force). Mean BMI was 29.1 ($SD=7.9$); 25% ($n=109$) of the sample was overweight while 40% ($n=175$) was obese. In bivariate analyses, CSA was associated with BMI, $F(1, 435)=5.22$, $p<.05$. CSA remained associated with BMI after controlling for demographic covariates and for other types of childhood abuse, $F(1, 413)=5.79$, $p<.05$. Women who experienced CSA had an average BMI of 30.1 ($SD=8.2$); women who did not experience CSA had an average BMI of 28.4 ($SD=7.6$). Among the women who reported CSA, abuse severity, including age at time of abuse, age difference between the participant and the other person, relationship to the other person, type of sexual act that occurred, duration of the abuse, use of force, and CSA severity, were unrelated to current BMI. A large percentage of participants reported CSA and a large percentage were obese, reflecting the numerous psychosocial and health challenges faced by low-income, urban women. Research is needed to determine whether the association between CSA and adult BMI is causal and, if so, the mechanisms through which CSA leads to adult obesity.

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C-097

WEIGHT STIGMATIZATION AS A RISK FACTOR FOR WEIGHT CONTROL AND HEALTH

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The goal of this study was to examine the relationship between weight stigmatization and health. In this cross-sectional survey study ($N=60$), the minority stress model was used as a framework to examine three types of stigma: internalized stigma, perceived daily stigma, and past stigmatizing events. Self-reported health status, specific weight control behaviors, and motivation for health behavior change (autonomous vs. controlled, of Self-Determination Theory) were also assessed. Regression analyses showed that perceived daily stigma was the strongest predictor of poorer health status ($\beta=0.31$, $p=.02$). No forms of stigma were associated with increased healthy weight control behaviors, but internalized stigma emerged as the strongest predictor of unhealthy weight control behaviors ($\beta=0.32$, $p=.02$). Furthermore, mediation analyses demonstrated that controlled motivation mediated the relationship between internalized stigma and unhealthy weight control behaviors ($p<.01$). Thus, it appears as though weight stigma can influence both controlled motivation and unhealthy weight control behaviors, both of which have been associated with lowered weight loss success in previous research. Although conclusions cannot be drawn about causality, our results suggest that weight stigmatization may be an important risk factor for healthy behavior change, and further attention into this understudied area is merited.

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C-098

MEDICAL AND PSYCHOLOGICAL PREDICTORS OF BARIATRIC SURGERY COMPLETION

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A psychological evaluation is required before approval for Bariatric Surgery (BS), but standardized BS evaluations are lacking (Fabricatore et al., 2006). The cost-effectiveness of pre-bariatric screening may be improved by advancing our understanding of which factors predict follow-through. Thus, the PsyBari-II, a psychological test constructed for BS candidates, was developed (Mahony, 2010). A sample of 480 bariatric candidates completed the PsyBari-II. Participants were predominantly female (71.9%) and White (69.9%), with a mean BMI (±*SD*) of 47.97 (±*7.94*) and mean age (±*SD*) of 40.87 (±*11.2*); 69% actually followed-through with BS (63% had gastric bypass, 35.8% had lapband, 1.2% other). BS follow-through rates did not differ by gender or race. Medical/weight history items and PsyBari-II items were analyzed separately. At the bivariate level, obesity onset and number of different weight loss programs were significantly (*p* <.05) associated with BS follow-through. In a simultaneous logistic regression model, both obesity onset in childhood (OR=1.61) and increased number of weight loss programs tried (OR=1.05) significantly increased the likelihood of BS follow-through. Seventeen PsyBari-II items were significantly associated with BS follow-through. Factor analysis of these items yielded six factors with eigen values greater than 1.0, accounting for 58.68% of the variance; however, only the first four factors were interpretable. In a simultaneous logistic regression model, three factors significantly predicted follow through with BS: Weight Concerns, OR=1.43, *p*<.05; Medical Care, OR=1.28, *p*=.053; Psychiatric History, OR= 0.52, *p*<.05; Health Concerns, OR=1.6, *p*<.05. That is, a psychiatric history decreased the likelihood of BS follow-through, while more extensive weight concerns, health concerns, and confidence in medical care increased the likelihood of BS follow-through. Findings suggest that relatively few questions in circumscribed domains predict BS follow-through. In future research, PsyBari-II data may also shed light on which factors best predict post-surgical outcomes.

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C-099

DIETARY RESTRAINT AND DISINHIBITION INTERACT WITH REINFORCING VALUE OF FOOD TO PREDICT BMI

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The Three-Factor Eating Questionnaire (TFEQ) measures cognitive restraint, disinhibition and hunger, eating behavior traits that have been associated with body weight and food intake differences in adults. Obese individuals find food more reinforcing, and body mass index (BMI) has been reported to moderate the relationship between restraint and reinforcing value of food in females. 273 subjects (79 non-obese females, 72 non-obese males, 60 obese females, 62 obese males) completed the TFEQ and a computer task designed to measure the relative reinforcing value of food (RRV), during which points for food or reading time could be earned on separate progressive ratio schedules. Results indicate an interaction between restraint and RRV on BMI (p=0.0064), where highly restrained individuals who also find food highly reinforcing have the highest BMI. In addition, there is an interaction between disinhibition and RRV on BMI (p=0.0123), where highly disinhibited individuals are more sensitive to RRV, and highly disinhibited individuals who also find food highly reinforcing have the highest BMI. A nominal interaction exists between hunger and RRV on BMI (p=0.0545). As expected, individuals who find food less reinforcing and report lower hunger ratings have the lowest BMI. Importantly, no sex differences were observed amongst these interactions. The TFEQ and the RRV task may therefore have utility as diagnostic tools for identifying people who are susceptible to becoming obese.

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C-100

GENDER DIFFERENCES IN PREDICTORS OF WEIGHT GAIN DURING THE FIRST YEARS OF COLLEGE

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Prior studies show the average college student gains about 2 kg during the 1st semester of college, with very little understanding of the factors contributing to this period of rapid weight gain. This study examines predictors of weight gain in young adults during the first and second years of college. Generalized least squares regression was used to analyze the relationship between weight gain and demographic, lifestyle (e.g., diet, physical activity, alcohol intake, eating habits), and psychosocial (e.g., cognitive restraint, disinhibition, hunger; stress; depression) constructs. Variables were measured at five time points, from the start of the 1st year of college through completion of the 2nd year in 507 young adults (65.5% female; 18.5±0.6 yrs; 60.6% Caucasian; baseline BMI 22.17±3.16 kg/m2). Men gained an average of 2.68 kg and women an average of 1.77 kg during their 1st year, with 22.5% gaining≥4 kg. Baseline weight varied by time and gender (p<.001), with 1st semester weight gain most prominent. Students on average did not lose this weight during their 2nd year, although weight gains were attenuated. Baseline predictors of weight gain for both men and women included lower dietary restraint (p=.04) and greater shape concerns (p=.06). In men, baseline predictors of weight gain included higher alcohol intake (p=.05), while more late-night eating episodes (p=.05) predicted 2-year weight gain. In women, baseline predictors included lower dietary restraint (p=.02), while 2-year weight gain predictors included increases in alcohol intake (p=.02), cognitive restraint (p=.01), disinhibition (p =.001), and shape concerns (p=.0001). Weight gain is prevalent during the 1st year of college, with this study documenting continued gains- and a lack of weight loss-through the 2nd year. 73% of students were heavier at the end of their 2nd year compared to the start of college. Gender differences in the factors contributing to weight gain have important implications.

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C-102

DOUBLE-EDGED SWORD EFFECTS OF WORKING FOLLOWING PSYCHOLOGICAL TRAUMA

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In post-disaster relief and reconstruction, the sustainable engagement and hope of local main workforces such as teachers, doctors and officials, are paramount important to the survival of the affected communities. However, they might also suffer from posttraumatic stress disorder (PTSD) symptoms as their fellow survivors do, in addition to their work responsibilities. To examine dynamics between PTSD and hypothesized positive effects of working, a survey was conducted to a cohort of teachers (n=215) in earthquake affected areas in China after the devastated earthquake in 2008 with a death toll of approximately 70,000. Among the participants with an average age of 34 years (SD=6.49) and a average working hours of 8.67 hours (SD=1.83), 28.4% lost immediate family members, 42.1% suffered from severe PTSD symptoms, and 49.3% suffered from severe depression symptoms. The Structural Equation Modeling analysis (Fit indices: x2=351.99, df=162, NNFI=0.916, CFI =0.928, RMSEA=0.06) supported a model in which PTSD symptoms aggravated job burnout and depression, whereas psychological empowerment in the work enhanced work engagement and hence hope which counterbalanced job burnout and depression respectively. The result suggests that meaningful engagement such as taking on work responsibilities following a trauma could be salutary notwithstanding the possible risk of job burnout. It not only can enhance hope but also resilience. However, the positive relationship between PTSD and job burnout and depression is indicative of a possible long-term harmful effect of the dissociation mechanism of PTSD, which is worth noting in discussing the salutary effect of working given its double-edged sword effect of being both the source of meaning and purpose and a distraction from the painful resolving process of traumatic experiences.

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C-104

THE GENERAL MEDICATION ADHERENCE (GMA) SCALE: PSYCHOMETRIC ANALYSIS OF A NEW SCALE FOR THE PRIMARY CARE SETTING

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ABSTRACT BODY: BACKGROUND: As part of a larger study on automating patient follow-up after outpatient visits, we examined the psychometric properties of a new scale devised to assess adherence to medications prescribed for any chronic condition typically treated in a primary care setting.
METHODS: The scale was a revised and expanded version of an eight-item Morisky Scale originally devised for hypertension patients. The new General Medication Adherence (GMA) scale has seven items, each with three possible responses (often, sometimes, never) which can be administered as self-report or by interview. The items covered days of missed medications over the last two weeks, amount of medicine taken yesterday (reverse-scored), forgetting to take medicine, stopping medicines when feeling bad, travel interfering with taking medicines, stopping when feeling better, and feeling hassled about taking medicine. Mean scores could range from 1.0 to 3.0 with higher scores indicating greater adherence. A higher GMA scale score should be associated with higher medication adherence on other measures. To test the GMA scale we administered the scale along with other items by telephone to two waves of patients from two primary care clinics after a recent clinic visit.
RESULTS: In the first wave, 104 of 111 patients responded. In a second wave 154 of 197 patients responded. The mean scale scores for the two waves were 2.77 (standard dev.=.32, range 1.57-3.00) and 2.78 (standard dev.=.28, range 1.17-3.00) respectively. Cronbach's alpha for the items was .75 and .76 respectively indicating good internal consistency and good reliability.
CONCLUSIONS: The results indicated that the GMA scale had good reliability and validity and was easily administered over the telephone. The GMA can be a valuable tool in the assessment of patient behavior and outcomes. This study was funded by AHRQ grant # HSR18 HS017060.

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C-105

THE PSYCHOSOCIAL ASSESSMENT TOOL IN PEDIATRIC SICKLE CELL

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Assessing the social environment and psychological distress experienced by children with sickle cell disease (SCD) and their families is essential for improving the overall quality of patient care in a public health setting. Herein, we evaluate the Psychosocial Assessment Tool 2.0 (PAT) as an appropriate screening measure for a pediatric SCD population. Participants consisted of 222 pediatric SCD patients (age M=7.62 yrs, range 14 days to 25 yrs; 45.9% female). Caregivers completed the PAT during a hematology clinic visit. Total PAT score and subscale reliability coefficients were initially calculated based on original scoring that dichotomizes specified items into 0=no risk and 1=risk. Total PAT scores were consistent with Pai et al.'s previous findings (2008) with 12.6% in the Clinical Risk range. Reliability coefficients for risk subscales ranged from poor to good (α's=.42 to .83). Given this application of the PAT to a novel SCD population, confirmatory factor analysis was utilized to examine original PAT items. Using maximum likelihood standardized estimation, the optimal solution included 52 items making up 6 subscales (RMSEA=.06; CFI=.84; NNFI=.83). Internal reliability was improved in this manner with α's ranging from .60 to .93. Overall, Social Support was low (M=1.63; SD=1.23; max=6). However, caregivers reported low Child Problems (M=0.25; SD=0.24; max=2), low Sibling Problems (M=0.10; SD=0.16; max=1), low Family Problems (M=0.15; SD=0.17; max=1), low Caregiver Stress (M=0.55; SD=0.67; max=3), and high positive Family Beliefs (M=2.60; SD=0.60; max=3). Increased parent education was related to increased Social Support ($p<.01$) and decreased Child Problems ($p<.05$). Results suggest that while families of patients with SCD report low social support, they report few symptoms of distress and positive beliefs regarding treatment. Further evaluation of the PAT in pediatric SCD in needed. Alternative scoring methods may increase reliability.

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C-106

COGNITIVE PROCESSES RELATED TO FALLS IN PATIENTS WITH MULTIPLE SCLEROSIS

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Recent research has focused on the link between cognitive and motor functioning in different populations with neurological impairments. Many patients with multiple sclerosis (MS) experience falls that may lead to serious injury. Thus, it is important to explore the correlates and possible predictors of falls in this population. We looked at correlations between various neuropsychological test scores and ambulation data from 155 patient charts at an MS center. We found that falls were significantly correlated with poorer total recall and more repetitions on the California Verbal Learning Test II (CVLT-II) ($p<.05$). There was also a trend toward significance for a negative correlation between performance on the oral version of the Symbol Digit Modalities Test (SDMT) and falls ($p=.089$). There were no correlations with executive functioning as were expected due to prior research. This suggests that deficits in verbal learning and processing speed could possibly indicate increased risk of falling in patients with MS.

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C-107

AMBULATION AND COGNITION IN PATIENTS WITH MULTIPLE SCLEROSIS

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There has been an increased interest in the link between walking speed, gait quality, and cognitive functioning in individuals with multiple sclerosis (MS). We explored the relationships between neurologist ratings of ambulation on the Incapacity Status Scale, walking speed on the Timed 25-Foot Walk, and scores on various neuropsychological tests for 155 patients at an MS Center. As expected, there was a strong correlation between the neurologist's ambulation ratings and walking speed ($r=.59$, $p<.001$). In addition, we found significant correlations between walking speed and performance IQ ($p<.01$), full scale IQ on the Wechsler Abbreviated Scale of Intelligence ($p<.05$), verbal fluency ($p<.05$), semantic fluency ($p<.01$), and performance on the Symbol Digit Modalities Test ($p<.01$). There were also significant correlations between ambulation ratings and total recall on the California Verbal Learning Test II ($p<.05$), performance on the Stroop Color Word Test ($p<.01$), as well as the errors, trials to complete, and categories completed on the Wisconsin Card Sorting Test ($p<.05$). These results indicate that there are many aspects of cognition and motor functioning that are related, which may suggest that slowed walking speeds and poorer ambulation abilities can signal existing or developing cognitive impairments.

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C-108

CONCEPTS OF ILLNESS AMONG CHILDREN OF DIFFERENT ETHNICITIES, SOCIOECONOMIC BACKGROUNDS, AND GENDERS

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Research regarding children's concepts of illness (CCI) is needed in order for parents, professionals, and health educators to understand and effectively communicate with both ill and healthy children. To date, most research on CCI has been conducted on White, middle to upper class children. Without diversity in research samples, the results from these studies cannot be disseminated in multicultural societies such as the U.S. and used to inform health practitioners and other professionals on how to communicate effectively with children. In the current study, 260 school-aged children's understanding of four aspects of physical illness was assessed using structured interviews. Specifically, children were interviewed about their concepts of the causes, symptoms, treatment, and prevention of physical illness. Children's general level of cognitive development was also assessed using a standard set of tasks based on Piagetian concepts. Analysis used polynomial contrast codes and controlled for overall cognitive-developmental level. The findings demonstrated a significant linear effect of socioeconomic status (SES) on children's level of understanding of causes and prevention of illness. Meaning as socioeconomic status increases (i.e., annual total family income) children's level of understanding of causes and prevention of illness also increases. In addition, when the average overall score of CCI was used, a significant cubic pattern of SES on children's average level of understanding of physical concepts of illness was demonstrated. CCI did not significantly differ by gender and ethnicity. Although overall there were few differences among children of different gender and from varying ethnic backgrounds, the results could guide professionals when communicating with children from different SES backgrounds, since children from lower SES levels showed an understanding of causes and prevention of illness that appeared less sophisticated than children from higher SES levels.

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C-109

CORRELATES OF FAITH-BASED INDIVIDUAL HEALTH COUNSELING: IMPLICATIONS FOR IMPLEMENTATION OF EVIDENCE-BASED BEHAVIORAL MEDICINE

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A recent national survey shows many faith-based organizations (FBOs) perceive a strong link between spiritual and physical health. Furthermore, individual health counseling was the most commonly reported form of faith-based health programming (Bopp et al., 2010); suggesting FBOs have great potential for adopting, implementing and sustaining evidence-based individually-tailored health programs. Thus, we examined individual, organizational and environmental correlates of FBO individual health counseling. A convenience sample of faith-leaders (N=693) completed an online survey assessing faith-leader demographics (age, sex, race), attitudes (fatalism, self-efficacy and comfort for individual health counseling), health behaviors (fruit & vegetable consumption, physical activity, body mass index), FBO social and environmental characteristics (church size, denomination, and parent organization support for health programming) and whether their FBO offered individual health counseling. Respondents were mostly White (92.7%), male (77.5%), middle-aged (52.7±10.9 yrs), Methodist (41.6%) or Lutheran (21.4%) affiliated and offered individual health counseling at their FBO (54.1%). Logistic regressions assessed the association of individual, social and environmental variables with the presence of FBO individual health counseling. Correctly classifying 62.8% of the cases, three factors distinguished whether churches offered individual health counseling [model $\chi^2=45.947$, $p<0.001$]. Specifically, faith-leaders at larger churches [Wald=18.22, $p<0.001$] and faith-leaders reporting greater levels of self-efficacy [Wald=15.71, $p<0.001$] and comfort [Wald=7.69, $p<0.01$] for individual health counseling were more likely to offer counseling programs. Public health professionals engaging FBOs to implement evidence-based health programs should target larger churches and build faith-leader self-efficacy and comfort for delivering individual health behavior change programs.

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C-110

USE OF PROMPTS TO INCREASE TRACKING IN A WEB-BASED INTERVENTION

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Self-monitoring or tracking of behaviors is a key behavior change mechanism. This study was designed to determine whether prompts increase tracking among individuals enrolled in a web-based intervention to reduce multiple cancer risk factors (red meat intake, fruit & vegetable intake, multivitamin use, number of steps, and cigarettes smoked). Participants (N=100; 18+ yrs, read English, w/daily internet access) were recruited at their health care organization when attending a well-care visit; they provided informed consent, completed a survey, and received a log-in for the study website, which emphasized tracking of behaviors and encouraged daily tracking. Those who met the minimum tracking goal of tracking$\geq$1 behavior$\geq$3 times in the first week did not receive prompts (n=14). All others were randomized to Automated Assistance Group (AAG, n=36) or Technical Assistance Group (TAG, n=50). AAG received daily reminder emails during weeks 2 and 3. TAG received these emails plus a technical assistance call at the end of weeks 2 and 3. Reminder emails included a link to the website, or participants could respond directly to the email with tracking information that was then uploaded to the website. There were no differences in demographics between those who met the tracking goal and those who did not. After the first week of prompts, the percentage of participants meeting the tracking goal was double for TAG (AAG=11%; TAG=22%), and increased slightly for both groups after the second week of prompts (AAG=14%; TAG=26%). Immediately after the prompts ceased, the percentage meeting the tracking goal declined (AAG=0%; TAG=17%). At week 16, tracking rates were still higher for TAG (TAG=8%; AAG=3%). Tracking rates reminded higher for TAG than AAG over the course of the study. However, there was only a significant difference ($P<.05$) in the percentage of participants in AAG and TAG meeting the tracking goal at weeks 4, 7, and 8. Although tracking rates were low, prompts increased tracking, with the increase sustained longer by those that received the technical assistance calls.

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C-111

ORAL HEALTH BEHAVIORS IN UNDERSERVED POPULATIONS: DENTAL CARE USE OVER THE LIFE COURSE FOR MEDICAID ENROLLEES WITH AN INTELLECTUAL/DEVELOPMENTAL DISABILITY

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Poor oral health is linked to a number of systemic conditions, yet has received little attention in the behavioral medicine field. Medicaid enrollees with an intellectual/developmental disability (IDD) are at increased risk for poor oral health, due in part to low dental care use. However, few studies have explored their patterns of dental use over the life course. The goals of this study were to determine the relationship between age and dental use, and identify other factors associated with dental use. Cross-sectional data were analyzed for persons with IDD enrolled in Iowa Medicaid for 11-12 months in 2005 (N=18,831). The outcome variable was dental care use in 2005. Chi-square tests and multivariate logistic regression models were used to determine associations of age and other factors with dental use. Mean enrollee age was 32.9 yrs (range:1 mo-95 yrs). 60% utilized dental care in 2005. There were significant differences in dental use by age (Chi2=516.4; $p<.0001$: 23.5% (age<4); 45.1% (age 4-6); 55.5% (age 7-11); 54.2% (age 12-17); 52.4% (age 18-21); 64.1% (age 22-44); 63.5% (age 45-64); 45% (age>64). Compared to Medicaid enrollees with IDD age>64, enrollees age 7-64 were 1.15-2.25 times as likely to use dental care ($p<.0001$), and those age<4 were 0.45 times as likely to use dental care ($p<.0001$). Non-whites ($p<.0001$), males ($p=0.02$), and metropolitan area residents ($p<.01$) were significantly less likely to use dental care. The results suggest that (1) dental use is not constant over the life course for Medicaid enrollees with IDD; (2) younger and older Medicaid enrollees with IDD are the least likely to use dental care, yet these groups represent important life stages with respect to oral health, and (3) race, sex, and population density are associated with dental use. Exploring disparities in dental use among subgroups is a first step in developing interventions aimed at improving the oral health of the most vulnerable Medicaid enrollees.

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C-112

CHILDREN WITH FUNCTIONAL ABDOMINAL PAIN REPORT GREATER DISABILITY AND DISTRESS THAN CHILDREN WITH INFLAMMATORY BOWEL DISEASE

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Investigations into differences in psychological factors among patients with functional (unknown medical etiology) versus non-functional (known medical etiology) gastrointestinal (GI) disorders have, to date, focused largely on adult populations. Specifically, adults with Irritable Bowel Syndrome (IBS), a functional disorder, report more depression and anxiety than those with Inflammatory Bowel Disease (IBD), an organic disorder with well-established physiological indicators and often serious medical sequelae. However, attention to comparisons between these groups in a pediatric GI population has been limited. In this study, we compared psychosocial functioning among children with Functional Abdominal Pain (FAP), a chronic pain disorder, and IBD. Participants were 200 children with gastroenterologist-documented FAP (M age =11.20, SD=2.59; 73% female; 86% Caucasian) and 68 children with IBD (M age=14.11, SD=2.49; 44% female; 84% Caucasian). All children completed the Functional Disability Inventory, the Catastrophizing subscale of the Pain Response Inventory, the Children's Depression Inventory, and the Multidimensional Anxiety Scale for Children. Children with FAP reported greater disability, catastrophizing, depression and anxiety compared to children with IBD, all p values <.01. Ms (SDs) for disability=0.76 (0.60) and 0.33 (0.41); catastrophizing=1.59 (0.86) and 0.91 (0.69); depression=10.24 (6.76) and 4.64 (6.25); and anxiety=13.17 (4.32) and 11.50 (4.13). These data parallel the somewhat counterintuitive findings from the adult GI literature, in which greater distress and disability are associated with the functional disorder of IBS as compared to the organic disorder of IBD. Furthermore, these findings suggest that the treatment of FAP should address psychosocial factors, specifically including the targeting of maladaptive cognitions.

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C-113

CHRONIC ILLNESS AND EXPERIENCE WITH THE HEALTH CARE SYSTEM AS PREDICTORS OF THE LIKELIHOOD OF HIRING A HEALTH CARE ADVOCATE

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A Health Care Advocate (HCA) is a professional who represents a patient's interests within the health care system. An HCA may be a valuable resource for patients experiencing illness, who must cope with multiple stressors. Little is known about factors that predict the likelihood of hiring an HCA. The present study examined participants' chronic illnesses and previous negative health care experiences as predictors of hiring an HCA for an ill family member. Chronic illness and a negative health care experience were expected to predict a greater likelihood of hiring an HCA for a family member than a chronic illness without a negative health care experience. Individuals with a chronic illness who report negative experiences may feel less adept in interacting with the health care system than their counterparts who have not had negative experiences, making them more likely to hire an HCA for an ill family member. To test this hypothesis, a community-based sample (N=1,149) was randomly selected to complete a questionnaire regarding HCAs. Respondents were asked whether they had any chronic health issues, whether they had had a negative health care experience, and their likelihood of hiring an HCA if a family member became ill. The results were analyzed with a 2 (Negative health care experience: yes or no) by 2 (Chronic health issues: yes or no) ANOVA to assess likelihood of hiring an HCA. The results revealed a significant crossover interaction effect, F (1, 1145)=6.893, p<.01, partial η¬2=.006. Specifically, among participants with chronic health issues, those who also had a negative health care experience reported being more likely to hire an HCA (M=4.85, SD=2.88) than those without negative health care experiences (M=3.97, SD=2.64), F (1, 1145)= 9.56, p<.01, partial η¬2=.008. Further research is needed to identify other factors that predict the likelihood of hiring an HCA.

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C-114

RISK AND PROTECTIVE FACTORS FOR PREVENTIVE HEALTH CARE AND HEALTHY LIFESTYLE CHOICES IN LOW INCOME FAMILIES

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Preventive health care for children ensures their healthy growth and survival. With increased prevalence of childhood overweight and related comorbidities, preventive health and healthy lifestyle choices are fundamental not only in preventing obesity, but in delaying and preventing other related diseases and conditions. Research shows that low income and minority parents are less likely to engage in preventive health care and healthy lifestyle choices.

Purpose: To identify risk and protective factors for preventive health care and subsequent healthy lifestyle choices made by low-income families.

Method: Head Start facilitators and parents were invited to participate in three focus groups (English-speaking parents [N=10], Spanish-speaking parents [N= 11], Head Start Facilitators [N=7]). Participants completed a brief questionnaire and participated in the focus groups. Questions were designed to elicit responses indicative of parents' and facilitators' recognized barriers and protective variables for preventive health and healthy lifestyle choices. Recordings were transcribed verbatim and analyzed using thematic analysis.

Results: There were some overlap in risk and protective factors identified by the 3 groups however facilitators were able to identify more barriers to healthy lifestyle and preventive health care than parents. Finances, transportation, insurance, cultural and religious beliefs, inflexibility of the health care system and safety were among the risk factors themes identified by both groups. Protective factors identified by parents included social support and security, while facilitators identified factors under the themes of convenience, knowledge, and social support. Themes will be expanded on and relevant findings including group differences will be presented.

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C-115

THE EFFECTS OF SOCIAL COMPARISON ON FEMALE BODY IMAGING

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The thin-ideal body image flaunted by the media pressures women to compete amongst each other on two levels: The average woman against the super model ideal, and against her own peers. The latter comparison is more relevant on a day-to-day basis; of specific interest is how women manage their environment in a way that may enhance or protect their current body evaluation. To address this, the present study was designed to examine how quickly women choose to approach peers of varying fitness in an exercise setting and to determine whether such self-selected exposures affect acute body satisfaction. An assistant asked 376 female undergraduates to fill out a brief pre-exercise questionnaire that assessed BMI, exercise attitudes, and body satisfaction as they entered a gymnasium at UCSD. Of those asked, 90% agreed (N=339). A final sample of 75 women (31 who had completed the pre-exercise questionnaire and 44 who had not) later became (unsuspecting) participants in the primary portion of the study by virtue of their choosing to exercise on an unoccupied apparatus in close proximity to a female confederate, who, via clothing and padding, was made to look slender and fit or relatively overweight. Of primary interest was time taken for a woman to approach, and the duration of their work outs on the target apparatus, in the fit, unfit, and no-peer conditions. An assistant recorded objective approach and exercise times unobtrusively. After completing their exercise on the target apparatus, all 75 participants agreed to complete a brief questionnaire that assessed current body satisfaction. An ANOVA indicated that subjects' approach times were affected significantly by condition, Fs (2, 74)= 3.79, p=.027, with times shortest in the unfit condition compared to the fit and control conditions. There was no significant effects of peer condition found for exercise duration or body satisfaction. These results show that when in a competitive setting, women do self-select into environments differently depending on the perceived fitness of those already present. An unfit peer invited approach for reasons that remain to be determined in future research.

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C-116

THE RELATIONSHIP BETWEEN NEUROCOGNITIVE ABILITY AND PSYCHOSOCIAL FUNCTIONING IN CHILDREN WITH NEUROFIBROMATOSIS TYPE 1

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Children with neurofibromatosis type 1 (NF1) experience significant psychosocial deficits that limit their quality of life. Their poor social functioning is well-documented, but relatively little is known about the factors that underlie their impairment. In light of this, the current study examines the relationship between psychosocial functioning, including facial expression recognition (FER), and neurocognition in children with NF1. In addition, this study will examine neurocognitive predictors of social functioning in this population. To date, twenty-two participants diagnosed with NF1 have been recruited during regularly-scheduled clinic appointments. Each child completed a brief measure of intelligence, the DANVA2 (a measure of FER), and the PedsQL. Parents rated their child's social and behavioral functioning via the CBCL, the PedsQL, and the Emory Dyssemia Index (EDI; a measure of nonverbal social behavior). Parents also completed the Connors-3 Short Form (a measure of inattention and executive functioning). Correlations were performed between FER and parent-rated inattention, parent-rated executive functioning, and estimated IQ. The relationship between FER and parent-rated social functioning was also assessed. Preliminary results reveal a strong positive association between FER and executive functioning, and between FER and parent-rated social functioning. Moreover, a significant negative relationship was found between parent-rated social functioning and inattention. Collectively, these observed associations implicate neurocognitive variables in the psychosocial processes of children with NF1. This is an important finding that may facilitate the development of more effective interventions for both the psychosocial and neurocognitive deficits observed in this population. In this regard, this line of research has the potential to improve the quality of life for children living with NF1.

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C-117

SELF-ESTEEM, ANXIETY, AND SELF-BLAME AMONG PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Smoking, a highly stigmatized health behavior, is the primary cause of chronic obstructive pulmonary disease (COPD); however, not all individuals with a history of smoking and COPD acknowledge the role of smoking behavior in causing their disease. COPD, the fourth leading cause of death in the US, commonly includes symptoms such as shortness of breath, coughing, and fatigue. This study assessed psychological factors associated with self-blame in patients with COPD. Forty-three women ($n=19$) and men with COPD (mean $age=62.9\pm11.1$ years) were recruited from a university-based outpatient pulmonary exercise rehabilitation program. All participants completed self-report questionnaires assessing depression (Center for Epidemiological Studies-Depression Inventory (CES-D)), anxiety (State-Trait Anxiety Inventory (STAI)), self-esteem (Rosenberg Self-Esteem Scale (RSES)), mastery/locus of control (Multidimensional Health Locus of Control scale (MHLOC), Personal Mastery Scale (PMS)), and stigma (Social Impact Scale (SIS)). Using a question from the SIS evaluating self-blame for their condition, it was found that 35 participants felt partially to blame for their illness and eight did not. Analysis of variance was used to examine differences between the two groups on all of the self-report measures. Patients who felt self-blame for their illness reported higher anxiety ($p<.05$), lower self-esteem ($p<.05$), and less personal control ($p=.05$) than patients who did not feel they were to blame for their illness. Self-blame was not associated with perceived stigma. Thus, results indicate that patients with COPD who do not blame themselves for the development of their illness appear to have higher self-esteem and less anxiety than those who acknowledge self-blame. Lack of self-blame among patients with COPD appears to be associated with more positive well-being. Because there is a clear link between health behaviors and disease etiology in COPD, patients who do not blame themselves may be especially resilient. Self-blame may be an important factor to consider in research and clinical work among patients with COPD.

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C-118

IMPLEMENTATION OF A KIOSK-BASED PEDIATRIC INJURY PREVENTION PROGRAM IN PRIMARY CARE

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The gap between the development of efficacious interventions and their use in practice is well acknowledged. Implementation studies are critical to guide the integration of efficacious programs into general practice. This study evaluated the implementation of an evidence-based pediatric injury prevention program, examining program use and identifying barriers and facilitators to its implementation. Safe N' Sound is an injury prevention program for use in pediatric primary care. Parents complete a computer-based assessment in the waiting room; feedback tailored to the identified risks and relevant beliefs is generated for the parent, along with a tailored summary for the healthcare provider. The program was adopted by five diverse pediatric clinics within a healthcare system. Implementation data were obtained from the computer program, patient census records, chart reviews, physician and staff questionnaires, focus groups, and waiting room observations. Overall, program use averaged 12.1% of eligible patients during the initial implementation phase (3 months) and 9.5% during the continuation phase (6 months); program completion averaged 7.6% and 4.2%, respectively. Differences in program use and completion by site were statistically significant (Marascuilo procedure). Use ranged from 5.6%-13.7% during the implementation phase and 2.1%-12.1% during the continuation phase. Program completion ranged from 4.4%-11.6% during implementation and 0.9%-6.3% during continuation. Documentation of program use in the medical records was estimated to be 34% of program completers. Providers and staff indicated the importance of gaining staff support, addressing logistical issues, addressing misconceptions, and enhancing communication for successful implementation. Findings highlight the challenges of implementing prevention programs in real-world settings, and can inform the dissemination of evidence-based public health programs, particularly in clinical settings.

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PSYCHOSOCIAL FUNCTIONING OF PEDIATRIC CHRONIC PAIN PATIENTS: ARE DIFFERENT SYNDROMES REALLY THAT DIFFERENT?

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Thirty percent of children experience debilitating chronic pain (Zeltzer et al., 2006). Research is sometimes diagnosis-specific (Lewandowski & Palermo, 2009) and sometimes summarizes different types of chronic pain (Simons et al., 2010). Although each approach has advantages, it is not clear which approach is best. As we continue to investigate interventions and moderators of intervention outcomes for pediatric pain, it would be useful to know how these patients are similar and different. This study examined pain and psychosocial variables among three common pain types experienced by children and adolescents to determine similarities and differences among these groups. Outcome variables included sex; pain duration, frequency, and intensity; psychological diagnoses; anxiety, depression, functional disability, and emotional regulation.

Chronic pain patients, 9 to 18 years old, with abdominal ($n=160$), headache ($n=159$), or localized pain ($n=147$) completed the Functional Disability Inventory; Spence Anxiety Scale for Children, Beck Depression Inventory and Children's Emotion Management Scales as part of their clinical care at a multidisciplinary pain clinic. Participants reported their sex, pain duration, frequency, and intensity.

Chi-square analyses indicated no differences in sex. ANOVA indicated no differences in pain frequency, functional disability, or anxiety. However patients with headache reported longer duration ($F=5.621$, $p<.01$) and more intense pain ($F=2.91$, $p=.05$) than those with localized pain. Patients with abdominal pain demonstrated significantly more depression than those with localized pain ($F=3.564$, $p<.05$). In addition, patients with localized pain demonstrated better anger coping skills than those with abdominal pain ($F=4.153$, $p<.05$).

Although the patients seen in our clinic were similar on some pain and psychological variables, there were also significant differences that suggest depending on the research question, looking at children with different pain syndromes separately might be warranted.

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C-121

MEDIATION OF THE PHYSIOLOGICAL EFFECTS OF MASSAGE DURING A PAIN TASK

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Complementary therapies such as massage have been shown to have potent effects in reducing pain and sympathetic arousal. The present study seeks to elucidate the physiological mechanisms of massage by contrasting the effects of massage verses guided imagery relaxation during experimentally induced electrical stimulation pain. Participants were 96 healthy females (mean age=20.13 years; 84.4 % Caucasian). Participants were randomly assigned to a massage plus guided imagery, massage, guided imagery, or no-treatment intervention period. Mean heart rate (MHR) and mean inter-beat interval (MIBI) were measured continuously and calculated using MindWare HRV 2.6 software. An initial multilevel fixed slopes model revealed significant effects of time on MHR (z's≥ 2.55, p's$<.05$) and MIBI ($z=3.80$, $p<.01$). There were also significant group x time interactions for MHR (z's≥ -2.76, p's$<.01$) as well as for MIBI ($z=-3.79$, $p<.01$). Chi-squared deviance statistics indicated that change over time should be allowed to vary randomly across participants for both MHR ($p<.01$) and MIBI ($p<.01$). Time and group x time effects on MHR and MIBI became non-significant, indicating that intervention effects are best explained by individual differences across groups. Using the Aroian version of the Sobel test, unpleasant affect was determined to be a significant mediator of the fixed slopes relationship between group assignment and change in MHR ($t=2.38$, $p<.05$), as well as change in MIBI ($t=-2.31$, $p<.05$). Self-reported relaxation level was also a significant mediator of between group assignment and change in MHR ($t=1.93$, $p=.05$) and change in MIBI ($t=-2.01$, $p<.05$). Thus, experience of unpleasant affect and self-reported relaxation appear to partially mediate the effects of massage and/or guided imagery on sympathetic MHR and MIBI during an experimental pain task. Current study findings that physiological cardiovascular outcomes may be mediated by experiences of affect and relaxation during intervention may help explain the inconsistent physiological research findings observed across the massage literature.

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C-122

CORRESPONDENCE BETWEEN SELF-REPORTED AND SIGNIFICANT-OTHER-REPORTED PAIN BEHAVIORS

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Background: After the onset of pain it is natural for persons to engage in "pain behaviors"—behaviors that communicate to others that a person is experiencing pain. Problems can arise when pain behaviors persist and contribute to subsequent psychosocial and physical disability. The work reported here is from a project to develop and validate measures of pain behaviors, and reports on the correspondence between self-reported and significant-other (SO) reported pain behaviors.

Sample: A community sample of 450 patient/observer pairs from three clinical populations (arthritis, back pain, and multiple sclerosis).

Measures: A candidate item pool of 46 items gleaned from a literature review and expert opinion was developed and administered to the sample with measures of pain intensity.

Analysis: Responses to candidate items from persons with pain and their SOs were correlated. Candidate item responses also were correlated with patient reports of average pain in the past 7 days.

Results: Correlations between patient and SO reports ranged from 0.23 (I stayed very still) to 0.78 (I used a cane or something else for support). Correlations >0.50 were obtained for items reflecting specific and observable behaviors (walking slowly, laying down, taking a bath/shower, not going to work/school, taking medication, and "you could hear it in my voice"). An item about staying "very still" had a low correlation (<0.30), as did items assessing position shifts, biting or pursing lips, and posture changes. Correlations between item responses and patients' average pain scores were lower than those between patient/SO pairs, ranging from 0.20 (bath/shower) to 0.50 (hear in my voice) for patients and 0.21 (used cane) to 0.39 (walked slowly) for SOs.

Conclusions: Observer reports correspond to patient reports but the magnitude of correspondence varies across pain behaviors.

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C-123

EFFECTS OF ANGER REGULATION STYLE ON PAIN INTENSITY DURING PAIN SUPPRESSION

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Suppression of pain-related thoughts and feelings during acute pain appears to have the ironic effect of magnifying perceptions of pain intensity. Anger regulation style (anger-out, anger-in) is an individual difference factor that seems to moderate these effects. Here, we sought to replicate findings showing that attempts to suppress thoughts and feelings during acute pain represent a mismatch situation for high anger-out people, such that they report more pain during suppression than low anger-out people. Also, we sought to refine assessment of anger regulation style by crossing anger-out and anger-in subscales of Spielberger's Anger Expression Inventory (eg, true anger out people=high anger-out scores and low anger-in scores). 115 chronic pain patients (CPPs) underwent cold pressor while instructed to suppress or not suppress. Pain ratings were taken after task completion and every 20-sec for 2 min thereafter. A 4-way Condition (Suppress, No Suppress) x Anger-out x Anger-in x Period (0-, 20-, 40- sec etc.) interaction was found $F(7,728)=3.4$, $p<.01$. Simple interaction tests showed that Condition x Anger-in x Period interaction for high anger-outs was nonsignificant, whereas this interaction was significant for low anger-outs $F(7,378)=3.2$, $p<.01$. Further dissection revealed that the Anger-in x Period effect was nonsignificant for those in No Suppress, but was significant for those in Suppress condition $F(7,189)=3.0$, $p<.01$. The pattern of pain ratings among these high anger-in/low anger-out CPPs suggests that suppression led to sustained pain above baseline levels for 2 min post-pain induction, whereas low anger-in/low anger-out CPPs did recover. Contrary to expectation, CPPs who were predominant anger inhibitors (high anger-in and low anger-out) responded to suppression of pain-related thoughts and feelings with persistent pain and prolonged recovery, whereas other CPPs did not. Results indicate that important individual differences in the manifestation of suppression-induced ironic effects remain to be explored.

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UTILITY OF COMBINED ACCEPTANCE AND EXPERIENTIAL AVOIDANCE SUBGROUPS IN TREATMENT OF CHRONIC PAIN

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In addition to being a significant healthcare cost burden, chronic pain (CP) is associated with persistent functional impairment and perceived disability. Higher levels of acceptance of pain have been associated with improved emotional, psychosocial, and physical functioning. General psychological acceptance or low levels of experiential avoidance (EA) may also play a key role in CP outcomes. Recent findings suggest that CP Acceptance subgroups, high (Hi), medium (Med), and low (Lo), differ on multiple measures of functioning. We recruited CP patients via online CP support groups who completed demographic, CP Acceptance (CPAQ) and Acceptance and Action (AAQ) and Perceived Disability (PDI) questionnaires. The total sample ($N=255$; Mean age=45, $SD=10.9$) was primarily female (85.9%), Caucasian (90.4%), married/partnered (54.4%), and well-educated ($M=14.9$ years, $SD=2.4$), with an average income between \$30 k and \$40 k. The CPAQ subscales [Activity Engagement (AE), Pain Willingness (PW)] and AAQ (EA) scores were divided into three Hi, Med, Lo groups and combined to form PW/AE and AAQ subgroups: Adaptive (Hi CPAQ + Lo AAQ), Maladaptive (Lo CPAQ + Hi AAQ) and Moderate (Med CPAQ + Med AAQ). MANCOVAs (controlling for pain severity) were conducted to assess differences between the groups on the PDI scale scores. Overall differences were found for the AE + AAQ groups [Wilks $\Lambda=.76$, $F(4, 288)=1.82$, $p<.05$] and the PW + AAQ groups [Wilks $\Lambda=.67$, $F(4, 252)=2.30$, $p<.01$]. Specifically, the Adaptive group reported less perceived disability in areas of recreation, social activity and sexual behavior. Conversely, the Maladaptive group had significantly higher perceived disability ratings on family home responsibilities, recreation, social activity, and self care (all p's$<.05$). Results suggest that in addition to CP acceptance, general acceptance of undesirable psychological experiences may also be beneficial for decreasing perceived disability. Tailored by subgroup, CP treatments focused on both of these constructs may help enhance CP patient functioning and outcomes.

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SPIRITUALITY AMONG CHRONIC PAIN PATIENTS: EFFECTS OF MULTIDISCIPLINARY TREATMENT

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Spirituality is related to pain and adjustment among chronic pain patients (CPPs). However, it is unclear whether spirituality affects treatment outcomes. Our data, pre to post treatment measures of spirituality from CPPs participating in a multidisciplinary treatment program, offer insight. 234 CPPs completed questionnaires pre and post treatment that assessed depression, perceived disability, pain severity, interference with daily living, and general activity. The FACIT was used to measure spirituality with meaning/peace (MP) and faith subscales scored separately. At pre-treatment, all measures were correlated significantly with MP subscale scores ($rs<.26$, $ps<.05$). Faith subscale correlated significantly only with depression ($r=-.32$, $p<.01$). All variables, including MP and faith subscales, showed significant pre to post treatment changes in directions showing improvement ($F(1,244)s>29.89$, $ps<.01$). Further, MP pre to post change scores correlated significantly with pre to post change scores for all measures ($rs<.26$, $ps<.01$). Faith subscale changes correlated significantly only with depression changes ($r=-.22$, $p<.01$). Because depression change scores also correlated significantly with other change scores, analyses were conducted to examine the unique effects of MP changes. After controlling for depression changes, most MP change score relationships with other change scores were still significant ($Fs>15.3$, $ps<.05$). Results suggest that the MP component of spirituality is an important factor in the improvement of CPPs during treatment. Although decreases in depression also impacted patient outcomes, increases in meaning/peace perceptions improved patient adjustment and well-being independent of depression. Thus, beyond reducing negative effects of depressed mood, increasing feelings of meaning and peace may help CPPs adjust.

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CREATING A PSYCHOLOGICAL AND PHYSIOLOGICAL PROFILE OF YOGA PRACTITIONERS

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There is growing evidence that the practice of Yoga yields beneficial cardiovascular (CV) effects, but there is a paucity of research on the profiles of its practitioners on psychological and physiological variables associated with CV health. The present study compared adults (20-59 years, $M=36.16$, $SD=11.62$) who regularly participate in Yoga ($n=51$), or running ($n=47$), or no regular physical activity ($n=50$). Participants completed questionnaires measuring psychological variables related to CV health. Resting blood pressure (BP) and heart rate were measured using a conservative protocol of repeated, averaged measures, and the Modified Canadian Aerobic Fitness Test (mCAFT) was administered to determine aerobic fitness level. Group differences were demonstrated on all psychological measures including depression, perceived stress, anxiety, hostility, mindfulness, and social support. Post-hoc analyses revealed that runners and Yoga practitioners scored lower on depression, stress, anxiety, and hostility compared to inactive individuals, while the runners and Yoga practitioners did not differ significantly from each other on these measures. Only Yoga practitioners scored higher on mindfulness, and only runners scored significantly higher on social support than the comparison groups. No group differences were found for resting BP, but a significant group difference emerged for heart rate ($F(2,139)=15.47$, $p<.001$), whereby runners and Yoga practitioners showed lower HR compared to inactive individuals, but not compared to each other. The mCAFT fitness zone, a score adjusted for age and gender, was significantly different between all groups ($F(2,136)=19.36$, $p<.001$), whereby runners were superior to Yoga practitioners who were superior to inactive individuals. This cross-sectional study cannot reveal causal effects of Yoga or running, but is instead meant to inform future research on the effects of physical activity on psychological and physiological contributors to CV health and suggests that differences in fitness differentiate the groups.

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FEASIBILITY AND IMPACT OF A LATIN DANCE PROGRAM ON PHYSICAL ACTIVITY AND QUALITY OF LIFE AMONG OLDER LATINO ADULTS

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Older Latino adults are the fastest growing component of the older adult population in the U.S., and despite suffering disproportionately from chronic disease have the lowest physical activity (PA) rates. Nonetheless, few PA interventions have targeted older Latinos. Therefore, the challenge is to identify culturally appropriate physical activities that are safe, increase PA, and improve quality of life among older Latinos. We developed the 12-week BAILAMOS© Latin dance program for older adults with input from community members. The goal of this pilot intervention was to assess the feasibility of the BAILAMOS© dance program and its effect on PA, enjoyment of PA, and quality of life. A total of 12 older, previously sedentary Latinos with self-reported mobility limitation began the program, and 9 (1 man, 8 women; M age=65.2) completed the 24-session program, for a 75% retention rate. The nine participants who completed the program attended 85% of the sessions. Participants completed the CHAMPS PA questionnaire (Stewart et al., 2001), PACES enjoyment scale (Kendzierski et al., 1991), and SF-12 (Ware et al., 1996) at baseline and posttest in Spanish or English. Effect sizes (Cohen's d) were computed to examine changes in variables. Analyses revealed that minutes of self-reported light, moderate, and vigorous PA considerably increased as a result of the program ($d=1.38$). Participants reported greater enjoyment of physical activity ($d=.61$) after the program, and improved physical quality of life ($d=.31$) but not mental quality of life ($d=-.14$). Participants also recorded ratings of enjoyment of each session on a 1-7 Likert scale. Participants thoroughly enjoyed the program [$M=6.75$ (.47)]. Evidence from this pilot intervention suggests that Latin dance is a feasible way of impacting upon the physical activity and quality of life of older Latinos. Larger trials assessing the impact of Latin dance on health outcomes are needed.

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PSYCHOSOCIAL BY BUILT ENVIRONMENT INTERACTIONS ASSOCIATED WITH OLDER ADULTS' PHYSICAL ACTIVITY

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This study investigated interactions between psychosocial and built environment correlates of physical activity (PA) in 719 community-dwelling older adults (mean age=74; 53% women; 71% White). Participants were recruited from neighborhoods varying in walkability and income. Walkability and number of parks and private recreation facilities were measured by GIS. Neighborhood aesthetics and walking facilities were self-reported via the validated NEWS-A. Social support, self-efficacy and barriers to PA were self-reported. Total moderate-to-vigorous PA (MVPA) was assessed by accelerometers, and transport and leisure walking were self-reported via the CHAMPS. Mixed effects regression models, accounting for clustering within block groups, investigated combinations of psychosocial-by-environment interactions on PA. Demographics were entered as covariates. The relation of walkability to total MVPA was stronger for participants with more social support ($p=.036$). The relation of walkability to walking for transport was stronger for those with more social support ($p=.017$) and self-efficacy ($p=.020$). Total MVPA was highest among those with access to ≥ 1 recreation facilities (vs. 0) and higher social support ($p=.044$). The relation of aesthetics to walking for transport was stronger for those with more self-efficacy ($p=.023$), and the relation of aesthetics to MVPA was stronger for those with fewer barriers ($p=.003$). Contrary to expectations, walking facilities had a stronger relation to walking for leisure among those with lower self-efficacy ($p=.031$). With one exception, the results indicated that psychosocial and environmental variables potentiated each other's effects in explaining PA outcomes. Evidence of several interactions between psychosocial and environment variables supports the principle of multi-level influences on behavior from ecological models.

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NEIGHBORHOOD PREFERENCES MODERATE THE RELATIONSHIP BETWEEN NEIGHBORHOOD WALKABILITY AND TOTAL WALKING IN OVERWEIGHT/OBESE MEN

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Considerable evidence has emerged supporting the relationship of neighborhood walkability with walking. This study investigated whether neighborhood preference moderated the effect of walkability on walking in overweight and obese men. Participants were 240 men enrolled in a randomized trial of Internet-based health promotion and weight control intervention targeting physical activity and dietary outcomes. Mean age=45, mean BMI=33, 76% of participants were white, and 71% had at least a college degree. A walkability index (land use mix, street connectivity, intersection density, retail floor area ratio) was created for each participant using GIS. Neighborhood preferences were rated for 3 scenarios, each describing one of the following: low or high residential density, single or mixed land use, and low or high street connectivity. The IPAQ was used to assess transport walking, leisure walking and total walking. Multiple regression was used to test interactions between walkability and preference in explaining each walking variable. Fifty-three percent of participants preferred a more walkable neighborhood, 40% preferred a less walkable neighborhood and 7% had no preference. Walkability interacted with preference in explaining total walking ($B=-1.21$; $p<.10$). Follow up t tests revealed a marginally significant walkability effect for participants who preferred a low-walkability neighborhood (M=194.4 min/week vs.79.8 min/week for high and low walkabiliy, respectively; $p=.06$). There was no walkability effect for participants who preferred a high-walkability neighborhood (M=115.6 min/week vs. 160.8 min/week for high and low walkability, respectively; $p=.48$). These findings suggest that for overweight men neighborhood walkability may be more important for those with lower preferences for living in a walkable neighborhood. These findings are counter to the hypothesis that a match between neighborhood preference and neighborhood characteristics should be the most beneficial combination for impacting walking behavior.

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C-131

LINKS BETWEEN PERCEIVED SOCIAL AND BUILT ENVIRONMENTS IN A SAMPLE OF OLDER ADULTS LIVING IN LOW-INCOME COMMUNAL SENIOR HOUSING

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Social and built environments are known to impact health but little is known about their relationship to each other or their effect on health behaviors, particularly in those with poor health and mobility impairments, such as seniors. We explored associations between perceptions of the social and built environments to inform intervention design for the Neighborhood Eating and Activity Advocacy Study, a community participatory initiative aimed at increasing levels of physical activity and healthful eating in older adults living in two communal affordable housing settings. Participants (N=39; 67% women; 44% Black; 36% Filipino) reported measures of the social environment (social capital, social cohesion, social support for diet and exercise) and the built environment (rated access to healthful food options, neighborhood walkability from the NEWS-A). Social cohesion (r=.31), social support for diet (r =.35) and exercise (r=.34), but not social capital subscales, were associated with access to healthful food options ($P<.05$). The social capital connectedness subscale was associated with measures of walkability such as land use diversity (r=.31), street connectivity (r=.40), infrastructure and safety for walking (r=.42), traffic hazards (r=-.36), and crime (r=-.43) ($P<.05$). Similarly, social cohesion was associated with land use diversity (r=.43), street connectivity (r=.50), infrastructure and safety for walking (r=.31), and neighborhood aesthetics (r=.32) ($P<.05$). In contrast, social support for diet and exercise were not associated with measures of walkability. Perceptions of the social environment, particularly connectedness and social cohesion, were correlated with residents perceptions of access to healthful foods and neighborhood walkability. Further research could shed light on the potential strengths and direction of the feedback loop between perceived environments, social capital and health behaviors suggested by these preliminary results to guide future intervention development.

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THE USE OF AN INTERACTIVE COMPUTER SESSION TO INITIATE PHYSICAL ACTIVITY IN SEDENTARY ADULTS

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A 2x2 randomized controlled trial was conducted to determine the effectiveness of an interactive computer personal action planning session to initiate physical activity (PA). The design was based on providing participants with an intervention that: (1) increased environmental accessibility to physical activity resources (ENV), (2) targeted social cognitive strategies (SC), (3) both (COMBO), or (4) a matched contact nutrition control (CON). A total of 452 sedentary participants without a gym membership (Mage=58.57; 59% female, 78% white; 12% black; 11% Hispanic) completed a baseline assessment and were randomly assigned to one of the 4 interventions. All participants completed an interactive computer session. ENV participants' session included an interactive GIS interface that allowed participants to select a free-voucher to a fitness facility in close proximity to their home or workplace. SC participants' session included personal action planning to improve self and response efficacy as well as personal goals for PA. COMBO participants' session included both the ENV and SC components. CON participants' session targeted goals and strategies for healthy eating. A general linear model for repeated measures was conducted with change in PA behavior from baseline to 1-month post interactive computer session as the primary outcome. A main-effect for time indicated that participants from environmental, individual and combo arms significantly increased their PA, while control decreased ($F(1,404)=31.46$, $p<.01$). A significant time by condition interaction ($F(3,404)=9.09$, $p<.01$) and post hoc analyses indicated that SC and COMBO participants increased weekly minutes of PA ($M=54.4\pm12.1$; $M=56.9\pm9.6$, respectively) significantly more than ENV ($M=8.5\pm8.3$, p's<.05) and CON ($M=-3.7\pm11.5$, p's<.01). There were no differences between SC & COMBO or between ENV & CON. A computer-based interactive personal action planning session may be an effective tool to initiate PA behavior in sedentary adults and a SC intervention produced better results than giving participants access to a fitness facility.

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USING ACCELEROMETRY TO ASSESS PHYSICAL ACTIVITY AMONG RETIREMENT COMMUNITY RESIDENTS: HOW MANY DAYS OF MONITORING ARE NEEDED FOR RELIABLE ESTIMATION?

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This study was designed to determine the minimum number of days of monitoring required to reliably estimate usual physical activity rates in older adults residing in assisted- and independent-living communities using accelerometers. 97 residents from assisted- and independent- living communities (M age=85.5 yrs, Range=68-99 yrs) were recruited to participate in this study. Objective assessments of physical activity over seven consecutive days were obtained using the Actigraph GT3X activity monitor. Data were analyzed using SAS PROC MIXED. Intra-class correlations were computed as the between-person variance/total variance, and the Spearman-Brown prophecy formula was used to determine the number of repeated measures needed to achieve sufficient reliability (≥80%) for a measure of activity counts in a day. Analyses indicated that 2 days of monitoring would be necessary to achieve a reliability of .80 among older adults residing in assisted- and independent-living communities, and that reliability increased with increasing days of monitoring; the 7-day monitoring protocol was associated with a reliability of .93. In this sample of older adults, activity levels on weekends were significantly lower than activity levels on weekdays. A series of exploratory analyses demonstrated a significant gender x time interaction. Overall, women had higher activity counts per day than men, though women were significantly more active on Monday, Wednesday, and Friday compared to their male counterparts ($ps \leq .05$). Our findings suggest that while 2 days of monitoring may be sufficient to obtain a reliable estimate of activity, a 7-day monitoring protocol may be preferred so as to account for potentially important differences in activity levels during the week and weekends versus weekdays.

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FIDELITY OF NURSE-DELIVERED MOTIVATIONAL INTERVIEWING

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Motivational interviewing was one component of a comprehensive 6-month intervention to assist middle school girls in increasing their moderate to vigorous physical activity. Our objective is to describe the methodology and findings related to the fidelity of this approach. Our study (NHLBI R21 HL090705) included two urban middle schools randomly assigned to receive either the intervention or attention control condition. Each girl in the intervention school (n=37) was asked to engage in three motivational interviewing sessions (one every other month) with a school nurse. For each girl who assented and whose parent/guardian consented, the nurse audio-taped all three sessions. All 37 girls, except for three at the beginning of the intervention, completed the sessions as scheduled. Sessions averaged 10:53, 13:20, and 11:48 minutes at the beginning, midpoint, and end of the intervention, respectively. Three audio-taped sessions were randomly selected at each time point and evaluated based on the Motivational Interviewing Treatment Integrity (MITI) Code. The MITI involves the following three global dimensions that are rated from 1 to 5: motivational interviewing spirit, direction, and empathy. For each dimension, the nurse's mean scores ranged from 4.00 to 5.00, indicating proficiency at the competent level. Behavioral counts were employed to provide evidence of the nurse's use of motivational interviewing-adherent statements, open-ended questions, and complex reflections. Findings related to the behavioral counts and a reflection:question ratio that was also calculated will be presented. Results of the evaluation were discussed with the nurse at each time point to assist the nurse in adhering to the motivational interviewing communication style. As a result, improvement occurred in motivational interviewing delivery by the nurse with each successive session. Establishing fidelity is essential for the translation of intervention research into practice.

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THE INFLUENCE OF MATERIALISM AND PERCEIVED BARRIERS TO PHYSICAL ACTIVITY

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Societal trends of the last decade, including increasing rates of obesity and sedentary behavior, underscore the importance of understanding the barriers and facilitators of physical activity. Additionally, the persistent pervasiveness of consumerism and materialistic values and the relationship these values have with physical activity participation needs to be more clearly understood.

Methods: A mixed methods, cross-sectional study utilized quantitative (SPSS 16.0, n=482) and qualitative analysis (8 focus groups) to investigate how materialistic values and specific types of barriers influence participation in physical activity.

Results: Analysis of Covariance found internal barriers (lack of motivation, self-consciousness $p<0.001$; materialistic values, $p<0.001$; R2=.08) and personal barriers (lack of time, social support or sickness, $p=0.003$; and materialistic values, $p=0.027$; R2=.04) were significant predictors of physical activity. Qualitative findings suggest participants identify similar barriers and facilitators regardless of materialistic values grouping; however, the experience associated with barriers varied by group. Further, active participants more readily saw facilitators to activity than non-active participants though they shared a common environment.

Conclusions: The literature regarding barriers and facilitators to physical activity support the findings of the present study: persons reporting fewer barriers are more active. Though all participants shared a common environment, their perceptions and experiences differed by level of physical activity as well as materialistic value indices. Evidence suggests that those facing fewer barriers to physical activity are more likely to meet recommended physical activity levels compared to those facing a greater number of barriers. These findings suggest the importance of addressing values systems and current activity level in message tailoring and program planning to increase physical activity participation.

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THEORY OF PLANNED BEHAVIOR GUIDED EXAMINATION OF EXERCISE BELIEFS IN WOMEN WITH HIGH AND LOW BODY SATISFACTION

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Although women's body image is a moderator for exercise motivation, theoretically-based research is needed to further understand the effect of body image on exercise. The purpose of our study was to theoretically determine differences in behavioral, control, and normative exercise beliefs in women with high (HBS) and low (LBS) body satisfaction. Participants were 73 women (M age=25.93, 54.8% Caucasian), recruited from women's health clinics as part of a larger ongoing study. Specific beliefs were assessed by open ended Theory of Planned Behavior guided behavioral (i.e., advantages, disadvantages, likes, dislikes of exercise), control (i.e., factors that make exercise easy, difficult), and normative beliefs (i.e., those who approve, disapprove). The Body Areas Satisfaction Scale (M =29.73) was used to classify participants into HBS (N=36) and LBS (N=37) groups. The number of normative, control, and behavioral beliefs did not differ for HBS and LBS women. Qualitative analysis revealed similar normative and control beliefs, but varying behavioral beliefs between the HBS and LBS groups. The most commonly reported behavioral beliefs were: Advantages - body image, physical health, weight loss (LBS) and body image, physical health, mental health (HBS); Disadvantages - time, appearance, pain (LBS) and time, soreness, fatigue (HBS); Likes - mental health, energy, appearance (LBS) and mental health, body image, stress relief (HBS); Dislikes - time, motivation, weather (LBS) and time, fatigue, soreness (HBS). These results indicate that HBS and LBS women's behavioral beliefs are different. Specifically, LBS women endorsed more beliefs concerning body image, appearance, and weight loss while HBS women focused on physical and mental health benefits of exercise. Our results suggest tailored interventions should focus on physical and mental health benefits rather than aesthetics for LBS women. Future research is needed to determine exercise prevalence and other health outcome differences in LBS and HBS women.

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EATING DISORDER SPECIFIC HEALTH-RELATED QUALITY OF LIFE AND EXERCISE

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Examining disease specific aspects of quality of life (QOL) provides insights that may guide tailored interventions targeting exact health outcomes rather than generic QOL constructs. Although eating disorder (ED) behaviors and symptoms result in decreased overall QOL throughout the ED continuum, research is needed to examine behaviors that influence this relationship. Furthermore, the negative health consequences experienced along the continuum of ED may not be captured by generic QOL measures. Thus, the purpose of our study was to conceptually examine the relationship among ED specific QOL, ED symptoms, and exercise. Female university students (N=387, M age=20.11 [SD=2.21], 65.9% Caucasian) from a variety of colleges and universities in the United States completed measures of ED specific QOL (Eating Disorders Quality of Life Instrument; Engel et al., 2006), exercise behavior (Leisure-Time Exercise Questionnaire; Godin & Shephard, 1985), ED symptoms (Eating Disorder Diagnostic Scale; Stice et al., 2000), and exercise dependence symptoms (Exercise Dependence Scale; Hausenblas & Symons Downs, 2002). Our analyses were guided by the Exercise and ED Model (Hausenblas et al., 2008). A series of regressions were performed on each path proposed in the model. We found support for the beneficial association of psychological well-being on ED symptoms ($\beta=.71$, $p=.01$), and a detrimental association of exercise dependence on ED ($\beta=.15$, $p=.01$). Together, physical well-being, psychological well-being, and exercise dependence explained 61.7% of the variance in ED scores. Our results suggest that improvements in psychological aspects of QOL resulting from exercise may mediate ED symptoms when exercise motivations are not pathological. Future research should continue to examine behaviors related to ED and QOL while advancing the development of theoretical models of ED specific QOL. Future research is also needed to examine a mediation or moderation relationship of psychological variables such as exercise dependence and amount of exercise with ED.

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Meritorious Poster

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DOES YOUR SPOUSE'S PHYSICAL INACTIVITY PREDICT YOUR OWN MORTALITY? PROSPECTIVE FINDINGS FROM ALAMEDA COUNTY

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This study examines the impact of one spouse's level of physical activity on the other spouse's risk for mortality.

Methods: The study used archival data from the Alameda County Study, which used stratified random household sampling to recruit a representative sample of the adult population of Alameda County, California. In 1965 a total of 6928 adults provided baseline information by written self-administered questionnaires on health history and status, psychological, social, behavioural and demographic variables. Our sample consisted of 4902 individuals who formed 2451 married couples at baseline. Subjects completed questionnaires again in 1974, 1994, 1995 and 1999; death certificates were collected throughout allowing time and cause of death to be tracked. Physical activity was measured by self-reports of physical exercise, taking long walks, swimming, or participating in active sports.

Results: Logistic regression revealed that spousal levels of physical activity predicted partner (the target's) mortality risk, controlling for the target's age, BMI, health status and own level of physical activity at baseline. Specifically, husbands of wives reporting low levels of physical activity had increased odds of dying compared to those married to wives reporting moderate levels of activity. Wives of husbands who reported low activity levels also had higher odds of dying compared to wives of husbands reporting moderate levels of activity. Follow-up logistic regressions supported a meditational model in which spouse physical activity appeared to serve a maintenance function. That is, spouse's physical activity level was significantly associated with the target participant's physical activity level at subsequent time-points.

Conclusion: Above and beyond an individual's own level of physical activity, moderate levels of spousal physical activity serve to reduce the individual's risk of mortality. Findings suggest that the pathway here appears to be via greater maintenance of physical activity over time when the spouse is also physically active. Our findings highlight the importance of including the spouse in interventions promoting participation in physical activity.

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C-139

PHYSICAL ACTIVITY, SELF-EFFICACY, AND FUNCTIONAL LIMITATIONS IN OLDER ADULTS: A RANDOMIZED CONTROL TRIAL

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This study was designed to examine a social cognitive model of functional limitations in the context of an exercise intervention. Specifically, physical activity involvement is theorized to directly contribute to self-efficacy, which in turn, also contributes to functional performance and functional limitations. A single-blind, 2-arm randomized controlled exercise trial lasting 12 months was conducted within a university setting. Both intervention arms were instructor-led, tri-weekly, 50-minute structured exercise classes that emphasized either walking (WALK) or flexing, toning, and balance (FTB). One-hundred seventy-nine older adults (Mage=66.38) began the study and 145 completed all assessments. Participants completed measures of self-efficacy, functional performance, perceived functional limitations, and demographic information at baseline and 12 months. Results suggested the model provided an adequate fit to the data based on relative fit indices (χsquare=350.89 (253), p<.001, CFI=.94, RMSEA=.07, (90% CI=.05 to .08)). Data fitness did not significantly differ when the model was constrained to be invariant across intervention groups. As hypothesized, results indicated significant direct effects of self-efficacy and functional performance on functional limitations (WALK βs=.26 and -.53; FTB βs=.30 and -.50, respectively) at baseline and 12 months (WALK βs=.25 and -.31; FTB βs=.32 and -.28). Time-lagged effects were also found, in addition to indirect effects on limitations via self-efficacy through performance at baseline. Our findings provide further validation for an efficacy-based model of functional limitations and suggest that it is invariant across exercise modality. Older adults may realize a protective effect on functional limitations regardless of their preferred mode of exercise.

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C-140

DIFFERENTIAL PATTERNS OF MENTAL HEALTH CHANGES CORRESPOND TO CHANGES IN ACTIVITY IN FEMALE COLLEGE FRESHMEN

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The Peer education, Exercising and Eating Right (PEER) Project was a peer-delivered intervention designed to promote weight maintenance in college freshmen females by targeting nutrition and physical activity (PA) behaviors. Participants (N=245) were randomly assigned to an intervention or control group and completed a battery of measures during the first and last month of the school year. Initial analyses revealed no differential changes between groups in PA, weight, or psychosocial variables across the year. However, it was hypothesized that changes in PA could be explained by unobserved subgroups (i.e., latent classes) constructed based on a profile of changes in mental health indicators, including self-esteem, anxiety, and quality of life (QOL). Results of a latent class analysis revealed a 2-class solution fit the data best, and class membership was independent of group assignment. Class 1 (C1; n=192) exhibited moderate improvements in self-esteem and QOL and modest declines in anxiety across the year. Class 2 (C2; n=53) displayed substantial declines in self-esteem and QOL and large increases in anxiety across the same period. Exploratory analyses revealed the two classes could be differentiated based on self-reported PA (p =.031), and the relationship with accelerometer-measured sedentary activity also approached significance (p=.078). Specifically, C2 demonstrated decreased PA and increased sedentary activity across the school year, whereas these changes were attenuated in C1. Thus, although no differential patterns of change based on treatment group assignment were observed, a clear pattern emerged based on distinct mental health profiles within the entire sample. These results suggest: a) positive treatment effects may be masked by a subgroup of individuals who experience unfavorable mental health changes unrelated to the intervention during the first year of college, and b) future studies should aim to identify these individuals early and provide targeted interventions designed to attenuate declines in mental health and PA.

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C-141

FATIGUE IS A CORRELATE OF CHANGE IN PHYSICAL ACTIVITY OVER A 1-YEAR PERIOD IN RELAPSING-REMITTING MULTIPLE SCLEROSIS?

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Background: The symptoms of fatigue and depression have been identified as cross-sectional correlates of physical activity behavior in persons with relapsing-remitting multiple sclerosis (RRMS).

Objective: This prospective, observational study used a panel design and examined the effects of change in fatigue and depressive symptoms on changes in physical activity over a one-year period in the absence of an intervention among persons with RRMS.

Methods: Persons with RRMS (N=269) completed the Fatigue Severity Scale, Hospital Anxiety and Depression Scale, Godin Leisure-Time Exercise Questionnaire, and International Physical Activity Questionniare, and then wore an accelerometer for 7 days on two occasions separated by 12 months. The data were analyzed using linear panel analysis and covariance modeling with manifest (i.e., fatigue & depression) and latent (i.e., physical activity) variables in AMOS 17.0.

Results: The panel model fit the data (χ2=39.02, df=29, p=.10, RMSEA=.035, CFI =.99) and demonstrated that change in fatigue (path coefficient=−.11, p=.025), but not depressive symptoms (path coefficient=−.05, p=33), was significantly associated with residual change in physical activity.

Conclusion: Such findings support the importance of fatigue for predicting longitudinal changes in physical activity in adults with RRMS. This is important as fatigue represents a specific target of behavioral interventions for changing physical activity behavior in persons with RRMS.

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C-142

MULTI-MODAL EXERCISE TRAINING IMPROVES QUALITY OF LIFE IN MULTIPLE SCLEROSIS: DIFFERENTIAL EFFECTS FOR DISEASE-TARGETED AND GENERIC INSTRUMENTS

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Researchers have examined the effects of single modes of exercise training on quality of life (QOL) in persons with multiple sclerosis (MS). There is limited information on multi-modal exercise training (i.e., aerobic, resistance, and balance exercises) and its influence on QOL using generic and disease-targeted QOL instruments. This study examined the effect of multi-modal exercise training on QOL using generic and disease-targeted instruments in persons with MS. The sample consisted of 13 persons with MS who had onset of gait impairment (i.e., Expanded Disability Status Scale scores between 4.0 and 6.0). The participants completed the Short Form-12 Health Survey (SF-12) and Multiple Sclerosis Impact Scale-29 (MSIS-29) before and after an 8-week training period. The exercise training was performed 3 days per week and consisted of equivalent amounts of aerobic, resistance, and balance training under the supervision of a physical therapist. The duration initially lasted for 15 minutes in week 1 (i.e., 5 minutes of each mode of exercise) and was increased by approximately 5 minutes per week until a maximum of 45 minutes in week 8. The data were analyzed using paired samples t-tests in PAWS 18.0. There were statistically significant and large improvements in physical, $t(12)=3.08$, $p=.005$, $d=0.85$, and mental, $t(12)=2.17$, $p=.025$, $d=0.60$, domains of QOL using the MSIS-29. By comparison, there were non-significant and small changes in physical, $t(12)=1.39$, $p=.10$, $d=0.39$, and mental, $t(12)=1.24$, $p=.12$, $d=0.34$, domains of QOL using the SF-36. Those results were unchanged in non-parametric analyses and were not driven by outliers. Such results indicate that a multi-modal exercise training stimulus results in larger improvements in QOL when measured using disease-targeted instruments in MS.

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ADOLESCENTS AND PHYSICAL ACTIVITY: REPLICATION OF PROFILES WITHIN THE MAINTENANCE STAGE OF CHANGE

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Despite the known health benefits, physical activity (PA) declines among youth in the U.S. through adolescence. Historically, individuals in the Maintenance (M) stage of change who have been regularly exercising for more than six months, are often considered not “at risk” for relapse and have be excluded from effectiveness trials. Recent data indicate that 50% of middle school students are in M for PA, while only 30% of high school students are. These data indicate a need to further investigate adolescents in M to identify who is at risk for relapse. The aim of this study was to determine if subgroups existed within M that could be used to identify relapse risk and to refine tailoring of Transtheoretical Model-based interventions to prevent relapse. Cluster analysis was performed on a sample of 1,912 6th grade students in M for PA. The sample was randomly split into five subsamples of approximately 383 students. Cluster analysis was performed within each subsample using three scales: Pros of PA, Cons of PA, and Situational Confidence to Engage in PA. Across the five subsamples, the same five clusters were identified. The five clusters were labeled (N refers to the pooled data set): (1) Most Protected from Relapse(N=464; 24%), characterized by high Pros, low Cons, and high Confidence; (2) Classic Maintainers(N=587; 31%), with average Pros, Cons, and Confidence; (3) Ambivalent(N=553; 29%), with average Pros and Cons and lower Confidence; (4) High Cons/Challenged(N=138; 7%), with High Pros, Cons, and Confidence; and (5) High Risk(N=170; 9%), characterized by extremely low Pros, low Cons, and the lowest Confidence among all clusters. Profile differences among the Processes of Change and rates of relapse at a 24 month follow-up time point offer external validity. The replication of these five profiles provides strong empirical support for these subgroups in M and offers an encouraging way to tailor PA interventions for adolescents to prevent the high rate relapse that occurs during adolescence.

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IMPACT OF A HOME COMMUNICATION RECOVERY MANAGEMENT INTERVENTION ON SELF-EFFICACY AND PHYSICAL ACTIVITY IN PERCUTANEOUS CORONARY INTERVENTION PATIENTS

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This experimental design pilot study tested a Home Communication Recovery Management Intervention (HCRMI) delivering information content (based on recovery management and self-efficacy theory for physical activity behavior change) on a daily basis for three weeks via a telehealth device (Health Buddy). The primary aim was to determine if PCI patients in the first 3 months post-PCI receiving the HCRMI, compared to routine care, demonstrated differences in: (a) Physical activity and Exercise; (b) Perceived Self-efficacy; and (c) Physical and Psychosocial Functioning.

The purposes of the HCRMI were to assess, manage, and educate regarding recovery after PCI, increase self-efficacy, and provide content for health promotion in the area of appropriate physical activity and exercise.

Measures were taken at baseline, 3 weeks, 6 weeks, and 3 months after PCI. Measures for Physical Activity and Exercise were the Modified 7-Day Activity Tool, and a 3-Day Self Report Activity Diary. Self-Efficacy was measured with the Barnason Efficacy Expectation Scale. Physical and Psychosocial Functioning were measured with the MOS SF-36 subscales.

The sample size was 56 (28 per group. Repeated measures analysis of covariance analyzed differences by group over time. Results revealed a significant group effect for physical activity–$F(1,156)=3.72$, $p=0.02$; the HCRMI group was significantly higher on kcals/kg/day. For self-efficacy, there was a significant group effect–$F(1,165)=14.32$, $p=0.0002$; the HCRMI group was significantly higher. The time effect was also significant–$F(2,165)=6.46$, $p=0.002$; self-efficacy increased over time for both groups. For physical functioning, there was a significant group effect–$F(1,110)=6.57$, $p=0.01$; the HCRMI group was significantly higher on physical functioning.

Findings demonstrate the potential for an intervention like this to improve self-efficacy, and to make behavior change in physical activity. Implications for practice and future research are presented.

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USEFULNESS OF PERCEPTIONS OF EXERCISE ADHERENCE AND SELF-EFFICACY TO IDENTIFY PATIENTS MOST LIKELY TO RESPOND TO TAILORED INTERVENTIONS

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Cardiovascular exercise is an important component of hypertension treatment, however inaccurate perceptions of exercise habits may hinder adherence and limit the success of interventions targeting non-adherent patients. To examine this, we evaluated if perceptions of exercise adherence were associated with self-efficacy and if such perceptions predicted the effectiveness of tailored interventions. We enrolled hypertensive veterans (N=533) and randomized them into three arms in a 6-month trial: a Transtheoretical Model-based stage-matched intervention (SMI), a non-tailored health education intervention (HEI), and usual care (UC). SMI and HEI received monthly phone calls. At baseline and 6 months, a 7-Day Physical Activity Recall (PAR) was administered; participants were also asked if they performed cardiovascular exercise$\geq$3 times per week for$\geq$20 minutes each time (defined as adherent). Among non-adherent patients at baseline (N=143) by PAR, 45 inaccurately believed that they were exercise adherent (Group 1) while 98 had accurate perceptions of non-adherence (Group 2). Group 1 had higher baseline self-efficacy (OR=0.897, $p<0.01$) compared to Group 2 using logistic regression. The SMI was more effective in Group 2, with 79.2% of SMI patients achieving exercise adherence at 6-months, compared to 63.2% of HEI and 37.1% of UC ($p<0.005$ by Fisher’s exact test). For Group 1, no arm was significantly more effective ($p=0.686$) in achieving adherence. In conclusion, a large proportion of non-adherent study participants (31.5%) had inaccurate perceptions of current exercise adherence, while paradoxically, they exhibited high exercise self-efficacy. These patients did not respond well to SMI or HEI while Group 2 responded well, suggesting that behavioral interventions are more effective when aimed at individuals with an accurate perception of adherence.

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USING THE REVISED STANFORD BRIEF ACTIVITY SURVEY (SBAS-R) TO ASSESS CHANGES IN LEISURE-TIME ACTIVITY AMONG OBESE WOMEN

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The Stanford Brief Activity Survey (SBAS) leisure activity item was designed to assess complex habitual activity patterns via a short list of descriptive categories ranging from sedentary to vigorous-intensity≥5 days/wk (Taylor-Piliae et al, 2006). The item is gaining widespread use as a clinical assessment tool and in large epidemiological surveys. We revised the leisure activity item (SBAS-R) to improve its clinical utility for assessing physical activity of overweight/obese adults. Among other revisions, we shortened the time frame to the past month; clarified the sedentary and light activity categories; and added a moderate-intensity activity category that explicitly referenced national recommendations (accrue 150 min/wk of at least moderate-intensity activity). Here, we evaluated the SBAS-R psychometrics (test-retest reliability, concurrent criterion validity, and sensitivity to change) among obese women randomly assigned to one of two 6-month behavioral weight-loss interventions ($N=267$, BMI 32.1±3.5, 66% White). The SBAS-R at baseline had substantial test-retest reliability across a 2-6 week interval (Spearman's $r=0.80$, $p<0.0001$, kappa=0.61). The SBAS-R at 6 months had strong concurrent criterion validity with median weekly pedometer steps during the last month of the 6-month intervention ($r=0.47$, $p<0.0001$), including a clear dose response relationship ($p<0.0001$). The SBAS-R was also sensitive to change. At baseline, only 21% of women met national recommendations whereas 55% met recommendations at 6 months. The SBAS-R at 6 months was related to 6-month improvement in weight loss ($r=0.32$, $p<0.0001$), including a clear dose-response relationship ($p<0.01$). On average, women increased their activity by one SBAS-R category and lost a clinically significant percent of their initial weight at 6 months (−8.8%±6.3). Ninety-one percent of sedentary women increased their activity by at least one SBAS-R category. Evidence of strong psychometric properties underscores the clinical utility of this revised measure.

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OWNERS AND PETS EXERCISING TOGETHER (OPET): DOES A BRIEF VETERINARIAN-BASED INTERVENTION INCREASE PHYSICAL ACTIVITY AMONG DOG OWNERS

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Physical activity reduces all cause mortality. Unfortunately, a minority of Americans engage in the recommended levels of physical activity. To increase physical activity at the population level, it is important to improve the translation of available science to environments where people seek care. The Owners and Pets Exercising study is a two-phase, randomized controlled trial that focuses on translating evidence to clinical practice. In the second phase of the study, owners of over-fat dogs were randomly assigned to receive general health counseling (Standard Care) about their dog or to receive brief physical activity counseling intended to increase the activity of the owner and the dog, (Physical Activity). Eight of the standard care group and 18 of the physical activity group completed the IPAQ-short form, a self-report measure of physical activity, before and after the intervention. There were no significant differences between the groups on total METs, total time engaged in activity or total sitting time pre- or post-intervention. Analysis of covariance (ANCOVA) revealed that those in the physical activity group reported a significant reduction ($M=-122.4$ mins; $SD=196.3$ mins) in sitting time compared to the standard care group ($M=-1.9$ mins; $SD=71.9$ mins; $F=5.02$; $p<.05$) and the trends of the data suggested that those in the physical activity group demonstrated a greater increase in activity ($M=1071.8$ MET mins/wk, $SD=2866.1$ MET mins/wk; Standard Care, $M=-130.8$ MET mins/wk; $SD=2080.1$ MET mins/wk),but these trends were not statistically significant. It is unclear whether veterinarian counseling to improve physical activity among owners of over-fat dogs effectively increases participation in physical activity.

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THE RELATIONSHIP BETWEEN PSYCHOSOCIAL FACTORS, PHYSICAL HEALTH STATUS, AND BMI IN A POSTPARTUM US MILITARY SAMPLE

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Excess postpartum weight has been associated with depression and other negative outcomes. Military women are required to meet military weight standards six months postpartum or they face mandated weight control programs or discharge from the military. These heavy consequences may place additional stress on these women, putting them at increased risk for negative psychosocial outcomes such as depression or anxiety. This study sought to determine the relationship between postpartum body mass index (BMI) and psychosocial outcomes, including depression, state anxiety, postpartum fatigue, and altered mental health and physical health status, measured five times (at 2, 4, 6, 9, and 12 months postpartum). The sample initially consisted of 123 participants, and was mostly white (43.1%), married (64.2%), and primiparous (61.0%). The women were either in the Navy (95.1%) or Marine Corps (4.9%) and most were non-commissioned officers (65.0%). By the final assessment, there were 82 participants in the study. There were no demographic or psychosocial differences between completers and non-completers. Mixed model regression analyses were used to determine if BMI (independent variable) and various psychosocial variables (dependent variables), measured at the same time, had an association. BMI was positively associated with depression, $F(1, 293.16)=4.00$, $p=.046$, and postpartum fatigue, $F(1, 372.80)=4.56$, $p=.033$, and was negatively associated with mental health status, $F(1, 251.56)=6.93$, $p=.009$. BMI was not associated with state anxiety, $F(1, 326.21)=2.06$, $p=.152$, or physical health status, $F(1, 204.48)=0.11$, $p=.739$. These analyses indicate that there are strong associations between BMI and various psychosocial factors, including depression and postpartum fatigue. Future research should focus on further exploring these relationships to develop interventions that will help postpartum military women improve their physical and mental well-being.

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BREASTFEEDING PREPAREDNESS AND CURRENT BREASTFEEDING STATUS: WOMEN'S PERCEPTIONS OF BREASTFEEDING SUPPORT DURING THE IMMEDIATE POSTPARTUM PERIOD

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Background: Although the health advantages of breastfeeding are unequivocal, many women never breastfeed or wean before the AAP recommended 6 months postpartum (PP). Little is known about women's perceived preparedness to breastfeed and/or women's perceptions of PP hospital based support in relation to their current breastfeeding habits. The aim of this study is to explore these perceptions in relation to current breastfeeding status.
Method: 119 women completed an anonymous survey at their 6-week PP visit at the Massachusetts General Hospital in Boston, MA. Data were collected on intention to breastfeed, current breastfeeding status, perceptions of breastfeeding support (10-point Likert scale; 0 was "not at all helpful," 10 was "very helpful"), perceived preparedness to breastfeed before delivery (5-point Likert scale; 0 was "not at all; 5 was "very prepared), and barriers to breastfeeding.
Results: Mean age was 32.7 years ($SD=4.83$). 82.4% of women were White, 88% of women completed college. 89.6% were married/partnered and 59.7% were primiparous. 82.7% of participants intended to breastfeed. At survey administration, 72% of the sample was breastfeeding, 24.2% were no longer breastfeeding, and 3.8% had never initiated breastfeeding. Preparedness of those currently breastfeeding (3.64) was significantly higher than for those who were not (2.52, $p<.001$). There were no differences in perceived helpfulness of breastfeeding support among those currently breastfeeding, and those who were not/who never started. Of the 21 women no longer breastfeeding, common barriers were identified.
Conclusion: Although most women rated the in-hospital breastfeeding support they received as very helpful, some did not feel prepared to breastfeed. Since preparedness is associated with breastfeeding behavior, further research is needed to identify ways to increase breastfeeding preparedness and reduce barriers to breastfeeding.

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PREGNANT WOMEN'S PREFERENCES FOR MENTAL HEALTH TREATMENT

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Background: While symptoms of depression and anxiety are not uncommon during pregnancy and can result in adverse health outcomes for both infants and mothers, little is known about preferences for mental health treatment during pregnancy. The aim of this study was to investigate these preferences.
Method: 94 women completed an anonymous survey at their 6-week postpartum obstetric (OB) visit at Massachusetts General Hospital in Boston, MA. Women were surveyed on their prenatal mental health, preferences and experiences with mental health treatment (using a 5-point Likert scale), and the PHQ-2 was used to assess current depressive symptoms.
Results: Mean age was 32.7 years (SD=4.83); 83.8% of women were White, and 42.3% of women completed college. 89.6% were married and 59.7% were primiparous. 28.6% reported difficulties with their emotions during pregnancy; 16.7% women received counseling and 10.7% received pharmacotherapy. Women who endorsed emotional difficulties during pregnancy had significantly higher PHQ-2 scores than women who did not (1.89 versus .42, respectively, p <.00). 85.8% of women "strongly agree" or "agree" it is important for OB providers to speak with patients about emotional health during pregnancy and 83.3% endorsed willingness to do so. Willingness to speak with a provider about emotions did not differ based on pregnancy mental health status. 83.2% were willing to accept a referral for mental health treatment; preferred referral sources were therapists and psychiatrists, with 85.6% and 45.6%, respectively.
Conclusion: Results suggest most women were open to speaking with their OB providers about emotional health during pregnancy, suggesting it may be acceptable to patients to combine OB and mental health care. Additional research on preferences and delivery of mental health treatment during pregnancy is needed as early detection of mood and anxiety may lead to a healthier postpartum period and healthier infant, both of which are critical public health issues.

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"I'LL MAKE UP FOR IT TOMORROW": COMPENSATORY HEALTH BELIEFS AND BEHAVIORS IN COLLEGE STUDENTS

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In today's society, people struggle with balancing their long-term health goals and immediately gratifying pleasurable activities, such as consuming alcohol, smoking tobacco, or overeating calorically-dense foods. Compensatory health beliefs (CHBs; Knauper, Rabiau, Cohen, & Patriciu, 2004) have been proposed as a cognitive strategy to reach equilibrium between maximizing pleasure and minimizing harm. CHBs posit that the negative effects of an unhealthy behavior can be neutralized by performing another, healthy behavior (e.g., "The effects of regularly drinking alcohol can be made up for by eating healthy."). Undergraduate students may particularly rely on CHBs to justify unhealthy behaviors characteristic of the college environment (e.g., smoking, binge drinking, dieting). The present study examines CHBs (assessed with the CHB scale; Knauper et al., 2004), reported smoking, drinking and dieting statuses, and reported compensatory health behaviors in 217 undergraduate students. The relationships among CHBs, smoking drinking, and dieting statuses, and associated compensatory behaviors were assessed. CHBs regarding smoking and drinking alcohol were related to the frequency of corresponding compensatory behaviors (*r*s ranging from .162 to .511), while only some CHBs about dieting were related to the frequency of compensatory dieting behaviors (*r*s ranging from .086 to .487). Further, students who reported greater alcohol-related problems had stronger drinking-related CHBs and reported performing corresponding compensatory behaviors more frequently (*p*s<.001). Similarly, smokers had stronger smoking-related CHBs and reported performing corresponding compensatory behaviors more frequently than nonsmokers (*p*s<.005). However, dieters typically did not have stronger dieting-related CHBs and did not report performing more corresponding compensatory behaviors than nondieters. These findings suggest that CHBs may play a role in college students' drinking and smoking-related decisions, though not in their dieting behaviors.

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INVESTIGATION OF VARIABLES ASSOCIATED WITH H1N1 VACCINE ACCEPTANCE

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Over the last decade, there have been a number of acute, infectious illness outbreaks with widespread global infection risk and serious health outcomes. The most recent H1N1 outbreak resulted in approximately 18,000 deaths and widespread panic. As a result, it is essential that research understand the correlates of and general beliefs regarding vaccination given how critical it can be for primary prevention. This study investigates predictors of H1N1 vaccine acceptance in college students using the Health Belief Model (HBM), a framework used in investigating preventative health behaviors that categorizes these behaviors into patterns of beliefs. We also explore the possible mediation role of parental beliefs and communication.
Two hundred and twenty seven students completed on line questionnaires regarding their opinions on vaccination, demographics, health behaviors, knowledge of H1N1 and the H1N1 vaccine, and whether they accepted the vaccine (i.e., got vaccinated or were planning on being vaccinated in 2009-2010). Thirty percent of participants were acceptors of the H1N1 vaccine. The HBM model correctly classified 94% of the participants that were not accepting of the vaccine and 65% of those accepting of the vaccine. Logistic regression found the categories of cost barriers, general barriers, and perceived benefits to significantly predict vaccine acceptance (B=.687, p<.001; B=−1.927, p<.001; B=.699, p=.014), with no influence of demographic variables on the acceptance outcome. Bootstrapping revealed that having a positive conversation with family members regarding H1N1 vaccination mediated the association between perceived benefits and acceptance when controlling for all other HBM categories (95% CI=.03480–.6571). In addition, positive family conversations mediated the impact of cost barriers on acceptance when controlling for other significant predictors (95% CI=.0044–.2821). These results provide evidence that the HBM may be helpful in conceptualizing vaccine acceptance in college students, and indicate specific pathways to target when designing interventions to increase vaccination rates in this population.

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LIKELIHOOD OF HIRING A PEDIATRIC HEALTH CARE ADVOCATE

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Medication errors and adverse drug effects in pediatric inpatient settings make health care advocacy important for parents. Within the present study, the responsibilities of a health care advocate (HCA) were categorized as "advisory services" (i.e., deal with insurance issues, coordinate medical appointments, communicate with members of the treatment team, research treatment options, and maintain medical records) or "support services" (i.e., staying with the child at the hospital, accompanying a child to medical visits, and assisting with daily symptom management). Participants (N=1142), were randomly assigned to read one of six scenarios describing a chronically ill child. The child's illness severity and probability of mortality varied among scenarios. Participants were asked to rate how likely they would be to hire an HCA for each type of service. Two 2 (probability of mortality: high or low) by 2 (severity: high or low) ANOVAs were performed to examine the likelihood of hiring an HCA for each service. Participants in the high severity condition were less likely to hire an HCA (M=5.53, SD=2.36) than those in the low severity condition (M=5.86, SD=2.49) for advisory services, (F (1, 1138=5. 29), p=.02). No differences were found between the high and low severity condition for support services. Participants in the high mortality condition reported higher likelihood of hiring an HCA for advisory services (M=6.16, SD=2.23) than participants in the low mortality condition (M=5.23, SD=2.54), F (1,1138)=43.55, p<.001. Participants assigned to the high mortality condition reported that they would be more likely to hire an HCA for support services (M=6.04, SD=2.37) than participants assigned to the low mortality condition (M=4.80, SD=2.78), F (1,1138)=70.67), p<.01. Thus both the severity and the mortality of a child's illness appear to have important effects on the probability that parents will employ an HCA.

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ATTRIBUTIONS FOR PERCEIVED COLON CANCER RISK IN PERSONS WITH A FAMILY HISTORY

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We explored why those with colon cancer (CC) family history think they are or are not at risk of developing CC. We surveyed 1,234 adults from 637 families with at least one first degree relative with CC who completed a survey for a study about CC genetic testing. Participants were asked, "How likely do you think it is that you will get colon cancer sometime in your life?" Responses were in a 5-point Likert format and ranged from "very likely" to "very unlikely." After answering this question, respondents were instructed to mark "yes" or "no" to a list of possible reasons as to why they thought developing CC was likely or unlikely. Additional space to write in other reasons was also provided. Participants were 60% female with a mean age of 50.1 years, and all had at least one FDR with CRC, with 91% expressing their CC risk perception as either likely (77%) or unlikely (23%). Examples of why people thought they were likely to develop CC included: "I have severely affected relatives" (90%), "I have bowel movement problems" (36%), "I live a stressful life" (30%), and "the chemicals in food may cause me to get colon cancer" (28%). Among those thinking they were unlikely to develop colon cancer, commonly cited reasons were: "I have a healthy diet" (82.3%), "I have my colon checked regularly by my doctor" (59.2%), "Not many of my relatives are affected by colon cancer" (58.9%), and "I have no bowel problems" (58%). An additional 233 written responses were organized into 6 categories: family history, physical characteristics, knowledge, lifestyle, psychological/emotional states, and healthcare provider. Findings suggest that attributions for perceived risk are multifactorial and differ between those who do and do not think they are at increased risk. Our findings can help investigators better understand how conceptions of risk are developed and use this information to better educate at-risk family members about CC prevention.

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Meritorious Poster

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GETTING VACCINATED AGAINST H1N1: THE RELATIVE ROLES OF PERCEIVED RISK, ANTICIPATED REGRET AND MEDICAL SKEPTICISM

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Although most cases of H1N1 influenza are seen in those under 24 years of age, only 20% of young adults are willing to get preventive vaccinations (Van et al., 2010). Work on the uptake of seasonal influenza vaccination in older adults shows that these decisions are driven by the perceptions of risk and more so by the desire to avoid future regret about the decision (Chapman & Coups, 2006). We examined these variables as predictors of H1N1 vaccination and intent in a sample of young adults, 353 University of Western Ontario undergraduates (mean age=20.7; 77% female) who participated in an on-line survey study at the height of the H1N1 threat in January 2010. We included a measure of medical skepticism designed for this study (Sample item: "The public should question the advice given by public health officials) to capture an oft-cited con to vaccination prevalent in the Canadian media at the time. Twenty-six percent of the sample either had been vaccinated or intended to, 58% did not plan to get the vaccine and 16% were still undecided. All variables correlated (all p's$<.001$) with the intention to get vaccinated (1=no intent 2=undecided 3=intend to or already vaccinated): perceived risk/threat of H1N1 ($r=.38$), perceived vaccine side effects ($r=-.42$), anticipated regret over getting the vaccine ($r=-.17$), anticipated regret over not getting the vaccine ($r=.53$) and medical skepticism ($r=-.35$). When entered simultaneously into a multiple regression the variables accounted for 41% of the variance (Model $F(5,312)=45.7$, $p<.0001$) in intent to get vaccinated, and, save for anticipated regret over getting the vaccine, all retained their predictive power. These findings suggest that, if the goal is to increase the uptake of seasonal influenza vaccines among young adults (and perhaps others), health communicators might be more effective if they 1) capitalize on the target audience's desire to minimize anticipated regret over getting the flu after not being vaccinated and 2) recognize and, to the extent possible, address the skepticism with which their message is being met.

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TEENAGE PREGNANCY IN THE NEWS: HOW DO ADOLESCENTS CRITICALLY ANALYZE THE MEDIA?

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Teenage pregnancy has become a public health burden that is mediated by numerous factors. One mediating factor could be the ability to identify and evaluate relevant health information. The capacity of teenagers to form opinions and make decisions based on reported health information does not come naturally, nor does their appreciation of the cognitive labor involved in these processes. Hence, there is the need for teenagers to acquire the skills for and value of being critical health news consumers.

This research study explored the news seeking behavior of teenagers ($n=60$; mean age 17.6, SD 0.76) applying a combination of interview and observation techniques. Twelve participants were interviewed specifically about teenage pregnancy and their news seeking behavior in this context (i.e., espoused beliefs). Then, they were asked to assess the credibility and quality of several newspaper clippings on teenage pregnancy (i.e., enacted beliefs). This research design permitted to identify discrepancies between espoused and enacted beliefs: a) Some students said they would use certain criteria and strategies to analyze health news but applied different criteria and strategies, b) some students mentioned strategies and criteria but were not able to apply them, and c) some students were able to apply criteria and strategies but were not cognizant about them during the interview. Essentially, more than 60% of the students were not able to apply criteria and strategies to assess the quality and credibility of the news clippings. From a health education standpoint, young adults should be cognizant of criteria and strategies to assess health related news, be able to form their own opinions, and to verbally argue for their opinions. The study's results demonstrate the need for health educators in high schools and in the field of teacher training to develop educational materials and interventions to improve the skills necessary to critically analyze health news in addition to improving opinion forming skills related to sexual behaviors and health.

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ATTITUDES TOWARDS METHAMPHETAMINE USE AND RISK FOR SEXUALLY-TRANSMITTED INFECTIONS

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Methamphetamine, colloquially known as "crystal" or "tina," is a psychostimulant which causes decreased fatigue, increased wakefulness, and a sense of euphoria and pleasure. Its use in the United States has increased dramatically in recent years. Meth use has been associated with high-risk sexual behaviors among men who have sex with men as well as heterosexual men and women. A major motivation cited for its use is meth's ability to prolong sexual activity and enhance sexual gratification. Beyond user motivations, specific beliefs and attitudes about methamphetamine use in conjunction with sexual activity have yet to be explored. In the present study, individuals seeking services at a sexually-transmitted disease (STD) clinic ($N=398$) completed measures assessing meth use, attitudes about meth, and sexual risk behavior at baseline and then were followed for one year. At baseline, 19% of participants reported having used methamphetamine, around 4 times the national average. A minority of meth users indicated that use of the substance increased sexual pleasure (33%), that meth use increased their desire for sex (41%), and made it less likely they would use a condom during sex (43%). Similarly, a subset of individuals reported using meth in conjunction with sexual activity (28%). Combining the use of meth with sexual activity was predictive of higher rates of overall meth use (rho=0.65, $p<.001$) and was predictive of being diagnosed with an STD in the year following the baseline survey (rho=0.81, $p<.001$). Findings suggest that methamphetamine users vary to the degree they perceive use as a sexual aide or enhancer. The subset of meth users who have this view are more likely to combine its use with sexual activity and are at particular risk for STDS including HIV. Interventions focused on this sub-group of users are needed.

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EASE OF SUGGESTING AND USING CONDOMS, ACTUAL CONDOM USE, AGE OF SEXUAL DEBUT AND LIFETIME PARTNERS IN AFRICAN AMERICAN WOMEN

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Background/Purpose: With an HIV incidence rate 55.7 per 100,000, African American women are among one of the fastest growing HIV populations. The best method of HIV prevention is condom use. However, these women must negotiate condom use with their partner. Research suggests that condom negotiation is related to the use of condoms. This study examines the relationship between ease of suggesting and using condoms, actual condom use, age of sexual debut, and number of sexual partners among African American women.

Methodology: Data for this study was taken from the Internet and Technology Strategies for the Prevention of STIs Study. Participants were 42 African American female college students. Three measures were used in this study: 1) Participant demographic questionnaire, 2) Participant sexual behavior questionnaire, and 3) HIV attitudes questionnaire.

Results: Analyses indicate a relationship between age of oral sex debut and ease of suggesting and using condoms, $r=-.37$, $p<.05$ and age of oral sex debut and actual condom use, $r=-.36$, $p<.05$. Results also suggest that the number of partners within the last 3 months is associated with actual condom use, $r=-.31$, $p<.05$. Ease in suggesting and using condoms and actual condom use were also related, $r=.36$, $p<.05$.

Conclusions: Recommendations: The younger African American women engage in oral sex the less likely they are to think that they have the skills to suggest and use condoms as well as actually use condoms. The more partners these women have in a 3 month period, the less likely they are to use condoms. Perceived ease of suggesting and using condoms is related to more actual condom use. These findings have implications for prevention and intervention programs for African American women. Prevention programs for female adolescents should aim to delay the onset of sexual activity, particularly oral sex. Intervention programs should focus on strategies to reduce sexual partners and increase condom negotiation skills.

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COGNITIVE PERFORMANCE OF ADULTS WITH PRIMARY INSOMNIA

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To evaluate cognitive performance in adults with primary insomnia, 44 participants completed a battery of neuropsychological tests. Data from the adults with insomnia was obtained from the baseline performance of a sample participating in a randomized clinical trial examining the efficacy of an Internet intervention for insomnia. The insomnia sample data was then compared to age-based normative data for the literature for these same measures. Overall, adults with insomnia performed better than that reported in the literature for healthy controls on tasks that primarily measured basic attention but less well on tasks that demanded more substantial cognitive resources. Additionally, adults with insomnia performed less consistently than did the healthy controls when sustained effort was required. Lastly, there was generally poor concordance between subjective complaints of concentration difficulties and objective cognitive assessments. Results are interpreted in light of the hypersousal theory in insomnia.

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THE RELATIONSHIP BETWEEN PSYCHOLOGICAL VARIABLES AND OBJECTIVE SLEEP QUALITY IN A MINORITY SAMPLE

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Background: We examined the relationship between psychological variables and sleep quality using objective actigraphy data in a minority sample. While there is some evidence for psychological variables predicting sleep quality, this literature is still very limited. Most available studies use only subjective sleep data (e.g., Pittsburg Sleep Quality Index) that does not accurately capture sleep architecture, and few studies have examined psychological variables and sleep in minority populations. Similarly, scant evidence exists on other individual difference factors that may influence this relationship. Sleep duration has been reliably linked to morbidity and mortality, and insomnia is a predictor for cardiovascular disease. Therefore, it is important for effective prevention and intervention to identify variables that place an individual at risk for poor sleep quality.

Methods: As part of a larger study, 80 participants of East Asian decent completed demographic and psychological measures in the lab and actigraphy data were collected for the night following.

Results: Results indicate that in males greater hostility was associated with less total sleep time ($\beta=-.40$, $t(60)=-2.49$, $p<.05$), and marginally associated with poorer sleep efficiency ($\beta=-.31$, $t(60)=-1.94$, $p=.06$). As well, an anger response style characterized by frequent use of diffusion was significantly associated with better sleep efficiency ($\beta=.76$, $t(60)=2.91$, $p<.01$) and less fragmented sleep ($\beta=-.88$, $t(60)=-3.03$, $p<.01$) in males. The constructs of trait anger and worry were not significantly associated with sleep parameters.

Conclusions: The relationship between psychological variables and sleep quality vary as a function of gender in an Asian sample. In Asian male subjects hostility appeared to be detrimental to sleep quality, while diffusion was positively associated with sleep quality. Psychological variables were not associated with sleep quality in Asian females.

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PRIZE-BASED CONTINGENCY MANAGEMENT FOR SMOKING CESSATION IN METHADONE PATIENTS

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Methadone patients smoke at a much higher rate than the general population, yet few studies have evaluated the effectiveness of smoking cessation interventions among methadone patients. Contingency management (CM) interventions provide non-drug reinforcement when the patient meets a behavioral target (e.g., drug-free biological test). Money and voucher based CM interventions have been shown effective in decreasing smoking in methadone patients; other types of CM, such as prize-based reinforcement, have not been explored. Our pilot study sought to examine the feasibility of a prize-based CM approach for smoking cessation in methadone patients. Six patients met with a research assistant daily; all patients participated in a one-week baseline, a four-week CM intervention phase, followed by a two-week return to baseline phase. Biological indicators (i.e., urinary cotinine, expired carbon monoxide [CO] levels) and self-report measures (e.g., cigarettes per day) were assessed several times per week. During the CM phase, patients earned the chance to win prizes if they provided negative CO specimens and/or reduced urinary cotinine levels (depending on the testing day). A fishbowl was used, which contained 500 slips of paper: half stated “good job”, 43.2% could be exchanged for small prizes (worth $1), 6.6% could be exchanged for large prizes (worth $20), and one could be exchanged for a jumbo prize (worth $80-100). Compared with baseline levels, prize CM significantly ($p<.01$) reduced average CO levels ($M_{\text{baseline, n=6}}=19.15$; $M_{\text{CM, n=6}}=9.44$) and cotinine levels ($M_{\text{baseline, n=6}}=5.69$; $M_{\text{CM, n=6}}=4.51$). Furthermore, 3 of the 6 patients quit smoking altogether and these results were maintained throughout the second baseline ($M_{\text{CO, n=3}}=2.35$; $M_{\text{cotinine, n=3}}=1.76$). These findings suggest that prize-based CM for smoking cessation may be an effective approach among methadone patients. Future research should replicate these findings in a larger sample.

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THE ROLE OF EMOTIONAL NONACCEPTANCE IN THE RELATION BETWEEN DEPRESSIVE SYMPTOMS AND CIGARETTE SMOKING

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Evidence that smokers have heightened levels of depressive symptoms and often report smoking in response to negative affect has led to an interest in the use of mindfulness and acceptance-based strategies to help smokers respond more adaptively to depressive symptoms. However, more research is needed to examine the role of emotional nonacceptance in the relation between depressive symptoms and smoking, particularly among populations with high rates of smoking (e.g., substance users). Thus, this study examined the mediating role of emotional nonacceptance in the relation between depressive symptoms and smoking among 120 current smokers (i.e., >4 times per week in the past year) in residential substance abuse treatment. Participants (mean age=35±10; 59% male; 63% White) reported the number of cigarettes they had smoked in the past hour (mean=1.8±1.4, range 0–7), and completed the Emotional Nonacceptance subscale of the Difficulties in Emotion Regulation Scale and the Depression subscale of the Depression Anxiety Stress Scales. As predicted, both depression and emotional nonacceptance were associated with more cigarettes in the past hour (rs>.33, ps<.01). Hierarchical multiple regression analyses (controlling for age, gender, SES, and race) provided support for the mediating role of emotional nonacceptance in the relation between depression and smoking. Specifically, depressive symptoms were associated with both smoking (t=2.98, p<.01, sr2=.07) and emotional nonacceptance (t=4.65, p <.01, sr2=.15). Further, depressive symptoms lost significance (p=.09) when emotional nonacceptance was included in the model (t=2.74, p<.01, sr2=.06). The Sobel test also supported nonacceptance as a mediator (p<.01). Results suggest that depressive symptoms may interfere with emotional acceptance, increasing urges to smoke in order to escape negative affect. Targeting emotional nonacceptance may be one strategy for improving smoking cessation treatment for depressed individuals.

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SOCIAL & CULTURAL INFLUENCES ON TOBACCO-RELATED HEALTH DISPARITIES AMONG SOUTH ASIANS IN THE UNITED STATES

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Background: South Asians are the 2nd largest Asian subgroup & fastest growing minority population in the U.S. Population-based research in the U.S. has concluded that tobacco does not contribute to existing disparities; these studies did not inquire about indigenous products commonly used by this group. Local surveys including culturally-specific tobacco demonstrate higher use rates, suggesting more consistent associations with tobacco-related disparities.
Methods: Focus groups (n=100) were conducted in 3 South Asian ethnic enclaves in the U.S. Participants were separated by key demographic variables but included diversity of religion and national origin. Deductive methods were used in content analyses to qualitatively describe patterns & predictors of tobacco use.
Results: A large number of culturally-specific tobacco products are commonly used by South Asians. Knowledge of product-specific risks was lacking or inaccurate. Culturally-specific products were differentially considered to have beneficial attributes. Use of South Asian products was ascribed social & cultural value, seemingly superseding perception of impacts on health. South Asians use these products to preserve and express ethnic identity in a new dominant culture, and to distinguish themselves from mainstream society and other minority groups. Product use is often a symbolic behavior to maintain tradition, engage in cultural celebration, serve as reminders of common heritage, and facilitate socialization among persons with a shared ethnic identity.
Conclusions: Many cultural factors govern tobacco use among South Asians in the United States and are not included in typical risk factor surveillance instruments. Measuring the prevalence and correlates of non-traditional tobacco use is pivotal to understanding the true contribution of all forms of tobacco to health disparities, and will facilitate identification of targets for intervention. For understudied minority groups, the role of social identity may strongly influence at-risk behaviors. Broader implications include extrapolation of findings to other culturally-framed behaviors among groups underrepresented in health disparities research.

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THE “SECOND OPINION” MATTERS:CONCORDANT AND DISCORDANT REPORTS OF SMOKING BANS IN FAMILIES

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Background: Home and car smoking bans are important approaches to reducing children’s secondhand smoke (SHS) exposure and attendant health risks. Such private smoking bans are usually informal, and reports of bans may differ across family members due to variance in observation, interpretation, and recall. However, most studies define private smoking bans based on one individual’s report and no study has investigated how report agreement on private smoking bans relates to smoking or SHS exposure of residents in the home.
Methods: A complete smoking ban in the home or car was defined as prohibition of all smoking in each respective location. In each of 386 families in San Diego, CA, a preteen and a parent reported separately on their home and car smoking bans and agreement was determined. ANOVA, Chi-square, and multiple linear regressions were used to determine relationships of child SHS exposure (urine cotinine, reported exposure) with (1) home/car smoking bans reported separately by preteen and parent; (2) type of agreement between preteen and parent reports of bans.
Results: Reports disagreed on home smoking bans in 19% of families; on car smoking bans in 30%. Families who agreed on the presence of a complete ban had the least exposure, followed by families who disagreed, and then by families who agreed on the absence of a ban. Parent and child reports of bans were independently predictive of exposure in regression models, and each explained unique variance in predicting SHS exposure
Conclusion: Due to relatively high prevalence of discordant reporting, classification of home bans may benefit from including multiple reporters. Including both parent and preteen reports proved to better predict cotinine and reported SHS exposure over a single person’s report. A “second opinion” can improve measurement of private smoking bans. Future studies should continue to improve validity and fidelity of smoking ban measures in private homes.

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STRATEGIES USED BY MULTINATIONAL TOBACCO COMPANIES IN EMERGING MARKETS: A CASE STUDY OF TARGETED MARKETING AND LEGISLATION INFLUENCE IN SPAIN

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Although the prevalence of smoking in Spain has decreased in recent years due to tobacco control efforts, it still remains high (35.3% for men and 24% for women). Multinational tobacco companies entered the Spanish market during the 1970 s and 1980 s, when Spain was particularly vulnerable, as it emerged from decades of fascism. A deeper investigation into the industry’s approach to influence advertising regulations and target women and youth in Spain can provide useful lessons for other countries with emerging tobacco markets currently pursuing tobacco control. A keyword search of the University of California San Francisco’s Legacy Tobacco Document’s Library was conducted, followed by complementary searches on PubMed, newspaper, and other relevant websites. During the 1970s, multinational tobacco companies developed agricultural assistance and research programs to modify the characteristics of tobacco grown in Spain to help farmers shift to growing U.S. type blond tobacco. To inform marketing strategies, the industry closely monitored changing social movements, the status of tobacco control regulations, and smoker’s attitudes. Tobacco companies identified Spain as having a tolerant society with a weak regulatory system. Industry surveys found that “light” cigarettes and American-type tobacco (perceived to be milder) were preferred by women and youth over the dark, Spanish type, and marketed these brands heavily to both groups. At the same time, through the establishment of voluntary self-regulation agreements and the creation of the AET (Asociación Española de Tabaco), the tobacco industry was successful in halting more stringent legislation in Spain for well over two decades. As stronger regulations succeeded during the 1990 s, with pressures from the European Union, tobacco companies developed more innovative marketing techniques, such as expansion of sponsorship of sporting events and promoting an ineffective juvenile smoking prevention campaign.

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PSYCHOLOGICAL PREDICTORS OF QUIT ATTEMPTS AND CESSATION MAINTENANCE IN A SMOKING CESSATION INDUCTION INTERVENTION FOR COLLEGE STUDENTS

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Little is known about the role of psychosocial factors in interventions designed to motivate unmotivated smokers to try to quit (i.e., smoking induction). In addition, there have been few studies testing interventions designed to encourage smoking cessation among college students. The purpose of this study was to examine psychological predictors of attempts to quit and cessation success in a sample of college students enrolled in a Motivational Interviewing (MI) intervention trial. Students from 30 Greek chapters who were not necessarily motivated to quit completed baseline assessments of motivation to quit (MQS), confidence to quit (CQS), self-efficacy (STI), depression (CES-D), perceived stress (PSS), and neuroticism-anxiety (N-Ax), and were randomized to receive either MI for smoking cessation or MI for increasing fruit and vegetable consumption. Participants were categorized into 3 groups according to their quit attempts and cessation maintenance during the last 30 days at the end of treatment (N=327) and 6-month follow-up (N=303): No attempt group, Attempt group (but did not maintain quitting), and Maintenance group. At the end of treatment (and independent of treatment group), the Attempt and Maintenance groups had significantly higher scores in MQS than the No attempt group (F=7.98, p<01); the Maintenance group had higher scores in CQS and STI than the No attempt and Attempt groups (F=14.54 and 37.56, p's<.01); the Attempt group had higher scores in CES-D, PSS, and N-Ax than the No attempt and Maintenance groups (F=4.45, 3.20, and 6.60, p's<.05). The same pattern of group differences was observed at follow-up. Results indicate that while motivation to quit may lead to attempts to quit smoking it is not predictive of cessation maintenance unless there is sufficient confidence to quit. Results highlight the importance of enhancing both motivation and confidence in induction interventions.

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C-172

CHARACTERISTICS ASSOCIATED WITH MEMBERSHIP IN SMOKING CESSATION SUBGROUPS AFTER THE DIAGNOSIS OF CANCER

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The purpose of this study was to identify characteristics associated with membership in smoking cessation subgroups after the diagnosis of cancer. Data were collected with standardized measures from 163 smokers or recent quitters with cancer at entry to the study, 132 and 116 had data collected at 3 and 6 mo later Biochemical verification with urinary cotinine measurement was used to define smoking status. Descriptive statistics and logistic regression were used for analyses. Smoking cessation subgroups consisted of continued quitters (CQ), delayed quitters (DQ) and continued smokers (CS). In univariate analysis, factors at baseline associated with being a DQ (compared to CQ) at 3 mo were increased craving (<.001) and self efficacy (.002), whereas increased craving (<.0001) and decreased withdrawal symptoms (.04) were significant in multivariate analysis. In univariate analysis, factors measured at baseline associated with being a CS (compared to CQ) at 3 mo were lower education (.04), smokers in the household (<.001), increased craving (<.0001) and self-efficacy (<.001), whereas increased craving (<.0001) and smokers in the household (.02) were significant in multivariate analysis. In univariate analysis, factors at baseline associated with being a DQ (compared to CQ) at 6 mo were increased craving (<.001), perceived control (.05) and self efficacy (.01), whereas increased craving (.001) were significant in multivariate analysis. In univariate analysis, factors measured at baseline associated with being a CS (compared to CQ) at 6 mo were lower education (.04), female gender (.02), smokers in the household (<.001), increased craving (<.001) and self-efficacy (.002), whereas increased craving (<.001) and smokers in the household (.009) were significant in multivariate analysis. Tailored interventions that include symptom management, self-efficacy, perceived control and smokers in the household may help promote cessation after the diagnosis of cancer.

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C-173

EVALUATING THE EFFECTS OF A NOVEL BODY IMAGE EXPOSURE PROCEDURE ON WEIGHT AND BODY CONCERNS AND SMOKING URGE AMONG COLLEGE-AGE FEMALES

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Smoking can be an effective but maladaptive weight management strategy among women with body image and weight concerns (BWC). Few studies have examined variability in BWC-smoking urge relationship and fewer have examined the effects of exposure to one's own mirror image on urges. The purpose of this study was to pilot test effects of a novel body image exposure procedure on smoking urge among college-age female smokers. Weight concerned (WC) smokers (N=9) participated in one 60-minute session. This involved wearing tight clothing (sports bra and shorts) in front of a mirror and (a) describing each part of their body as prompted by the researcher, (b) providing an emotional reaction to each description. A 30-second script based on their responses was read back to them. Pre-post session measures of smoking urge, body image (BISS), physical appearance-related anxiety (PASTAS), and positive and negative affect (PANAS) were assessed. Participants (mean age=19.8 yrs; sd=.92) smoked approximately 9cigs/day. Higher pretest WC scores correlated significantly with lower post-test BISS scores (r=-.85, p<.01) and higher PASTAS scores (r=.68, p=0.04). Wilcoxon signed rank test showed significant decreases in post-test measures of BISS (Z=−2.4, p<.01), PA (Z=−2.5, p<.01), and increased PASTAS scores (Z=−2.67, p<.01). Post-test smoking urge was greater than pretest urge (Z=−1.9, p=.06). This is the first study to use a combination of mirror exposure and script-based imagery to manipulate WCs and observe its relation to smoking urges. The results suggest that body exposure procedures increase BWC providing evidence that situational changes to BWC are related to smoking urge. These underline the need for CBT based procedures to attenuate BWC in smoking cessation interventions.

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C-174

SMOKING CUE REACTIVITY ACROSS MASSED EXTINCTION TRIALS: NEGATIVE AFFECT AND GENDER EFFECTS

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Designing and implementing cue exposure procedures to treat nicotine dependence remains a challenge. This study tested the hypothesis that gender and negative affect (NA) influence changes in smoking urge over time using massed extinction procedures. Forty-three smokers and ex-smokers completed the behavioral laboratory procedures. All participants were over 17 years old, smoked at least 10 cigarettes daily over the last year (or the year prior to quitting) and had expired CO below 10 ppm at the beginning of the ~4-hour session. After informed consent, participants completed 45 minutes of baseline assessments, then completed a series of 12 identical, 5-minute non reinforced exposure trials. Smoking cues included visual, tactile, and olfactory cues with a lit cigarette, in addition to smoking-related motor behaviors without smoking. Logistic growth curve models supported the hypothesis that across trials, participants would demonstrate an initial linear increase followed by a decrease in smoking urge (quadratic effect). Data supported hypothesized gender, NA, and gender x NA effects. Significant linear increases in urge were observed among high and low NA males, but not among females in either NA subgroup. A differential quadratic effect showed a significant decrease in urge for the low NA subgroup, but a non-significant decrease in urge in the high NA group. Results could guide future cue reactivity research and exposure interventions for nicotine dependence.

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C-176

"ZAR:SPIRIT POSSESSION OVER THE BODY, DISTRESS AND HEALING"

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Zar is a culture-bound syndrome that is briefly described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) as a form of spirit possession common in North African and Middle Eastern societies. This syndrome is typically not considered pathological in local cultures but it can be perceived as indicative of a more serious mental health condition outside of the social/cultural context in which it develops. Zar symptoms vary in severity and are more common among older individuals, women, and those who grew up in non-urban communities. It can resemble psychotic and dissociative disorders in its most severe forms. Given the large number of immigrants from the Middle-East in the US – particularly in California – it is important that US clinicians become familiar with Zar and learn how to identify this condition in clinical settings in order to avoid misdiagnosis and increase treatment effectiveness. This poster will present a review of the limited literature available on Zar (including literature from X Iran, South Asia and some African countries) and provide practical information to clinicians regarding the assessment and treatment of this condition among immigrants from the Middle East. Information about symptomatology, prevalence and typical course of the condition will be included, as well as a brief discussion regarding the social context in which it occurs. Additionally, the presenters will offer specific recommendations for how to work with patients presenting with symptoms of Zar and discuss the role family may play in recovery.

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C-177

MULTIDIMENSIONAL ASSESSMENT OF RELIGIOSITY/SPIRITUALITY AND HEALTHY LIFESTYLES IN COLLEGE STUDENTS

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Research demonstrates a positive relation between religiousness/spirituality (R/S) and various health indices. Many mechanisms have been proposed to mediate this relationship (e.g., social support, positive affect, health behaviors). This study's purpose was to determine if a multidimensional conceptualization and assessment of R/S is related to a healthy lifestyle (including multiple behaviors) in college students. Measures of R/S (i.e., religious service attendance, other religious activities, self-rating of religiousness, personal spirituality, experiential comforting faith, private religious practices, religious community support, negative religious interaction, punishing God, intrinsic/extrinsic religiosity) and health behaviors (i.e., smoking, alcohol use, alcohol in the car, seatbelt use, sleep problems, sexual risk behavior, physical activity, healthy eating) were collected from 318 undergraduates (59.1% female, 77.7% White). Canonical correlation was used to test the relationships between R/S and health behavior sets. Results indicated that the first two canonical correlations were significant ($Rc=.35$, $p<.001$; $Rc=.33$, $p=.011$). The R/S latent variable in the first canonical correlation was strongly and positively influenced by personal spirituality and religious service attendance and negatively related to extrinsic religiosity and intrinsic religiosity; the health behavior latent variable was strongly and positively influenced by seatbelt compliance and physical activity and moderately and negatively related to smoking behavior and alcohol use. The R/S latent variable in the second canonical correlation was moderately and negatively related to personal spirituality and punishing God, and weakly and positively associated with intrinsic religiousness; the health behavior latent variable was negatively associated with physical activity and positively associated with alcohol use and smoking behavior. These results suggest that spirituality may be related to a healthier lifestyle in undergraduates, whereas religiosity not supported by spirituality may be related to a less healthy lifestyle.

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C-178

SPIRITUALITY AND HEALTH IN THE BEREAVED: THE ROLE OF RELIGIOUS COPING

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Grief is a public health issue (Center for the Advancement of Health, 2004). Spirituality/religion has been shown to affect both health (i.e. Cotton et al., 2006) and grief (i.e. Hayes & Hendrix, 2008). The current study examines the relationship between spirituality/religion and somatic symptoms in traumatic and nontraumatic losses.

A sample of bereaved undergraduate students ($N=876$; age $M=19.1$, $SD=2.25$; 60.6% female; 53.4% Caucasian, 20.1% Black American; 66.0% Christian; 65.6% freshman) were administered the HGRC (Hogan, Greenfield, & Schmidt, 2001), a measure of grief, along with the SWBS (Paloutzina & Ellis, 1982), a measure of spiritual health, and the RCOPE (Pargament et al., 2004), a measure of religious coping. A 5-item measure of somatic complaints was derived from the Panic subscale of the HGRC ($\alpha=.82$).

Participants experienced the loss of a variety of loved-ones (i.e. extended family members, 63.7%; friends, 28.1%). They also reported a variety of types of loss, including illness (69.7%) and traumatic loss (homicide, suicide, or accident; 30.3%). An independent samples t-test indicated a trend such that somatic complaints were greater with traumatic losses ($M=9.43$) than nontraumatic losses ($M=8.84$) $t(874)=-1.91$, $p=.056$. Traumatic losses score higher on negative religious coping ($M=18.68$, and 15.67 respectively) $t(874)=-3.42$, $p<.05$ and report less ability to make sense of their loss ($M=2.45$ for traumatic loss, $M=3.13$ for nontraumatic) $t(874)=9.96$, $p<.05$.

A hierarchical regression model tested the power of negative religious coping to predict somatic symptoms beyond participants' spiritual wellbeing. The model was significant at both steps: spiritual wellbeing ($\beta=-.26$, $p<.05$) significantly predicts somatic symptoms $r2=.07$. The second step showed a significant improvement in the model $r2=.21$, $\Delta r2=.14$, $F(1, 873)=151.2$, $p<.05$, such that negative religious coping ($\beta=.27$, $p<.05$) explained unique variance in somatic symptoms.

These results highlight the complex nature of the relationships between spiritual health, religious coping styles, and somatic complaints in bereavement. The use of negative religious coping strategies is particularly implicated in affecting the health of the bereaved.

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C-180

TRAUMATIC STRESS AND PROBABLE PTSD AS A RESULT OF ONGOING VIOLENCE IN CIUDAD JUáREZ, MéXICO: IMPACT OF CONCURRENT RISK FACTORS AND BUFFERS TO TRAUMATIC STRESS

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Understanding the impact of risk factors and buffers to traumatic stress on PTSD symptomology resulting from the insecurity in Ciudad Juárez, México may help to focus screening and treatment efforts for those affected by drug cartel conflicts. Participants were 119 young adults living in or frequently traveling to Ciudad Juárez. Traumatic stress levels, probable PTSD, concurrent risk factors for traumatic stress (demographics, prior traumatic event exposure, depression, anxiety, general stress symptomology, and avoidance coping) and potential buffers to stress (problem- and acceptance-focused coping, and social support) were assessed. Descriptive analyses assessed the frequency of meeting the probable PTSD threshold, while multiple regression and logistic regression models explored significant associations with traumatic stress scores and meeting the probable PTSD threshold respectively. Notably, 48% of the sample reported past 30 day symptomology consistent with probable PTSD. After adjusting for covariates, traumatic stress levels were positively related to female gender ($\beta=.26$, $p<.01$), age ($\beta=.17$, $p<.05$), avoidance coping ($\beta=.23$, $p<.05$), and marginally, stress scores ($\beta=.27$, $p=.09$). In the logistic model, only concurrent stress levels were associated with past 30-day probable PTSD ($OR=1.22$, $p=.05$). Results suggest that a significant proportion of U.S./México border young adults may be affected by the ongoing insecurity in Ciudad Juárez. Many traumatic stress risk factors and buffers commonly associated with PTSD may not be relevant in the midst of ongoing violence and insecurity. Focus on concurrent stressors and the nuances of avoidance coping in a situation of ongoing potentially traumatic events may also be warranted. *Research in part funded by: The Hispanic Health Disparities Research Center, Grant No. 1P20MD002287-03 and A Smoke-Free Paso del Norte Grant No. 26-8113-17.

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C-181

STRESS AND INTERNET USE AMONG UNDERGRADUATES

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It is important to consider not only benefits but also potential dangers of Internet use. Recent findings suggest that young adults may be using the Internet to escape anxious thoughts and replace dysphoric moods after stressful life events. However, it is still unclear how this relates to the frequency of problematic Internet use. Research has shown that Internet use may buffer the impact of stress on health and has also been associated with higher rates of Internet addiction.

Students are at particular risk for excessive Internet use and increased levels of stress. Increased stress has been associated with poor health and worse sleep patterns. The current cross-sectional study examined the relation between Internet use and stress among undergraduate students and how this may increase their vulnerability toward Internet addiction.

Data were collected from 482 college students from a Northeastern University. Multiple regression analyses were conducted to assess perceived stress, social support, family environment, and online cognitions as predictors of frequency of Internet use, the time spent on social networking sites, and scores on the Internet Addiction Test and the Chinese Internet Addiction Scale. Analyses revealed social support (significant others β=-.13, p<.05; friends β=.21, p <.01) and family conflict (β=-.15, p<.01) to be significant predictors of the number of days spent online per week, with all predictors accounting for 8.7% of the variance. Perceived stress (β=.08, p<.05), family conflict (β=.14, p <.01), and online cognitions (depression β=.14, p<.05; diminished impulse control β=.25, p<.01) were significant predictors of scores on the Internet Addiction Test, with all predictors accounting for 31% of the variance. Using the Internet for distraction moderated the relation between perceived stress and measures of Internet addiction. The results provide support for the hypothesis that stress is related to increased frequency of Internet use and that use is motivated by efforts to distract oneself from psychological distress, which may result in Internet addiction among students.

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C-182

STRESS-EATING PARADIGM: FURTHER INVESTIGATION OF THE ASSOCIATION OF EATING BEHAVIORS WITH STRESS

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Research suggests that food consumption varies in response to psychological stress. Although the mechanisms underlying this association are still largely unknown, one possible pathway is via differences in physiological stress reactivity. It may be that an individual's autonomic nervous system function (e.g., increases in arousal, blood pressure, heart rate) may have a direct effect on whether an individual chooses to eat. The current study investigated whether differences in cardiovascular function and stress response were associated with self-reported eating behaviors. Sixty-eight undergraduate students (34 female, 34 male, mean age=19.12) participated in a standard five minute speech stressor task where systolic blood pressure (SBP), diastolic blood pressure (DBP), and pulse rate (PR) were assessed approximately every two minutes throughout baseline (10 min), stress (6 min), and recovery periods (7.5 min). Eating behavior was measured using the Dutch Eating Behavior Questionnaire (DEBQ, 1986). Repeated measures ANOVA was used to analyze differences in stress reactivity and recovery for the different eating group categories. Results revealed that after controlling for sex and resting blood pressure, restricted eaters had higher stress reactivity responses in SBP (F=4.01, p<.05) and DBP (F=5.12, p<.05). In addition, emotional eaters had a higher SBP reaction to stress, although the results were marginal (F=2.94, p<.1). Eating behaviors were not associated with differences in baseline cardiovascular levels, pulse rate, or with recovery from the stressor, after controlling for baseline, sex, and stress reactivity. These results indicate that self-reported eating behaviors are associated with higher cardiovascular stress reactivity. It may be that the heightened physiological arousal (e.g., higher blood pressure responses) seen in restricted and emotional eaters in response to stress triggers the desire to consume or restrict. These findings have implications in understanding stress-induced eating in factors such as dieting and obesity, and may contribute to understanding healthy eating and stress management.

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C-184

DEVELOPING TAILORED INTERVENTIONS IN 3D GAMES TO REDUCE METHAMPHETAMINE AND HIV RISK BEHAVIOR

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Two pilot studies, one with 30, and the other with 72 MSM who used methamphetamine (MA) while engaging in unprotected anal intercourse (UAI) suggested several motivations for the use of MA in this context. The first study revealed that MA was used to alleviate feelings of loneliness by creating a "short-cut" to intimacy with other MA users through disinhibition and increased libido. MA use was viewed as a catalyst to very risky sexual behavior according to 87% of these subjects. In the second pilot study, subjects reported that MA was used to cope with religious and family rejection, and this was cited significantly more often among bisexual and other non-gay identified MSM than gay identified MSM: (χ^2= 9.29, *p*<.01) for religious rejection and (χ^2=16.74, *p*<.01) for family rejection. Although many MA prevention messages focus almost exclusively upon the inability of the MA user to achieve or maintain an erection and the side effects of MA to dissuade its use, we found that 24% of men who reported difficulties performing as an insertive partner used MA to overcome erectile dysfunction. In separate negative binomial regression analyses, perceptions of enhanced performance predicted use of MA as an insertive partner (Exp (*B*)=3.74, CI .46, 2.18, *p*<.01) but not as a receptive partner. Receptive partners' perceptions of enjoyment (Exp (*B*)=3.41, CI .22, 2.23, *p*<.05) and of their desirability (Exp (*B*) =2.45, CI .09, 1.70, *p*<.05) predicted their MA use, but did not predict the use of MA for insertive partners. These results suggest that a "one-size-fits-all" approach may not be the best way to present prevention messages for MSM who use MA and engage in UAI. Through the use of videogames that collect player data (e.g., sexual orientation, preferred sexual position, experiences with rejection) that is then translated into the program, tailored messages can be delivered to the appropriate player. Scenes from our newly completed videogame will be presented and discussed to demonstrate how a tailored approach can be developed from empirical data.

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C-185

POST-BARIATRIC PATIENTS IN SUBSTANCE ABUSE TREATMENT: NUMBER AND TYPES OF MAJOR LIFE EVENTS DIFFERENTIATE RELAPSERS VERSUS NEW ONSET USERS

Bethany R. Feldman, BS exp 4/11, Karen Saules, PhD, Ashley Wiedemann, BS, Valentina Ivezaj, MS, Summar Reslan, BS, Alyssa Frederick, BS, Lindsay Salters, Student and Tracy McMillon, MSW

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Recent evidence suggests that post-bariatric patients are over-represented in substance abuse treatment programs (Saules et al., in press). In addition, about half of these patients are individuals who had no evidence of previous substance use problems, which we refer to as New Onset Users (NOU's). To better understand which factors may confer risk for new onset of substance abuse problems post-bariatric surgery, we analyzed qualitative data obtained from 26 post-bariatric surgery substance abuse treatment patient interviews. Patients were classified as either NOU's (50%, n=13) or Relapsers (50%, n=13). Relapsers were patients who reported substance abuse pre-bariatric surgery, although it is important to note that the majority were not abusing substances at the time of surgery. The sample was 73% female, 84% Caucasian, with a mean age of 45.5; Relapsers and NOU's did not differ on demographic variables. Interview data was coded into six major life event themes by three independent raters; raters achieved 92.9% agreement and discrepancies were resolved by consensus of the first two authors. Themes included: 1) Death of Someone Close; 2) Major Family Change/Issues; 3) Financial, Legal, or Occupational Trouble; 4) Major Personal Life Adjustment; 5) Physical Trauma; 6) Relationship Distress. Data collection is ongoing; however, preliminary results suggest that relative to Relapsers, NOU's had significantly more major life events post-surgery (0.5 vs. 1.7 major events, *p*<.01), with significant elevations on Major Personal Life Adjustments (0% of Relapsers vs. 38.5% of NOU's, *p*<.05) and Physical Trauma (33.3% of Relapsers vs. 100% of NOU's, *p*<.05). Results suggest that post-bariatric surgery patients who encounter major life events after surgery may be at an elevated risk for developing substance use disorders, even when there may be no evidence of problematic substance use pre-surgery. Pre-surgical counseling should educate patients about these elevated risks.

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C-186

EFFICACY OF ALCOHOL EXPECTANCY CHALLENGES TO REDUCE COLLEGE STUDENT DRINKING: A META-ANALYSIS

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Alcohol expectancies, positive or negative beliefs associated with alcohol use, predict current and future alcohol consumption (see Jones, Corbin, & Fromme, 2001, for a review). Interventions challenging alcohol expectancies may lead to reductions in alcohol consumption. This meta-analysis evaluates the efficacy of alcohol expectancy challenges (EC) for college alcohol prevention. Studies were retrieved from electronic databases, reference sections of relevant papers, electronic journals, and author responses to requests. Fifteen studies that measured alcohol expectancies and consumption, provided sufficient information to calculate effect sizes, and were available as of June, 2010 were included (N=8,357; M age=20.14; 37% women; 88% White). Independent raters coded participant characteristics, design and methodological features, and intervention content. Weighted mean effect sizes, using both fixed- and random-effects models, were calculated; positive effect sizes indicated fewer positive alcohol expectancies, greater negative alcohol expectancies, and less alcohol consumption. Compared to controls, EC participants reported fewer positive alcohol expectancies (d+=0.27, 95% CI=0.13, 0.41), reduced their alcohol use (d+= 0.23, 95% CI=0.09, 0.36), and reduced their frequency of heavy drinking (d+= 0.26, 95% CI=0.09, 0.43). Significant within-group improvements in alcohol expectancies and consumption emerged for the EC group only; relative to their baseline, EC participants reported fewer positive alcohol expectancies (d+= 0.20, 95% CI=0.12, 0.28), reduced their alcohol use (d+=0.12, 95% CI=0.01, 0.22), and reduced their frequency of heavy drinking (d+=0.32, 95% CI=0.17, 0.47). No changes in negative alcohol expectancies were found. Implications of these findings will be discussed.

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C-187

BARRIERS AND FACILITATORS TO SUSTAINING SBIRT SERVICES POST-SAMHSA GRANT FUNDING

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Screening, Brief Intervention, and Referral to Treatment (SBIRT) has been identified as an effective public health approach for identifying and treating individuals who use alcohol and/or other drugs at risky levels. The Substance Abuse and Mental Health Services Administration (SAMHSA) funded cooperative agreements with six States and one Tribal Council to implement SBIRT services and funded a cross-site evaluation to examine the sustainability of SBIRT services post-SAMHSA grant funding and the facilitators and barriers to sustaining services. Data collection methods included semi-structured telephone interviews conducted with 29 key contacts (e.g., administrators, grantee's evaluators, SBIRT service providers) in 5 of 6 Cohort 1 Grantees. In addition, observational site visits and in-person interviews were conducted with at 3 of the 6 Cohort 1 grantees. Cleaned transcripts of all interviews were uploaded and coded by a team of six coders using a qualitative software, ATLAS.ti. Two analysts coded each document independently and then reviewed for consensus. Analysis of the qualitative data resulted in 451 quotes assigned to the Barriers (237), Facilitators (214), or both (43) codes. Results indicated the presence of six primary themes: champion/dissemination, data collection, funding, political context, and provider/model. Reported facilitators of sustained service delivery after SAMHSA funding ended included presence of a champion to promote SBIRT services and provider buy-in, presence of continued internal and/or external funding to support service delivery, and adaptations to the model such as the inclusion of a universal prescreening. The primary barrier to sustaining services was the lack of continued funding. Other barriers included post-grant funding dissolution of interagency partnerships and internal reorganization, loss of champion and reduced provider buy-in, reduction of capacity, and decreased coordination for delivering SBIRT. Implications for these findings are discussed.

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Saturday
April 30, 2011
8:30 AM–10:00 AM

Poster Session D

D-001

PSYCHOLOGICAL TREATMENT OUTCOMES FOR SCREENED CANCER PATIENTS: WHAT DO META-ANALYSES TELL US?

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Objective: Reviews of the outcome of psychological treatments for cancer patients vary considerably in their conclusions and a number of researchers attribute this to a lack of consideration of critical moderator variables. If distress screening was to become routine practice, clinicians and policymakers implementing such a system need to be able to refer to consistent, supportive evidence that the subsequently offered treatments are of actual benefit to patients.

Method: We conducted a review of 14 meta-analytic reviews to determine whether careful consideration of moderating variables could assist clinicians and policymakers. Specifically, we assessed evidence for three hypotheses regarding the sources for disagreements among reviewers, namely [a] poor quality of clinical trial designs (where weak studies may falsely boost positive outcomes), [b] disagreement about how much evidence is required before recommendations can be made, and [c] ignoring floor effects that may underestimate possible treatment benefits.

Results: Taken together, the reviews indicated that poor trial design is not a key moderator of outcomes. Sweeping conclusions are hampered by the absence of evidence on many important questions like differential treatment effects for different cancer types and stages, and ignoring floor effects has led to large distortions and underestimation of possible treatment benefits. Treatment effects sizes are 3x as large for screened patients than they are for un-screened patients.

Conclusion: Sweeping judgments about the effectiveness of psycho-oncological treatments are misleading and counter-productive.

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D-002

NAVIGATORS' ACCURACY IN PREDICTING TIME INTENSITY OF NAVIGATION FOR CANCER CARE

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Background: Patient navigation- the process of assessing and alleviating barriers to care- is increasingly widespread and time and resource intensive to provide. There is a need to accurately identify those patients who are most in need of navigation services.
Purpose: To examine navigators' accuracy in predicting which patients are likely to require the greatest time for navigation.
Methods: We analyzed a study sample of 139 cancer patients randomized to the navigation arm of a larger trial evaluating the effectiveness of patient navigators on cancer-related healthcare quality and outcomes. Following an initial assessment of patients' needs, but prior to beginning any navigation services, navigators completed a one-item scale estimating how much navigation time patients were likely to require over the subsequent three months. Navigators then documented the actual time spent on various navigation tasks during the following three months. We compared the navigators' baseline estimates of time intensity ratings with actual time spent. We also explored patient characteristics and barriers associated with more or less time-intense navigation.
Results: Participants were mostly females (89.2%) with breast cancer (83.4%). The most common barriers to cancer care were insurance difficulties (26.6%), social support (18.0%) and transportation (14.4%). A mean of 139 minutes per patient was spent in navigation over the three-month period. Navigators spent on average 70% more time with females than males and 36% more time with Blacks than with Whites. The total number of barriers, rather than a specific type of barrier, was a better predictor of total navigator time; time spent went up 16% for each additional barrier identified by the navigator. Navigator prediction of time intensity remained a significant predictor in both crude and adjusted models.
Conclusion: Navigators accurately estimated the time intensity of navigation for cancer patients, even when adjusting for multiple patient characteristics and barriers. Findings suggest that navigator estimates of patients' needs for navigation time could assist in allocation of patients to receive navigation.

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D-003

GENERAL ANESTHESIA OR CONSCIOUS SEDATION: BETTER FOR THE PARENT OR BETTER FOR THE CHILD?

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Children and parents often report that cancer-related treatment procedures are more distressing than the actual disease itself. Physicians and medical staff try to lessen this through the use of general anesthesia during the procedures. While the trend is to perform more procedures under general anesthesia, it is not known if this is actually less distressing for families. The purpose of this study is to examine the differences in parent and child reactions to cancer-related treatment procedures done using general anesthesia and those done using conscious sedation.
The participants were 45 pediatric cancer patients who were receiving a stressful outpatient treatment procedure and their adult caretakers. Parents completed measures of their affective states (e.g. anxiety) immediately before the procedure. Children, parents, medical staff, and independent raters provided qualitative and quantitative evaluations of child distress, parental distress and child cooperation during each of the procedures.
Initial qualitative evaluations indicate that parents experience more distress and anxiety during procedures that involve anesthesia than those that involve conscious sedation. Conversely children experience less distress and are more corporative during procedures using general anesthesia than those that involve conscious sedation. We expect that the quantitative analyses will yield similar differences, and that parents' responses within each procedure will be predicted by their pre-procedure affective states.
Results from this study will inform planned future interventions to help parents and children cope with pediatric cancer treatments. If, in fact, procedures under general anesthesia are more distressing for parents but less distressing for children, interventions can be tailored to support parents whose children receive general anesthesia, and children who receive conscious sedation.

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D-004

GENOMIC AND STANDARD BREAST CANCER RECURRENCE RISK TEST RESULTS: ASSOCIATION WITH PERCEIVED RISK AND TREATMENT DECISIONS

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Background: Genomic testing is increasingly used in cancer care to aid patients' and physicians' decisions regarding cancer treatment. One such genomic test, Oncotype DX, predicts recurrence among early stage breast cancer patients. While potentially useful, this information may conflict with information from standard methods for assessing recurrence risk (e.g., tumor size and grade). It is unclear which source of risk communication (genomic test versus standard tests) more strongly affects perceptions of recurrence risk and subsequent treatment decisions.
Methods: Participants were 48 early stage breast cancer patients who previously received the Oncotype DX test as part of their usual care. They read six hypothetical vignettes that varied the recurrence risk indicated by standard methods (low or high recurrence risk) and genomic test (low, intermediate or high recurrence risk). For each vignette, women reported their perceived risk of breast cancer recurrence and interest in chemotherapy.
Results: When either test result indicated high recurrence risk, women reported higher perceived risk and greater interest in receiving chemotherapy than when the test indicated lower recurrence risk (each $p<.001$). Women reported greater interest in chemotherapy when the genomic test indicated high risk (and standard methods indicated low risk) than when standard methods indicated high risk (and the genomic test indicated low risk) (82% vs 67% $p<.001$). However, mediation analyses found that the effect of test result on interest in chemotherapy was not explained by perceived risk.
Discussion: Genomic test results have the intended effect of influencing women's perceptions of recurrence risk and interest in chemotherapy. Moreover, women appear to give more weight to genomic tests over standard methods when results conflict.

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D-005

DISRUPTION OF CIRCADIAN BEHAVIORAL RHYTHM INCREASES CANCER RISK

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Most physiological processes in mammals follow a circadian rhythm which is generated by the endogenous circadian clock. Disruption of circadian behavioral rhythm increases cancer risk in humans and rodents. We have shown previously that mice lacking circadian gene Period2 are cancer-prone (Fu et al. Cell 2002 111:41-50). However, it remains unclear how disruption of circadian rhythm may lead to tumorigenesis. Here we provide evidence that tumor suppression is a clock-controlled physiological function in vivo. The central clock in the brain and peripheral clocks in peripheral tissues act in synchrony to generate a circadian rhythm in cell proliferation which plays a key role in tumor initiation and progression when disrupted. We have found that the central clock rhythmically paces extracellular mitogenic signals that drive peripheral clock-controlled expression of cell cycle and tumor suppressor genes. The central clock-controlled sympathetic signaling simultaneously activates peripheral clock, cell cycle clock and tumor suppressor p53 by activation of Period genes and AP1-c-Myc and ATM-p53 signaling. Disruption of circadian behavioral rhythm desynchronizes the central clock-SNS-peripheral clock axis, leading to suppression of peripheral clock and ATM-p53 signaling but activation of c-Myc oncogenic potential. Together, these result in uncontrolled cell proliferation and increased tumor development in wild-type mice. Our studies uncover a previously unknown molecular pathway that links disruption of circadian rhythm to tumorigenesis and suggest that frequent disruption of circadian behavioral rhythm is an important tumor-promoting factor. Thus, educating the general public and promoting a healthy lifestyle could improve the efficiency of cancer prevention since most populations in industrialized societies live a lifestyle that often uncouples endogenous circadian rhythm with daily physical activity.

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D-006

EFFECTS OF STRESS, COPING, AND ETHNICITY ON DEPRESSIVE SYMPTOMS AMONG COLORECTAL CANCER PATIENTS

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Introduction: The psychosocial burden of colorectal cancer has been greater among African-American (AA) patients than non-Hispanic White patients, due in part to the higher mortality rate. This may be attributed to poorer mental health among AA patients. This study aimed to identify coping strategies that may be more effective for AA patients dealing with cancer-related stress, thus relating to lower levels of depressive symptoms.

Methods: Colorectal cancer patients (N=145: 52% AA, the rest non-Hispanic Whites) from 5 community hospitals participated in the study and provided valid data at 2 months (T1) and 6 months (T2) post-diagnosis. Predictors were measured using the Cancer-Related Stress Scale and the Brief COPE at T1. The CES-D as an outcome was measured at T1 and T2. Age and CES-D score at T1 served as covariates.

Results: Hierarchical regression analyses showed that AA patients who used religious coping to deal with cancer-related stress reported lower levels of depressive symptoms. This pattern was not significant among non-Hispanic Whites (interaction effect p=.003). In contrast, non-Hispanic Whites patients who used humor to cope reported lower levels of depressive symptoms (p =.066), which was not the case among AA patients.

Implications and Future Research: The findings suggest that the benefit of certain types of coping strategies may differ by an individual's ethnic background. Cancer patients may benefit better from stress management programs that provide culturally relevant coping training. Future research should investigate the underlying mechanisms for the ways in which religious coping among AAs and use of humor among non-Hispanic Whites related to lower levels of depression while adjusting to cancer diagnosis and treatment. Identifying coping strategies that are more effective to other minority groups such as Latinos and Asians is also needed.

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D-007

ILLNESS REPRESENTATIONS OF BREAST CANCER AMONG HISPANICS

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Hispanics are more likely to die from breast cancer compared to non - Hispanic whites matched on stage and age at diagnosis. Higher mortality rates among Hispanics are attributed to cancer - related disparities across the cancer continuum. While research has shown that socioeconomic factors play a significant role in the development and maintenance of cancer - related disparities, differences persist when these factors are controlled. Thus far, research on cultural factors and cognitions surrounding cancer is limited. The current study investigated illness representations of cancer and their determinants among Hispanic men and women (N=120) using a cross - sectional survey approach. The study sample was comprised of predominantly first generation, employed Hispanic women in their early - thirties from Mexico. Most had not resided in the U.S. for more than 5 - 9 years. Half of the sample reported an annual income of $20,001 - $30,000 and completing at least a middle school education. While the majority indicated that they did not have health insurance, most indicated that they did have a regular source of health care. Additionally, while most had not been diagnosed with cancer, nearly half of the sample knew of someone diagnosed with cancer. Descriptive data regarding illness identity, illness coherence, timeline, causes, consequences, and controllability are provided. Results suggest that demographic factors (i.e. acculturation, education, and income), cultural constructs (i.e. fatalism and familism), intrapersonal factors (state and trait anxiety), and previous experience with cancer were associated with illness representations of breast cancer. The study adds to the literature by systematically investigate illness representations of breast cancer and their determinants among a diverse sample of Hispanic men and women. This is a significant first step that can be used to guide and develop effective and culturally appropriate interventions that ultimately reduce disparities across the cancer continuum.

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D-008

CANCER RISK, CULTURE AND HIGH RATES OF HEPATOCELLULAR CARCINOMA IN LATINOS: IMPLICATIONS FOR ETIOLOGIC RESEARCH

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Background: Hepatocellular carcinoma (HCC) continues to rise in the U.S. despite a decline in cancer overall 1975-2005. The cause of HCC increase is unknown. This is especially true of Latinos, who experience higher rates of HCC than others. Texas and South Texas Latino rates are even higher.

Aims:

1) Compare HCC incidence between Latino groups
2) Identify differences by gender, age at diagnosis and urban/rural residence
3) Evaluate HCC incidence rates 1995-2006
4) Identify mediating factors

Methods: Public-use data files from the SEER Program, Texas Cancer Registry, and the Center for Health Statistics of the Texas Department of State Health Services were obtained. Annual age-specific and age-adjusted HCC incidence, annual percent changes (APCs) and associated 95% confidence intervals (CI) were calculated and analyzed using SEER*Stat and SPSS Complex Samples software. Group differences were assessed at p<.05.

Results: 3,374 Latino HCC incident cases occurred in SEER, 3,891 in Texas, and 2,011 in the South Texas subset 1995 to 2006. Latinos accounted for>than 1/3 of HCC cases in Texas and~3/4 HCC cases in South Texas. More than 70% of all Latino HCC cases were male; similar in SEER, Texas and South Texas groups and consistent for all South Texas age groups>40. Texas Latinos were diagnosed at older ages than SEER and South Texas Latinos. More Texas (14.3%) and South Texas Latino (14.8%) than SEER (5.2%) cases resided in rural areas. South Texas Latinos had high prevalence of obesity and diabetes.

Conclusions: HCC occurs most frequently among South Texas Latinos. Differential rates of risk factors for HCC occur among Texas and South Texas Latinos. Further research to establish contributing factors for these excesses is warranted.

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Meritorious Poster

D-009

THE INFLUENCE OF SOURCES OF INFORMATION ON HEPATITIS B SCREENING, KNOWLEDGE, SOCIAL NORMS AND SELF-EFFICACY FOR HEPATITIS B SCREENING AMONG ASIAN AMERICANS

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The source of health information is important for behavioral change. Few studies have compared the influence of sources of information of hepatitis B screening among Asian Americans. The objective of this analysis is to compare the influence of different sources of information on screening behavior, knowledge, perceived norms, and self-efficacy for hepatitis B screening. The Asian American Liver Cancer Education Program in Maryland recruited 877 Asian Americans. A pre-test result indicated that 82.9% of participants had heard of hepatitis B. Having heard of hepatitis B had a significant association with screening behavior. The most common sources of information, identified by a multiple answer question, were newspapers (39.8%), physicians (39.2%), friends (33.7%), TV (31.7%), and the internet (29.5%). Bivariate analyses showed that information from physicians was associated with screening behavior (p< 0.01), and this was consistently significant across the knowledge level, injunctive norms, descriptive norms, and self-efficacy. Newspapers had positive and significant associations with the self-efficacy, as did the internet with knowledge and descriptive norm. Multivariable logistic regression, controlling for family history of hepatitis B, ethnicity, socio-economic status, age and gender, showed that information from physicians was the strongest predictor for hepatitis B screening (OR 3.06, 95%CI: 2.19-4.28) while newspapers and the internet were insignificant. Multivariable linear regressions found that information from a physician was no longer significantly associated with knowledge level and injunctive norm, but still a positive and significant influence on descriptive norm and self-efficacy. Newspapers and the internet had a significant influence only in self-efficacy. Future education programs may consider collaboration with physicians for development and dissemination of hepatitis B education materials.

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D-010

PROMOTING CONSULTATION RECORDING USE IN ONCOLOGY: DETERMINATION OF PATIENT BENEFIT AND EVALUATION OF IMPLEMENTATION STRATEGIES

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The uncertainty and emotional distress surrounding the receipt of a cancer diagnosis and the treatment planning period is well documented. The Cochrane Collaboration identified the provision of consultation recordings to newly diagnosed cancer patients as empirically justified in a recent systematic review. Despite the evidence in favor of this intervention, uptake in oncology practice has been slow. The objective of this study was to examine the benefits to patients of receiving a consultation recording of their initial treatment consultation, and to examine implementation strategies. Women with breast cancer (n=154), men with prostate cancer (n=55), and their oncologists (n=16) from cancer centers in three Canadian cities (Vancouver, Calgary, Winnipeg) participated. Patients provided detailed feedback on the consultation recording at 3 and 7 days post-consultation. Oncologists were provided with patient feedback letters to positively reinforce their involvement. Forty-eight percent of patients patients expressed an "extreme liking" of their recording (100 out of a possible score of 100), while 48% scored the recording between 75-99 points, and 5% scored it between 50-74 points. Patients listened to the entire recording an average of 1.4 times, and listened to a portion of it an additional 2.0 times. Sixty-three percent of patients first listened to the recording within three days of the consultation; 37% first listened between 4-7 days post-consultation. While 58% of patients reported making their treatment decision either prior to or during the consultation, the remaining patients made the decision post-consultation. Overall, the recording assisted in making the treatment decision in 26% of patients. Patient benefits included enhanced retention of information, better informed decision making, reduction in anxiety, and improved communication with family members and the oncology team. The oncologist feedback letter was a key implementation approach.

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D-011

VALIDATION OF A TTM PROCESSES OF CHANGE MEASURE FOR HPV VACCINATION AMONG FEMALE COLLEGE STUDENTS

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HPV is the most commonly sexually transmitted disease in the world and can lead to serious health issues such as cervical cancer and genital warts. Although the HPV vaccine appears in the US immunization schedule during adolescence, a large percentage of women reach adulthood without being vaccinated. Rates of HPV vaccination are particularly low in women between the ages of 18 and 26; therefore, there is a need to understand motivational factors that influence vaccine-related decision making among this group. The Transtheoretical model (TTM) is a model of behavior change that has been applied to a wide array of health-related behaviors. This study developed and validated a TTM Processes of Change (POC) measure for HPV vaccination in a sample (N=340) of female college students (ages 18 to 26). Of the approximately 50% of women in our sample who had not received the full HPV vaccination the majority (63.3%) were in the Precontemplation stage, 22.5% were in Contemplation, and 14.2% were in Preparation, indicating that more than 85% of unvaccinated individuals were not intending to get vaccinated in the next six months. Women who had received the full vaccine (50.3% of the total sample) were categorized into the Action/Maintenance stage. Confirmatory analyses replicated the theoretically expected structure of the scales. For Processes of Change, the ten-factor correlated model was the best fit, Chi square (695)=2185.48, p<.001, CFI =.87, GFI=.74, and AASR=.04. Expected patterns of POC by stage of change were confirmed and are comparable to previously validated TTM measures applied to other health behaviors. Results from this study suggest that the POC measure for HPV vaccination developed herein has good internal validity and adequate external validity, and can be used to guide TTM-tailored intervention development for this group. The large proportion of women not considering vaccination underscores the need for such an intervention.

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D-012

ORGANIZATIONAL BARRIERS TO PROVIDING CANCER SCREENING AT A FEDERALLY QUALIFIED COMMUNITY HEALTH CARE CENTER

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Background: Health care provider and institutional barriers are important concerns when implementing new strategies to improve clinical cancer screening. To be successful, health care providers need to design and implement culturally appropriate screening programs and institutions must be ready to change ineffective practices. Therefore, before developing a new cancer screening program/intervention, issues like identifying the resources already in place and assessing "institutional barriers" and "organizational readiness to change" need to be assessed. The aim of this study was to determine organizational barriers and facilitators to the implementation of such programs.
Methodology: Eighteen semi-structured interviews were conducted among clinic managers, care coordinators, medical assistants and providers of a Latino serving Federally-qualified Health Care Center. Interviews were conducted in person or over the phone in the participants' preferred language (English or Spanish). All interviews were recorded and transcribed verbatim. They were coded using Atlas ti and analyzed using a Thematic Network Approach.
Results: Some organizational barriers to cancer screening were: Time constraints, patient tracking and follow up, and lack of standardized screening criteria and procedures. Salient factors discussed regarding organizational readiness for change were: Support from senior leadership, institutional resources (such as staffing resources and facilities) and an organizational climate that supported adoption of novel strategies.
Discussion: Addressing institutional barriers to cancer screening is a crucial step for the successful implementation of new cancer screening strategies. These results will inform further research on designing and implementing cancer screening strategies in Latino settings.

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D-013

"I AM JUST DESIDIOSA!" BARRIERS AND FACILITATORS TO PARTICIPATING IN BREAST CANCER SCREENING AMONG LATINAS

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Background: Personal and cultural barriers to breast cancer screening are important to consider when developing a cancer screening program, as a culturally inappropriate program could result in low mammography screening rates. Barriers to breast cancer screening in Latinas include lack of health insurance and fear of pain and abnormal findings. As part of a larger study aim to develop and test a multi-level clinic intervention to improve breast cancer screening in Latinas, the aim of this study is to describe and understand barriers and facilitators for mammography screening among Latina patients at a Federally-qualified Health Center.
Methodology: Eight focus groups were conducted at four Sea Mar Community Health Center locations. Two focus groups were held per site and participants were divided into two age groups: 40 - 49 and 50 - 74. Focus groups were conducted in Spanish, recorded and transcribed verbatim. Each transcript was coded by at least, two independent coders and checked for reliability. Codes were developed from the data as well as from theory and existing literature.
Results: Even though economic factors, fear of the exam and of possible findings were described as potential barriers, one very interesting concept emerged from all the groups: Desidia. Translated as "lack of motivation or inertia", desidia was described as a mixture of concepts such as mammography screening not being a priority, not taking good care of oneself, not "loving oneself enough", "letting life get in the way" or letting all other barriers get on the way of screening. Desidia was described as an overarching reason why Latinas delay in getting screening mammography.
Discussion: Understanding Latino cultural beliefs is a critical step in designing and implementing new strategies for cancer screening. Our findings may inform future research on designing and implementing effective cancer screening strategies in Latino settings.

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D-014

HPV KNOWLEDGE AND STAGES OF CHANGE MEASURE FOR HPV VACCINE COMPLETION AMONG COLLEGE WOMEN

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Human papillomavirus (HPV) is the most common sexually transmitted infection and high-risk HPV types can cause cervical cancer. Prevalence of HPV in the United States is highest among women aged 20-24. In 2006, GARDASIL® was licensed, a three-dose quadrivalent HPV vaccine, for use in females aged 9-26. This study examined HPV knowledge and stages of change for vaccine completion among college women aged 18-26. Focus groups, cognitive interviews, and expert interviews were conducted to generate and test items for the stages of change measure and knowledge measure. N=340 women, aged 18-26, were then recruited to complete an online survey. 50% of women in the sample were categorized into Action/Maintenance (completed the HPV vaccine series). Of the 50% who had not started or completed the vaccine series, 28% were in Precontemplation (not intending to start or complete the series), 14% were in Contemplation (planning to start or complete the series in the next 6 months), and 7% were in Preparation (planning to start or complete the series in the next 3 months). Stage of change differed by race, $\chi2(3)=35.0$, $p<.001$, by age $\chi2(3)=54.1$, $p<.001$, and by year in school, $\chi2(3)=52.6$, $p<.001$. HPV knowledge scores (M=7.7, SD=2.4, range 0-12) did not differ by stage of change, $F(3,336)=2.31$, $p=.076$, but knowledge differed by race, $F(1,338)=10.79$, $p=.001$. Results indicate that most women in pre-Action stages were in Precontemplation (63.3%) and did not intend to start or complete the vaccine series. While knowledge was not related to stage of change, white women had higher knowledge scores than non-white women. Factors associated with vaccine completion included being 18 or 19 years old, freshman status, and white race. Disparities may exist in HPV vaccine delivery and knowledge among college women. Results may inform theory-based interventions to increase HPV vaccine receipt among women who have not yet started or completed the vaccine series.

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D-015

ACCULTURATION AND KNOWLEDGE OF HBV TRANSMISSION AMONG ASIAN AMERICANS

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Asian Americans are often diagnosed with late stage liver cancer primarily because of a lack of knowledge of liver cancer prevention. Acculturation has been shown to be associated with preventive health behaviors among Asian Americans. However, few studies have focused on HBV screening behavior. This research examined the relationship between level of acculturation and knowledge of HBV infection among Asian Americans. A total of 877 Korean, Chinese and Vietnamese Americans ages 18 and above from community-based organizations in Maryland participated in this study. They completed a self-administered survey in 2009-2010. An acculturation scale was constructed with 12 items (cronbach's alpha=0.90). Ten questions about knowledge of HBV transmission were constructed as an outcome (mean(SD), 4.55(2.48), 0-10). Multiple linear regression analysis was used. Age, gender, marital status, employment, and having a family history of HBV infection were included as control variables. There were racial differences in knowledge of HBV transmission mode ($F=8.74$, $p<.01$): Chinese Americans reported the highest knowledge scores followed by Vietnamese Americans. In multiple regression analysis, acculturation was associated with knowledge of transmission among Vietnamese Americans. However, there was no main effect of acculturation on knowledge for Chinese- and Korean-Americans. We found interaction between gender and acculturation among Korean Americans: Korean women who had higher levels of acculturation were more likely to have higher levels of knowledge than those with a lower level of acculturation, while Korean men with a higher level of acculturation were less knowledgeable than those with a lower level of acculturation. Findings suggest the effect of acculturation on HBV knowledge of transmission mode differs by ethnic groups. Less acculturated Vietnamese will require that more targeted and tailored attention be paid to meeting their educational needs for liver cancer prevention and control.

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D-016

SUPPORT FOR VOLUNTARY PROVISION OF HPV VACCINE IN SCHOOLS

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BACKGROUND: HPV vaccination rates in the United States lag far behind other developed countries, partly because few schools offer the vaccine. We sought to assess mothers' willingness to have their adolescent daughters receive HPV vaccine at school.
METHODS: A national sample of mothers of adolescent females aged 11-14 years completed our internet survey. The final sample (n=496) excluded mothers who did not intend to have their daughters receive HPV vaccine in the next year.
RESULTS: Overall, 65% of mothers reported being willing to have their daughters receive HPV vaccine at school. Mothers were more willing to allow their daughters to receive HPV vaccine in schools if they had not yet vaccinated their daughters, resided in the Midwest or West, did not self-identify as born-again Christians, or were not married (each $p<.05$). The two concerns about voluntary school-based provision of HPV vaccine that mothers most frequently cited were that their daughters' doctors should keep track of her shots (65%) and that they wished to be present when their daughters were vaccinated (38%).
CONCLUSIONS: Provision of HPV vaccine in schools could improve vaccine coverage rates in the U.S. Our study suggests that most mothers who support vaccination against HPV find school-based HPV vaccination an acceptable option.

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D-017

CULTURAL VIEWS OF CANCER AND CANCER SCREENING BEHAVIORS AMONG ASIAN AMERICANS

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Cultural view of cancer was associated with Chinese women's mammogram and pap testing behaviors, yet, previous studies have not tested among other Asian ethnicities that might have similar cultural belief about cancer and illness. A fatalistic view of cancer indicated that seeing cancer as the uncontrollable fate and is commonly observed among Asians.
The purpose of the study is to identify the prevalence of breast, cervical and colorectal cancer screening behaviors among Asian Americans and examine the influence of a fatalistic view of cancer on screening behaviors.
A total of 877 Korean, Chinese and Vietnamese Americans aged 18 and above were recruited from community-based organizations in Maryland for a health education intervention and completed a self-administered survey in 2009-2010. Fatalism scale was composed of 9 items on a 5-point scale (cronbach's alpha= 0.85). Multiple logistic regression was used to examine the association between fatalism and self-reported screening behaviors.
Fatalism score differs between three ethnicities based on the ANOVA test ($F=6.01$, $p<0.01$). There were 69%, 63% and 53% of participants reported having a mammogram, a pap testing, and a screening for colon cancer in the past two years, as recommended by USPSTF for their age. Compared to those women with the most fatalistic view, women with the least fatalistic view were more likely to have a mammogram and pap testing in the past two years, after adjusting for age, socioeconomic status, health insurance, English fluency and ethnicity (mammogram- OR: 2.66, 95%CI: 1.32-5.36; pap- OR: 1.69, 95%CI: 1.00-2.84). For those aged 50 or more, the least fatalistic group was more likely to have colorectal cancer screening than those in the most fatalistic group (OR: 2.32, 95%CI: 1.15-4.70).
Cancer screening behaviors among Korean, Chinese and Vietnamese Americans are associated with the level of fatalistic view of cancer and illness. To increase Asian American's cancer screening behavior, it is important to develop education programs that integrated their cultural view of cancer and illness.

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D-018

FACTORS ASSOCIATED WITH ATTRITION FROM A RANDOMIZED CONTROLLED TRIAL OF MEANING-CENTERED GROUP PSYCHOTHERAPY FOR PATIENTS WITH ADVANCED CANCER

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The generalizability of palliative care intervention outcome research is limited due to high rates of study attrition. This study examined factors associated with attrition in a randomized clinical trial comparing Meaning-Centered Group Psychotherapy (MCGP), an intervention designed to help advanced cancer patients sustain or enhance their sense of meaning, to Supportive Group Psychotherapy (SGP), a standardized support group. Patients with advanced solid tumor cancers ($N=153$) were randomized to eight sessions of either MCGP or SGP. They completed a baseline assessment (week 0), a post-intervention assessment (week 8), and a follow-up assessment two months later (week 16). Assessments included self-report measures of psychosocial, spiritual, and physical well-being.

Rates of attrition between the screening and three assessments were 28.1%, 17.7% and 11.1%, respectively; 66 (43.1%) participants completed the entire study. These rates did not vary significantly between study arms, and there were no significant demographic differences between completers and those who dropped at any time point. Discordance between pre-randomization group preference and actual group assignment predicted attrition after the baseline assessment. Participants who dropped out after week 8 were more likely to have taken psychotropic medication prior to the study and currently be in counseling than completers. Completers had significantly lower functional impairment than participants who dropped out of the study. Not surprisingly, the most common reason for drop-out was patients feeling too ill. These findings highlight the challenge of maintaining advanced cancer patients in longitudinal research and suggest the need to consider alternative approaches (e.g., telemedicine) for patients who might benefit from group interventions but are too ill to travel.

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D-019

FOLLOW-UP AFTER ABNORMAL FINDINGS IN A BEACH-BASED SKIN CANCER EXAM

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More than 80,000 Americans received free skin cancer screenings in 2009, and one-third of these took place in non-traditional settings (e.g., beaches). Little is known about factors associated with follow-up among those attending screenings in these settings. An RCT was conducted to promote skin cancer prevention and early detection among beach-goers. Participants received education or biometric feedback, with or without dermatologic skin exams. We assessed factors associated with abnormal findings among participants in the skin exam arms ($n=312$). Participants were recruited at the beach where they completed a baseline survey, received an educational session, and had a dermatologic skin exam. The survey assessed behavioral (sun protection, skin self exam, past dermatologic exam) and cognitive (perceived skin cancer risk, perceived skin damage) factors. Participants with a positive screening received a form indicating the finding and a strong recommendation from the clinician for follow-up. Participants then completed Survey 2 where their exam recall was assessed. Survey 3, administered at the end of the summer, was completed by 90% ($n=282$) of the sample. In total, 11% of participants did not accurately recall their exam results. One-third ($n=93$) had inappropriate follow-up; 27 pursued unneeded care and 66 did not seek advised care. Notably, 74% ($n=26$) of persons with a screening diagnosis of actinic keratoses and 73% ($n=11$) of those with a screening diagnosis of dysplastic nevus did not seek follow-up. However, 38 participants advised to seek follow-up care did so. There were no significant associations between the behavioral and cognitive variables and appropriate follow-up. More research is needed to determine factors associated with appropriate follow-up. There is also a need to develop better systems to ensure needed follow-up in non-clinical settings that have limited support to implement these procedures.

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D-020

FATIGUE CATASTROPHIZING AT END OF TREATMENT FOR BREAST CANCER PREDICTS FATIGUE SEVERITY AND INTERFERENCE 3 YEARS LATER

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Breast cancer patients commonly report treatment (tx) related fatigue that often persists long after tx completion. Prior research suggests that fatigue catastrophizing is a cognitive risk factor for prolonged fatigue in this population. However, the longest longitudinal study was limited to 6 months post-tx. This study examined the impact of fatigue catastrophizing at end of tx for breast cancer on fatigue severity and interference 3 years later. It was hypothesized that, controlling for fatigue at end of tx, fatigue catastrophizing would account for additional variance in fatigue severity and interference 3 years later. The study also explored a possible interaction between fatigue catastrophizing and type of tx. Participants were 239 women treated for stage 0-II breast cancer who completed the Fatigue Catastrophizing Scale and Fatigue Symptom Inventory at the end of tx and approximately 3 years later. Fatigue catastrophizing exhibited trait-like stability over a 3-year interval ($r=.48$, $p<.01$). Hierarchical regression analyses indicate that, controlling for fatigue at end of tx, fatigue catastrophizing at end of tx accounted for significant additional variance in fatigue severity and interference 3 years later ($ps<.01$). As expected, women who reported greater fatigue catastrophizing at end of tx also reported greater fatigue severity and interference 3 years later. Moreover, positive residualized change scores indicate that greater fatigue catastrophizing at end of tx is associated with increases in fatigue severity and interference from end of tx to 3 years post-tx. The impact of fatigue catastrophizing did not differ by type of tx ($p>.05$). Findings support the cognitive-behavioral model of fatigue and suggest that reducing fatigue catastrophizing at the end of tx may be an important component of interventions designed to ameliorate prolonged fatigue among breast cancer survivors. Funded by NCI R01CA82822.

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D-021

SOCIOECONOMIC DIFFERENCES IN CANCER FEAR AND FATALISM

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One potential explanation for SES differences in cancer survival is greater fear of a cancer diagnosis, leading to delay in symptom presentation and later stage diagnosis. Qualitative research in lower SES and ethnic minority communities has highlighted fatalism as an important theme which could contribute to fear of diagnosis, but there have been few quantitative analyses. This study assessed cancer outcome expectations and examined whether they mediated the association between SES and fear of symptom-reporting in a general population sample of adults. Respondents to a population-based survey in Britain ($N=2018$) answered questions on survival expectations (estimates of 5-year survival rates), perceived curability, perceived value of early detection, and fear of symptom reporting for four cancer sites (breast, ovarian, lung, bowel) and 'cancer' unspecified. SES was indexed with a social grade classification. Results here are presented for 'cancer' unspecified, but effects were similar for each cancer site. Only a minority of respondents agreed that fear of reporting symptoms would prevent them seeing a doctor (<10%), but this was graded by SES ($p<.001$). Lower SES groups perceived cancer to be less survivable ($p<.001$) and less curable ($p<.05$), and they were less positive about the value of early detection ($p<.01$). The association between SES and fear of symptom reporting was partly mediated by survival expectations and the perceived value of early detection in hierarchical and multiple mediator regression analyses using bootstrapping techniques. Against a general background of optimistic expectations about cancer outcomes, lower SES respondents were more fatalistic and this appeared to partially explain why they were more fearful of reporting symptoms. Differences in fatalistic beliefs are likely to contribute to inequalities both in screening and diagnostic delay.

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D-022

CAREGIVING DURATION, POSITIVE CAREGIVING APPRAISALS, AND PROLONGED GRIEF AMONG PARENTS BEREAVED BY CANCER

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There is limited research on positive appraisals of the caregiving experience among parents of children with cancer. This study examined associations between caregiving duration, positive appraisals of caregiving, and prolonged grief symptoms in 32 parents (mothers=19, fathers=13) who lost a child to cancer between 6 months and 6 years ago. Caregiving duration was calculated as the amount of time from the child's initial cancer diagnosis until his/her death, with the recognition that intensity of the child's illness and parental caregiving may not have been consistent throughout this time period. Examination of the distribution of the caregiving duration variable revealed three distinct groups: 1-30 mos., 50-70 mos., and 80-100 mos. Analyses of variance showed that parents who cared for their child for 1-30 mos. and 80-100 mos. reported that their families discussed their feelings with one another, were better able to cope with change, worked together to solve problems, and became closer as a result of the caregiving process to a greater extent than parents who cared for their child for 50-70 mos. ($ps < .05$). The latter two findings remain statistically significant when controlling for parental dyads as random effects. These parabolic relationships imply that the length of time from diagnosis to death impacts the caregiving experience and related positive appraisals. It may be that parents whose child had a shorter, more intense course of illness were better able to rally their familial coping resources quickly, and that parents whose child had a longer course of illness were able to develop more adaptive coping behaviors and perspectives over time. Parents who reported that their family grew closer through caregiving had lower levels of prolonged grief symptoms, suggesting the influence of positive caregiving experiences on bereavement outcomes. Implications of these findings for the development of psychosocial interventions are discussed.

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D-023

EFFECTS OF SIMILARITY IN ADULT ATTACHMENT ON QUALITY OF LIFE OF CANCER PATIENTS

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Background. Studies have shown that cancer patients who have good relationships with caregiving family members report better mental health (MH) and physical health (PH). Adult attachment theory, however, suggests that this pattern should be examined considering the attachment orientations of both patients and their family caregivers.

Objective. The present study aims to investigate the extent to which attachment styles between colorectal cancer patients and their family caregivers are similar to each other, and how this similarity relates to the patient's quality of life (MH and PH).

Methods. A total of 120 patient-caregiver dyads (N=240) were recruited from five community hospitals in Atlanta, GA, and provided valid data for the study variables. The patients were diagnosed with colorectal cancer within two months prior to participation in the study (T1). The attachment for both patients and caregivers was measured at T1 using the MAQ that assesses three attachment orientations: security, avoidance, and anxiety. MH and PH were measured using the MOS SF-12 at T1 and 6-month post-diagnosis (T2).

Results. Paired t tests and Pearson correlation coefficients revealed that although patients were higher on secure attachment and lower on anxious attachment than their caregivers, small and positive correlations between patients and caregivers were found across all attachment orientations. Results of hierarchical regression analyses showed that patients with secure attachment scores greater than their caregivers' reported better MH at T2, controlling for MH at T1 ($t=2.27$, $p=.025$). With regard to PH, patients' avoidant scores, not similarity in avoidance, were negatively related to PH at T2, controlling for PH of T1 ($t=-2.42$, $p=.017$).

Conclusion. Results suggest that cancer patients may benefit from programs designed to encourage them to rely on and feel close to their caregivers. Especially for a stressful diagnosis of a chronic disease, such as cancer, it is important to better understand the influence of complicated, close relationships on the patient's mental and physical well-being.

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D-024

MISERY LOVES COMPANY?: TIMING OF THE FINANCIAL CRISIS MODERATES THE ASSOCIATION BETWEEN FINANCIAL STRESS AND QUALITY OF LIFE AMONG STEM CELL TRANSPLANT SURVIVORS

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Survivors of hematopoietic stem cell transplantation (HSCT), a demanding treatment for hematologic cancers, often experience physical, emotional, and practical complications that persist long after treatment has been completed. Financial problems related to costly medical care, changes in employment status, and challenges with insurance coverage represent a substantial source of stress likely to adversely affect HSCT survivors' quality of life (QOL). Furthermore, the current economic recession is a powerful aspect of survivors' social environments that may influence how they appraise and respond to financial problems. In the present study, we used hierarchical regression analyses to test the hypothesis that greater financial stress would be associated with poorer QOL, and to explore whether the timing of the financial crisis moderates this association. Participants (n=182) had undergone HSCT 9-to-36 months prior to the study. As predicted, after controlling for sociodemographic and medical covariates, greater financial stress was associated with poorer physical ($\beta=-.36$, $p<.001$), social ($\beta=-.17$, $p=.05$), emotional ($\beta=-.31$, $p<.001$), functional ($\beta=-.26$, $p<.001$) and transplant-specific ($\beta=-.33$, $p<.001$) QOL. In addition, timing of the financial crisis moderated this association; the inverse association between financial stress and emotional QOL was stronger for participants assessed before the financial crisis (i.e. before September 2008; $r=-.78$) than for those assessed after the crisis began ($r=-.23$). Results confirm that cancer survivors' financial challenges can substantially affect their mental and physical health, and that aspects of survivors' social environments may uniquely influence their emotional functioning.

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D-025

IMPACT OF GENOMIC BREAST CANCER RECURRENCE RISK ESTIMATES ON PATIENT DECISION MAKING, PSYCHOSOCIAL OUTCOMES AND QUALITY OF LIFE

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As breast cancer treatments become increasingly effective, treatment-related decisions remain complex—often with no "right" answer. This uncertainty presents at a time when patients experience significant anxiety about their prognosis. Practice guidelines incorporate genomic profiling of early-stage, ER + breast tumors, using tests such as the Oncotype DX® Recurrence Score (RS) to refine recurrence estimates and guide shared treatment decisions. Patients with a high RS likely benefit from a combination of chemo- and hormonal therapy, whereas patients with a low RS could more safely avoid chemotherapy. Treatment guidelines for an intermediate RS are less clear and are the topic of ongoing clinical trials. We examined whether psychosocial and quality of life outcomes of women who received testing differed by test result and/or treatment received. 63 breast cancer survivors who completed active treatment and received low (N=15), intermediate (N=41) or high (N=7) RS completed measures of cancer worry, decisional conflict and quality of life. All high and low risk patients received RS-concordant treatment. More patients with intermediate RS opted for hormonal therapy (N=29) than combination chemo/hormonal therapy (N=12); the latter were more likely to be at higher risk for recurrence based on clinical factors ($t=2.1$, $p<.05$). Among intermediate RS participants, avoiding chemotherapy did not offer quality of life advantages. Specifically, chemotherapy-naïve patients reported higher cancer worry ($t=2.1$, $p<.05$) and comparable quality of life (as measured by the FACT-B) compared to those treated with chemotherapy. Age and time since diagnosis were unrelated to these outcomes. Despite our small sample and retrospective data, results suggest that treatment-related ambiguity associated with an intermediate RS may relate to greater worry in a group already experiencing certain prognosis-related anxiety. This could potentially impact quality of life.

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D-026

EMOTIONAL WELL-BEING IN MEN WITH PROSTATE CANCER: EFFECTS OF A PSYCHOSOCIAL INTERVENTION USING GROWTH MIXTURE MODELING

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Men treated for prostate cancer (PC) often experience declines in emotional well-being (EWB) and quality of life (QoL). Psychosocial interventions to improve EWB and QOL have had mixed results. Findings may be partially explained by varying emotional and physical responses to PC treatment. The current study used growth mixture modeling (GMM) to explore the effects of a cognitive behavioral stress management (CBSM) intervention on EWB among men with localized PC. We assumed heterogeneity within intervention groups and examined intervention effects across latent classes defined by different trajectories of EWB. Predictors of intervention efficacy were evaluated. Participants (N=255) were randomized to a CBSM or a control condition and were assessed at four time points over 15 months. Sample was 65.3 years old on average (SD=7.7), ethnically diverse (41% White, 17% Black, 42% Hispanic), and 13.8 months (SD=3.4) post-treatment. Measures included the RAND Short Form 36 (SF36) EWB subscale, the Expanded PC Index Composite (EPIC), and the Perceived Stress Scale (PSS). Following standard GMM guidelines, three fit indices were used to compare subgroup models (Bayesion Information Criteria [BIC], Adjusted-BIC (ABIC), and Lo-Mendel-Ruben [LMR] p-value). Results indicated that both conditions (intervention & control groups) were made up of three classes characterized by significantly different trajectories of EWB (BIC=7127.8; ABIC=7070.8; LMR p<.01). Baseline levels of urinary and sexual function, and perceived stress were significant predictors of class membership and intervention efficacy (all p's <.05). These results showed significant variability in the effects of PC on EWB and differential intervention effects depending on baseline profiles of disease-specific factors and perceived stress.

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D-027

MODELING THE RELATIONSHIP BETWEEN HEALTH BEHAVIORS AND QUALITY OF LIFE AMONG PATIENTS WITH NON-HODGKIN LYMPHOMA (NHL)

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The relationship between health behaviors and QoL among survivors of NHL is not well understood. From 2002-2008, 215 participants with newly diagnosed NHL were enrolled in a prospective cohort study and completed baseline quality of life (QOL) and health behavior questionnaires. We used a structural equation model to examine correlates of the four inter-related QOL domains of the Functional Assessment of Cancer Therapy (General version, FACT-G). The final model provided good fit to the data; N=215, $\chi 2(420)=720.14$, p<.001, CFI=0.90, RMSEA=0.058 (0.051-0.065). Smoking and alcohol use were significantly and independently associated with lower emotional and functional well-being, respectively. Counter to hypothesis, higher physical activity was associated with lower social/family well-being. Additionally, female gender was associated with higher social/family well-being, while white ethnicity, active treatment status, and lower functional status were associated with lower physical well-being. All p's<.05. BMI was not associated with QOL. Our study is the first that we are aware of to link multiple health behaviors to QOL in NHL after accounting for clinical and sociodemographic variables. These study results fill a gap in our understanding of the basis of QOL among NHL survivors, and identify modifiable health behaviors that could be targeted for interventions to improve QOL in NHL survivors.

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D-028

WEEKLY HIGH-DOSE CALCITRIOL AND WEIGHT-BEARING EXERCISE ON CANCER-TREATMENT-INDUCED BONE LOSS (CTIBL) AND FATIGUE IN BREAST CANCER PATIENTS: A CLINICAL TRIAL

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Background: CTIBL is a side effect of hormone therapy (HT) and occurs in up to 80% of women being treated for breast cancer. Daily calcitriol and weight-bearing exercise (active vitamin D) therapy improve bone metabolism and may reduce fatigue. This trial aimed to examine the effect of novel weekly, high-dose calcitriol therapy in combination with weight-bearing exercise on bone metabolism and fatigue in breast cancer patients.
Methods: 40 ER+, stage I-III breast cancer patients receiving HT were randomized to 1 of 4 arms for 12 weeks: 1) weekly, high-dose calcitriol (45 μg QW), 2) a personal weight-bearing exercise program, 3) both, or 4) a multivitamin (control). Changes in bone resorption [NTx] and bone formation [BSAP] were calculated using ANCOVA. The bone metabolism index [BOMI] (ΔBOMI=ΔZ-score BSAP - ΔZ-score NTx) comprehensively represents the balance between resorption and formation. Fatigue was assessed using the brief fatigue inventory (BFI).
Results: Calcitriol therapy was well-tolerated, with no grade>2 toxicity. Bone formation increased for the calcitriol group (ΔBSAP=+5.3 μg/L; p=0.16) and increased significantly for the calcitriol + exercise group (ΔBSAP=+13.3 μg/L; p=0.01) compared to the control group (ΔBSAP=−2.3 μg/L). Changes in BOMI were greater for participants receiving calcitriol + exercise (BOMI=+0.6; p=0.06), calcitriol (BOMI=+0.4; p=0.15), and exercise (BOMI=0.0; p=0.87) compared to participants in the control group (BOMI=−0.1). Fatigue improved for those receiving calcitriol (BFI=−0.7; p=0.01), calcitriol + exercise (BFI=−0.1; p=0.04), and exercise (BFI=0.0; p=0.07) compared to the control group (BFI=+0.9).
Conclusion: The combination of calcitriol and weight-bearing exercise improved bone metabolism and reduced fatigue. Further research is warranted to determine the effect of weekly high-dose calcitriol therapy and weight-bearing exercise on CTIBL and fatigue in breast cancer patients. Funding: NCI R25CA10618.

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D-029

EMOTIONAL RESPONSES AFTER A CANCER RECURRENCE: IMPLICATIONS FOR INTERVENTION

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Purpose: Little research has focused on how the emotional needs of cancer patients change after a recurrent cancer diagnosis. This has made it difficult to develop psychological interventions specifically tailored to the needs of recurrent cancer patients. To address this issue, the present qualitative study explored the emotional responses of cancer patients following their recurrence diagnosis.
Methods: Thirty-five women with recurrent breast (n=17) or gynecologic (n=18) cancer participated in semi-structured interviews. Most participants were Caucasian (89%) with a mean age of 61 years (SD=9). Patients were asked to discuss how their emotional responses differed from those following their initial diagnosis. Interviews were recorded, transcribed, and coded using Atlas.ti. Cross-case, inductive analysis was used to identify themes.
Results: Shock, stress, and fear were common after both initial and recurrence diagnoses. When asked to compare the experiences, most women voluntarily identified one diagnosis as "worse" than the other. Women who described their recurrent diagnosis as easier often focused on their successes in coping with the initial cancer (e.g., "Well I've made it through this once, I'll make it through again"). In contrast, women who described recurrence as more difficult often focused on a poorer prognosis; new, unknown treatments; a perceived failure in treatment that lead to the recurrence; and fewer physical and social resources since the time of initial diagnosis.
Conclusion: Tailored psychosocial interventions for recurrent cancer patients could enhance self-efficacy by emphasizing the ways in which women overcame adversity during their initial cancer experience. Interventions should also attend to the reality that these patients face issues that differ from those of the initial cancer experience, such as poorer prognosis and receiving more aggressive treatments. Because reduced physical and social resources were common, recurrence patients may also benefit from learning ways to develop or modify copings strategies to effectively utilize their remaining resources.

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D-030

SELF-REPORTED COGNITIVE FUNCTIONING AND INTEREST IN A COMPUTERIZED COGNITIVE TRAINING PROGRAM IN PROSTATE CANCER PATIENTS

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There is mounting evidence that a recommended initial treatment for prostate cancer patients with a rising PSA, androgen deprivation therapy (ADT), is associated with impairments to cognitive functioning. Unfortunately, there is a dearth of research investigating rehabilitation approaches to help cancer patients experiencing cognitive impairments. Moreover, no research studies published have specifically focused on ameliorating or preventing cognitive impairments in prostate cancer patients. A computerized cognitive training program that taps into brain plasticity mechanisms, referred to as Brain Plasticity-based Cognitive Training (BPCT), has been found to be efficacious and feasible for use in non-cancer populations. For this study, in-depth interviews were conducted with 11 men(aged between 42 and 69), recruited from the community, who were undergoing ADT for non-metastatic prostate cancer. They were asked about cognitive changes since beginning ADT, and their interest in BPCT. Sixty four percent (n=7) reported significant impairments to cognitive functioning (e.g., "I've felt completely out-of-it and had to figure out where the heck I am", "I'll be in conversation and then forget what I was going to say"), 18% (n=2) noticed possible changes or a general "slowing" (e.g., "I think I'm a little slower…I don't really know if I've had memory loss or anything"), and 18% (n=2) reported no changes (e.g., "I have never stopped working. There were no changes"). When the BPCT program was described to participants, not surprisingly, only 50% of the participants who reported no change or "possible" changes were interested in testing it out. However, all participants who reported significant impairments following ADT were interested in trying the BPCT program if it were available to them. Overall, these initial findings are consistent with the extant literature indicating that a significant proportion of prostate cancer patients who have undergone ADT will experience cognitive impairments. These findings also highlight their interest in a home-based computerized cognitive training program to help ameliorate these impairments.

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D-031

INFLAMMATORY MOLECULES AND COGNITIVE FUNCTION AMONG BREAST CANCER (BC) PATIENTS RECEIVING DIFFERENT CHEMOTHERAPIES

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Background: Dysregulation of MCP-1, IL-8 and IL-6 levels are associated with mild cognitive impairment, defined as frequent and irregular bouts of forgetfulness, difficulties with attention and/or difficulties with language—a condition with comparable symptomology reported by cancer patients experiencing 'chemobrain'. Dysregulated levels of these molecules may compromise neuronal integrity leading to cognitive impairment. We previously found that levels of IL-6, IL-8 and MCP-1 increased in BC patients receiving AC/CAF but not in patients receiving CMF.

Methods: We assessed whether changes in the levels of these cytokines correlated with changes in cognitive functioning, measured by questions from the Fatigue Symptom Checklist in 54 BC patients. The five cognitive questions were: "At the moment I feel: heavy headed, my thoughts are muddled, difficulty thinking, unable to concentrate, and forgetful," and were each assessed on a five-point scale.

Results: The proportion of patients with complaints of heavy-headed feeling, muddled thoughts and forgetfulness was higher in the AC/CAF group at on-study cycle 2; difficulty thinking and difficulty with concentration were higher in subjects receiving CMF. At on-study cycle 4, heavy-headedness, difficulty thinking, and difficulty with concentration were all higher in the AC/CAF group; muddled thoughts were higher in the CMF group and forgetfulness was the same in both groups. In those who received AC/CAF, changes in MCP-1 were significantly negatively correlated with changes in heavy-headedness, difficulty thinking ($r=-.464$, $p<0.02$), difficulty with concentration ($r=-.575$, $p<0.01$), and forgetfulness ($r=-.521$, $p<0.01$).

Conclusions: Our preliminary work suggests that decreases in MCP-1 levels over two cycles of chemotherapy are associated with cognitive decline in the areas of memory and concentration. Larger studies with cognitive and cytokine measurements are needed to confirm these results.

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D-032

RELIGIOSITY, CANCER FATALISM AND ACCULTURATION IN HISPANIC AMERICAN WOMEN

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Past research has demonstrated that religiosity is related to health, and that this relationship may be mediated by cognitive constructs such as fatalism. This investigation sought to determine if there is a relationship between religiosity and cancer fatalism among Hispanic American (HA) women, and if acculturation affects this relationship. HA women age 18 and older (N=463) completed written questionnaires in either English or Spanish. The Duke University Religion Index (DUREL) measured religiosity and the Powe Fatalism Inventory (PFI) measured cancer fatalism. The DUREL is comprised of three subscales measuring Organizational Religiosity (OR), Non-organizational Religiosity (NR), and Intrinsic Religiosity (IR), and lower scores indicate higher religiosity. The PFI measures the four sub-constructs of Predeterminism (PR), Pessimism (PE), Inevitable Death (ID) and Fear (F), and higher scores indicate higher levels of cancer fatalism. The language-based Brief Acculturation Scale for Hispanics (BASH) measured acculturation, with higher scores indicating greater acculturation. Pearson correlation coefficients were calculated among scores. No significant ($p<.05$) correlations were found between total scores on the DUREL and PFI. When examining subscales, PE was significantly positively correlated with OR and IR. IR was significantly negatively correlated with PR and ID. NR was not significantly correlated with any PFI subscales. Multiple regression analysis determined that the interaction of IR and acculturation significantly predicted ID. Moreover, the interaction between IR and acculturation significantly predicted PFI total scores. These findings indicate that researchers using just total scores when examining correlations may falsely conclude that there is no relationship between religiosity and cancer fatalism among HA women. Moreover, as the interactions between acculturation and IR did significantly predict scores of ID as well as total PFI scores, researchers should consider acculturation when assessing this relationship.

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D-034

PREDICTORS OF HYPERTENSION MEDICATION USE: HEALTHCARE PROVIDER ADVICE AND PATIENT ADHERENCE. BRFSS 2009 FINDINGS

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The prevalence of hypertension (HTN) is at record levels and contributes to severe complications to health. Medication (med) can be a critical component to successful HTN treatment with many patients, such as those with excessively high BP, or those for whom lifestyle change has failed. This study examines two questions of relevance to this issue: predictors of receipt of healthcare provider HTN med advice, and predictors of adherence to HTN med.

Methods: Population-based data was used (2009 Behavioral Risk Factor Surveillance System [BRFSS]); 40090 self-identified hypertensive survey participants were fully evaluable. CDC sample weights were used to adjust for sampling design and non-response; Taylor Series Linerization Method in SUDAAN calculated variance estimates to account for the stratified multistage sampling design. Predictor variables included gender, age, income, education, ethnicity, marital status, BMI, perceived health, and having a personal HCP (PHCP). Outcome 1 was receipt/no receipt of HCP advice to take HTN med. Outcome 2 examined HTN med adherence/no adherence in those who received med advice. Logistic regression was used to predict factors related to both outcomes.

Results: Outcome 1. Predictors of HCP HTN med advice. Less likely to receive advice: male gender, poorer health, and those who are widowed or never married. More likely to receive advice: older age, African Americans, increased BMI, having a PHCP ($ps<.05$).

Outcome 2. Predictors of HTN med adherence. Decreased adherence: poorer health, increased education and being divorced. Increased adherence: older age, income level, African Americans, increased BMI, having a PHCP ($ps<.05$).

Conclusion: Beyond the effect of specific risk factors, PHCPs also appear to influence med adherence. Identifying unique factors associated with adherence can guide in developing future screening practices and development of effective treatment strategies.

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D-035

OUTCOMES FROM THE COUPLES PARTNERING FOR LIPID ENHANCING STRATEGIES (COUPLES) TRIAL

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Patient self-management interventions involving significant lifestyle changes have shown limited effectiveness. The effectiveness could be enhanced by enhancing spousal support. The Couples Partnering for Lipid Enhancing Stratgies (CouPLES) trial was conducted to determine whether a spouse-supported, self-management intervention would improve patient low-density lipoprotein cholesterol (LDL-C) and related health behaviors.
Eligible veterans were married with LDL-C>76 mg/dL. 255 couples were randomized to the usual care or intervention arm. The intervention involved monthly phone calls from a nurse involving goal setting (for patients) or providing support for goal achievement (spouses). The primary outcome was LDL-C at 11 months. One secondary outcome was frequency and duration of moderate intensity exercise as measured by the CHAMPS. Linear mixed modeling was used to compare outcomes between arms adjusting for baseline randomization stratification variables (race and risk level). Because the exercise variables were skewed, a square root transformation was conducted to normalize model residuals.
Patients were 95% male, 64% White, and 38% high risk. Mean (SD) baseline LDL-C was 126.3 (26.3) mg/dL, moderate intensity exercise frequency was 9.8 (8.1) times per week, and duration was 8.7(8.0) hours per week. The adjusted estimated mean 11-month LDL-C was 2.9 mg/dL higher in the intervention than the control arm (p=0.33, 95%CI [-3.0, 8.8 mg/dL]). The estimated mean 11-month LDL-C was 121.2 mg/dL for the intervention arm and 118.3 mg/dL for the control arm. Estimated exercise frequency and duration were modestly higher in the intervention than the control arm (p=0.08 for frequency and p=0.39 for duration). The estimated mean 11-month exercise frequency and duration were 11.5 times and 8.6 hours per week for the intervention arm and 10.1 times and 8.0 hours per week for the control arm.
A spousal support intervention focusing on lifestyle changes was insufficient for improving LDL-C but improved physical activity behaviors modestly.

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D-036

PREHYPERTENSION, ALCOHOL, AND STRESS RESPONSE DAMPENING

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Both prehypertension (PH) and excessive alcohol consumption are implicated in the development of essential hypertension. Coping with stress responsiveness also has been implicated with the development of these two risks for cardiovascular disease. Some persons with PH show high levels of stress reactivity, and alcohol has been found to dampen stress responses. This study's aim was to investigate whether PH persons would show the greatest degree of alcohol induced stress response dampening during a period of anticipatory stress.
Eighty-eight young adults (age range: 21 to 35 years; 41 males) rested for 20-min (BL), undertook a stressful or non-stressful mental arithmetic task (randomly assigned to condition), drank to a blood alcohol level of .03% to .04%, and then anticipated performing the task again while viewing a count-down timer marking the passage of time. For each cardiovascular measure, means were computed from the last 5-min of the baseline period, and all 15-min of the anticipation period. Change scores were computed by subtracting the baseline value from the anticipation stress period value. PH was classified as BL blood pressure (BP) greater than or equal to120 mm Hg for systolic BP and/or 85 mm Hg for Diastolic BP (DBP). A general linear model with Helmert contrasts and sex as a covariate showed that the PH group in the high stress anticipation condition showed a significantly (p<.035) greater reduction in DBP (-8.5 mmHg) than the other groups (the means for the low stress PH, high stress non-PH, and low stress non-PH are, respectively, −6.4, −3.6, and −5.9 mm Hg). Analyses of covariance (sex as covariate) showed the PH group to manifest a significantly (p<.002) wider pulse pressure (58.9 mm Hg) than the non-PH group (49.0 mm Hg).
The wider resting PP of the PH group supports the association of PH with vascular stiffness in young adults. Moreover, results suggest that the anticipatory DBP levels of PH are dampened by alcohol. The pattern of findings is consistent with use of alcohol to dampen the BP responsiveness of young adults showing sub-clinical signs of cardiovascular disease.

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D-037

THE ASSOCIATION OF CHRONIC DISEASE SELF-CARE WITH SELF-RATED HEALTH AMONG AFRICAN AMERICANS WITH HYPERTENSION

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Purpose: This study examined the association between adherence to hypertension self-care behaviors, as prescribed by the JNC7, and self-rated health (SRH) among African Americans with hypertension.
Methods: We interviewed 190 African Americans with hypertension about their self-care activities, related health factors, and demographic characteristics. Logistic regression was used to model the relationship between hypertension self-care and the outcome of better self-rated health.
Results: Over three-fourths of participants rated their health as good to excellent. In adjusted models, nonsmokers had 4.36 times the odds of reporting good to excellent SRH (95% CI=1.13-16.78). Following a low-salt diet was weakly associated with better SRH (OR=3.73; 95% CI=0.98-14.18; p=0.053). Good mental health was also associated with better SRH (OR=1.12; 95% CI=1.02-1.23). Those who adhered to anti-hypertensive medications had 69% reduced odds of reporting better SRH (OR=0.31; 95% CI=0.10-0.91). Participants who reported bodily pain in the past month had 38% reduced odds of better SRH (OR=0.62; 95% CI=0.42-0.93).
Conclusions: Adherence to hypertension self-care behaviors affects overall health differentially. African Americans with hypertension believe themselves to have good overall health particularly if they are nonsmokers. Hypertension is manageable and does not have to affect overall health status if patients can engage in appropriate self-care and maintain good mental health.

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D-038

THE ASSOCIATION BETWEEN HYPERTENSION KNOWLEDGE AND SELF-EFFICACY WITH WEIGHT MANAGEMENT PRACTICES AMONG AFRICAN AMERICANS WITH HYPERTENSION

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Purpose: Maintaining or losing weight is an important self-care behavior to help individuals manage their high blood pressure. This study examined the role of hypertension knowledge and self-efficacy to manage hypertension with adherence to weight management behaviors among African Americans.
Methods: We interviewed 190 African Americans with hypertension about their self-care activities, related health factors, and demographic characteristics. Logistic regression was performed to model the relationship between hypertension knowledge and self-efficacy with the outcome of adherence to weight management practices.
Results: Only 30% of respondents followed good weight management practices even though 80% were overweight or obese. In unadjusted results, respondents with good self-efficacy had 3.49 times the odds of adhering to weight management strategies (95% CI=1.78-6.85). Individuals with good hypertension knowledge had 2.57 times increased odds of adhering to weight management techniques. In models adjusted for living situation, the association between self-efficacy and adherence to weight management practices was basically unchanged (OR=3.50, 95% CI=1.77-6.95) as was the magnitude of association between good hypertension knowledge and weight management adherence (OR=2.61, 95% CI=1.31-5.21).
Conclusions: African Americans can benefit from having greater knowledge of their hypertension and increased confidence in their ability to manage their condition, increasing the likelihood that they will engage in weight management practices. Counseling patients about weight management practices within the context of hypertension self-care may improve blood pressure control and increase motivation to lose weight.

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D-039

THE RELATIONSHIP BETWEEN PATIENT AND SPOUSE PSYCHOSOCIAL FACTORS AND PATIENT WEIGHT: BASELINE RESULTS FROM THE COUPLES PARTNERING FOR LIPID ENHANCING STRATEGIES (COUPLES) TRIAL

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Background: Patient self-efficacy and perceived spousal support for health behaviors have been found to be associated with patient health outcomes. However, these variables have typically been examined in isolation, without accounting for social context. Because spouses share environments and, often, health behaviors, spouses' self-efficacy or perceived spousal support may provide an additional avenue to improve patient self-management.

Method: We analyzed baseline data from a randomized, controlled trial evaluating a spousal support intervention to help veteran patients lower their LDL-C. Patients and spouses (N=255 couples) completed measures of self-efficacy and spousal support for exercising and eating healthy. We fit a multiple regression model with patient weight as the outcome and predictor variables that included patient demographic and clinical factors and patient and spouse psychosocial factors.

Results: Patients were 95% male and 65% White, with an average age of 61 years (SD=12) and average weight of 212 lbs (SD=43). Spouses were 65% White, with an average age of 59 years (SD=12). Greater patient weight was associated with younger age (estimate=−0.9 lbs, p<.002), presence of blood pressure (estimate=15.6 lbs, p<.02), and lower self-efficacy for eating healthy (estimate=−4.4 lbs, p<.02). Additionally, although greater patient weight was associated with higher dietary spousal support perceived by the patient (estimate=10.8 lbs, p<.03), it was associated with lower dietary spousal support perceived by the spouse (estimate=−10.9 lbs, p<.02).

Conclusion: Including spouses in interventions to increase healthy eating is important because spouse factors are associated with patients' weight.

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D-040

MODELING THE METABOLIC SYNDROME IN ADOLESCENTS

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The metabolic syndrome is a cluster of cardiometabolic risk variables that predict cardiovascular morbidity and mortality. Although there is no universally accepted pediatric definition, research in adults suggests that a hierarchical four-factor model consisting of insulin resistance, obesity, lipids, and blood pressure (BP) under a common metabolic syndrome factor is well-supported and stable across populations (Shen et al., 2003; 2006). The purpose of this study was to replicate this model in adolescents. A sample of 367, 15-17 year old adolescents (73% boys) largely from ethnic minority groups (45.78% Hispanic, 30.79% Black), and the majority (72%) with systolic (S)BP and/or diastolic (D)BP at or above the 90th percentile adjusted for gender, age, and height, underwent cardiovascular risk factor screening.

Confirmatory factor analysis was used to examine a model with four first-order metabolic syndrome component factors (and their respective indicators) comprised of obesity (waist circumference and body mass index), insulin resistance (fasting glucose and insulin), lipids (high density lipoprotein and triglycerides), and BP (SBP and DBP). Next, the model was tested for an overarching common metabolic syndrome factor incorporating the four lower-order component factors. Results suggested good fit (CFI=0.98; RMSEA=0.05; SRMR=0.03). All factor loadings were significant (p<0.01). The metabolic syndrome factor explained 71%, 65%, 40%, and 20% of the variance in the insulin resistance, obesity, lipids, and BP factors, respectively.

The higher order metabolic syndrome factor model was similar in structure, as well as in specific factor loading values, to the Shen and colleagues adult model. The current study provides a conceptual and empirical framework for defining the metabolic syndrome in adolescents. This model may be used in assessing interventions designed to reduce risk and improve long term cardiovascular disease risk.

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D-041

ECOLOGICAL MOMENTARY ASSESSMENT OF CARDIOVASCULAR FUNCTION: IS THERE AN EFFECT OF RELIGIOUS ORIENTATION?

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Research suggests that religious orientation may impact cardiovascular stress response. The current research was designed to advance the literature on religious orientation and cardiovascular health by examining the association between religious orientation and cardiovascular response to naturally occurring stress in a middle-aged to older adult sample. Specifically, two relatively unstudied types of religious orientation (pro-religious, non-religious) were examined in addition to the intrinsically religious to allow for a more thorough investigation of religious orientation and its relationship to cardiovascular response to daily stress as measured by ambulatory blood pressure (ABP) and ambulatory heart rate (AHR). Study participants were 83 adults ages 40 to 65 years. Findings from this study did not reveal statistically significant relationships between religious orientation and cardiovascular response to naturally occurring stress. Visual inspection of these non-significant results did show, however, that the pro-religious group experienced fewer stressors, specifically interpersonal stressors, over the course of a 24-hour period. Surprisingly, the pro-religious group also demonstrated considerable decreases in SBP, DBP, and HR responses to those stressors that they had identified as being the strongest in intensity as compared to the no stress (for SBP and HR), some stress (for SBP, DBP, and HR), and moderate stress (for SBP, DBP, and HR) categories. The intrinsic group showed the largest increases in cardiovascular response to the stressors they identified as being very strong. These observations require further study in order to better understand how religious orientation may interact with stressors, particularly interpersonal stressors, in naturalistic environments to influence middle-aged and older adults' cardiovascular response.

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D-043

INSIGHTS INTO MEDICATION AND HEALTH SCREENING ADHERENCE AMONG PATIENTS WITH DIABETES

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Health consciousness influences a wide array of health behaviors that include adherence to preventive health screenings and adherence to prescribed medications. For patients with chronic health conditions such as diabetes, these adherence behaviors are essential components of evidence-based self-management plans. This retrospective study examined the relationship of medication adherence to general and diabetes specific health screenings in an employer insured population who have been diagnosed with diabetes. Three years of medical and pharmacy claims data from 2,048 continuously enrolled members with diabetes with an average age of 54.6 from a large, self insured employer were examined. Health Screenings were selected from guidelines provided by the National Institute of Health and the American Diabetes Association. Adherence to the various recommended screenings was converted into dichotomous variables: compliant and non-compliant. Patients averaging three or more general screenings per year were treated as compliant and for diabetes specific screenings, patients averaging 2 or more HbA1c tests per year were treated as compliant. A student "t" test showed that for general screening the mean medication possession ratio (MPR) was significantly higher for the screening-compliant group than screening non-compliant group (80.5% vs. 76.4%, p<.0001). Further, for diabetes specific screenings the compliant group had significantly greater MPR than the non-compliant group (80.1% vs. 76.7%, p<.0001). These results demonstrate that adherence to general and diabetes-specific health screenings are related to increased medication adherence and provide insight into diabetes patient behavior. Understanding the relationship between adherence behaviors provides the opportunity for additional patient touch-points; investment in improved adherence in one dimension may lead to improvement in the other. Future prospective studies could explore potential causal relationships and lead to improved diabetes self- management.

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D-044

TYPE 2 DIABETES PATIENTS' PERCEPTIONS OF THEIR PHYSICIANS RESPONSES TO PSYCHOSOCIAL ISSUES

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Psychosocial challenges and affective disorders are common in diabetes patients. Understanding what support diabetes patients would like from their healthcare providers is important for diabetes care. The purpose of this study was to explore how type 2 diabetes patients viewed their physicians' awareness of and responses to their psychosocial difficulties. Thirty-four type 2 diabetes patients (age=60± 7 years, diabetes duration=12±9 years, A1c=8.0±1.7%, BMI=33±8, 41% females, 82% White, education=15±2 years, 59% seen by an endocrinologist) participated in semi-structured interviews. Interviews were transcribed, coded, and analyzed using content analysis. When asked if their physicians inquired about psychosocial issues in their life, 15 patients stated that their physicians inquired about these matters. Most viewed these inquiries as helpful. Some patients explained that their physicians ordered medications to address depression and/or anxiety or made mental health referrals. Nineteen patients reported that they did not express psychosocial concerns or that their physicians did not inquire about them. Many patients wanted their physicians to inquire; however, several felt it was the patients' rather than physicians' responsibility to bring up these difficulties. Further, three patients did not want their physician to ask about their psychosocial concerns because they felt it was not relevant to their diabetes treatment. These findings highlight the important role physicians could have in helping patients cope with the psychosocial challenges of diabetes. Physicians should be aware of strategies to address psychosocial challenges in diabetes and the necessity of mental health referrals. Patients may also benefit from education focusing on the risk for and impact of psychosocial issues. Both physicians and patients should feel comfortable discussing these issues; curriculum that provides communication skills may assist them in addressing psychosocial challenges.

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D-045

SOCIAL FACTORS AND BARRIERS TO DIET AND EXERCISE IN HISPANIC PATIENTS WITH TYPE 2 DIABETES

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Behavioral risk factors such as sedentary lifestyle and poor diet have been identified among the preventable causes of morbidity associated with health disparities. Conventional health promotion methods tend to emphasize individual responsibility for making healthy choices, often ignoring social norms and available resources that may influence self-efficacy or motivation for changing behavior. We examined the cross-sectional association between social support, barriers, and facilitators of diet and exercise on BMI in a sample of Hispanic patients with T2DM. Patients included in this analysis were low-SES, English- and Spanish speaking, predominantly overweight participants in a randomized controlled trial of a culturally tailored intervention for diabetes management. The sample (n=200) had a mean age of 52.7±9.6 years, 10.1± 7.7 years with diabetes, a mean BMI of 33.9±7.7; 63 (31.5%) were men, and 137 (68.5%) women. We used multiple linear regression to test the association between barriers to exercise, social support (Diabetes Care Profile; Social Support for Diet and Exercise scales), and BMI, adjusting for insulin use, age, and language. Results for men indicated that higher levels of support for exercise and diet were associated with higher BMI (p <=.05) and for women, friends' criticism of exercise, and a number of physical, environmental, and personal barriers to exercise were associated with higher BMI (p <=.01). Because of the cross-sectional nature of the data, cause and effect cannot be determined. Our findings suggest that, in this sample of Hispanic men and women with T2DM, men were more likely to receive support for changing behavior when they needed to lose weight. In contrast, women encountered numerous obstacles to exercising, despite reporting high levels of social support. This suggests that social norms in this population may benefit men, but could potentially hamper women's efforts to successfully change behavior. Interventions targeting Hispanics should carefully consider cultural norms that differentially impact men and women.

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D-046

DISORDERED EATING AMONG ADOLESCENTS WITH TYPE 1 DIABETES: RELATIONS WITH FAMILY ENVIRONMENT AND QUALITY OF LIFE

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Adolescents with type 1 diabetes (T1D) are at risk for engaging in disordered eating behaviors. This study examines the relation of disordered eating behaviors with family eating habits, parent modeling of healthful eating, diabetes conflict, and child quality of life (QOL). Adolescents with T1D (n= 156) and their parents completed self-report measures including Family Eating Habits, Parent Modeling of Healthful Eating, Diabetes Family Conflict Scale, Pediatric QOL Inventory and child report of Diabetes Eating Problems Survey. Multivariable relations were tested using two hierarchical regression models (separate models for youth and parent report), entering demographic variables in block 1, family eating and environment variables in block 2, and child QOL in block 3. Greater disordered eating behavior was correlated with adolescent report of lower priority of family meals (r=−0.26, p=.001), less parent modeling of healthful eating (r=−0.24, p=.002), more diabetes family conflict (r=0.21, p=.007 adolescent report; r=0.31, p<.001 parent report), and lower adolescent QOL (r=−0.46, p<.001 adolescent report; r=−0.22, p=.006 parent report). In both youth and parent regression models, family environment variables (block 2) accounted for significant additional variance in disordered eating (Δ R2= 0.13, p=<.001; Δ R2=0.13, p<.001, respectively). QOL (block 3) accounted for additional variance in disordered eating in the adolescent model (R2=0.31, Δ R2=0.14, p<.001), but not in the parent model (R2=0.18, Δ R2=0.01, p=.26). The overall R2 for the youth and parent models were .28 and .15 respectively. The family food and diabetes environment may represent important risk/protective factors. Adolescent, but not parent, report of child QOL was independently associated with disordered eating behavior, suggesting the potential importance of this relationship, as well as differences in adolescent and parent perspectives.

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D-047

THE RELATIONSHIP BETWEEN COPING STYLES IN RESPONSE TO UNFAIR TREATMENT AND UNDERSTANDING OF DIABETES SELF CARE

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Background: African Americans have higher diabetes prevalence and suffer greater diabetes-related complications and mortality than whites. Although passive coping is associated with poorer self-reported general health among diabetic African Americans, little is known about the link between coping styles and diabetes self care. Therefore, we examined the association between coping styles and understanding of diabetes self care among African Americans and whites in a Southern Medicare managed care plan.

Methods: Participants were identified through a diabetes-related pharmacy claim or ICD-9 code and completed a computer-assisted telephone survey (66.4% response rate). Understanding of diabetes self care was assessed using the Diabetes Care Profile (DCP) Understanding scale (range: 0-100). Coping styles were classified as active (talk about it/take action) or passive (keep it to yourself). We used linear regression to quantify the associations of race/ethnicity and coping style with the DCP, adjusting for age, sex, education, and comorbidities. Finding a significant race-coping interaction, we stratified by race.

Results: Of 1,800 participants, the mean age was 73 years, 56% were female, and 45% were African American. Adjusted mean DCP scores (95% CI) for African Americans with passive and active coping were 65.0 (64.5-65.5) and 54.3 (53.3-55.3), difference 10.7 (9.6-11.8). Corresponding scores for whites with active and passive coping were 69.0 (68.6-69.4) and 65.9 (65.1-66.8), difference 3.0 (2.1-4.0).

Conclusions: Active coping was more strongly associated with understanding of diabetes self care among older African Americans than whites. Future research on coping styles may give new insights into reducing diabetes disparities among racial/ethnic minorities.

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D-048

EXPLORING ASSOCIATIONS OF RESILIENCE WITH COPING AND DIABETES OUTCOMES IN ADOLESCENTS

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The purpose of this pilot study was to explore coping as a potential mechanism of resilience in youth with type 1 diabetes (T1D). Fifty adolescents with T1D (ages 13-18, mean yrs diagnosed=5.8±3.6) were seen at Seattle Children's Hospital for a research visit. Participants completed written questionnaires, including the KidCope to assess coping. Resilience was assessed by a factor score of optimism, self-esteem, self-efficacy, and self-mastery questionnaires, and coping subscales were categorized as adaptive or maladaptive. Total maladaptive coping was associated with resilience ($r=-.39$, $p<.01$), but this effect was not found for adaptive coping (p=NS). Four of the seven maladaptive coping subscales (e.g., wishful thinking, self-criticism) were negatively associated with resilience (r's$=-.30$ to $-.38$; p's$<.05$), while only one of the four adaptive subscales, cognitive restructuring, was associated with resilience ($r=.29$, $p<.05$). Post hoc analysis was used to explore the main effect of resilience. Given the population size, median cut-off was used to group participants into high and low resilience groups. To examine an overall test of profile difference between the groups, we computed a one-way multivariate analysis of variance of the coping subscales. The test yielded a significant effect ($F(11,37)=2.03$, $p=.05$), indicating different patterns of coping in the two groups. The most pronounced group differences occurred for wishful thinking and negative emotional regulation. An "adaptive balance" score, created by subtracting mean total maladaptive scores from adaptive scores (thus higher scores=more adaptive coping), yielded higher scores in the high resilience group ($t=-2.30$, $p<.05$). This study demonstrates the association of resilience and coping. Future intervention research is needed to explore whether improving coping in those with low resilience may improve outcomes in adolescents with T1D.

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D-049

SEASONAL TRENDS IN DEPRESSIVE SYMPTOMS IN ADOLESCENTS WITH TYPE 1 DIABETES

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Depressive symptoms have been linked to poorer metabolic control and adherence in youth with type 1 diabetes (T1D). Research into cyclical trends in adult depression has focused on the winter season, but clinical observation suggests that depressive symptoms in youth tend to peak in the spring/summer seasons. The purpose of this study was to determine the cyclical nature of depressive symptoms in youth with T1D and explore associated demographic variables. The current study is a secondary analysis of baseline data from a multi-site randomized clinical trial of an internet-based intervention for adolescents ages 11-14 with T1D. Adolescents (n=291) from four U.S. sites completed the Children's Depression Inventory (CDI) and provided demographic information (mean age=12.3; 55% female; 62% white, 21% Hispanic, 9% African American, 8% Other). Chi-square analysis indicated that there was not a significant effect for individual seasons on clinically significant (high) CDI scores, but there was a significant difference in high CDI scores between the spring/summer and fall/winter seasons ($\chi 2=5.67$, $p=.018$). Adolescents were almost twice as likely to score above the clinical cutoff on the CDI in the spring/summer (22% in April - September) than in the fall/winter (11% in October - March). Further, adolescents ages 11-12 (but not those ages 13-14) had significantly more high CDI scores in the spring/summer than in the fall/winter (22% vs. 9%, $\chi 2=4.77$, $p=.029$). Non-white adolescents had more high CDI scores in the spring/summer seasons than in the fall/winter (28% vs. 12%, ($\chi 2=4.01$, $p=.045$), but this was not significant in white adolescents. Standards of care recommend annual screening for depression in youth with T1D, and these results suggest that increased vigilance may be appropriate for young adolescents from April through September. Further exploration of developmental, racial/ethnic, and other risk factors associated with seasonal depression in youth with T1D is indicated.

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D-050

COPING IN MOTHERS OF ADOLESCENTS WITH TYPE 1 DIABETES

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Mothers of youth with type 1 diabetes (T1D) are often the caregiver primarily responsible for treatment management, and they experience high levels of stress and distress. Few studies, however, have examined coping in this population. The current study describes the coping strategies used by mothers of adolescents with T1D and examines coping in relation to maternal and adolescent adaptation. In this cross-sectional pilot study, adolescents age 10-16 years (n=30; mean age=12.6; 71% White) and their mothers completed questionnaires on psychosocial functioning, and mothers completed an empirically-validated measure of coping (Responses to Stress Questionnaire). Clinical data on metabolic control (i.e., HbA1c) was obtained from adolescents' medical records.

Mothers reported using secondary control engagement coping strategies (e.g., acceptance, distraction) to deal with diabetes-related stress most often (mean ratio score=.29±.05), followed by primary control engagement coping strategies (e.g., problem solving, emotional expression, mean ratio score=.23 ±.03). Mothers reported using disengagement coping strategies (e.g., avoidance, denial) least often (mean ratio score=.14±.02). Bivariate correlations indicated that greater use of primary control coping was related to significantly fewer symptoms of maternal depression and anxiety ($r=-.38$, $-.57$, both $p<.050$). Similarly, greater use of secondary control coping was strongly associated with fewer symptoms of maternal depression and anxiety ($r=-.71$, $-.63$, both $p<.001$). In terms of adolescent adaptation, mothers' use of secondary control coping was associated with better metabolic control in adolescents ($r=-.37$, $p=.05$), but mothers' use of disengagement coping was related to higher depressive symptoms in adolescents ($r=.37$, $p=.050$). Results suggest that the ways that mothers cope with the stress of diabetes management impact both maternal and child functioning. Interventions aimed at teaching mothers effective coping strategies may improve maternal psychosocial adjustment and have a positive impact on metabolic control and depressive symptoms in their adolescent children.

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D-051

EVERYDAY FUNCTION, HEALTH LITERACY, AND GLYCEMIC CONTROL IN AFRICAN-AMERICANS WITH TYPE 2 DIABETES

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Background: African-Americans with type 2 diabetes (T2D) experience increased morbidity and mortality due to poor self-care. As everyday functioning and health literacy may adversely influence glycemic control and partially account for T2D-related disparities, we examined whether these factors are associated with glycemic control in urban African-Americans with T2D.

Methods: This is a cross-sectional study of 140 low-income African-American men and women aged 18 and older who received care at Grady Diabetes Clinic in Atlanta, Georgia. Patients completed the Brief UCSD Performance-Based Skills Assessment (UPSA-B), which measures everyday living skills, and a shortened version of the Rapid Estimate of Adult Literacy in Medicine (REALM). Glycemic control was assessed by clinical laboratory measurements of hemoglobin A1c (HbA1c). The associations of everyday function and the outcome glycemic control, and of health literacy and glycemic control, were examined using both multivariate linear and logistic regression.

Results: The sample primarily consisted of women (61%). Most patients exhibited poor glycemic control ($\text{HbA1c}\geq 7\%$) (68%), and 40% exhibited poor everyday function ($\text{UPSA-B}<80$). Mean REALM score was 12.9(±3.3) (range 0-15). After adjusting for socio-demographic predictors of glycemic control, there was no significant association between everyday function and glycemic control, or between health literacy and glycemic control.

Conclusion: This small study suggests everyday function and health literacy are not predictors of glycemic control in this low-income sample. Longitudinal research is necessary to identify the specific factors that lead to poor glycemic control within this population, and comparisons with other groups are essential to explain existing racial disparities. This knowledge could be used to tailor interventions to improve individual self-care of T2D.

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D-052

EFFECTS OF A PEER-LED INTERVENTION ON SUPPORT AND SELF-CARE AMONG LATINOS WITH TYPE 2 DIABETES

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Active diabetes self-management is required to achieve glycemic control and prevent serious health complications, however, many Latinos with type 2 diabetes fail to adhere to self-care recommendations. Research shows, however, that individuals receiving greater social support in relation to their illness manage their diabetes more effectively than those with less support. The current study examined the effects of a psychoeducational intervention ("Project Dulce") on support for disease management (SDM) and diabetes self-care (DSC) in 125 Latinos with type 2 diabetes. Psychosocial assessments were collected at baseline, post-treatment (M4), and again six months later (M10). Participants ranged in age from 21 to 75 years old; 76% were female and 87% were born in Mexico. Significant time-by-group interaction effects indicated that, relative to control participants ($n=71$), the Project Dulce group ($n=54$) exhibited significantly greater increases in DSC ($p<.05$) and SDM ($p<.01$) from baseline to M4. At M4, the treatment group reported greater SDM (3.40 vs. 3.13, $p=.06$) and better DSC (4.60 vs. 3.95, $p<.01$); however, these differences were attenuated to marginal significance for DSC (4.18 vs. 3.82, $p=.09$) and non-significance for SDM (3.33 vs. 3.18, $p=.28$) by M10. Only participants who attended at least 6 of the 8 Project Dulce classes ($n=37$) showed significant gains in both SDM and DSC at M10, relative to the control group. Results suggest that the Project Dulce intervention is one avenue by which SDM and DSC can be improved in the Latino population. Support may be a particularly important influence on health in this population due to the value placed on family and close relationships. These findings also indicate that attendance ("dosage") plays a pivotal role in the maintenance of intervention effects, thus highlighting the importance of understanding and addressing barriers to participation for this population.

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D-054

MEDICAL STATUS AND HEALTH BEHAVIORS IN UNDERGRADUATE STUDENTS

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Over 70% of high school graduates enroll in college (U.S. Dept. of Labor, 2010). This is a time for independence and self-exploration that places increased responsibility on the student (Heister, Nordstrom, & Swenson, 2009). Also, it is estimated that 22% of adolescents suffer from a medical condition (Okumura, McPheeters, & Davis, 2007). This study investigated the relationship of medical status with stressful experiences of college, student-university match, substance use, healthcare adherence, and medication beliefs. It was hypothesized that students diagnosed with a medical condition would perceive the college transition as more stressful; report less satisfaction with match to university, more substance use, and less adherence to health care; and would find medications both necessary and harmful.

Data were collected from 97 undergraduate students in the northeast United States; 82.5% were female, 72.2% were Caucasian, and 37.1% were diagnosed with a medical condition. The study was approved by the university's IRB. Participants were compensated with course credit and a chance to win a gift card after completing the Beliefs about Medication Questionnaire, Demographics Questionnaire, Medication Adherence Survey, Medical Screener, Inventory of College Students' Recent Life Experiences, Student University Match Questionnaire, and Substance Use Screener. Analyses found medical status was not related to demographic variables. Results indicated that students with a medical condition perceived more stressful college experiences ($t(95)=-2.23$, $p=.029$), were less adherent to medical treatment ($t(95)=2.82$, $p=.006$), found medications more necessary ($t(95)=5.12$, $p<.001$) and were more concerned about the consequences of taking medications ($t(95)=5.51$, $p<.001$). Medical status was not related to amount of substances used, student-university match, or beliefs about overuse or harmfulness of medications.

Results show having a medical condition is related to poorer outcomes highlighting the special needs of these students, perhaps necessitating greater awareness and support within a college environment.

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D-056

THE RELATIONSHIP BETWEEN HOPE, DEPRESSION, COPING, SOCIAL SUPPORT AND STRESS AND ADHERENCE IN HIV+ WOMEN

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Even though the efficacy of HAART is well documented, adherence rates are still low (DiIorona et al., 2009). Ironson et al. (2005) found that hope, depression, coping and stress, but not social support, correlated with adherence in a sample of HIV-positive individuals with low CD4 cell counts. Research also suggests that adherence rates are lower among women than men (Berg et al., 2004), but there is a dearth of research aimed at identifying factors that lead to increased adherence among women. Therefore, this study focused on women with all levels of CD4 cell counts.

We measured adherence with the ACTG Medication Adherence Questionnaire (Chesney et al., 2000). We used scores from the Perceived Stress Scale (PSS; Cohen, Kamarck & Mermelstein, 1983), Center for Epidemiologic Studies - Depression Scale (CES-D; Radloff, 1997), subscales agency and pathway from The Hope Scale (Snyder, Harris et al., 1991), subscales behavioral disengagement and denial from The Brief Cope Carver, 1997), and The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) as predictor variables.

Our sample ($N=77$) of HIV-positive women was primarily African-American (52.6%), with a mean age of 40.4 years ($SD=7.9$). Correlational analyses suggest a significant negative relationship between adherence and CESD scores ($r=-.28$, $p=.01$) and PSS ($r=-.34$, $p<.01$), and a significant positive relationship between adherence and agency ($r=.29$, $p<.01$). A regression analysis indicated our model accounted for 20% of the variance in adherence (adj. R2=.20, $F(3,74)=6.97$, $p<.001$), with agency ($\beta=.27$, $t=2.40$, $p=.02$) and stress ($\beta=-.32$, $t=-2.57$, $p=.01$) as significant predictors. Our results suggest that high levels of agency and low levels of stress contribute to adherence. This agency component of hope may guide practitioners in treatment plans, as someone with diminished hope may have difficulty with adherence. Further, behavioral techniques may alleviate stress, enhancing treatment outcomes. This information may inform the development of interventions to increase adherence among HIV-positive females.

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D-057

EXPLORING POTENTIAL MEDIATORS OF THE RELATION BETWEEN TRAIT POSITIVE AND NEGATIVE AFFECT AND HIV HEALTH STATUS

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Research supports an association between negative psychosocial functioning and adverse health outcomes. The biobehavioral model posits that these effects occur via alterations in physiological response and health damaging behaviors. The broaden-and-build model of positive emotions holds that positive emotions can undo the physiological and behavioral restrictions associated with negative emotions and promote resource development. The present correlational study sought to explore whether cortisol, medication adherence, and health behaviors mediated relations between trait positive affect (PA) and negative affect (NA) and health status in persons living with HIV. HIV-infected participants ($N=53$) collected salivary cortisol five times over the course of one day at home and completed interview. Clinical staff provided HIV symptom ratings, and virologic and immunologic indicators were collected by chart review. Results showed that high PA was associated with lower total cortisol concentration ($b=-3.42$, $t=-2.1$, $p<.05$), and total cortisol mediated the relation between PA and CD4+ percent ($z'=1.11$, $p<.01$). High NA was associated with poorer medication adherence ($b=0.01$, $t=1.93$, $p=.05$), and percent adherence mediated the relation between NA and CD4+ percent ($z'=-1.33$, $p<.01$) and viral load ($z'=1.61$, $p<.01$). Mediation hypotheses for health behaviors were not confirmed; however PA was associated with lower alcohol consumption ($F(4, 47)=3.10$, R2=.26, $\beta=-0.35$, $p<.05$), greater physical activity ($F(4, 48)=3.89$, R2=.24, $\beta=0.39$, $p<.01$), and better nutrition ($F(4, 48)=3.68$, R2=.22, $\beta=0.34$, $p<.05$). Because this study used cross-sectional design, causation cannot be determined. However, findings provide preliminary evidence on mechanisms by which PA could relate to HIV disease markers and support existing evidence on mechanisms of NA in HIV disease.

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D-058

CONDOMS, CONFLICT AND COPING: INFLUENCING SEXUAL BEHAVIOR IN NORTHERN INDIA

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With a diverse population of 1.1 billion, HIV prevention in India requires a large scale comprehensive approach utilizing multidisciplinary strategies. This collaborative pilot study tested a behavioral intervention designed to enhance sexual barrier use, self efficacy, coping and conflict resolution among Indian heterosexual couples. We sought to assess the impact of the intervention on these factors, and the relative contribution of conflict resolution style, coping and self efficacy on sexual barrier use. Thirty sexually active couples recruited from clinics in an urban public hospital were enrolled in weekly gender concordant group interventions for one month and assessed post-intervention regarding study outcomes. Participants were a mean age of 32 (men) and 29 (women) years, and the majority having at least 10 years of education. At baseline, the majority reported either no condom use (64%, women; 55%, men) or consistent condom use (36%, women, 41%, men). Gender differences in the changes in conflict resolution styles, coping and self efficacy associated with improvements in condom use were identified at baseline and follow-up. Participants reporting inconsistent condom use increased to consistent use ($F=37.35$, $p<.001$) and those reporting consistent use maintained their level of condom use. Participants also reported increased positive communication and decreased violence, and women reported decreased negative communication by male partners. Finally, coping strategies and self efficacy improved. Additionally, examination of inconsistent condom user characteristics indicated that coping, self efficacy and positive and negative conflict resolution strategies were comparable with consistent condom users' at follow up. Violence decreased among all couples. This study illustrates the feasibility of implementing a behavioral group intervention strategy to enhance sexual barrier use, conflict resolution, self efficacy and coping among heterosexual Indian couples.

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D-059

PENIS SIZE, MEASURING BEHAVIOR, AND EXPERIENCES WITH CONDOMS: AN UNDERSTUDIED ASPECT OF HIV AND STI PREVENTION AMONG GAY AND BISEXUAL MEN

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As researchers and health providers continue to encourage condom use as a chief strategy to prevent HIV transmission among men who have sex with men (MSM), research is needed to explore better the intersecting roles between penis size (length and circumference), condom feel, ease of finding condoms, and recent experience of condom failure (breakage and slippage). Data are taken from a 2010 community-based survey of gay and bisexual men in New York City ($n=463$). In total, 51.4% of men reported their penile length was between 6 to 8 inches long (15 cm to 20 cm), and 31.5% reported their penile circumference was between 4 to 6 inches around (10 cm to 15 cm). Variation in penile dimensions was associated significantly with men's attitudes toward the typical/average condom, difficulty finding condoms that fit, and the recent experience of condom breakage. Furthermore, men who found the average/typical condom to be too tight were significantly less likely to use them. Most men in our data had measured their length (86.2%) and/or circumference (68.9%), suggesting that measuring oneself is a common and acceptable practice. In order to facilitate a proper match between sized-to-fit condoms and actual penile dimensions, it is necessary to establish and disseminate a universal measurement technique. In collaboration with researchers, this may be a complementary direction for HIV and STI prevention providers to pursue. Improving condom fit and attitudes toward condoms may also improve condom use and minimize condom slippage and breakage.

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D-060

IMPACT OF SUBSTANCE ABUSE AND PHYSICAL VIOLENCE ON SAFE SEX BEHAVIORS AMONG HETEROSEXUAL HISPANIC COUPLES

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Hispanics have the second highest rates of AIDS diagnosis nationally (CDC, 2008). HIV risk reduction interventions have primarily focused on prevention at the individual level, neglecting the mutually determined nature of sexual behavior within couples dyadic data. This study of Hispanic HIV sero-positive and -discordant heterosexual couples in Miami, Florida, applied a multilevel approach to assess the influence of substance use and physical violence on safe sex behaviors. The cross-sectional study enrolled 21 couples ($n=42$ individuals), with at least one of the partners being Hispanic, currently cohabitating or partners for at least 6 months. All participants were 18 years of age or older. A partner's alcohol and drug use was a significant predictor ($p<.01$) of safe sex behaviors, such that the greater a partners drug history the greater the use of safe sex behaviors. This was qualified by a gender interaction ($p<.05$). Specifically, men and women whose partners drank more, engaged in safe sex behaviors more frequently (path weight .56; (path weight .16, respectively). A partner's history of violence was a significant predictor ($p<.05$) of safe sex behaviors, such that the greater a partner's history of violence, the less likely the use of safe sex behaviors. This was qualified by a partner's history of violence by gender interaction ($p<.01$) such that for both men and women when their partner had a history of violence they were less likely to engage in safe sex behaviors (males=-.182; females=-.0236). A person's own history of violence significantly interacted with gender ($p<.05$), such that men with a history of violence were more likely to engage in safe sex behaviors (.026), although women with a history of violence were less likely to engage in safe sex behaviors (-.045). This study illustrates the importance of consideration of the influence of partners on sexual risk behavior. The need for novel analytic strategies in assessing data associated with sexual risk reduction strategies is discussed. This study was funded by NIMH grant R01MH63630.

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D-061

WHO'S PROTECTED: DIFFERENCES IN CONDOM USE AMONG COLLEGE STUDENTS

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Background/Purpose: Sexually transmitted infections (STI's) are a serious health concern affecting college students across the country. There are approximately 19 million new infections are reported annually in the US costing the heath care system an estimated $15.9 billion. Young adults and adolescents ages 15-24 represent almost 50% of the reported new STI infections. Correct use of condoms is one of the simplest and most efficient preventative behaviors to protect oneself from contracting a STI. The authors' purpose of the study was to examine differences in condom use between male/female and African American/Caucasian participants.
Methodology: This study's data was collected as part of a larger study, the Internet and Technology Strategies for the Prevent of Sexual Transmitted Infections Study. It was a randomized controlled pilot study designed to educate college students about STI's, where to get tested, and the necessity of safe sex. Participants consisted of 72 college students which were 20% male & 80% female and 69% African American and 31% White. Two measures were used in this study: 1) Participant demographic questionnaire and 2) Participant sexual behavior questionnaire.
Results: A 2(ethnicity) X 2(race) ANOVA examined the participants reported condom use. Although there was no significant interaction, a significant main effect for gender, $F(1,68)=7.48$, $p<.01$, and a marginally significant main effect for ethnicity, $F(1,68)=3.68$, $p=.06$, was observed. Males ($M=3.07$, $SD=1.27$) reported higher condom use than females ($M=1.88$, $SD=1.42$). African American participants ($M=2.29$, $SD=1.36$) indicated higher condom use than white participants ($M=1.67$, $SD=1.62$).
Conclusions/Recommendations: The findings indicated males engage in condom use more frequently than females and blacks more than whites mirrors current research. The failure to find a significant interaction may be contributed to the low sample size. Preventative programs should continue educating young adults about safe sex while offering increased screenings.

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D-062

TRAUMA, SUBSTANCE USE AND SEXUAL BEHAVIOR AMONG HIV POSITIVE WOMEN

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Sexual trauma and substance use have been associated with increased risk of HIV transmission, and HIV seropositive women have been identified as having an increased risk of substance use. This study examined the impact of the time of abuse (childhood, adolescence, adulthood) and relationship serostatus on sexual behavior and substance use. Participants were multicultural women in sero-positive and -discordant heterosexual relationships living in urban Miami, Florida.

Women ($n=220$) were African American (72%), Hispanic (8%), White non-Hispanic (16%), Haitian (1%); 84% were HIV+ ($n=187$) and 16% were HIV- ($n=35$). The majority had a high school education ($M=11$ years), were unemployed (83%) and living in poverty (55%, income $M=\$5{,}000$). Sexual risk was defined as unprotected sex, multiple partners and use of alcohol or drugs. Over half (54%, $n=113$) of respondents reported a history of sexual trauma; of those, at the time of trauma, 13% were below age 8, 44% were aged 8 to 16, and 22% were 17 years or more. Trauma history was associated with substance use ($r=.16$, $p=.02$) and partner violence ($r=.24$, $p=.001$); more recent trauma was associated with lower HIV self efficacy ($r=.20$, $p=.049$). Of those reporting childhood trauma ($n=35$), 24 reported additional sexual assault in adulthood. Condom use by women with recent trauma ($M=57\%$) was lower than those with early childhood abuse ($M=70\%$).

This study illustrates the very high rates of sexual trauma in this population, and the importance of interventions focused on both trauma processing and substance use to reduce HIV transmission risk. In addition, results suggest that recurring sexual trauma may impact HIV-related self efficacy. Finally, novel analytic strategies to assess the role of male partners in the promotion of substance use and sexual risk are discussed.

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D-063

GREATER ENDORSEMENT OF POWER INEQUITIES IS ASSOCIATED WITH TAKING FEWER FREE CONDOMS AND LOWER SEXUAL SELF-EFFICACY AMONG HETEROSEXUAL MEN AND WOMEN UNDERGRADUATES

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Worldwide, the percentage of people living with HIV who are women has dramatically increased over the past two decades, especially among 15- to 24-year-olds (UNAIDS/WHO, 2007). Because heterosexual contact accounts for the majority of HIV cases in women (more than 70% in the United States), it is vital to understand why women are becoming infected by male partners. Many researchers have begun to examine the role of power inequities between men and women to understand heterosexual risk behavior (e.g., Amaro, 1995), often focusing on condom use as an indicator of risk. We (Rosenthal & Levy, 2010) recently proposed that social dominance theory (Sidanius & Pratto, 1999), a theory about social hierarchy and power inequities, helps to explain the increasing rates of HIV infection among women worldwide. Following from our theoretical analysis, we examined whether social dominance orientation, an individual difference construct about support for social power inequities from social dominance theory, would be associated with greater scores on sexual risk indicators among 450 female and 180 male undergraduates identifying as heterosexual from diverse racial and ethnic backgrounds at a large public university in the Northeastern U.S. We found that greater endorsement of social dominance orientation was associated with less chance that both female and male students would take female condoms that were easily available for free, as well as lower sexual self-efficacy (i.e., confidence with sexual situations, including condom use). Additionally, for male participants, social dominance orientation was associated with lower intentions to use condoms. These findings corroborate the application of social dominance theory to understanding heterosexual HIV risk, and demonstrate that power inequities are integral to both women's and men's decisions to protect themselves during sexual activity.

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D-064

RELIGIOUS AFRICAN AMERICANS: ARE THEY SUSCEPTIBLE TO RISKY SEXUAL BEHAVIORS?

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HIV in African American (AA) communities continues to be a major public health problem. While AAs make up only 13% of the US population, they account for approximately 49% of HIV cases. While some studies have found mixed results, many more have found that highly religious AAs tend to engage in fewer risky sexual behaviors. Yet, few studies have focused on whether religiosity may serve as a protective factor against engagement in HIV risk behaviors among adult AA parishioners. The current study explored religiosity and demographic correlates of risky sexual behavior in an adult AA church-based population. Study participants ($N=255$) consisted of 177 women and 78 men (mean age=46.3, $SD=13.9$), of which 44% were married. Participants provided demographic data and completed the Religious Beliefs and Behaviors (RBB) and HIV Behavioral Risk Assessment (BRAT) measures. Participants were highly religious; 80% reported daily thoughts of God and 64% reported daily prayer. Also, 36% reported almost daily direct experiences with God and 32% attended church twice weekly. On average, participants had seven lifetime sex partners ($SD=8.0$), and most (85%) inconsistently used condoms. Male gender ($\beta=.14$, $p<.05$), lower average monthly income ($\beta=-.17$, $p<.05$), and lack of medical insurance ($\beta=-.25$, $p<.01$) significantly predicted BRAT-checklist behaviors (e.g., trading sex for drugs) and explained 15% of the variance. Age ($\beta=.21$, $p<.01$) and marital status ($\beta=-.31$, $p<.01$) significantly predicted BRAT-sex behaviors (e.g., number of sex partners) and explained 19% of the variance. God consciousness on the RBB (e.g., prayer; $\beta=.25$, $p<.01$) significantly predicted BRAT-sex behaviors and explained 6% of the variance. Findings indicate that although this population appears to be highly religious, they are still at risk for HIV. Future research should continue to identify correlates of risky sexual behavior among adult AA parishioners in order to facilitate development of religiously and culturally tailored HIV risk reduction interventions in AA church settings.

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D-066

A WELLNESS PROGRAM FOR MEDICAL STUDENTS

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Common sources of stress in the first year of medical school include adjustment to a new environment, financial worries, high stakes exams and distance from family support systems, leading to anxiety and depression. This study goal was to evaluate the impact of a wellness program in 1st year medical students. The protocol was approved by the IRB. Students completed a demographic questionnaire and: Beck Depression Inventory (BDI-II) Beck Anxiety Inventory (BAI), Social Readjustment Rating Scale-Revised (life events (LE)), and a measure of self efficacy (SE). Students were randomly assigned to either the experimental group (EC) or control group (CG). The program consisted of eight 45 minute sessions: mindful breathing, relaxation, imagery, survival thinking, nutrition, and coping. Each session ended with a 10 min. relaxation exercise.

Results: 379 students agreed to participate in the program, 205 women and 174 men of average age 23.5 yrs. Women had higher BDI ($p=.004$) (females=6.13, males=4.66) and BAI ($p=.001$) scores (females=6.72, males=4.84) than men. About 21% of the students had LE scores above 300. LE scores were significantly correlated with BDI and BAI scores ($p=.01$). With weighted LE as a covariate, post BDI scores were significantly ($p=.045$) lower in EC than CG (EG=7.6; CG=9.1). CG trained later showed decreases in BDI ($t=3.6$; $p=001$). Anxiety scores did not decrease. There was a trend for the EG to stop unpleasant thoughts (mean=60.6) versus CG (mean=55.1) ($p=.08$) after intervention. This was also true for CG after training. (paired t-tests: $t=-2.25$; $p=03$). Students significantly increased within session relaxation scores.

Conclusion: Despite scheduling challenges and time pressures in first year medical students, wellness programs are popular. Women students had higher distress than males. Previous LE were predictors of depression and anxiety through the first year of school. Eight sessions of programming was associated with decreases in endorsed statements related to depression, and greater self efficacy but not anxiety.

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D-067

THE RELATIONSHIP BETWEEN TREATMENT SETTINGS AND DIAGNOSTIC ATTRIBUTIONS OF DEPRESSION AMONG AFRICAN AMERICANS

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Objective: To explore the relationship between treatment-setting characteristics and diagnostic attributions of depression among community-dwelling African Americans.

Methods: Data come from the National Survey of American Life, a nationally representative sample of African Americans and Caribbean Blacks. Major Depression (MD) was assessed using the Composite International Diagnostic Inventory. Participants were categorized into four diagnostic groups: Never MD, MD never attributed to physical health problems (i.e., affective depression), MD sometimes attributed to physical health problems (i.e., complicated depression), and MD always attributed to physical health problems (i.e., physical depression). Multinomial regression was used to assess the association between diagnostic attributions of depressive symptomology and treatment setting characteristics.

Results: Among those who met criteria for MD (N=441), 66.4% were classified as affective depression, 17.8% were classified as complicated depression, and 15.8% were categorized as physical depression. Seeking treatment from a mental health professional was associated with increased likelihood of being in the complicated depression group (Adjusted odds ratio (AOR): 5.52; 95% Confidence Interval (CI): 2.28 - 13.36). Seeking treatment from a family doctor was associated with greater odds of being in the physical depression group (AOR: 2.93; 95% CI: 1.18 - 7.26). Seeking care from three or more different healthcare providers was associated with increased likelihood of being in the complicated depression group (AOR: 1.99; 95% CI: 1.17 - 3.40).

Conclusion: Treatment setting characteristics are associated with the diagnostic attribution of depression among African American adults. Results suggest that encounters with healthcare providers influence the diagnostic attribution of depression in a systematic manner.

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D-068

DO PARENT-CHILD AND SIBLING RELATIONSHIPS IN ADOLESCENCE EXPLAIN THE EFFECTS OF FAMILY STRUCTURE ON DEPRESSIVE SYMPTOMS IN YOUNG ADULTHOOD?

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The present study examined whether the effects of adolescent family type on depressive symptoms in young adulthood were explained by intra-family relationship quality. Empirical generalizations from prior research suggest that sibling relationships, parent-adolescent relationships, and family structure all affect adolescent depressive symptoms. However, few studies have assessed how all three of these factors intersect to affect depressive symptoms in young adulthood. Drawing from the developmental ecological model, I investigated how the quality of parent-child and sibling relationships in adolescence explained the effects of family structure on depressive symptoms in young adulthood. This research used two waves of longitudinal data from the National Longitudinal Study of Adolescent Health (Add Health), six years apart, of a sample of adolescents in 834 sibling dyads. By analyzing individual adolescent, sibling, and parent reports, I examined associations between intact family structure, parent-child relationship quality, sibling relationship quality, and sibling dyad characteristics during adolescence to determine the effects on depressive symptoms in young adulthood. I used generalized linear models with a log link to analyze the data. Results indicated that non-intact family structure was a significant predictor of increased depressive symptoms in young adulthood, but these differences were not explained by intra-family relationship quality at adolescence. I also observed that adolescents in mixed gender dyads reported significantly higher depressive symptoms in young adulthood than those in female-female dyads.

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D-069

WHAT DO WE KNOW ABOUT THE CLINICAL, PSYCHOLOGICAL, AND BIOLOGICAL CORRELATES OF PLACEBO EFFECTS?

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The concept of a placebo—what it is, what it does, and how it works—is very complex. The purpose of this study was to investigate prospectively possible demographic, clinical, cognitive psychological, and biological predictors of a placebo response in 139 outpatients with major depression. Compared to placebo non-responders (n=100), placebo responders (n=39) had significantly longer depressive episodes, less severe depression, greater mood reactivity, better sleep quality, better self efficacy skills, less dysfunctional thinking, and were more likely to be employed. Compared to placebo responders, there was a non-significant trend for non-responders to be more likely to have recurrent major depression. There were no biological differences (sleep EEG and urinary cortisol) between placebo responders and non-responders. Based on our findings, clinical trials could minimize placebo response rates by recruiting subjects whose major depression is severe, recurrent, and does not have significant mood reactivity, whereas clinical trials investigating the treatment of less severe, mood reactive forms of depression may need to use novel study designs or statistical methodologies to distinguish drug and placebo responders. What is known about some of the clinical, psychological, and biological correlates of placebo effects is further discussed in the paper. The prevalence and magnitude of placebo effects depend on how the clinical-placebo effect is measured, the characteristics of the condition being studied, and the experimental or clinical context in which the placebo is administered. Placebo effects are real, but they are unlikely to work as effectively in real world settings. Fundamentally important cognitive psychological and neurobiological processes underlie placebo effects.

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D-070

CONTINGENCIES OF SELF-WORTH PREDICT DISORDERED EATING AND NEGATIVE CONSEQUENCE BEHAVIORS

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Whereas, global self-esteem reflects an individual's overall attitude toward the self and conveys personal benefits, contingent self-esteem reflects dependencies on confirmations of worth and may convey personal costs. Indeed, research investigating these costs shows that contingencies of self-worth predict a wide range of negative outcomes in college students including excessive alcohol consumption (Luhtanen & Crocker, 2005) and eating disorders (Crocker, 2002). The present study assessed relations between Contingencies of Self-Worth and weight management practices, eating disorder risk behaviors, and alcohol use disorders in a sample of 287 predominantly Hispanic college students. Students completed the Contingencies of Self-Worth scale as well as measures of weight management practices, eating disorders risk behaviors (DSM-IV), and alcohol risk behaviors (AUDIT). Multiple regression analyses, controlling for age, gender, and BMI, indicated that Competition contingency of self-worth predicted binge eating ($\beta=.16$, $p<.05$) and DSM eating disorders risk behaviors ($\beta=.14$, $p<.05$). Appearance contingency of self-worth predicted assisted dieting ($\beta=.15$, $p<.05$) and DSM eating disorder risk behaviors ($\beta=.20$, $p<.05$). Family contingency of self-worth negatively predicted DSM risk behaviors ($\beta=-.16$, $p<.05$), whereas Approval contingency positively predicted such behaviors ($\beta=.16$, $p<.05$). Lastly, God's Love contingency of self-worth negatively predicted alcohol use disorder ($\beta=-.24$, $p<.05$). The results clarify the links between internal and external contingencies of self-esteem and negative consequence behaviors, and do so in a historically under-studied population.

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D-071

EXAMINATION OF MEDIATIONAL MODELS OF THE HOSTILITY-HEALTH LINK

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Empirical research has consistently supported a link between hostility and poor health. The present study examined social support, coping strategies, and health behaviors as potential mediators of this relation. Participants were 253 undergraduate students (M=20.9 years; 72.8% male). They completed questions about hostility (Cook Medley Hostility Scale), physical health (Cornell Medical Index), psychological health (Symptoms Checklist Revised-90), positive (aerobic exercise, physical activity) and negative (cigarette use, caffeine and alcohol intake) health behaviors, social support (Interpersonal Support Evaluation List, ISEL), and avoidance (COPE) and emotion-focused coping (Ways of Coping Checklist, WCCL).

We used the Baron and Kenny approach to test avoidance coping, emotion-focused coping, social support, and health behaviors as potential mediators of the hostility-health relation. Results indicated that none of the health behaviors met Baron and Kenny criteria for mediational analysis. Furthermore, neither coping strategy significantly mediated the hostility-health link.

Results indicated a significant model when social support was added to the hostility-physical health model, F (3, 200)=35.01, MSE=42172.89, p<.001, R2=.34, suggesting that social support partially mediated the hostility-physical health relation (β=-.14, p<.05; Sobel p<.05). Further, results indicated a significant model when social support was added to the hostility-psychological health model, F (3,191)=22.21, MSE=2878.21, p<.001, R2=.26, suggesting that social support partially mediated the hostility-psychological health relation (β=-.22, p=.001; Sobel p<.01).

Social support significantly mediated the link between hostility and physical as well as psychological health. Further, none of the health behaviors or coping strategies significantly mediated this link. These findings suggest that individuals with poor social support may have greater vulnerability to developing adverse physical and psychological health outcomes.

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D-072

SUBJECTIVE SOCIAL STATUS, SOCIOECONOMIC STATUS, AND PHYSICAL AND MENTAL HEALTH IN LATINAS

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Recent research suggests that subjective social status (SSS), people's subjective opinion of their place within their community and within the U.S. at large, may differentially relate to health and illness. However, there is limited research on SSS (community and U.S.) and health in general, and among Latinas in particular. The objectives of this study were to examine in a sample of Latinas: (1) the relationship of community and U.S. SSS to physical and mental health, (2) whether community and U.S. SSS have differential relationships to physical and mental health, and (3) whether community and U.S. SSS predict physical and mental health above and beyond objective SES indicators. A community-based sample of 498 English- and Spanish-speaking Latinas provided information on objective SES (education and employment), U.S. and community SSS (MacArthur Scale of Subjective Social Status), physical health (Health-Related Quality of Life-4), and mental health (Patient Health Questionnaire). A series of hierarchical linear regression analyses were performed to identify significant predictors of physical and mental health in Latinas. Covariates (age and insurance) were entered (block 1), followed by objective SES (education and employment) (block 2), and then community or U.S. SSS (block 3). For both physical and mental health, the overall models were significant (all ρs<.05) with the community or U.S. SSS scores as significant predictors after accounting for covariates and objective SES indicators, adding 2-3% to the explained variance in each model. For mental health, the models were not significant until community and U.S. SSS indicators were entered in the final step. Results support SSS as a potentially important predictor of health outcomes in Latinas.

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D-074

UNDERSTANDING THE REACH OF HEALTH LITERACY INTERVENTIONS: A SYSTEMATIC LITERATURE REVIEW

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A number of systematic reviews have identified that effective interventions to improve health behaviors and self-management for people with low health literacy exist. Unfortunately, the extent to which these interventions have the potential to achieve a public health impact (i.e., reach X effectiveness) is unclear. We conducted a systematic review to determine the reach (participation rates and representativeness) of health literacy interventions. Articles were identified according to the following inclusion criteria: published between 2000-2010, experimental or quasi-experimental study, an explicit focus on health literacy, and included a measure of health literacy. Two researchers coded each article, using a validated data extraction tool, and group meetings were used to gain consensus on discrepancies. Of 572 articles identified 31 met the inclusion criteria. Studies were primarily clinic-based (>85%) and 27/31 reported on a method to identify the target population. Only 9/31 reported participation rate and, of those, the participation rate ranged from 11% to 98%. However, the method for determining a denominator to calculate participation rate varied widely. Further, only 7/31 studies reported on the degree to which those participants reflected the larger eligible population and inconsistent reporting of different demographic characteristics, health status, education level, or socio-economic status made conclusions of representativeness problematic. Importantly, while the targeted audience was low health literate patients in most cases, across studies only 28% of the participants could be considered low health literate. A systematic approach to addressing the reach of health literacy interventions is needed that includes a focus on standardized reporting criteria on intervention type, recruitment strategies, and intended audiences. Further, future research should develop strategies to reach a higher proportion of participants with low health literacy and expand into community settings.

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D-075

ASSESSMENT OF SELF-EFFICACY FOR CAREGIVING: THE CRITICAL ROLE OF SELF-CARE IN CAREGIVER STRESS AND BURDEN

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Purpose: Little attention has been given to assessing the importance of self-care and communication in the caregiving setting, especially caregiving for those who are terminally ill. The Caregiver Inventory (CGI), a measure of self-efficacy for caregiving that includes these two dimensions, was subjected to psychometric analyses.

Method: 133 primary caregivers completed the CGI; of those 133, 81 also completed the Perceived Stress Scale (PSS), Caregiver Burden Inventory (CBI), and a measure of caregiver tasks (ADLR-CG). Based on home visits, social workers also rated the caregiver tasks required (ADLR-SW). Exploratory Factor Analysis, as well as reliability and validity analyses were conducted.

Results: Fit indices in M+ (V. 5.1) indicated a four factors solution: Managing Medical Information (B=.64), Care of the Care Recipient (B=.78), Care of Oneself (B=.88), and Managing Difficult Interactions/Emotions (B=.76). The CGI was highly negatively related to stress (PSS, r=-.54, p=.001) and burden (CBI, p=-.37, p=.001; ADLR-CG was related to burden (.43, p=.001) but not stress. In regression and relative importance analyses, Care of Oneself and Managing Difficult Interactions/Emotions emerged as equal in terms of having the strongest and most robust negative relationships with stress and burden.

Discussion: Results suggest that the CGI is a reliable and valid measure of self-efficacy for caregiving. Moreover, because efficacy for self-care and managing difficult communication were more highly related to stress and burden than efficacy for care of the patient, these findings establish self-care as more critical than care of the patient in terms interventions designed to prevent caregiver burnout.

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Citation Poster

D-076

PSYCHOMETRIC ASSESSMENT OF THE DECISIONAL BALANCE ?INVENTORY FOR SMOKING PREVENTION IN MIDDLE SCHOOL STUDENTS

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Establishment of psychometrically sound measures is critical to the development of effective interventions. The current study examined the psychometric properties, including factorial invariance, of a 10-item Decisional Balance Inventory for Smoking Prevention on a sample of 6th grade Rhode Island students (N=4094). The Decisional Balance Inventory consisted of three correlated subscales: Pros of Smoking, Personal Cons of Smoking, and Social Cons of Smoking. Factorial invariance was evaluated by structural equation modeling across four different subgroups defined by gender (male/female), race (white/black), ethnicity (Hispanic/Non-Hispanic), and school size (<200/>200 6th graders). A model is factorially invariant when the measurement model is the same in each of the subgroups. Three levels of invariance were examined in sequential order: 1) Configural Invariance (unconstrained nonzero factor loadings); 2) Pattern Identity Invariance (equal factor loadings); and 3) Strong Factorial Invariance (equal factor loadings and measurement errors). Strong Factorial Invariance provided a good fit to the model across gender (CFI: .98), race (CFI: .98), ethnicity (CFI: .95), and school size (CFI: .98). Coefficient Alphas for the three subscales, Pros of Smoking, Personal Cons of Smoking, and Social Cons of Smoking, were .77, .91, and .78, respectively. These findings provide empirical support for the construct validity of the Decisional Balance Inventory for Smoking Prevention in middle school students.

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D-078

EXPLORING HEALTH THROUGH FOOD: TRADITIONAL CHINESE MEDICINE IN THE CONTEXT OF CUISINE

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BACKGROUND: Traditional Chinese Medicine (TCM) includes four distinct methods of treatment: herbology, acupuncture, manipulative therapy, and food cures. In addition, it encompasses the remedial exercises of Qi-gong and Tai-ji. In theory, food cures within TCM are composed of four parts: food as diet, food as tonic, food as medicine, and food abstention. A number of historians note how remarkable it is that traditional concepts of food cures have persisted in the face of rapid social and cultural changes.

PURPOSE: The proposed research analysis aimed to explore the prevalence, popularity, and knowledge/beliefs of TCM food cures in present-day cosmopolitan Hong Kong, including an exploration of mass-produced and marketed food, drinks, and remedies catering to a new generation of Hong Kong residents. In addition, a comparative analysis of TCM food cures in New York City (NYC) was conducted.

METHODS: In this analysis, an ethnographic approach was used aimed at describing cultural patterns and nuances reflected in shared group understandings and behavioral responses in the context of food cures within TCM. Thirty individual interviews were conducted in Hong Kong and NYC. Data collection also involved visual observation and the use of photography.

SIGNIFICANCE: Results suggest that food cures within TCM are still very much believed in and practiced by those in the East and West. Although somewhat different in style and name from traditional form, an increasing appreciation and understanding of the power of food cures appears to be present and increasing in popularity. In particular, the influence of food cures appears very much apparent in Hong Kong and NYC culture through increasing knowledge, the occurrence of herbal, organic, and health food shops and restaurants, and advertisements. It was also visible in the packaging and mass production of products and consumer goods. Further exploration of the occurrence and influence of food cures will provide additional pathways in which to explore and encourage healthy eating and lifestyle habits.

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D-079

RELATIONS AMONG PARENT AND YOUTH SOCIAL COGNITIVE CONSTRUCTS AND DIETARY INTAKE IN YOUTH WITH TYPE 1 DIABETES

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Social Cognitive Theory constructs have shown utility in understanding dietary behavior; however, little research has examined these relations in youth and parents concurrently. Unique demands of dietary management among families of youth with type 1 diabetes (T1D) suggest the importance of investigation in this population. We examined the relations of parent and youth healthful eating attitudes and parent modeling with diet quality among youth with T1D. Youth (n=259) age 8 to 18 years (13.4±2.9) with diabetes duration≥1 year (6.4±3.4) and their parents completed self-report surveys assessing healthful eating attitudes (self-efficacy, perceived barriers, negative outcome expectations); youth reported parent modeling of healthful eating. Youth dietary intake from 3-day diet records was used to calculate the Nutrient Rich Foods 9.3 index, a measure of overall diet quality. The direct and indirect relations between parent and youth healthful eating attitudes and parent modeling on youth diet quality was examined using structural equation modeling in MPlus Version 5.21. Model fit statistics indicated very good data fit (χ^2 p=0.3, CFI/TLI=0.997/0.994, RMSEA=0.02). Parent negative healthy eating attitudes had direct effects on youth negative attitudes (standardized β=0.21, p=0.005) and diet quality (β=−0.23 p=0.002). Parent modeling had direct effects on youth negative attitudes (β=−0.35, p<0.001) and diet quality (β=0.15, p=0.03). Youth negative attitudes had a direct effect on diet quality (β=−0.16, p=0.04). Parent negative attitudes and modeling were associated (β=−0.4, p<0.001). No indirect effects on youth diet quality were statistically significant. Separate models for youth≤12 and≥13 suggested no age-related differences in these relations. Findings indicate an important role of parent attitudes and behavior in impacting youth healthful eating attitudes and diet quality, suggesting the importance of family-based interventions for improving diets of youth with type 1 diabetes.

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D-080

TRIBAL HEALTH PROFESSIONALS' AND AMERICAN INDIAN MOTHERS' PERSPECTIVES ON INFANT FEEDING PRACTICES: A COMPARISON

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Purpose: Infants in American Indian (AI) families are especially high-risk for the development of obesity. A major infant feeding concern for new AI mothers is the introduction of solid foods to their infants. However, AI mothers report that information from health professionals is not always suited to their individual circumstances. The purposes of this study were to determine the perceptions of: (1) AI mothers' infant feeding practices and beliefs; and (2) tribal health professionals' (HP) on assisting AI mothers with infant feeding.

Theoretical framework/subjects/methods: 12 focus groups were conducted with 14 tribal health paraprofessionals and 42 AI mothers of infants from six AI tribes in Michigan. Written consent for audio taping was obtained. Questions were developed using the Theory of Planned Behavior to identify mothers' perceived ability in infant feeding. Focus group transcripts were coded using the NVivo data management program and inter-rater reliability was established between two research assistants.

Results: Three main themes emerged: (1) infant feeding practices; (2) family support; and (3) useful feeding information. Tribal HPs reported inappropriate liquids given to infants; AI mothers reported external factors influencing exposure to unhealthy foods and liquids as barriers to feeding their babies healthy foods. Tribal HPs and AI mothers identified the family's advice as most important, and information that is individualized and culturally-congruent.

Conclusions: Developing an effective intervention to assist AI mothers transition their infants to solid foods can help promote appropriate infant growth during their first year of life. Tribal HPs need to incorporate nutrition messages that are culturally-congruent and sensitive for AI mothers. Inclusion of AI family members may enhance successful changes in infant feeding practices.

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D-081

APPEALING TO VANITY: DOES SEEING THE POTENTIAL APPEARANCE-BENEFITS OF FRUIT AND VEGETABLE CONSUMPTION MOTIVATE DIETARY CHANGE?

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Inadequate fruit and vegetable (FV) intake is linked to myriad health conditions, such as cardiovascular disorder, diabetes and cancer. There is an urgent requirement for more effective interventions in this area.

This study aims to develop and test a novel appearance-based dietary intervention targeting FV consumption. We attempt to motivate diet-change by appealing to people's vanity, illustrating how their appearance (specifically, skin colour) may benefit from a diet that is rich in FV.

Skin colour differences between high and low FV consumers were determined and this defined a 'FV colour transform'. 62 University students were then allocated to 3 groups receiving: no intervention; NHS dietary advice; or NHS advice in addition to viewing their own faces manipulated with this colour transform via a computer programme and printed photographs. Diet, lifestyle and health information were collected at baseline and again after 3 and 6 weeks, and skin spectrophotometry (CIE L*a*b*) was conducted at each of these sessions.

Controlling for ethnicity, makeup and fake-tanning products, FV consumption was associated with increased skin yellowness and redness. Individuals participating in the appearance-based intervention significantly increased the colour transform to optimize the appearance of health in their face. Controlling for baseline FV intake, a significant effect of group was seen, such that the group viewing their own face manipulated showed an improved diet relative to the other individuals. Increases in FV consumption over the course of the study significantly predicted increases in overall skin redness and yellowness. At wavelengths associated with carotenoid absorption, changes in facial skin reflectance are significantly correlated with changes in FV consumption.

Increased FV consumption confers measurable effects on skin appearance within 6 weeks. Seeing the potential benefits of FV consumption on skin colour can motivate improvement in diet.

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D-083

A RANDOMIZED CONTROLLED TRIAL OF A 'BETTER-WEIGHT & BETTER-SLEEP' INTERVENTION VERSUS A 'BETTER-WEIGHT' INTERVENTION IN PRIMARY CARE

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Research suggests that obesity is aggravated by inadequate sleep. We conducted a 12-week randomized trial to explore the feasibility & effects of integrating sleep and obesity management interventions based on cognitive-behavioral principles and the chronic care model. The local IRB approved the protocol. Sixty primary care patients were randomized to a weight management intervention (BW) or to a combination of the BW intervention & a better sleep intervention (BWBS). Mean change scores describe change trajectories & mixed repeated measures models tested time-trends & group X follow-up time interactions. BWBS patients were comfortable dealing with dietary, exercise, and sleep-issues. Baseline characteristics and dropout rates were balanced. BWBS patients lost more weight [12-week mean weight change score of −5.0% (↓) versus - 2.1% (↓) with a group x time interaction p-value=.04]; experienced less stress (12 week mean perceived stress score of 3.5 versus 5.0 with group x time interaction p-value=.06); and more coping self-efficacy (12 week mean coping self-efficacy score of 45.3 versus 37.6 with a group x time interaction p-value=.01) than the BW group. Results suggest that sleep hygiene education & sleep focused cognitive behavioral counseling can be feasibly incorporated into a primary care intervention for obesity. The data support the hypothesis that the BWBS intervention would reduce perceived stress, increase coping self-efficacy, and induce greater weight loss in a 12-week period. These preliminary results need to be replicated, & extended in a larger primary care based trial with a longer continuous intervention & follow-up period.

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D-084

VITAMIN D IS INVERSELY ASSOCIATED WITH DISTRESS AMONG OBESE WOMEN PARTICIPATING IN A BEHAVIORAL WEIGHT-LOSS TRIAL

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Empirical evidence suggests an inverse relationship between vitamin D and weight (Arunabh et al., 2003). Less is known, in contrast, regarding the association between vitamin D and mood, though there is some suggestion that vitamin D improves mood (Bertone-Johnson, 2009). In this study, we examined the predictive value of serum hydroxyvitamin D (25-OHD) in explaining distress and depression among obese adults enrolled in a behavioral weight-loss trial. 210 participants provided anthropometric data and blood samples repeatedly over time: at baseline and 6, 12, 18, and 30 months later. They also completed the Beck Depression Inventory (BDI) and the Profile of Mood States (POMS). Baseline demographic and clinical characteristics were: M (SD) age=49 (10); 52% female; 68% Caucasian; 3% Hispanic; M (SD) BMI=34.9 (2.8). Two linear mixed model regression analyses were conducted, one using BDI scores as the outcome and the other using POMS Total Mood Disturbance scores as the outcome, an indicator of global distress. Predictors included time, sex, age, race (non-Hispanic white versus other), weight in kg, and 25-OHD. Both outcomes improved over time ($p<.01$). Depression was associated with female sex (estimate=1.45, $p=.01$), heavier weight (estimate=0.05, $p<.01$), and lower 25-OHD (estimate=−0.05, $p<.01$). Distress was associated with younger age (estimate=−0.53, $p<.01$), non-white Hispanic race (estimate=−9.93, $p=.01$), heavier weight (estimate=0.23, $p<.05$), and lower 25-OHD (estimate=−0.35, $p<.01$). Post-hoc stratified analyses indicated that the associations between distress and 25-OHD, and distress and weight were stronger for females ($p<.05$) than for males ($p>.05$). These findings highlight independent predictors of negative affect during the weight-loss and maintenance processes and lend support for an inverse relationship between distress and 25-OHD, particularly among females who may benefit from both mood and 25-OHD monitoring.

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D-085

COLLEGE STUDENTS' DEFINITIONS OF AN "EATING BINGE" DIFFER AS A FUNCTION OF GENDER AND BED STATUS

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Binge eating disorder (BED) prevalence differs by gender. Both genders engage in comparable rates of binge eating, but gender differences in what constitutes a "binge" might contribute to the disproportionate likelihood of females meeting diagnostic criteria for BED. Using data from one university enrolled in the 2010 Healthy Minds Study, we investigated differences in "eating binge" definitions as a function of gender, BED status, and their interaction. In response to an open-ended question, participants provided definitions of an eating binge. Responses were coded into psychological/behavioral and food themes. Inter-rater reliability was high (97% agreement). The sample of 969 undergraduate college students was 64.0% female, 73.3% Caucasian, and ranged in age from 18 to over 40, with the majority (64.3%) in the 18-22 year old range; 9.3% (10.7% of women; 6.9% of males) met full criteria for BED. Females with BED were most likely to mention loss of control when defining an eating binge, $X^2(1)=4.47$, $p<.05$, and relative to males with BED, were significantly more likely to mention sweet foods, $X^2(1)=8.64$, $p<.01$; males with BED were significantly more likely to mention pizza, $X^2(1)=5.13$, $p<.05$. Among those without BED, females mentioned mood, $X^2(1)=7.87$, $p<.01$, type of food, $X^2(1)=10.10$, $p<.01$, and engaging in compensatory behaviors, $X^2(1)=8.32$, $p<.01$, significantly more than males. Results suggest that the diagnostic emphasis on binge eating as involving "loss of control" may lead to heightened diagnosis of BED among females. Notably, however, in terms of public health consequences, it is overeating, including binge eating behavior, but not necessarily BED, that leads to adverse consequences such as obesity and related health problems. Public health messages and interventions which convey binge eating as involving loss of control may not resonate with certain populations, and therefore, may be ineffective.

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D-086

ADDRESSING THE INTERSECTION: PREVENTING VIOLENCE AND PROMOTING HEALTHY EATING AND ACTIVE LIVING

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Where people live, work, learn, and play significantly impacts their health. When communities have walkable and bikeable streets, safe parks and playgrounds, grocery stores selling healthy foods and beverages, and neighbors who know one another, residents live healthier, safer lives. In communities heavily impacted by violence, strategies to promote health and well-being often do not have maximum impact. Food and activity advocates and practitioners are increasingly noting that violence undermines the effectiveness of their efforts to prevent chronic disease. Further, high rates of community violence disproportionately impact vulnerable populations, contributing heavily to overall health inequities. To understand the relationship between violence and healthy eating and activity, as well as solutions to address these complex issues, Prevention Institute conducted qualitative research consisting of interviews and strategic sessions with community representatives and prevention experts as well as a literature scan. Additionally, the Institute coordinated pilot projects, supported by the Healthy Eating Active Living Convergence Partnership, to reduce violence and promote healthy eating and activity at the neighborhood level through innovative policy and environmental change strategies. Launched in January 2010, the project brings together non-traditional partners from multiple fields and sectors including healthy eating and activity, preventing violence, youth, and public health. The 6 pilot sites are located in cities across the United States: Chula Vista, CA; Denver, CO; Detroit, MI; Louisville, KY; Oakland, CA; and Philadelphia, PA.

Prevention Institute will present the early outcomes of the pilot project, including successes and lessons learned through multi-field collaboration and environmental changes undertaken to address violence and chronic disease at the neighborhood level. In addition, Prevention Institute will present findings from qualitative research outlining the linkages between violence and healthy eating active living environments.

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D-087

URBAN/RURAL DIFFERENCES IN ADOLESCENT OBESITY

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Background The purpose of this study was to examine: 1) the influence of urban/rural residency on the prevalence of adolescent obesity across four US regions; and 2) variations in physical activity (PA), sedentary behaviors (SB), and obesogenic diet (OD) that may account for regional and urban/rural differences in obesity.

Methods Data Source: The 2005-2006 U.S. Health Behavior in School—Aged Children survey, a nationally−representative sample of 6th- to 10th-grade students. Nine US census divisions were collapsed into four regions. Urbanicity: Four categories of metropolitan status: Urban, urban fringe, towns, and rural areas. Obesity: Body mass index based on self-reported height and weight and categorized as non-obese/obese. PA: Days per week of PA lasting 60 minutes. SB: Hours per day engaged in screen-based activity. OD: Times per week consuming obesogenic foods (sweets, sugary soft drinks, chips, French fries). Analysis: Regression and logistic regression models were used to examine regional and urban/rural differences in obesity, PA, SB, and OD, with socio-demographic variables as covariates and design variables controlled.

Results Regional Comparisons: Relative to the South, only the Midwest (MW) had significantly lower obesity prevalence. Levels of PA were higher in the West than the South, while levels of SB and OD were lower. The Northeast (NE) had higher levels of SB than the South. Urban/Rural Comparisons: Obesity was more prevalent in towns in the MW and South. PA levels were higher in towns in the NE, but lower in rural areas of the NE and West and urban fringe areas of the West. SB were higher in rural areas of the NE and South. Diet was better in the Southern urban fringe, but worse in Southern towns.

Conclusions Patterns of PA, SB, and diet did not match patterns of obesity across US regions, but diet may explain differences in rural/urban patterns in the South. Longitudinal studies following adolescents across residency changes may clarify causal relationships between urbanicity and obesity.

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D-088

THE RELATIONSHIP BETWEEN NEIGHBORHOOD DISORDER AND PERCEIVED WEIGHT STATUS AMONG AFRICAN AMERICAN ADOLESCENTS

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Neighborhood disorder is associated with increased obesity risk among adults, however this relationship among adolescents is less clear. Using a theoretically grounded framework, this study examined whether neighborhood social and physical disorder were related to physical activity and perceived weight status among adolescents. Data were obtained from a study that evaluated the social and cultural factors that encourage adolescents to be physically active. The sample consisted of 56 African Americans age 12 to 15. Self-reported perceived weight status (underweight, somewhat underweight, normal weight, somewhat overweight, or very overweight) was the outcome variable. Adolescents reported the number of days they spent engaged in moderate to vigorous physical activity over a 7-day period and completed the Ross and Mirowsky measure of perceived neighborhood disorder. Perceived neighborhood disorder values were collapsed into tertiles of low-, moderate-, and high- perceived disorder. ANOVA analyses were used to assess significant differences in self-reported physical activity across neighborhood disorder groups and multiple regression analyses examined the effects of neighborhood disorder on perceived weight while adjusting for age, gender, physical activity, and socioeconomic status. There were no significant differences in self-reported physical activity across perceived disorder groups. Similarly, neighborhood disorder was not associated with perceived weight status ($P=0.784$). However, compared to their male counterparts, females were significantly more likely to perceive themselves as overweight ($P=0.003$). None of the additional covariates, age ($P=0.928$), self-reported physical activity ($P=0.778$), education ($P=0.908$) or income ($P=0.302$), were associated with perceived weight status. These findings indicate that neighborhood disorder may not be associated with perceived weight status and that there may be underlying social and cultural factors that contribute to perceived weight among African American adolescents.

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D-089

ADOLESCENT OBESITY AND CHRONIC DISEASE-RELATED HEALTH PRACTICES: MEDIATION BY BODY IMAGE

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Background: Chronic disease related health practices (CDRHP) tend to co-occur. In particular, among youth, overweight/obesity is negatively associated with physical activity (PA) and breakfast consumption, and positively associated with screen-based media use (SBM) and smoking. Given that health practices that are established during adolescence are likely to be sustained into adulthood, understanding the mechanism through which youth obesity is associated with CDRHP may inform prevention efforts. A possible mechanism could relate to body image. Overweight/obese adolescents are more likely to suffer from poor body image, which could be linked to a higher engagement in CDRHP.

Purpose: To determine whether poor body image mediates the association between overweight/obesity and CDRHP among adolescents.

Methods: Data are from the 2006 Health Behaviors in School-Age Children survey, a nationally representative sample of students in grades 6-10 during the 2006 school-year. Outcome variables included self-reported measures of PA, SBM, breakfast consumption and smoking. Body image was assessed with 5 items ($\alpha = .87$) asking for agreement/disagreement with statements about one's body. Weight status, determined from body mass index, was computed from self-reported height/weight and categorized using CDC 2000 growth charts. Stratifying on gender and controlling for age, race and SES, an initial model estimated the association between weight status and health practices. Mediation models that included body image were then compared to the initial model to determine the role of body image in the relationship between weight status and CDRHP.

Results: Overweight/obesity were negatively associated with PA and breakfast consumption, and positively associated with SBM and smoking, but the associations varied by gender and were stronger for obesity. Mediational analyses demonstrate that body image is a significant mediator of the relationship between overweight/obesity and CDRHP among boys and girls.

Conclusions: Encouraging overweight and obese adolescents to develop positive body images may result in lower engagement in CDRHP

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D-090

FAMILY AND PEER INFLUENCES ON UNDERSERVED ADOLESCENTS' OBESITY AND IMPLICATIONS FOR PARENT-BASED INTERVENTIONS

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Although families and peers play unique roles in promoting youth health behaviors, it is unclear how family and peer influences impact obesity in underserved (low-income, ethnic minority) adolescents. Using an ecological framework to better understand these social-contextual influences, the purpose of the present study was to determine the extent to which family variables (meal patterns, home availability of fruits and vegetables (F&V), social support for physical activity (PA) and healthy eating) and peer variables (social support for PA and healthy eating) are associated with adolescent weight status (body mass index; zBMI). It was hypothesized that negative family meal patterns, less home availability of F&V, and less family and peer support for PA and healthy eating would significantly predict greater adolescent zBMI. Participants were African American adolescents (n=45, 51% girls, 12.6±1.2 years, 58% income≤$24,000, 51% overweight or obese) from low-income communities in the Positive Action for Today's Health (PATH) trial. Measures included objective height and weight (for calculation of BMI z-scores using CDC guidelines), adolescent-reported family meal patterns, caregiver-reported home availability of F&V, and adolescent-reported support from family and peers for PA and healthy eating using validated scales. After controlling for sex, age, and income, the overall regression model was significant (F (9,35)=2.39, $p<.05$) and accounted for 38% of the variance in adolescent zBMI. Lower home availability of F&V ($p<.05$) but greater family support for healthy eating ($p<.05$) predicted greater zBMI. None of the peer variables were significant. These findings highlight the continued importance of families in underserved adolescents' weight outcomes. Given the finding that positive family support for encouraging healthy eating was associated with higher adolescent zBMI, future obesity prevention efforts should target parents as primary agents of change by addressing specific parenting skills for preventing weight gain.

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D-091

YOUTH ADVOCACY FOR OBESITY PREVENTION: PROCESS EVALUATIONS

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An emerging but under-evaluated obesity prevention strategy is engagement of youth in advocacy for environment and policy change. Two youth advocacy groups in San Diego, CA pilot tested evaluation processes. For a class project, 8th graders (n=17 boys and girls; 100% ethnic/racial minority) completed two walk audits, photographed barriers to walking, and presented findings to transportation engineers. A 28-item survey to assess skills and attitudes about walking and advocacy was developed and administered. Responses ranged from 0 (Not useful/Strongly disagree) to 5 (Very useful/Strongly agree). Youth reported moderate engagement with the audit and advocacy process (mean score range: 2.23–4.14). Students rated photo-voice activities as most useful and valued that they could be a voice for change. Most youth did not report changes in attitudes or self-efficacy for advocacy. The moderate engagement results suggest that being required to complete projects may lead to less enthusiasm than among a voluntary group. Traffic engineers responded positively and within 2 months they fixed or planned repairs on 5 of 13 of the identified problems. These results suggest that youth advocacy can lead to environmental changes. The second study piloted a new survey with a group (n =10 6th and 7th grade girls; 100% ethnic/racial minority) who volunteered to complete audits of fast food outlets in the neighborhood around their school. Baseline data showed that most had previously engaged in advocacy with peers or family members but not with decision-makers. Half believed they would be listened to by a decision-maker. Most believed their group could influence people's decisions about physical activity and nutrition. The survey was acceptable to the students. Next steps include comparing baseline and follow-up surveys, and increasing sample sizes to assess scale reliability and validity.

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D-092

CHALLENGES FACED BY COMMUNITY HEALTH WORKERS ENGAGED IN PROGRAMS FOR LATINO IMMIGRANTS IN THE SOUTHEASTERN UNITED STATES

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Background: Although Community Health Worker (CHW) interventions are increasingly being employed for a large number of health conditions, a more full understanding of the challenges associated with implementation is only now emerging. Issues of CHW training, burnout, and lack of professional support have been highlighted as important barriers. In this study, we sought input from CHWs regarding challenges and needs to inform the development of a CHW support system.
Methods: We conducted 8 semi-structured interviews with community health workers from 2 ongoing health promotion programs within a Latino community in the Southeast. Interviews were conducted by a bilingual, bicultural interviewer. Transcripts were analyzed by 2 independent reviewers for themes using a combined inductive-deductive approach.
Results: All CHWs were female; mean age was 37, 75% were married, 90% high school education or greater, 80% were from South America, 20% from Mexico. Half of the women worked full time as CHWs, for the others activities were performed as volunteers. Challenges faced by CHWs included gaining confidence in their role, learning health information well enough to teach others, teaching individuals with low literacy, cultural barriers/language barriers, handling unanticipated situations and few health care resources for immigrants. Women reported a need for increased interaction with health care providers, more integration/buy-in from the medical system, and a desire for continuing education.
Conclusion: Community health workers could benefit from increased interaction with the medical system and with health care providers. Tools that facilitate that communication may also strengthen CHWs' role in the community.

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D-093

MOTHERS' CONCERN ABOUT OFFSPRING'S WEIGHT AT ADOLESCENCE AND ITS RELATIONSHIP TO OBESITY BY AGE 18

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Objective: To determine how a mother's weight history from pregnancy through the succeeding 15 years is related to her awareness and concern about her offspring's weight from adolescence to adulthood.
Methods: We reviewed mothers' medical records from pregnancy, postpartum, and the succeeding 15 years to assess weight changes. We also reviewed their offsprings' medical records from birth to age 18. Mothers were surveyed when their children were age 15 to determine predictors of a mother's perception of her child's discomfort with body size (CHILD DISCOMFORT), concern about her child's excessive weight gain (WEIGHT GAIN CONCERN), and obesity of the child at age 18 (AGE 18 OBESE).
Results: 795 women were studied in pregnancy; 777 remain after exclusions due to deaths or twin births. Of these, 492 (63%) completed the survey. Mothers accurately categorized their child's overweight or obesity status 64% of the time, based on actual status from the medical record. After adjusting for mother's obesity status at survey, the best predictors of CHILD DISCOMFORT were: female(RR=3.4), child obese at age 15 (RR=7.5), child less or similarly active as peers (RR=4.7), and mother uncomfortable with own body size (RR=2.3). The best predictors of WEIGHT GAIN CONCERN were: mother obese at survey (RR=2.6), mother's gain of 10+ pounds over the past 15 years (RR=3.1), and mother's perception of child discomfort (RR=2.3). Finally, the best predictors of AGE 18 OBESE were: male (RR=2.9), mother obese at survey (RR=7.9), and mother's perception of child discomfort (RR=11.0).
Conclusions: Mother's perception of her child's discomfort with body size was a very strong predictor of child's obesity status as an adult. Mothers thought their daughters had more discomfort with body size, whereas males were more likely to be obese as adults. Mother's concern for child's weight gain was not independently predictive of being an obese adult in an adjusted model. A mother's own experience with her weight and weight gain are associated with concern for child's weight gain.

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D-094

LACK OF SOCIAL SUPPORT FROM FRIENDS PREDICTS SUCCESSFUL WEIGHT LOSS IN A GROUP-BASED PROGRAM

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Social support, considered essential to behavioral weight-loss programs, is rarely assessed for its potential to predict intervention outcomes. Our previous work evaluating a measure of perceived social support and sabotage for healthy eating and physical activity (8 subscales) indicated adequate to excellent psychometric properties as well as low initial levels of support among obese women in a randomized weight management trial. Here, we evaluated predictive validity, i.e., whether the subscales predicted subgroups of women who were successful at losing weight in one of two 6-month, group-based weight-loss programs (N=267 women; BMI 32.1±3.5). Signal detection, an empirically-driven recursive partitioning analysis, identified two subscales—support from friends for healthy eating and support from family for physical activity—which predicted three clinically meaningful subgroups ranging widely in the likelihood of losing≥5% of initial weight at 6 months (46-80%). As might be expected, women who 'never' experienced family support (13% of sample) were the least likely to lose weight (46%) whereas women who experienced more frequent friend and family support (38% of sample) were more likely to lose weight (72%). However, of interest, women who 'never' experienced friend support (49% of sample) were the most likely to lose weight (80%). These women, representing the largest subgroup, may have particularly benefited from the group-based program given the lack of support in their usual social environment. There were no interactions between the subscales and type of weight-loss program. Results support the predictive validity of the social support measure and suggest that heterogeneity in social support, especially from friends, could inform personalized weight-loss interventions.

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D-095

A WEIGHT LOSS INTERVENTION FOR ADOLESCENT GIRLS: AN EXPLORATION OF ADDRESSING SELF-ESTEEM

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The adolescent obesity rate has more than doubled during the past thirty years and for those aged 12-19 years, prevalence of obesity increased from 5.0% to 17.6%. As observed in adult weight loss interventions, pediatric weight loss interventions typically lead to approximately 10% body weight reduction and consequent re-gain of lost weight. Interventions for weight loss often target diet and physical activity. However, there has been a recent call for more comprehensive programs. The primary aim of this exploratory study was to evaluate the effect of an 8-session (4 week) weight loss program incorporating self-esteem promotion alongside of nutrition and physical activity improvements among obese adolescent girls. Participants (n=12) were recruited from the Weight Management and Wellness Center of Children's Hospital of Pittsburgh and were matched on Body Mass Index (BMI), age, and race with participants from a 12 session (12 week) behavioral intervention targeting physical activity and nutrition. A repeated measures analysis of variance was used to compare BMI change between the two groups. No significant difference was seen between studies (F(1, 12)=3.259, p=.101). However, there was an average decrease in BMI in both groups and the self-esteem intervention resulted in a greater decrease (1.6%) in BMI than the traditional weight-management-only approach (0.9%). This is particularly encouraging as the self-esteem program was considerably shorter in length. While further research is needed, these findings support the inclusion of psychosocial elements to improve the efficacy of weight loss programs.

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D-096

SELF-COMPASSION IN PATIENTS WHO ARE OBESE AND HAVE PERSISTENT MUSCULOSKELETAL PAIN: RELATIONSHIP OF SELF-COMPASSION TO PAIN- AND WEIGHT-RELATED FACTORS

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Self-compassion is a positive psychological factor that entails qualities such as kindness, understanding towards oneself, and mindfulness, and may influence pain- and weight-related factors among obese patients with persistent musculoskeletal pain. Patients who are obese and have musculoskeletal pain often find themselves in a vicious cycle of increased pain and increased weight gain which may make it difficult to be self-compassionate. However, self-compassion may help obese patients with persistent musculoskeletal pain better manage challenges related to their pain and weight. The aim of this study was to examine the relationship of self-compassion to pain-related disability and weight-management factors (i.e., overeating, emotional overeating, weight-management self efficacy) in a diverse sample (N=89; 56% White, 41% African American; 72% Female; M=54 yrs) of obese (M=37 BMI) patients diagnosed with musculoskeletal pain. We hypothesized that higher levels of self-compassion would be associated with lower levels of pain-related disability, lower levels of overeating, lower levels of emotional overeating, and higher levels of self-efficacy for weight management. Correlational analyses demonstrated that persons scoring high on self-compassion were less likely to report pain-related disability (r=−0.25, p<0.05), binge eating (r=−0.40, p<0.01), and emotional overeating (r=−0.28, p<0.01), and more likely to report higher weight-related self-efficacy (r=0.33, p<0.01). The results indicate that self-compassion may be important in explaining the variability of pain- and weight-related factors among obese patients with persistent musculoskeletal pain. These findings highlight the potential benefit of positive psychological factors, such as self-compassion, on pain- and weight-related variables for patients working to manage both persistent pain and obesity.

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D-097

THE ROLE OF HEALTH KNOWLEDGE, SELF-EFFICACY AND LITERACY IN PREDICTING HEALTH BEHAVIORS IN YOUTH

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Health knowledge, health literacy, and self-efficacy are important potential health behavior predictors. This study aimed to explore the additive role of these constructs in predicting health behaviors related to nutrition and physical activity in adolescents. Public high school students (n=469; 90% Hispanic; mean age 15.9 yrs), were surveyed on their health literacy at baseline and their health behaviors, knowledge, and self-efficacy over a 6 week period. Hierarchical multiple regression analyses were run to examine the contribution of these constructs in predicting health behaviors. While previous health behaviors accounted for the majority of the variance (R2s=.10–.46, ps<.01), other constructs also significantly added to the model. Physical activity—related self-efficacy significantly added to the prediction of involvement in sedentary behavior (b=−.04, p=.04; r2=1%), aerobic activity (b=.11, p<.01, r2=2%), strength training (b=−.11, p<.01, r2=2%), and sports (b=.63, p<.01, r2=1%). Dietary—related self-efficacy significantly added to the prediction of weekly intake of soda (b=−.02, p<.01, r2=2%), fruit (b=.02, p<.01, r2=1%), vegetables (b=.02, p=.01, r2=1%), and 100% juice (b=−.02, p<.01, r2=1%). Health literacy significantly added to the ability to predict weekly intake of fatty foods (b=−.05, p<.01, r2=2%). Though previous behaviors were the best predictors of future health behaviors, it appears that self-efficacy and, to a lesser degree, health literacy have implications for future health behaviors. Interventions aimed to change health behaviors should promote area specific self-efficacy as well as increase health literacy. In youth, the importance of promoting health education outcomes beyond knowledge is highlighted by these results. Supported by SEPA NCRR NIH grant 5 R25 RR023279.

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D-098

PARENTAL REPORTS OF WEIGHT-BASED TEASING AND WEIGHT-CONTROL PRACTICES AMONG THEIR CHILDREN

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Previous research has found a significant and positive relationship between weight-based teasing and self-reported dieting behaviors. Specifically, children who report being teased about their weight also report engaging in weight control behaviors. Research has yet to examine the relationship between weight-based teasing and parental reports of promoting weight control in their teased children. The current study examined this relationship among a stratified random sample of 1,500 parents from all 55 counties in West Virginia. Kendall's tau correlations and logistic regression were performed to test the hypothesis that a relationship was present between parental reports of child weight-based teasing and parents engaging children in weight-control practices (parent placed child on diet, had child skips meals, skip snacks, gave child diet pills/herbal supplements). Child grade level and gender were also examined as covariates. Results revealed that gender was not correlated with whether the child had been teased; however, all dependent variables included in the model were correlated with the dependent variable except for giving child diet pills/herbal supplements ($ps<.05$). Additionally, children in 9th grade were more likely to be teased than children in K, 2nd, 5th, and 7th grades. Logistic regression analyses indicated that parent placing child on diet significantly and negatively predicted parental reports of their child having been teased about his or her weight ($p<.001$).This result is in contrast to the research examining child reported weight-based teasing and dieting behaviors. Further, the model performed well in correctly classifying parents (91.8% overall correctly classified).

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D-099

THE RELATIONSHIP BETWEEN BODY DISSATISFACTION, DEMOGRAPHIC CHARACTERISTICS, AND HEALTH BEHAVIORS AMONG AFRICAN AMERICAN WOMEN WHO VISIT BEAUTY SALONS

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Understanding the factors that are related to higher obesity levels among African American (AA) women is important to future intervention efforts. In addition to diet and physical activity, perceptions of body image and body dissatisfaction may be contributing to obesity levels among AA women. We investigated baseline associations between body dissatisfaction, demographic characteristics, and health behaviors as part of a larger intervention trial.

The sample was AA women, 18 and older, who visited a participating salon enrolled in a community-based intervention study based in beauty salons, and who completed a baseline survey that assessed body image (adapted from Williamson et al., 2000), demographic characteristics, and health behaviors (i.e., dietary habits and physical activity) ($N=660$). Using analysis of variance (ANOVA) we investigated the relationship among body dissatisfaction, demographic characteristics, and health behaviors.

The average age was 39 and over 40% were categorized as obese. Women aged 40–49 were more dissatisfied with their body size compared to women 18-29, 30-39, and 50+ ($F(3,606)=4.20$, $p<.01$). There were no differences by education or income. Married women were more dissatisfied with their body size compared to single women ($F(1,625)=4.89$, $p<.05$). Those more dissatisfied also reported more financial difficulties ($F(1,627)=4.81$, $p<.05$). Overall, those more dissatisfied reported poorer general health ($F(1,598)=31.67$, $p<.001$).

Additionally, dissatisfaction scores were higher among women who reported not consuming the recommended 5 daily fruits and vegetables ($F(1,628)=4.73$, $p<.05$) or not avoiding high fat foods ($F(1,633)=6.68$, $p<.05$).

Although these associations are based on baseline measures, and causal relationships cannot be determined, there is support for targeting body image as an intervention leverage point to promote healthy weight. Future directions include developing interventions that target body dissatisfaction and promote healthy eating and physical activity.

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D-100

APPLICATION OF A SMALL CHANGE APPROACH TO WEIGHT LOSS IN A RESIDENTIAL CAMP FOR ADOLESCENTS

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It is estimated that 17% of US adolescents are considered obese. In rural eastern North Carolina, where there is less access to care, almost twice as many adolescents are considered obese. With childhood obesity clearly linked to early morbidity, developing effective treatments to help adolescents achieve and maintain a healthy weight is a public health priority. Therefore, we developed a one year program consisting of a 3-week initial residential health camp followed by a 9-month follow-up program to address pediatric obesity. The camp utilizes a "small change" approach, which encourages small, sustainable changes in diet and exercise that are camper-selected and will result in gradual weight loss. Campers are encouraged to make healthy choices regarding food types and portions within a family-style dining environment. They wear pedometers to measure activity and they learn new games and sports. Campers receive nutrition classes, group therapy, cognitive behavioral therapy, and weekly individual therapy sessions. The purpose of the present study was to examine the impact of the initial phase of the program. Nineteen obese (Initial BMI $M=39.45$, $SD=9.99$) male ($n=6$) and female ($n=13$) adolescents, ages 12-18 years ($M=13.84$, $SD=1.57$), participated in the camp in rural North Carolina. Upon completion, campers had lost a significant amount of weight ($M=-2.38$ kg, $SD=1.48$ kg, $p<.0001$). Average BMI upon completion ($M=38.53$, $SD=9.97$) was significantly lower than initial BMI (Change in BMI $M=-2.08$, $SD=.60$, $p<.0001$). Currently, follow-up comparing in-person with telephone-based follow-up is ongoing to assist adolescents across the following year. Results suggest that a small change approach applied in a residential camp setting may be an effective means of helping adolescents to achieve initial weight loss. However, more research is needed to determine the effectiveness of this program across time.

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D-102

THE EFFECT OF PROGRAM IMPLEMENTATION ON OCCUPATIONAL SUN PROTECTION WHEN DISSEMINATING AN EVIDENCE-BASED WORKSITE SUN SAFETY PROGRAM

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Implementation of a successful occupational sun protection program was assessed at 69 U.S. and Canadian ski areas in a trial comparing dissemination strategies. Association of program implementation with employees' message exposure (i.e., recall of sun safety messages) and sun protection behavior assessed in a posttest survey ($n=2{,}228$ employees: 64%<age 35; 93% White; 5% Hispanic; 64% male; 69% worked outdoors) was analyzed adjusting for clustering within ski areas. Program implementation was measured with a validated on-site observation protocol in which program materials in use were recorded. Employees' message exposure was elevated at two levels of program use: <4 (55% exposed), 4-8 (68%), and 9+ (82%, $p=.01$) program items in use. At worksites using 9+ program items (versus 4-8 or <4 items), employees more frequently used sunscreen (3.43, 3.08, 3.14 on 5-point scale; $p=.04$) and lip balm (3.96, 3.46, 3.44; $p=.04$), limited midday sun exposure (2.57, 2.42, 2.31; $p=.01$), carried sunscreen, hat and sunglasses/goggles at all times (4.05, 3.78, 3.80; $p=.03$), and used all sun protection behaviors combined (23.69, 22.58, 22.37; $p=.01$). Employees exposed to messages more frequently wore sunscreen (recalled messages=3.32, did not recall=2.97, $p<.01$), lip balm (3.60, 3.40, $p<.01$), and sunglasses/goggles (4.53, 4.31, $p<.01$), carried sunscreen, hat and sunglasses (3.97, 3.68, $p<.01$), and performed all sun protection behaviors (23.3, 22.2, $p<.01$). The effects of message exposure on sun protection was mediated by increased perceived risk and importance of skin cancer, sun protection knowledge, and self-efficacy for sun protection ($p<.05$). Methods to maximize implementation fidelity are needed to achieve benefits when disseminating evidence-based prevention programs.

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D-104

SUPPLEMENTAL CAREGIVER INVOLVEMENT AND MEDICATION ADHERENCE OF YOUTHS WITH INFLAMMATORY BOWEL DISEASE

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Suboptimal oral medication adherence is widely documented in youths with inflammatory bowel disease (IBD). Research has shown that youths' and primary caregivers' levels of involvement in medication taking are factors that influence medication adherence. The role supplemental caregivers (i.e., an immediate/extended family member who is not one of the primary caregivers) play in medication adherence of teens with IBD has not been examined. The purpose of this study examined how common the involvement of supplemental caregivers is in IBD management and the relationship between having a supplemental caregiver involved in IBD management and medication adherence as measured via electronic monitoring. A second objective explored specific areas of involvement of supplemental caregivers. Thirty teens ages 11-18, 63% male and 93% Caucasian, participated. Youths used a MEMS cap for their medication for 6 months and were classified as adherent (≥80% of doses taken) or nonadherent (<80%). Youths completed the 23-item IBD-FRQ that assessed levels of involvement of child, mother, father, and any additional caregiver specified by the youth in IBD management. The most frequently reported supplemental caregiver was grandmother (36%) followed by sibling, aunt, biological father, and uncle. A logistic regression examined relationships between the presence or absence of a supplemental caregiver and adherence. Results suggest that youths with a supplemental caregiver involved in their IBD management were 5.3 times more likely to be nonadherent than were youths who did not report having a supplemental caregiver (p=.074). Analyses of supplemental caregiver involvement suggests their greatest involvement was related to knowing medication side effects, but they were less involved in other medication-related tasks. Given the risk for nonadherence in families with supplemental caregivers involved in IBD management, more research that examines mediators and moderators of this relationship is warranted.

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D-105

OPEN-ACCESS MENTAL HEALTH SERVICES IN SPECIALTY MEDICINE: BRIDGING TWO WORLDS

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Introduction: Over the past several years there has been considerable support throughout the Department of Veterans Affairs for the integration of mental health services within Primary Care (PC). In efforts to continue to bridge the gap between mental health and medicine a need was identified within outpatient specialty medicine where mental health services have traditionally been limited. As a result, this medical facility approved funding for a fulltime psychologist position to provide mental health services for all outpatient specialty clinics (e.g., Pain Clinic, Oncology, Endocrinology, etc…) based on evidence-supported principles all ready utilized in PC.

Method: The psychologist was strategically placed in clinics where the need for mental health services was expected to be the greatest (e.g., Pain Clinic, Oncology, etc…). While there, the psychologist employed an open-access approach where referrals were received either through warm hand-off, via paging, or by telephone with the psychologist being available to see the patient during the same visit with their specialty provider.

Findings: A total of 176 patients were tracked for this study. The findings revealed that approximately 42% of those referred had never received mental health care at this facility. While 56% of those seen only required a one-time intervention, approximately 29% were referred on to specialty mental health. An approximately 72% consult completion rate was observed for those referred for specialty mental health.

Implications: Preliminary findings suggest that employing an open-access model can provide a cost-effective approach to increasing accessibility to mental health services in outpatient medicine clinics. At the same time, such an approach helps to reduce the demand on specialty mental health (e.g., outpatient mental health, PTSD clinics, substance abuse treatment, etc...) while also reducing the rates of missed opportunities in those clinics. Additional benefits include changing the culture within specialty medicine regarding mental health issues, increasing the specificity and accuracy of consults placed, and reducing secondary costs resulting from a lack of treatment for mental health concerns.

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D-106

PREDICTIVE GENOMIC RISK ASSESSMENT IN PREVENTIVE CARE: PATIENT AND PHYSICIAN EXPERIENCES OF A DIRECT-TO-CONSUMER APPROACH

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We evaluated the experience of integrating direct-to-consumer (DTC) predictive genomic risk assessment (PGRA) into a preventive health visit. Eleven physicians and 61 patients in the PGRA arm of a larger randomized controlled trial of PGRA completed a survey after each office visit that assessed the process, preliminary outcomes, and perceived value of the testing experience. Most patients (89%) reported viewing their pg result online. Of those, 97% reviewed a summary page for the 12 diseases for which they received information, and 90% reviewed detailed information on at least one of the diseases. While none used the online genetics counselor, 90% discussed their results with their physician and 82% with a family member. The most frequently cited responses to finding out results were curiosity (64%), encouragement (22%), and worry (16.9%). Over half reported plans to make lifestyle changes based on their PGRA (53%), with 66% reporting these changes were not suggested by their physician. While 59% reported that PGRA added some or great value to their health visit, physicians were more skeptical, and 69% of the time they reported that the PGRA added little or no value to their patient's visit. Physicians also reported that the office visit took more time than usual due to the conversation of PGRA 82% of the time. Our results from one of the first clinical trials of DTC PGRA suggest that patients are taking the time to evaluate their results, that they see value in and are reacting to PGRA to the extent that they report intention to change health behaviors. The difference between patients' and physicians' perceived value of PGRA may also highlight a need for improved communication in clinic visits where meaning and limits of PGRA are discussed.

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D-107

PREVALENCE RATES OF ANXIETY, DEPRESSION, AND COGNITIVE DIFFICULTIES IN PATIENTS WITH MULTIPLE SCLEROSIS FROM AN OUTPATIENT CLINIC

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There has been little known about the prevalence rates of anxiety and depression, and their relation to cognitive difficulties in patients with multiple sclerosis (MS). The few studies that have been published have indicated that anxiety is commonly comorbid with depression for individuals with MS, and may occur with greater frequency than depression. There is also little known about the relationship between cognitive difficulties and anxiety in patients with MS. We examined the prevalence rates of self-reported anxiety, depression, and cognitive symptoms for 101 patients at an outpatient MS Center. The frequency of self-reported anxiety and depression symptoms were measured by the Hospital Anxiety and Depression Scale (HADS). In this study, the prevalence rates of clinically significant anxiety symptoms were 32.1%. The prevalence rates for clinically significant symptoms of depression were 21.1%. The frequency of self-reported cognitive difficulties, as measured by the Multiple Sclerosis Neuropsychological Screening Questionnaire (MSNQ), was 30.3%. In addition, there were significant correlations between anxiety and reported cognitive difficulties ($p<0.01$), depression and cognitive difficulties ($p<0.01$), and anxiety and depression ($p<0.01$). There is a need to further examine anxiety, depression, and cognitive difficulties for individuals with MS in order to determine individuals who may be at greater risk for developing these conditions; these individuals may benefit from early intervention.

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D-108

GENETIC VARIANTS AND DELAYED MENARCHE

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Genes within the human cytochrome P450 (CYP3A) are involved in the metabolism of estrogen and testosterone and it is suggested that they are associated with early menarche onset in healthy girls. However, such an association has not been investigated in late sexually maturing girls who have sickle cell disorders (SCD). A comparative design was used to investigate variants within the CYP3A4 gene with a nonrandomized purposive sample (n=40) late sexually maturing African American girls ages 14 to 21 years. Four groups of girls included girls (1) with SCD and menstruating; (2) with SCD and not yet menstruating; (3) without SCD and menstruating; and (4) without SCD and not yet menstruating. Menstrual status, have or have not experienced menarche, was ascertained through self-report. Tanner's pictorial stages were used for girls to provide a self-report of pubic hair growth. DNA was extracted from saliva samples and the samples were collected using the Oragene DNA self-collection kit. Several variants were genotyped within the CYP3A4 gene. The CYP3A4 1A/B single nucleotide polymorphism (SNP) was found at position −290 in the promoter region of the gene. For haplotyping, the following SNPs were genotyped: rs2242480, rs2687117, rs4987159, rs2738258, rs7801671, and rs2687105. All seven of these SNPs were genotyped using TaqMan allele discrimination technology. Chi-square tests showed the study's two categorical variables (genetic variants and SCD/menstrual onset group) were associated. Findings from the project are being used to develop studies that will use hypotheses to predict relationships and effects of gene variants on menarche onset in girls with sickle cell and associated health problems.

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D-109

RACIAL/ETHNIC DISCRIMINATION AND HEALTH BEHAVIOR AMONG AFRICAN-AMERICAN ADULTS

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Studies have found strong relationships between racial discrimination and health behaviors among African American adults. Exposure to the stress of discrimination is associated with increased cigarette smoking and with failure to engage in cancer screening, these risk behaviors more prevalent among Blacks than Whites. There are no studies of the possible role of discrimination in diet, and only one study (Shariff-Marco et al., 2010) examined its role in physical activity (and found no relationship)among Blacks. Thus, we explored the role of discrimination in fruit/vegetable consumption (FVC) among Blacks for the first time, and examined its role in vigorous physical activity (PA) and cigarette smoking as well. We hypothesized that discrimination would be positively associated with smoking, would have no relationship to PA (as in prior studies), and formed no hypotheses on its role in 5+ FVC.

Participants were a random, statewide sample of N=2118 Black adult residents of California, who were sampled door-to-door on weekends by Black surveyors and asked to complete a brief, anonymous, written health survey for $10. Standard questions on FVC were asked (e.g., consumption of juice, salad, etc.) and 5+ daily FVC calculated. Current cigarette smoking (yes/no), and engagement in vigorous PA in the past month (yes/no) were assessed using well-known items. Recent racial discrimination was assessed by a single item that has been used in prior studies.

Three hierarchical, logistic regressions were conducted (one for each outcome), with demographic variables (gender, age, income, education) entered on the first step, and discrimination on the second. Results revealed that discrimination was positively associated with smoking (OR=1.33, 95% CI=1.04–1.70) and vigorous PA (OR=1.34, 95% CI=1.06–1.70), but unrelated to 5+ FVC (OR=1.23, 95% CI=0.96–1.59). These results suggest that discrimination may be associated with both increased unhealthy (smoking) and increased healthy (PA) behaviors among Blacks. Implications for research and interventions are explored.

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D-110

THE TRAJECTORY OF HEALTH PROMOTING BEHAVIORS FOR PERSONS WITH MULTIPLE SCLEROSIS ACROSS 13 YEARS

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Multiple Sclerosis (MS) is a chronic disabling condition affecting the central nervous system. While the degree of functional impairment and disease trajectory vary considerably, symptoms often include muscle weakness, fatigue, numbness, gait disturbance, visual disturbances, cognitive impairment, bowel and bladder problems, and spasticity. Previous research has shown that health promoting activities can help reduce the burden of chronic conditions such as MS; however most studies utilize a cross-sectional design and therefore provide limited information about the long-term trajectory of health promoting behaviors. We report survey data across 13 years from persons recruited with the help of two chapters of the National Multiple Sclerosis Society. The average age of the 453 persons who remained in the sample through 2009 was 60 years. They had been diagnosed with MS an average of 23 years. They were 84% female; 90% were non-Hispanic White. Half had post-secondary education. One third were unemployed due to disability. The Health Promoting Lifestyle Profile II measured self-reported health behaviors. The Incapacity Status Scale (ISS) assessed MS-related functional impairment with higher scores indicating greater limitations. A repeated measures analysis of variance was performed using the SPSS GLM procedure. Statistically significant positive increases were found for 3 scales: Stress Management (F=5.3, partial eta squared=.18), Health Responsibility (F=9.8, partial eta squared=.28), and Nutrition (F=6.5, partial eta squared=.20). Scores on the Physical Activity, Spiritual Growth, and Interpersonal Relationship Scales showed no statistically significant changes across time. ISS scores also increased significantly (F=4.7, partial eta squared =.16). The findings suggest that many individuals with MS are able to maintain, and in some areas improve their health promoting behaviors, even in the face of increasing functional impairment.

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D-111

FREQUENCY OF ADOLESCENT SELF INJURY

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At any one point in time, a substantial proportion of youth lacking in support or adaptive coping skills may be at risk for trying self-injury, some of whom will develop a chronic behavioral condition. The purpose of this study was to identify predictors of the frequency of self injury among 1748 sixth and eighth graders using the middle school Youth Risk Behavior Survey (YRBS). Among youth who self-reported having ever tried self-injury (N=495; 28%), 35% had harmed themselves once and 35% had harmed themselves more than once during the past month. Multilevel modeling using HLM.6 was used to identify statistically significant predictors of the frequency of self injury. Those who self injured once (compared to never) were more likely to demonstrate abnormal eating behaviors (OR=3.69, 95% CI 1.70, 8.05), exposure to peer self-injury (OR=1.72, 95% CI=1.21, 2.44), and higher level of suicidal tendencies (OR=1.63, 95% CI=1.33, 2.01). Those who had self injured more than once (compared to never) were more likely to demonstrate higher levels of suicidal tendencies (OR=2.84, 95% CI 2.27, 3.55), inhalant use (OR=2.52, 95% CI=1.47, 4.31), and lower levels of belief in their possibilities (OR=0.61, 95% CI=0.42, 0.88). Finally, those who self injured more than once (compared to once) demonstrated higher levels of suicidal tendencies (OR=1.74, 95% CI 1.37, 2.21). Overall, results suggested the presence of two basic groups of youth—youth who may be catching a cultural trend and youth who have underlying mental health issues.

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D-112

PROVIDERS PERSPECTIVES ON EVIDENCE BASED INTERVENTIONS FOR CHRONIC DISEASE AND MINOR DEPRESSION AMONG LATINOS

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The growing concern over the gap between research and practice reiterates the need for advancing implementation science. The purpose of this qualitative study was to gather provider's perceptions about adopting and implementing an evidence based intervention (EBI), Tomando Control de su Salud, for chronic disease and minor depression among Latinos from CBO directors (n=6), physicians (n=9), nurses (n=11) and lay health leaders (n=11). Data from semi-structured interviews were analyzed using Altas.ti, 6.0. Participants reported limited experience with EBIs (Physicians=0; Nurses=2; CBO Directors=0; Lay Health Workers=2). Participants suggested organizational changes necessary for adopting Tomando (e.g., referral system, dedicated space). Numerous implementation facilitators were discussed—client (e.g., promotion from a trusted source), organizational (e.g., support from administrators), and personal level (e.g., additional time). Finally, barriers to adoption were discussed including client level (e.g., emphasis on fulfilling basic needs), cultural barriers (e.g., beliefs about depression), program related (e.g., 6-week timeframe), provider level (e.g., lack of decision making power), and organizational level (e.g., rotation of providers). Findings informed the development of a survey designed to elicit needs and preferences of prospective clients. Results guided the augmentation of Tomando (e.g., addition of 'Priming' and 'Sustaining' components to address identified needs of underserved Latinos).

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PREVENTING GIRLS' EARLY SUBSTANCE USE AND SEXUAL INTERCOURSE: THE ROLE OF RELATIONAL AGGRESSION

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BACKGROUND: Early substance use and sexual activity are associated with many deleterious health outcomes in adolescence and adulthood, and thus are prevention targets. However, past work has focused on males, suggesting that (overtly) aggressive boys may be at highest risk for later health risk behaviors (HRBs). Developmental research suggests that girls may engage in relational (e.g., social exclusion, gossip) rather than overt forms of aggression (e.g., hitting). Girls' HRBs are also increasing two to three times more rapidly than are boys'. This study examined how forms of aggression may be differentially associated with drinking, smoking, and sexual intercourse for 9th grade boys and girls. METHOD: A total of 167 9th graders (56.3% female, 44% White, 29% African American, 19% Latino/a, 8% other ethnicities) were recruited from a rural Southeast school district. Using standard sociometric nomination procedures, adolescents reported peers' relational and overt aggression by providing unlimited nominations from a roster of grademates. Adolescents self-reported lifetime smoking, drinking, and sexual behaviors, using items from the CDC YRBSS. RESULT: Regression analyses revealed that peer-reported relational aggression, but not overt aggression, was associated with adolescents' reports of smoking and drinking (all p's<.05). Both forms of aggression were associated with sexual intercourse. As anticipated, significant gender interactions were revealed. For girls, but not boys, those who had used cigarettes had remarkably high relational aggression scores (+2 SD) compared to non-smokers. Girls who had used alcohol also had elevated relational aggression scores (+1 SD) compared to non-drinking girls. Results for sexual behavior indicated that both male and female non-virgins were more overtly aggressive than virgins; only female non-virgins were more relationally aggressive than virgins. CONCLUSION: Results have implications for understanding how aggression may differentially relate to HRB engagement for boys and girls.

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D-114

HEALTH STATUS TO POLICY ADVOCACY AND NEW DRUGS LICENSES

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In Thailand, the burden diseases are cancer, heart diseases, hypertension and infectious diseases. Most of them are preventable. The priority health policy advocated for behavior change by healthy promotion and unhealthy prevention. Thai FDA is responsible for drugs approval into the market. It should clarify whether new drugs serve the health policy advocacy. This study described and verified new drugs licenses for treating the priority burden diseases. The classification of drug groups causing adverse drug reactions (ADRs) has been undertaken. New drugs licenses approved from 1/1/2009–6/30/2010 were used for therapeutic use analysis along with their frequency. We used all ADRs reports, received in 2008, for classification of their drug groups. 362 new drugs were identified. Of these, 77% were therapeutic use for cardiovascular disease (i.e. hypertension, diabetes). Anti-cancer, anti-infective, and central nervous disease, are 70%, 68%, and 60%, respectively. A new drug was registered for lifestyle use (erectile dysfunction). Suspected drugs according to ADRs reports, totaling 38,698, were classified by drug group. The most suspected drug group is anti-infective (52%). Muscular skeletal system is the second(17%,followed by central nervous system(11%).Conclusions: most new drugs have met the needs of burden diseases. On the other hand, of the many new drugs for lifestyle use that were registered, too many of them are for preventable diseases which behavior changed may help to alleviate. It is shown that the most ADRs reports came from anti-infective drug group (antibiotics-resistance is a critical problem from irrational drug use if there is no good health policy and proper risk management,allowing the worse problem to occur). As it has been said,no drug is inherently safe. A person taking a drug is exposed not only to the likely benefits of treatment, but also the risks of unwanted effects. So evidence based on burden diseases, ADRs, and new drugs license approval should be used primarily for setting health policy. Accordingly, involved organization should translate policy to action effectively.

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SOCIODEMOGRAPHIC FACTORS, BELIEFS AND CHILDREN'S A(H1N1) VACCINE UPTAKE

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Early vaccination against influenza viruses is a cost-effective solution to prevent contagion and reduce the number of influenza-related deaths. In the face of pandemic viruses, such as the A(H1N1), adequate rates of vaccine uptake play a critical role in containing the spread and deleterious effects of the disease.

In order to understand the reasons underlying the relatively low A(H1N1) vaccination rates we conducted an online survey of 1569 respondents drawn from a nationally representative sample of U.S. adults ages 18 and older. Because previous research suggests that vaccination rates are especially low among some population sub-groups, we oversampled participants from minority ethnic/racial groups and those living under the Federal Poverty Level. Traditionally decisions regarding vaccination uptake have been mostly studied from demographic, psychological and psychosocial perspectives. That is, most studies looking at vaccination uptake stress the role of income, education, race/ethnicity, or risk beliefs and decision making mechanisms. Our goal is to integrate these various levels of analyses to provide a more comprehensive description of factors associated with vaccination.

This report will show how parents' decisions regarding vaccinating their children and attitudes towards A(H1N1) vaccination were associated with sociodemographic factors, health beliefs and history of vaccination. For instance, participants with a bachelor degree or higher are less likely than those with no high school degree to vaccinate their children (OR=.38; CI95% (.18-.78). Even though believing the vaccine is safe for children is strongly associated with children's vaccination (OR=4.26; CI95%(2.66–.6.83), parents' own vaccination decisions are not (OR=1.52; CI95%(.84–.2.75).

This description will be aimed at providing useful information for future targeted communication strategies to enhance vaccination compliance among different population subgroups.

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LIFE CONCERNS TRUMP HEALTH CONCERNS FOR PATIENTS ATTENDING A PUBLIC HEALTH CLINIC

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Researchers have documented numerous racial disparities in health but the reasons for these disparities are poorly understood. One possibility is that African Americans, who are often socially, politically, and economically marginalized, face a disproportionate number of life challenges that interfere with their ability to prioritize health as a concern. To test this hypothesis, we recruited 150 patients from a publicly-funded STD clinic (50% female; 62% African American) and asked them to complete a survey of common health concerns, as well as a survey of social and personal concerns. Patients rated each concern on a 4-point scale from 0=no concern to 3=serious concern. This design allowed us: (a) to determine whether other concerns are more important than health-related concerns for urban, economically disadvantaged patients; and (b) to explore whether there are differences in the priority of concerns by race. Factor analysis of the social and personal concerns measure resulted in three factors: mental health concerns, income concerns, and violence. All measures had acceptable internal consistency reliability (αs ranged from .88 to .92). As hypothesized, participants rated income-related issues as more concerning than health issues, $t(149)=-5.22$, $p<.05$. Ratings of somatic health concerns did not differ from ratings of mental health or violence concerns. Exploratory analyses were conducted by race (Caucasian vs. African American). Among Caucasians, health issues were more of a concern than violence, $t(26)=3.00$, $p<.05$. Among African Americans, income issues were more of a concern than health issues, $t(90)=-4.13$, $p<.05$. Results suggest that other life issues are more concerning than health-related issues, particularly for African Americans. To develop effective interventions and improve the health of the public, researchers and providers should broaden their focus to include social and structural factors that may influence an individual's ability to prioritize health behavior change.

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EMOTIONAL APPROACH COPING, PROBLEM-FOCUSED COPING, AND QUALITY OF LIFE AMONG MULTIPLE SCLEROSIS PATIENTS

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Multiple sclerosis (MS) is a chronic neurodegenerative disease. MS patients typically report feeling a lack of control over their symptoms and decreased quality of life. Research assessing the coping strategies of MS patients often has found emotion-focused strategies to be associated with worse mental health whereas problem-focused (PF) strategies have been associated with better mental health. However, evidence suggests that the assessment of emotion-focused coping has often been confounded by multiple constructs and a lack of items addressing emotional processing and expression.

The present study assessed the relation of emotional approach coping (EAC) and PF coping to quality of life (QoL) among 57 MS patients in the upstate New York area. This is the first study to explore the effects of EAC (i.e., coping through the processing and expression of emotion) on QoL (mental health, physical health, and overall) among MS patients.

Results revealed that emotional processing ($\beta=.33$, $p<.05$), emotional expression ($\beta=.39$, $p<.05$), and PF coping ($\beta=.39$, $p<.01$) were all significant predictors of physical health QoL, but not of mental health or overall QoL. Emotional processing moderated the relation between PF coping and mental health QoL. For MS patients who reported high levels of emotional processing, the relation between PF coping and mental health QoL was positive and significant ($\beta=.71$, $p=.006$) and for those who reported low emotional processing, the relationship disappeared ($\beta=-.65$, $p=.058$).

It may be understood from the current data that emotional processing and PF coping interact to predict patients' perceptions of mental health. Taking the time to understand emotions brought about by physical impairments may improve QoL and allow individuals to take more efficient steps toward treatment, resulting in less psychological distress and improved health outcomes. Future studies exploring the effectiveness of emotional processing among chronic illness populations may have implications for the inclusion of mental health professionals in primary care settings.

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PAIN AND EMOTIONAL DISTRESS PREDICTION BY ACCEPTANCE, RUMINATION, AND COGNITIVE FLEXIBILITY IN FIBROMYALGIA PATIENTS

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Pain acceptance is an important construct in predicting disability, emotional distress, and pain intensity in chronic pain patients, while rumination is valuable in the prediction of emotional distress in various clinical populations. Little research has been conducted on the combined prediction value of cognitive flexibility, acceptance, and rumination for pain or emotional distress. The purpose of this study was to assess the above constructs' utility to predict affective pain, sensory pain, and emotional distress in patients with fibromyalgia.

102 women were recruited from rheumatology clinics to complete study measures. The following constructs were assessed: Pain acceptance (Pain Acceptance Questionnaire: ACCEPT); cognitive rumination (Reflection, RF, & Brooding, BR); emotional distress (Profile of Mood States total score: TMD); pain level (McGill Pain Inventory: Sensory, SEN & Affective, AFFECT); cognitive flexibility (Trails B/A ratio, TRAILS, & Cognitive Flexibility Inventory total score, COG).

Three hierarchical multiple regression analyses were conducted to predict emotional distress and chronic pain. 40.8% of affective pain variance was predicted by TRAILS, ACCEPT and BR, $F(3, 98)=22.521$, $p=0001$. 37.9% of sensory pain variance was predicted by TRAILS, COG, and RF, $F(3, 98)=19.953$, $p=0001$. 32.1% of emotional distress variance was predicted by TRAILS, ACCEPT, BR, $F(3,98)=15.433$, $p=0001$. High affective pain was reported by patients with low cognitive flexibility, low acceptance, and high brooding. Patients with high sensory pain demonstrated low cognitive flexibility and reflection. High emotional distress was found in patients with low cognitive flexibility, low acceptance, and high brooding.

Pain acceptance was an important predictor of pain and emotional distress; however cognitive flexibility and rumination accounted for substantial pain and distress variance. Research and treatment implications will be discussed.

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HOME-BASED COPING SKILLS TRAINING FOR YOUTHS WITH SICKLE CELL DISEASE

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Episodic pain is the hallmark feature of sickle cell disease (SCD) and the most frequent type of morbidity in SCD. Effective treatment of chronic pain is recognized as requiring combined biopsychosocial treatment; however, most pain in SCD is treated at home and with medication alone. Cognitive-behavioral coping techniques (CBT) hold promise for improving pain management in SCD; however, there are barriers to integrating CBT into pain management. Many of these barriers could be overcome by making home-based practice of these skills more attractive and by using technology to guide patients through the training with remote monitoring of treatment implementation. We conducted a randomized trial of a home-based training program comparing 12 youths receiving medication plus CBT training to 12 youths with medication treatment alone (ages 9 to 19 years). Smart-phone technology was used to guide CBT skills practice and remotely monitor treatment compliance over eight weeks. The CBT group showed statistically significant increases in their use of CBT coping skills, decreases in more passive methods for coping with pain, and decreases in negative thinking. The standard of care condition showed no significant changes in the use of CBT coping skills or negative thinking, but increases in passive methods for coping with pain. Overall, this preliminary trial indicates that the incorporation of technology may help with implementing CBT training for youths with SCD. Future work will examine the mediators of treatment benefits and refine the protocol for dissemination.

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HYPNOTHERAPY INTERVENTION FOR LOIN PAIN HEMATURIA: CASE STUDY

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Loin pain hematuria is characterized by recurrent or persistent unilateral or bilateral loin pain, hematuria, low-grade fever, dysuria, and proteinuria. The symptoms are often severe; resulting in chronic use of pain medication and interference with daily living. Additionally, psychological symptoms have been associated with the condition. Treatments have included analgesia with non-steroidal anti-inflammatory drugs and opioids, prolonged antibiotic use, antiplatelet therapy, anticoagulants, renal autotransplantation, intraureteric capsaicin treatment, nephrectomy, and renal denervation. However, outcomes have been mixed and many treatments are unsuccessful in long-term pain relief. Further, high opiate doses and invasive surgical interventions are associated with negative side-effects, suggesting a need for safe and effective interventions. Hypnosis is a behavioral intervention demonstrated effective for treating some types of chronic pain. However, to our knowledge no previous reports of hypnosis for loin pain hematuria exist.

The present study reports on a 17 year-old female patient diagnosed with loin pain hematuria who presented with unilateral, uncontrolled loin pain following numerous unsuccessful attempts at symptom control with traditional medical interventions. The patient received 12 sessions of hypnotherapy. Baseline and outcome measures included General Health Questionnaire (GHQ28), Hospital Anxiety and Depression Scale (HADS), McGill Pain Questionnaire, Pain Discomfort Scale, and visual analogue measures of pain and academic and social interference. At 6-month follow-up results indicated clinically significant decreases in pain, anxiety and depression with nearly complete symptom remission. Data from this example suggest that hypnotherapy may be a promising intervention for symptoms of Loin Pain Hematuria. In addition to providing physical relief, hypnosis provides a safer and less invasive treatment option to patients and their providers.

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MISSING DATA IN A DAILY DIARY TELEPHONE STUDY OF SICKLE CELL DISEASE PAIN

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Objective: The objectives of this study were to: (1) describe patterns of missing data in a 28 day daily diary telephone study of Sickle Cell Disease (SCD) pain, and (2) examine SCD related and non-SCD related predictors of daily diary completion rates and the number of consecutive completed daily diary days (DDD).

Method: 20-minute standardized, mixed method daily diary telephone interviews were conducted for 28 consecutive days to assess the incidence, occurrence, and characteristics of SCD pain among 20 African American children living in a southeastern metropolitan setting. Before collection of DDD data began, respondents and their primary caregiver completed a baseline questionnaire that assessed a range of SCD and non-SCD related predictors. Additional SCD related predictors were gathered through respondents' medical records.

Results: Respondents were between the ages of 10 and 17 (mean age= 13.25 years) and evenly split by gender. The overall completion rate was 69%. Only 1 of 20 children completed 28-consecutive days of interviews. Completed DDD ranged from 3 to 28 (M=19.55). Mean number of completed consecutive DDD was 8.5. Missing DDD mainly occurred on weekends and when children were sick. Both SCD related and non-SCD related predictors from the baseline questionnaire were significantly correlated with daily diary completion rates and the number of consecutive completed DDD. Completed DDD were negatively associated with children's baseline SCD pain (r=-.50, p=.02), positively and marginally associated with family income (r=.39, p=.09) and interviews starting in fall/winter months (r=.41, p=.09). Other predictors were not associated with completion.

Conclusions: Although daily diary assessment methods are most appropriate for studying pediatric SCD pain, findings indicate that daily diary studies may underestimate SCD pain; children reporting most pain completed fewest DDD. Researchers should design studies controlling for SCD- and non-SCD related predictors of missing data before collecting daily diary assessments to maximize completion rates and most accurately characterize SCD pain.

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SELF-EFFICACY AS A PREDICTOR OF CHANGE IN DEPRESSION FOR FIBROMYALGIA PATIENTS

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Fibromyalgia syndrome (FMS) is a chronic pain condition that affects approximately 6 million Americans. Although the usual FMS symptoms are widespread musculoskeletal pain and fatigue, depressive symptoms are also common and frequently severe. Higher levels of depression have been associated with increased pain severity and persistence; therefore, it is important to study changes in depressive symptoms over time, as well as factors that may mediate the changes. Self-efficacy has been associated with better physical well-being for people with chronic pain conditions, and may affect depression for fibromyalgia patients. Subjects in the present study were 600 individuals (572 females) who took part in a study of the quality of life for people with FMS. All participants reported pain lasting longer than 3 months in 11 of 18 tender points. The Center for Epidemiological Studies Depression Scale (CES-D) and Arthritis Self-efficacy scales were administered to participants at baseline, 6-month, 12-month and 18-months. A latent growth curve analysis (LGCA) using EQS 6.1 was conducted to examine changes in depressive symptoms over a period of 18 months. Both the intercept (M=4.324) and slope (b=−.260) latent variables were significant, and correlated with one another (r=−.435, p<.05). Depressive symptoms decreased linearly over time. Individuals who reported having more depressive symptoms at time 1 experienced a more rapid improvement in depression levels across time than individuals who reported lower initial levels of depression. Self-efficacy was a significant time-varying predictor of changes in depression. Individuals who reported having higher levels of self-efficacy at the initial assessment had fewer depressive symptoms, and increases in levels of self-efficacy over time were associated with decreases in depressive symptoms. Results from LGCA suggest that interventions that include self-efficacy-enhancing education may improve the effectiveness of treatment programs for fibromyalgia.

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D-124

MEDIATION OF THE ASSOCIATION BETWEEN HEADACHE FREQUENCY AND QUALITY OF LIFE IN MIGRAINEURS

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BACKGROUND: Migraine headaches are one of the most disabling and prevalent disorders (13.2%) in the U.S. Although extensive literature confirms the negative effects of migraines on quality of life, little is known about factors that may account for or otherwise modify that relation. We hypothesized that measures of distress due to psychological symptoms would influence the relation between headache frequency and quality of life.

METHODS: Fifty-two frequent migraineurs (2 or more headaches per week) aged 20-62 years (M=40.20, SD=11.94) participated. These data are part of an initial assessment of participants enrolled in a pilot study of a behavioral migraine treatment. Testing included the Migraine-Specific Quality of Life questionnaire (MSQoL) and the Brief Symptom Inventory (BSI). We performed tests of mediation and moderation to determine if BSI subscales affected the relation between headache frequency and MSQoL.

RESULTS: As expected, headache frequency was significantly associated with MSQoL (r=−0.35, p=.01). Sobel tests showed that the Interpersonal Sensitivity subscale of the BSI mediated the relation between headache frequency and MSQoL scores. The point estimate of the indirect effects between headache frequency and MSQoL via interpersonal sensitivity was −0.36 (CI −0.05 to −0.87). Further, the direct effect of headache frequency on MSQoL scores was reduced to non-significance when accounting for the indirect effect through the interpersonal sensitivity subscale.

DISCUSSION: The effect of headache frequency on migraine-specific quality of life was significant. However, the association was mediated by scores on a measure of distress due to interpersonal sensitivity. The current results contribute to the existing literature by illustrating the complex nature in which headaches affect quality of life in migraineurs.

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WOMEN BOUND TO BE ACTIVE: EFFECT OF A BOOK CLUB INTERVENTION ON WOMEN'S PHYSICAL ACTIVITY AND SELF-WORTH AT ONE-YEAR FOLLOW-UP

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Few studies have examined facilitators of women's long-term PA adherence ($\geq$1 year of regular PA). Our objective was to examine women's PA and self-worth (SW) one year after participating in Women Bound to be Active (WBA), a PA book-club.

Women who completed WBA and controls were contacted one year after WBA ended and asked to complete self-report questionnaires assessing PA, SW, benefits of and barriers to PA (TOBB), and body mass index (BMI). WBA participants were also asked to participate in a follow-up interview. Quantitative data presented here represents one year follow-up of women who participated in WBA (N=15) compared to controls (N=10). Mixed model repeated measures ANOVAs were conducted to examine intervention effects on women's PA, SW, TOBB, and BMI, and to examine whether effects were the same for both groups. Qualitative analysis of interviews is ongoing and will be presented in the future.

No differences in PA, SW, TOBB, and BMI were observed at baseline between the groups. WBA participants had significantly higher PA levels than controls through the intervention to follow-up, F(1,19)=5.4, p=.03, and PA levels for both groups at follow-up were significantly higher than baseline F(2,38)=4.3, p =.02. A marginally significant interaction between group and time on SW was found, F(2,40)=2.8, p=.07. SW scores for both groups increased from baseline to post, but the control group's SW decreased at follow-up while the WBA group's SW continued to increase at follow-up. TOBB scores for both groups were significantly higher at post compared to baseline, F(1,21)=6.4, p=.02, but no difference in TOBB was observed between baseline or post and follow-up.

PA and SW increased one year after completing WBA. Consistent with our previous research, this study suggests that SW may be an important factor related to PA adherence in women. Analysis of our qualitative data may provide a better understanding of what facilitates women's long-term PA adherence.

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EFFICACY OF QIGONG IN THE TREATMENT OF CHRONIC FATIGUE SYNDROME: A PROSPECTIVE RANDOMIZED CONTROLLED TRIAL

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Background: Chronic fatigue syndrome (CFS) with unknown etiology is a common health problem, but is usually neglected. There is a controversy in the definition and treatment of CFS. Western drugs for CFS have many side-effects and little clinical benefit. Only graded exercise therapy and cognitive behavioural therapy have evidence of efficacy. Qigong is a traditional Chinese movement exercise including meditation, which focuses on the balance between yin and yang, as well as regulating the circulation of qi (vital energy in the body) to attain holistic health. Few large studies on Qigong and CFS have been conducted. This study was the first randomized controlled trial (RCT) study to assess the efficacy of Qigong as an alternative approach in the treatment of CFS.

Methods: A RCT study for adult CFS patients was conducted with Qigong group (n=56) and control group (n=58). Ten sessions (twice a week for 5 weeks) of Qigong exercise (WuXingPingHengGong) of 2 hours each was delivered by an experienced Taoist Qigong master (YLP). The primary outcome was a change of Chalder's Fatigue scale between baseline and post-intervention (T1 - T0). The secondary outcomes were Chinese Brief Fatigue Inventory (CBFI) and SF-12 Health Survey Questionnaire.

Results: Two groups were comparable in demographic characteristics and other aspects at baseline. Mean (SD) of Chalder's fatigue score at baseline and post-intervention for Qigong group were 34.5 (9.0) and 23.3 (10.3), respectively, versus 35.8 (9.6) and 29.6 (10.7) for control group. The changes of Chalder's fatigue (T1-T0) were −11.2 and −6.2 for Qigong and control groups respectively (p=0.004). There were also the improvements in terms of CBFI (- 1.6 vs - 0.5, p=0.004) and quality of life (SF-12 PCS: 5.5 vs 2.6, p=0.056; SF-12 MCS: 7.6 vs 1.5, p=0.003). No adverse events were observed.

Conclusion: Qigong exercise may be a promising therapy for the treatment of CFS as an alternative approach.

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D-128

PHYSICAL ACTIVITY AND SELF EFFICACY PATTERNS: CROSS CULTURAL DIFFERENCES IN AMERICAN AND INDIAN COLLEGE STUDENTS

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Self efficacy is an important behavior-specific cognitive variable and has been consistently linked to physical activity (PA) participation. Influences of culture on PA and on self efficacy beliefs have not been systematically studied. This study examined the status of participation in PA in relation to self efficacy among American and Indian college students. 162 students from US(n=80, Mage=19.45) and India (n=82, Mage=21.82) completed an internet based survey which included measures of leisure time PA, exercise history and exercise self efficacy. Statistical analyses showed that American college students were significantly more active (4.78 days/week vs. 3.91), undertook more leisure time exercise (Godin's score 67.47 vs. 47.90) and had higher exercise self efficacy scores (128.68 vs. 101.03). MANOVA revealed a significant effect of culture on the 3 subscales of self efficacy [F(3,126)=7.29; p<.000; Wilks Lambda=.85; partial eta2=.148]. Interestingly, these subscales showed unique positive correlations with PA. Although, the Indian sample scored significantly lower, these lower beliefs were more predictive of PA patterns. The internal feelings sub factor (eg. feeling anxious, depressed) was associated with the frequency, duration and intensity of the exercise sessions. Competing demands sub factor (eg. recovery from illness, injury) was associated with frequency whereas situational and interpersonal sub factor (eg. work, visitors, family problems) was associated with the length of exercise sessions. None of these patterns were observed in the American sample indicating the potential effect of culture and social structure on self efficacy, and self regulation on PA behavior. These findings have implications for examining cultural influences and perceptions of self efficacy as it is often a key construct in theory based interventions designed to promote adoption and maintenance of PA as well as other health behaviors. The Exercise Self Efficacy Scale may also be more culturally specific than the measures typically used in varied ethnic and cultural populations.

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D-129

NEIGHBORHOOD AND PARENTAL SUPPORTS FOR PHYSICAL ACTIVITY IN AFRICAN AMERICAN ADOLESCENTS

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Few studies have examined environmental, home and parental supports for physical activity (PA) in underserved African American adolescents. Given the increasing rate of obesity in minority adolescents, it is important to better understand ecological determinants of PA in these youth. The present study used a multi-level model to evaluate the significance of neighborhood, home, and parental supports for PA on moderate-to-vigorous PA (MVPA; based on 7-day accelerometry estimates) in African American adolescents. A parent telephone survey was developed and collected on parents of 198 (104 girls and 94 boys) adolescent participants from the "Active by Choice Today" (ACT) trial; a randomized school-based trial to increase PA. Cognitive testing interviews of a survey designed to assess neighborhood, home, and parental supports for PA were conducted with 30 parents to assure comprehension. A random sample of parents (n=200) from the intervention and control schools whose child had recently completed the ACT after school program completed the survey. Multi-level modeling indicated no significant treatment effects, however, there were significant effects of parental and neighborhood supports for PA on adolescent MVPA overall. Adolescents who perceived higher (vs. lower) levels of parental support for PA engaged in more minutes of MVPA per day (β=3.01, se=1.38, p<.05). Furthermore, adolescents whose parents reported living in neighborhoods with greater (vs. fewer) supports for PA (parks, lighting etc.), engaged in more minutes MVPA per day (β=4.27, se=2.15, p<.05). Implications for developing interventions that integrate neighborhood and parental supports for PA in minority adolescents will be discussed.

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A META-ANALYSIS OF SELF-EFFICACY AS A MEDIATOR OF PHYSICAL ACTIVITY

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Engaging people in physical activity (PA) is of critical importance and has been identified by several health agencies as a national imperative. Over the years a myriad of interventions have been developed to target PA. Guiding these interventions are theories, each with their own set of construct which are specified to cause change in a specific order. Often these constructs overlap from theory to theory. One construct in particular which overlaps and has received much attention is self-efficacy. Moreover, a number of studies have identified self-efficacy as a possible mediator of PA. The current study examines the theoretical distinctions and similarities of self-efficacy across a number of theories and examines self-efficacy as a possible mediator of PA via meta-analysis. Findings from the meta-analysis show a small but significant ES of 0.014 indicating self-efficacy is a necessary but insufficient part of changing PA behaviors. Possible moderating variables are identified and methodological issues with the current approaches to mediation analysis are considered. Finally, implications and future directions in the mediation of PA are discussed.

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SELF-EFFICACY AS A MEDIATOR OF PARENT SOCIAL SUPPORT AND PHYSICAL ACTIVITY IN UNDERSERVED ADOLESCENTS

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Physical inactivity is a major health concern, especially among underserved (e. g., low income, minorities) adolescents. Previous studies have demonstrated that parental support of physical activity (PA) is related to adolescent PA and this relationship may be mediated by adolescents' confidence that they can overcome barriers to being physically active. Based on Social Cognitive Theory (SCT), behavior is influenced by cognitive factors such as self-efficacy (SE) and social factors such as social support (SS). Using SCT as a theoretical framework, the current study aimed to expand on past research by examining whether SE for overcoming barriers mediated the relationship between parental SS (emotional and instrumental) and adolescent PA. Potential moderation of this mediation hypothesis by sex was also explored. Baseline data were collected from 1,421 sixth graders (mean age 11.3 years, 54% female, 73% African American, 71% on reduced lunch) in South Carolina who participated in the Active by Choice Today (ACT) randomized controlled trial. Measures for emotional SS, instrumental SS, and SE were assessed using previously validated scales. The outcome variable, moderate-to-vigorous PA (MVPA) was assessed using 7-day accelerometry estimates. Separate mediation models were analyzed across sex on PA measures. Results demonstrated that SE significantly mediated the relationship between parental emotional SS and PA in boys (β=.66, se=.32, T (651)=2.09, p<.05) and girls (β=.62, se=0.29, T (768)=2.55, p<.05); similarly, SE was a significant mediator between parent instrumental SS and PA in boys (β=1.63, se=0.55, T (651)=2.96, p<.001) and girls (β=.51, se=0.65, T (768)=2.12, p<.05). The magnitude of these mediated effects did not significantly differ across boys and girls. Findings from this study demonstrate that SE for overcoming barriers may help explain why different types of SS are related in increases in adolescent PA. This research also illustrates that SE is a mediator between parent SS and adolescent PA similarly in boys and girls.

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"EXER-GAMING" TO INCREASE PHYSICAL ACTIVITY AND DECREASE SEDENTARY TIME AMONG COLLEGE FRESHMEN WOMEN: A PILOT INVESTIGATION

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Weight gain is prevalent during the 1st year of college. Low levels of physical activity (PA) and high levels of sedentary behavior (SB) may contribute to this period of rapid weight gain. Given commonly reported barriers to physical activity (e.g., limited time, lack of interest), novel approaches to increasing activity are needed. This pilot project evaluated "exer-gaming" as a way to increase PA and decrease SB among college freshmen women. Using a mixed-methods, within-subjects design, the study compared three conditions: use of the Wii videogaming system, an exercise DVD program, and a control comparison. Participants engaged in each active condition for 3 weeks, with study participation lasting 11 weeks, including a one-month follow-up. Weekly weigh-ins were conducted. Participants were 17 female freshmen living on campus (17.9±.06 yrs; baseline BMI=27.4±4.97 kg/m2). PA and SB were measured via both accelerometer armband and daily journal. While 66% of the sample indicated they had used the Wii in the past, this was largely infrequent. Preliminary 1-month follow-up results indicate significant differences between the groups on PA (F=9.4; p<.05) and borderline significant group differences on SB (F=5.9; p=.04), with the exercise DVD outperforming both the Wii and control conditions. Participant reports of perceived exertion were comparable across the Wii and DVD conditions. No differences were noted in weight change between the groups. Qualitative debriefing interviews with a subsample of participants found that the use of novel exercise tools was welcome to this population and that weekly study weigh-ins aided in motivating participants to exercise. This study provides insight into the use of exergaming technology in improving health behaviors of college freshmen.

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DEFINING ACCELEROMETRY CUT POINTS FOR PHYSICAL ACTIVITY IN UNDERSERVED AFRICAN AMERICANS

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Although the use of Actical accelerometers to measure physical activity (PA) is increasing, few studies have defined cut points for moderate PA in adults (Crouter & Bassett, 2008, Heil, 2006), and none have done so for underserved populations. The high rates of chronic disease, including obesity, in low-income, minority populations is likely to impact the measurement of PA. There is growing concern that traditionally defined PA intensity values which use samples of healthy, young to middle aged adults may be too high for older or overweight adults (Ainsworth et al, 2000). The present study aimed to determine the self-selected pace associated with instructions to "walk for exercise" and the corresponding Actical counts for older, African American adults. The 51 participants (64% women) had a mean age of 60.8 (SD=9.8) and a mean BMI of 31.2 (SD=6.8). They performed one seated task (card sorting), one standing task (table dusting), and three walking tasks: strolling-to elicit slow walking; walking for exercise; and walking in an emergency. The researchers recorded walking times and distances to calculate paces for minutes 2-4 of the five minute walks. The average paces for strolling, walking for exercise, and walking in an emergency were 1.62mph (SD=.51), 2.51mph (SD =.53), and 2.86mph (SD=.58), respectively. The average Actical counts for the five activities were 74 (SD=129), 90 (SD=264), 957 (SD=1035), 1090 (SD= 849), 1504 (SD=1078), respectively. The results showed that, during exercise, these adults self-select a pace within the range of moderate PA (>3.0 METs; Ainsworth et al, 2000), but lower than the typically pace of "brisk" walking (3.5mph; Ainsworth et al, 2000), which is typically associated with moderate PA and recommended for health benefits (Haskell et al, 2007). The Actical counts associated with the average exercise pace appear to be lower than previously reported counts. Further analyses that demonstrate how these self-selected paces translate to Actical cutpoints for underserved African American adults will be presented.

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INTERNATIONAL PATTERNS IN ADOLESCENT PHYSICAL ACTIVITY, SEDENTARY BEHAVIOR AND DIET: LATENT CLASS ANALYSES OF THE HEALTH BEHAVIOR IN SCHOOL-AGED CHILDREN SURVEY

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Purpose: To identify healthful and unhealthful patterns in adolescents' physical activity (PA) and dietary choices and their relationship to quality of life (QOL), health status (HS), and weight status (WS).
Methods: Nationally-representative samples representing adolescents ages 11, 13, and 15 in the U.S. and four regions of Europe (East, North, South and West) participated in the Health Behavior in School-Aged Children survey assessing PA, screen-based sedentary behavior (SSB), frequency of health and unhealthy food items, QOL, WS, and HS. Latent Class Analysis was used to identify patterns of PA, SSB, and diet.
Results: The number of latent classes best fitting the data in each region varied from four to five; however, all regions included: Class 1 (Healthful) with high PA, and fruit and vegetable intake and low SSB and intake of sweets, soft drinks, chips and fries; Class 2 (Unhealthful) with high SSB and intake of sweets, soft drinks, chips and fries; Class 3 (Low) with low PA, low fruit and vegetable intake, and low intake of sweets, chips and fries; and Class 4 (High) with high levels of all PA, SSB, and diet behaviors. In all regions, adolescents in Class 1 reported significantly higher HS. In all regions except Eastern Europe, Class 1 reported the highest QOL and Class 2 reported the lowest QOL and HS. Class 1 had higher WS than Class 2 in two of the regions. Adolescents in Eastern Europe, which has a relatively low prevalence of adolescent obesity, had a unique pattern in which Class 4 reported the highest QOL and Class 3 reported the lowest QOL.
Conclusions: In all regions studied, four latent classes of adolescent physical activity, sedentary behavior, and diet emerged reflecting healthful, unhealthful, high and low patterns. In 4 of the 5 regions, class membership was significantly related to QOL, HS, and WS; Eastern Europe exhibited a unique profile suggesting further study of cross cultural relationships between patterns in adolescent health behaviors and health status.

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PRELIMINARY DEVELOPMENT OF THE PHYSICAL ACTIVITY SELF-WORTH INVENTORY: A RASCH ANALYSIS

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Study of self-worth (SW) subdomains and their relationship to PA is needed. No tool exists to measure these domains in women. Though used in other research, Rasch modeling for survey construction in PA research is limited. This study reports the preliminary development and psychometric properties of an instrument to measure PA-related SW in adult women using Rasch modeling.
PA SW Inventory (PASWI) items were developed using literature, an existing tool, and expert faculty discussions. Women (N=388) completed 52 initial items. Exploratory factor analysis and Rasch modeling were used for item selection and elimination and to determine construct validity and internal consistency. Pearson correlations were calculated between the final PASWI and a global self-worth (GSW) instrument and PA participation measures to determine convergent validity. A principal factor analysis indicated a dominant factor for the 52 PASWI items, which explained 32% of total variance. Nineteen items were identified as misfit items according to Rasch Infit and Outfit statistics (<.6 and/or >1.4). The final PASWI contained 33 good items (Infit and Outfit were between .6 and 1.4) addressing PA-related: knowledge SW (15 items), emotional SW (11 items) and social SW (7 items). The difficulty levels of the 33 items ranged from -.95 to 1.21 logits and the final PASWI demonstrated high internal consistency (Rasch persons and items reliability statistics ≥.95). The persons' ability scores derived from the Rasch analysis of the final PASWI demonstrated low correlation with GSW scores (r=.31, p<.0005) and moderate correlations (r>.4, p<.0005) with PA measures.
The PASWI demonstrated high internal consistency and low to moderate correlations with GSW and PA. Analysis of PASWI provides evidence to support validity and reliability of this survey to measure PA-related SW in women. Future studies should focus on developing more items for the PASWI to assess the broad range of women's PA-related SW.

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POSITIVE ACTION FOR TODAY'S HEALTH (PATH) TRIAL COST ANALYSIS

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Environmental interventions are used to combat physical inactivity. Only one study has measured the cost-effectiveness of these interventions (Wang et al, 2004), reporting the average annual cost for a more physically active (PA) person from a path at $98, not including time costs. Our study will examine program costs, participant costs and cost collection methods.
Methods: The PATH trial compares three communities randomly assigned to different levels of an environmental intervention to improve safety and access for walking in low income communities. Three communities matched on census tract information were randomized to receive either: an intervention that combines a police patrolled-walking program with social marketing, a police patrolled-walking only, or general health education only. Utilizing detailed spreadsheet data and participant time logs, we present a cost analysis of the three programs. Participant time costs are valued at the area median wage. A payer's perspective is used.
Results: Examining only program costs, the cost per participant for full intervention is $1546, $774 for walking only and $470 for health education. Adding participants' time costs increases per participants' costs for the full intervention by $225, walking only by $130 and education by $167.
Conclusions: As emphasis on behavioral modification includes environmental interventions, studies are needed regarding these program costs. Program costs include not only implementation costs but participant time costs. For behavioral modification strategies, developing participants' time costs measures are vital for accurate cost analysis and subsequent cost-effectiveness analysis. This study demonstrates the issues and methods to collect these time costs, and describes the costs surrounding physical activity environmental interventions. Future work will utilize these cost estimates to develop cost-effectiveness estimates.
Wang, et al. 2004. Cost effectiveness of a bicycle/pedestrian trail development in health promotion.Prev Med 38:237-42

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INDIVIDUAL DIFFERENCES IN FITNESS AND MEMORY RESPONSE TRAJECTORIES ACROSS A 12-MONTH EXERCISE TRIAL

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The purpose of this study was to examine individual differences in physical fitness and memory performance within a sample of participants involved in an exercise trial designed to enhance physical function in addition to brain structure and function. It was hypothesized that unobserved subgroups (i.e., latent classes) should differ in their responsiveness, and that change in physical fitness and memory should be positively related. Further, we hypothesized that individuals who exercise more regularly should exhibit more favorable outcomes (a dose-response relationship). Participants completed baseline (n=179), 6 and 12 month assessments of spatial working memory reaction time (SWM-RT), accuracy (SWM-ACC), physical fitness (i.e., ml/kg via maximum exercise testing), and performance (i.e., 8 ft Up and Go, Rockport 1-mile walking test). Attendance was assessed as the percentage of classes attended. Data were analyzed via growth mixture modeling and latent classes were derived from initial and change values of SWM-RT and fitness. SWM-ACC and attendance were used as auxiliary variables, and physical performance was entered as a time-varying covariate with fitness. A 3-class solution provided the best fit to the data based on theory and model fit indices. Results revealed three distinct subgroups of substantial size (c1=60, c2=33, and c3=86) with unique patterns of SWM-ACC and performance scores predicting group differences; attendance frequencies were in the expected direction, albeit, not significantly different across groups. Class 2 and 3 showed significant change in SWM-RT and fitness, and significant mean differences in SWM-ACC and performance scores relative to Class 1 (but not significantly different from each other). Results partially supported hypotheses and have implications for theory (i.e., speed-accuracy trade-off hypotheses) and clinical practice (i.e., memory-enhancement via exercise prescription).
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Meritorious Poster

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TRAJECTORIES OF CHANGE IN SELF-ESTEEM IN OLDER ADULTS: EXERCISE INTERVENTION EFFECTS

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The hierarchical and multi-dimensional Exercise Self Esteem Model (EXSEM) has been extensively used to understand the physical activity and self-esteem relationship. However, no published studies have explored unique effects of exercise type on EXSEM constructs in older adults. Moreover, few studies have examined the trajectory or growth curves of elements of esteem across time. This randomized controlled trial examined changes in multidimensional self-esteem as a function of exercise intervention mode (i.e. walking vs flexing-toning-balance, FTB) using the EXSEM as a guiding theoretical framework. 179 older adults (Mage=66.38) participated in this 12 month, 2-arm, single blind randomized exercise trial. Participants completed measures of physical and global self-esteem as well as demographic information at 3 time points (baseline, 6 and 12 months). Data were analyzed using linear and parallel process growth modeling procedures. Our results supported the position that domain-level (i.e. physical self-worth) and sub-domain-level (i.e. perceived attractiveness, strength, and condition) esteem changed as a function of the mode of exercise participants engaged in. FTB group showed more favorable changes in strength (model fit: $\chi2=13.77$ (10), p=.18, CFI=.99, RMSEA=.07) and attractiveness esteem (model fit: $\chi2=14.01$ (10), p=.17, CFI=.98, RMSEA=.07; FTB slope= 1.38 vs walking=.67) whereas participants in the walking group demonstrated improvements in strength esteem (FTB slope=2.19 vs Walking=.67) potentially as a result of improvements in leg strength, mobility and function. In addition, change in the higher-order esteem component, physical self-worth, was largely dependent on the lower-order esteem components of perceived body attractiveness and perceived strength esteem. Our findings provide further support for the hierarchical structure of EXSEM and extend the literature showing unique psychological responses conditional on specific types of physical activities.

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GOAL-SETTING IN A PRINT-BASED PHYSICAL ACTIVITY PROMOTION INTERVENTION

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Goal-setting is an important component of many physical activity (PA) interventions; however, little attention has been paid to the relationship of the specific goal to success in a PA program. This study examined the association between baseline PA goals and PA behavior in the first six months of a print-based intervention. The sample included 197 healthy, under-active adults who were randomized to receive one of two theoretically tailored print-based PA promotion interventions. Participants were on average 47.46 years old (sd=9.79), predominantly female (88.32%) and currently employed (83.25%) The 7-day Physical Activity Recall was administered at baseline and month 6, with outcomes operationalized as continuous min/week of moderate to vigorous physical activity (MVPA). All participants completed a 10 minute face-to-face goal setting session at baseline. Participants identified their own goals in terms of minutes of MVPA per session and number of sessions per week. Linear regression was used to model the association between goals set at baseline and reported MVPA at 6 months. Results reveal a significant association between goal minutes per session and MVPA at 6 months, when controlling for goal sessions per week, baseline activity, gender, employment and season (b=1.25, SE=0.58, p= 0.03). Specifically, a 20 minute increase in goal minutes per session was associated with a 25 minute increase in reported MVPA at 6 months, when controlling for relevant covariates. There was no significant association between goal sessions per week and reported MVPA at 6 months. Results suggest that goals focusing on minutes of activity per session may be more important than those based on number of days of activity in the first 6 months of a PA program.

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CAN MOTHERS PROMOTE HEALTHY HOME ENVIRONMENTS? A COMBINED PRIMARY CARE AND PUBLIC HEALTH INTERVENTION FOR PROMOTING HEALTHY WEIGHT IN CHILDREN

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Given that childhood obesity has become a public health concern, effective interventions to address this issue are needed. Research suggests that the use of a parent-only approach is an effective way to improve the home and family environment to promote healthy weight in children. Primary care interventions have been shown to be effective for enhancing physical activity (PA) in adults, especially when using PA prescriptions and referrals to community programs. Therefore, these two interventions were combined to explore the possibility of an added-value effect relative to the promotion of a healthy family environment conducive to healthy weight in children. Female patients (N=35) were randomly assigned to one of three conditions: Prescription Plus (PP), Prescription Only (PO) and Usual Care (UC). The PP group received a PA prescription plus a referral to a parent-only intervention, the PO group received only the PA prescription, and the UC group, regular health care. Outcome variables were PA levels, the obesogenic home environment, mother's confidence for making obesity related changes, exercise/PA self-efficacy and outcome expectations, self-regulation and perceived competence for exercise/ PA. All measures were self-reported and were assessed before and eight weeks after the intervention. A 2 x 3 mixed analysis of variance showed no significant group differences at post-intervention. Only a significant interaction between time and group was observed (p=.03), where the PP group achieved the largest effect (partial η^2=.20) in the obesogenic home environment. These findings suggest that the combined primary care-parent-only intervention was effective for improving the home environment and provide preliminary insight into the effectiveness of such an intervention for influencing healthy weight in children.

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SOCIAL COGNITIVE VARIABLES AND PHYSICAL ACTIVITY IN PERSONS WITH MULTIPLE SCLEROSIS: FINDINGS FROM A LONGITUDINAL, OBSERVATIONAL STUDY

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Background: Persons with multiple sclerosis (MS) are often physically inactive and sedentary. This observation has prompted the search for modifiable variables derived from established theories that act as correlates of physical activity using longitudinal research designs. Such variables would presumably represent targets for interventions designed to promote change in physical activity behavior among persons with MS.
Purpose: The present study examined social cognitive variables as correlates of change in physical activity over an 18-month period in persons with MS.
Methods: On two occasions separated by an 18-month period, persons (N=218) with relapsing-remitting MS completed a battery of questionnaires that assessed physical activity behavior; self-efficacy for exercise; physical, social, and self-evaluative outcome expectations for exercise, functional limitations as an impediment for physical activity, and exercise goal-setting. The battery was delivered and returned through the US postal service. Data were analyzed using panel analysis and covariance modeling in Mplus 3.0.
Results: The overall panel model provided an acceptable fit for the data ($\chi2=$ 125.88, df=73, p=.001, RMSEA=.06, SRMR=0.08, CFI=0.96). The 18-month changes in self-efficacy (path coefficient=.25, p<.01) and goal setting (path coefficient=.26, p<.01) had direct effects on residual change in physical activity. We further note that change in self-efficacy had an indirect effect on residual change in physical activity that was accounted for by change in goal-setting (path coefficient=.05, p<.05).
Conclusions: This longitudinal, observational study suggests that self-efficacy and goal setting represent plausible targets for changing physical activity behavior in persons with relapsing-remitting MS.

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D-142

EXAMINATION OF A SELF-DETERMINATION THEORY WEB-BASED PHYSICAL ACTIVITY INTERVENTION

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Studies have shown that long-term participation in regular physical activity (PA) is more likely when individuals are autonomously motivated. Self-determination theory (SDT) stresses, in addition to a continuum of motivational regulations, the importance of three psychological needs: autonomy, competence, and relatedness. Electronically-mediated interventions have gained increased acceptance and use as a means to disseminate PA education and deliver interventions. The present study is the first randomized control trial to examine a web-delivered, SDT-based 10-week PA intervention. A sample of 69 inactive college students were assigned to either a website intervention only or website plus six modules and individualized e-mail feedback designed to promote perceptions of autonomy, competence, and relatedness. Questionnaires were completed at baseline, post-treatment, and 3 months following treatment. Repeated measures ANOVA were conducted to examine autonomous motivation, perceived competence, and PA levels. Both groups significantly increased PA levels over the assessments periods. No significant interactions were found regarding the influence of the intervention on perceived competence and autonomous motivation, though the latter was found to increase for both groups. Perceived autonomy support following the intervention was significantly higher in the web-site plus SDT module intervention group; however, perceived autonomy support was not associated with PA levels, autonomous motivation, nor perceived competence. Process evaluation questions suggested that participants had a greater desire to interact with self-directed technologies than to solicit support or interaction with others through the available on-line discussion networks. The findings show that a web-based intervention may facilitate PA adoption among inactive young adults, though offering more intensive and autonomy supportive components may not be desired by potential participants or necessary to produce PA change.

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SELF-REPORTED PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOR VARIES BY STAGE OF CHANGE IN ADOLESCENTS

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Prospective studies indicate that increased physical activity (PA) and decreased sedentary behavior in youth protect against weight gain, a contributor to cardiovascular disease (CVD). This highlights the need to encourage healthy lifestyle behaviors. We examined whether adolescents' self-reported PA and sedentary behavior is related to stage of change (SOC).

Adolescent boys (n=244) and girls (n=292) were recruited from physical education and fitness classes at a predominantly Hispanic public high school as part of a larger study on cardiovascular health. To index SOC, participants endorsed their readiness to be physically active 1 hour/day. They also reported participation in sports, hours/day of TV watching, video game and/or computer use, and days/week engaging in 1 hour of PA.

Fifty-two percent of the sample reported being in the maintenance phase, having engaged in the desired behavior for at least 6 months. There was a significant effect of SOC on days of PA/week (F (4, 531)=90.3, p<0.01). Those in action and maintenance reported being active more days/week (M=3.2 and 4.9, respectively) compared to other stages (ps<0.05). Participation in sports also differed by SOC (F (4, 532)=24.0, p<0.001). Post-hoc comparisons indicated that maintainers participate in more sports than other groups (ps<0.05). For sedentary behavior, hours of TV (F (4, 537)=3.8, p<0.01) and video game/computer usage (F (4, 537)=12.8, p<0.01) also varied by SOC. Maintainers spent fewer hours/day playing video games and/or on the computer than other groups (ps<0.05). Maintainers also spent fewer hours watching TV than contemplators (p<0.05).

Adolescents' self-reported activity patterns reflect their current SOC. Awareness of the importance of PA may account for half the sample being maintainers. Future school-based PA interventions may focus on advancing SOC in youth at other stages to promote long-term commitment to behavior change and protect against CVD.

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EXERCISE HABITS AND EXPECTANCIES IN A COMMUNITY SAMPLE OF YOUNG ADULTS

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Our bodies are designed to be physically active to maintain mental and physical health. Americans, however, do not meet these exercise needs resulting in a costly health crisis. To encourage the development of lifelong exercise habits, early interventions are needed to develop positive habits and beliefs about exercise. The purpose of this project was to examine physical activity habits (current and past) and exercise expectancies of young adults in the general population using internet collection of data.

Participants from more than 27 states (N=307) completed online surveys including an inventory of exercise habits (past/present) and the Swan Exercise Expectancy Measure (SEEM). The SEEM, a brief self-report questionnaire, measures exercise expectancies in four domains: positive, negative, social, and practical. Activity rate was operationalized as how many of the past 7 days a participant reported being physically active. For current/past exercise habits, participants were asked to endorse current and/or past participation in specific activities across four domains: active living (e.g., gardening), sports (e.g., basketball), fitness (e.g., aerobics), and alternative pursuits (e.g., hiking).

Significant correlations were in the predicted directions between current physical activity rate and expectancies (r=.51, p<.001), current activity habits and expectancies (r=.38, p<.001), and past activity habits and expectancies (r =.18, p=.002). In a stepwise, multiple regression analysis, exercise expectancies explained a significant amount of variance in current activity habits above and beyond that explained by past activity habits (ΔR^2=.12, $\Delta F(1,\ 298)$= 45.61, p<. 001). These results suggest that positive expectations about physical activity may be more predictive of current physical activity than a history of activity participation. In conclusion, this project advances our understanding of physical activity habits of young adults in the general population and across various geographical locations. Further, the results of the analyses offer support for targeting young adults' expectancies about being physically active as a possible way to increase current activity participation.

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PREDICTING CHANGES IN HEALTH-RELATED QUALITY OF LIFE IN CHILDREN: INFLUENCES OF PHYSICAL SELF-WORTH, SELF-EFFICACY, FITNESS AND BODY MASS INDEX

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The current epidemic of physical inactivity among children is associated with an array of comorbidities including reductions in health-related quality of life (HRQL); yet research examining the contributions of physical activity-related correlates to this construct is limited. The purpose of this study was to determine whether changes in HRQL are influenced by changes in psychological and physical factors in children. Children (N=87, M age=8.78) were randomized into an afterschool physical activity program (n=44) or a waitlist control group (n=43). Participants completed self-report measures of HRQL (i.e., physical, emotional, social, and school functioning), self-efficacy for physical activity, and physical self-worth (PSW) at baseline and follow-up. Aerobic fitness was assessed by peak oxygen uptake during a maximal graded exercise test, and body mass index (BMI) was calculated. Correlational analyses were conducted among the residual change scores of the predictor and outcome variables for each group. Significant associations in the treatment group included relationships of physical functioning with PSW (r=.60, p<.001) and self-efficacy (r=.42, p<.01), social functioning with PSW (r=.35, p<.05), and school functioning with BMI (r=-.38, p<.05). There were no significant relationships among the HRQL dimensions and the predictor variables in the control. Subsequent heirarchical multiple regression analyses were conducted to examine the independent contribution of changes in each predictor variable on the changes in the HRQL indicators. In the treatment group, only changes in PSW significantly contributed to changes in physical (β=.591, p=.019) and social (β=.439, p=.033) functioning. Changes in predictor variables had no significant influence on changes in the HRQL dimensions in the waitlist group. Programs aimed at improving HRQL in children should employ activities that are both physical and social in nature and aimed at enhancing PSW.

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INTRAINDIVIDUAL RELATIONS BETWEEN WEEKLY FLUCTUATIONS IN PHYSICAL ACTIVITY AND WELL-BEING

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Mental health problems present a great cost in terms of health care, lost productivity, and decreased quality of life. The prevalence of depression and anxiety within college students is estimated around 15%. Physical activity (PA) reduces depressive and anxious symptoms among clinical and non-clinical populations, and enhances self-perceptions. Less is known about its impact on satisfaction with life, a key component of subjective well-being, as well as whether the source of mental health benefits of PA occur at the between- or within-person level.

College students ($N=33$; 42% male)completed 10 consecutive weekly reports of their PA levels (using the Leisure Time Exercise Questionnaire) and well-being outcomes including anxiety, depression, satisfaction with life, and self-esteem. Four multilevel models with random effects were estimated to test interindividual hypotheses (i.e., relations between sex, average level of activity, and average level of well-being) as well as intraindividual hypotheses (e.g., relations between a linear time component, weekly fluctuations in activity, and weekly fluctuations in well-being).

At the within-person level, weekly fluctuations in PA significantly covaried with weekly ratings of depression ($b=-0.01$, $p<.05$) and self-esteem ($b=0.003$, $p<.05$). Weekly satisfaction with life scores were marginally associated with fluctuations in PA ($b=0.004$, $p=.065$). Weekly reported state anxiety levels were not related to fluctuations in PA ($b=-0.009, p>.10$). Between-person differences in sex and overall physical activity over the 10 weeks were not significantly related to participants' average levels of each well-being indicator.

These findings indicate that PA effects on wellbeing are selective and depend more on weekly fluctuations in PA rather than overall levels of activity. These results suggest that, regardless of habitual activity, increasing students' PA acutely may help to lessen the burden of mental health issues such as depression in this vulnerable population.

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NEIGHBORHOOD LEVEL DISADVANTAGE, RACE/ETHNICITY AND INFANT MORTALITY IN WASHINGTON DC

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This study examines the effects of neighborhood level disadvantage and individual level characteristics such as race/ethnicity on infant mortality. Secondary analysis were conducted using linked birth/death certificate and census data from the Washington DC State Center for Health Statistics. Live births (55,938) and infant deaths (607) occurring in Washington DC from 2001-2007 were examined. The research questions were: (a) Do women who are comparable on factors such as maternal education and marital status experience different rates of infant mortality by race? (b) Do women living in areas of high disadvantage experience higher rates of infant mortality than women living in areas of low disadvantage? (c) Does the effect of race/ethnicity on infant mortality change if the mother lives in a place of high disadvantage versus low disadvantage? Whites have the lowest rates of infant mortality (2.8/1000), followed by Hispanics (7.4/1000), with Blacks having the highest rates (15.2/1000) after adjusting for age, education, and marital status. These findings are consistent with previous research affirming a relationship between race/ethnicity and infant mortality. Infants born in disadvantaged neighborhoods are 1.63 times more likely to die before their first birthday than those born in advantaged neighborhoods. The odds for infant mortality compared to Whites decreases especially for Blacks (5.39 to 3.10; 42% change), living in disadvantaged communities even when race/ethnicity was interacted with the neighborhood disadvantage index. This suggests that disadvantage has different consequences for different race/ethnicity populations living in those neighborhoods. The importance of place (disadvantaged or advantaged neighborhood) in relation to infant mortality at the neighborhood level in addition to improving individual level factors is discussed for program development and policymakers. Implications for health disparities, maternal and child health, social support and future public health research are presented.

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THE MEDIATING EFFECTS OF BODY IMAGE SATISFACTION AND EXERCISE BEHAVIOR ON THE RELATIONSHIP

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Background. High gestational weight gain (GWG) is associated with adverse pregnancy outcomes. Good psychological health and engaging in regular exercise behavior are two modifiable factors that may ameliorate excessive GWG. Purpose. The study purposes were to examine: (1) the moderating influence of prepregnancy weight status (i.e., normal weight, overweight, and obese) on the biopsychosocial determinants of GWG (i.e. body image satisfaction, depression, and exercise behavior), and (2) if first trimester body image satisfaction and exercise behavior mediated the relationship between first trimester depressive symptoms and GWG from the 1st to 2nd trimester.

Methods. A prospective study design was conducted in which 183 pregnant women (M age=30) completed measures of their GWG, body image satisfaction, depression, and exercise behavior in their 1st and 2nd trimesters via the mail.

Results. As predicted, significant differences were observed at both trimesters for GWG, body satisfaction, depressive symptoms and exercise behavior across prepregnancy weight status groups such that normal weight women had greater GWG, better body image satisfaction, and less depressive symptoms at both 1st and 2nd trimesters when compared to overweight and obese women. In contrast to the hypothesis, obese women reported significantly more min of moderate-vigorous exercise than normal weight and overweight women in the 1st trimester. However, no significant group differences for exercise were observed at the 2nd trimester. Two mediation models were tested using 4-step hierarchical regression analyses (Baron & Kenny, 1986). Mediation was only observed for the second model such that 1st trimester body image satisfaction ($\beta=-0.17$, $p<0.05$) mediated the relationship between 1st trimester depressive symptoms and 2nd trimester GWG.

Conclusions. These preliminary study findings demonstrate that depressive symptoms and body image satisfaction may be important psychological determinants of GWG in early pregnancy; therefore warranting intervention attention to promote better psychological health in pregnancy.

Key Words: Pregnancy, Weight Gain, Psychological Health

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THE ASSOCIATION BETWEEN RELIGIOUS COPING AND DEPRESSION FOLLOWING PREGNANCY LOSS

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Introduction: In the six months following a pregnancy loss, women are at elevated risk of depressive symptoms and disorders (Klier, Geller, & Ritsher, 2002). Positive religious coping has been found to reduce the risk of depression in a number of adverse medical events, such as cancer and chronic heart failure (e.g., Bekelman et al., 2007). Religious coping is utilized by most women who experience pregnancy loss (Millspaugh, & Xie, 1996), and an association between negative religious coping and grief severity has been found in this population (Cowchock et al., 2009). However, the relationship between religious coping and mood disorders following pregnancy loss has not yet been explored.

Hypotheses: An inverse relationship between positive religious coping and depression following pregnancy loss was hypothesized.

Methods: Eighteen adult women (76.2% White, 10% Black, 4.8% Hispanic, 10% Other; mean [SD] age=36.7 [9.3]) who experienced a miscarriage or stillbirth at any point in their lives were recruited online and from University of Utah and Drexel University medical centers. Measures included the Brief R-COPE and the Center for Epidemiologic Studies Depression Scale.

Results: In uncontrolled analyses, a moderate and significant positive Pearson's correlation was found between positive religious coping and depression ($r(16)=.47$, $p<.05$, r2=.22). No relationship was found between negative religious coping and depression ($r(16)=.43$, $p>.05$, r2=.18).

Conclusion: These preliminary results are inconsistent with previous literature, which suggests that positive religious coping may serve a protective function against depression (e.g., Harrison et al., 2001). It is possible that positive religious coping does not offset depressive responses following pregnancy loss. However, the small sample size, wide range of time since loss within the sample, and lack of controls (e.g., history of depression prior to loss) may have contributed to these findings. Given the intense grief and depression that often follow pregnancy loss, further research is warranted to inform healthcare providers' post-loss coping advice.

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CONCEPT MAPPING TO ELICIT MEN'S AND PARTNERS' VIEWS OF ACTIVE SURVEILLANCE AS AN OPTION FOR EARLY STAGE PROSTATE CANCER

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Background: There is no consensus on the best option for men facing a diagnosis of early stage prostate cancer; active treatment (ATx) often causes side effects, e.g., incontinence, and does not extend life. Active surveillance (AS) is an option that is not currently included in decision aids.
Methods: Using concept mapping, a qualitative, participatory method, we produced a framework for viewing AS and ATx: 54 statements about what men need to make a decision were derived from focus groups with African American, Latino, and white men and partners in Houston and El Paso who had screened negative and from journal articles; 89 similar participants sorted the statements and rated their importance.
Results: Multidimen-sional scaling and cluster analysis yielded a combined map (8 clusters) for the 3 ethnicities: doctor-patient information exchange, thinking about AS, weighing the options, side effects of ATx, find out ATx options, access to ATx, seeking and using information, and family consid-erations. Average cluster importance ratings varied across ethnic groups: African Americans saw thinking about AS as more important than other groups; access was less important to whites; weighing the options was less important to Latinos.
Conclusions: We are seeking in-terpretation by participants and advisers. The results are contributing to the development of educational messages that include AS.

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PERCEIVED PEER NORMS AND SUBSTANCE USE AMONG ADOLESCENT FEMALES WITH CHRONIC MEDICAL CONDITIONS

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Adolescents with chronic medical conditions (CMCs) engage in equal or greater frequency of health risk behaviors (HRBs) than their healthy peers, but little research has examined risk and protective factors for HRBs in this population. HRBs like substance use may be particularly detrimental to youths with CMCs, given the negative impact on physical functioning, hazardous interaction with medication, and interference with regimen adherence. Adolescents with CMCs may be more likely to engage in HRBs to gain peer acceptance or to assert autonomy from parents.
Among healthy teens, valuing peer over parent opinions is a risk factor for substance abuse, and beliefs about greater frequency of peer substance use are linked with more substance use. The goal of this study was to determine whether these models are supported among teens with CMCs.
Teens ranged in age from 14 to 19 and were diagnosed with a CMC (21% pulmonary, 10% GI, 31% rheumatology, 29% cardiology, and 9% multiple CMCs). In the past year, 12%, 44%, and 7% reported using cigarettes, alcohol, and marijuana, respectively. 34%, 18%, 6%, and 4% estimated a 50% or more chance of drinking alcohol, becoming intoxicated, using marijuana, or using cigarettes, respectively, in the next 6 months. Subjective peer and parent norms were positively correlated with current reports of teen substance use and intention to use substances. Regression analyses (simultaneous entry) indicated that peer but not parent subjective norms accounted for significant variance in current (23%, F (1, 65)=22.46, p<.001) and future substance use (22%, F (1, 65)=22.22, p<.001).
Like their healthy peers, reliance on peer over parent opinions is a risk factor for HRBs among female teens with CMCs. Future research should identify factors that may protect against the impact of subjective peer norms.

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D-154

DECISIONS TO DISCONTINUE ADJUVANT HORMONAL THERAPY IN BREAST CANCER

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Background: Adjuvant hormonal therapy (AHT) reduces breast cancer (BC) recurrence in women with hormone receptor positive tumors. Yet 1/3 of invasive BC patients discontinue AHT before the recommended 5 year course. Discontinuation rates in non-invasive patients are unknown. The present study aimed to explore rates and predictors of discontinuation in invasive and non-invasive BC patients.
Method: 30 women who were prescribed and agreed to take AHT (57% tamoxifen, 43% aromatase inhibitors) participated. Measures included one item on AHT decision-making, 4 Decisional Conflict Scale (DCS) subscales, 6 questions on decision-making affect, and the Intrusions subscale of the Impact of Events Scale-Revised (IES-R). Sample characteristics: age (M=56, SD=11.37), stage (30% non-invasive, 70% invasive), prior chemotherapy (67% no), race (80% White), days post-AHT start (M=275, SD=170.48).
Results: Overall, 20% of patients discontinued AHT early (M=3.5 months). Continuers and discontinuers did not differ (ps>.05) on demographic/medical variables, including stage. Yet relative to continuers, discontinuers: perceived less decisional support (F(1,28)=8.01, p=.01, d=.99), had more difficulty making the initial decision (F(1,28)=4.12, p=.05, d=.27), were more uncertain in the decision (F(1,28)=5.98, p=.02, d=.90), had higher levels of intrusions about the decision (F(1,28)=3.50, p=.07, d=.90), and were more worried about side effects (F(1,28)=9.39, p=.01, d=.78). Non-invasive patients perceived the initial decision to take AHT as more difficult (F(1,28)=4.12, p=.05, d=.75) and worried more about side effects (F(1,28)=9.39, p=.01, d=1.27) than invasive patients.
Conclusion: On average, patients (both invasive and non-invasive) discontinue AHT in the first 4 months. Psychological factors add to our understanding of AHT discontinuation and suggest medical decision making paradigms are applicable to this context. Lastly, results suggest invasive and non-invasive BC patients may have different reasons for discontinuation, and thus may need tailored interventions.

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A REAL-TIME ASSESSMENT OF FACTORS INFLUENCING MEDICATION EVENTS IN A PHYSICIAN SAMPLE

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OBJECTIVE: To assess in real-time the influence of emotional stress, sleepiness and workload on self-reported medication events by physicians in an inpatient care setting.
METHODS: During an 18-month study period, handheld computers equipped with software designed to assess stress, sleepiness, and workload were deployed to 185 physician volunteers working on the medical wards of four university-affiliated teaching hospitals. The physicians were asked to report any witnessed medication events, using a confidential medication event reporting application.
MAIN OUTCOME MEASURES: Emotional stress scores, perceived workload, patient case load, clinical experience, total sleep, and demographic variables were captured via self-reporting. Medication event reports were correlated with these demographic and performance shaping factors.
RESULTS: Eleven complete medication events were self-reported in real-time. Using mixed regression analyses, higher perceived workload (t=2.2, p<0.03), patient workload (t=2.8, p<0.005), and emotional stress (t=2.8, p=0.005) were associated with medication events.
CONCLUSIONS: Real-time assessment of medication event suggests that self-reported medication events may be associated with higher perceived workload, higher patient workload, and emotional stress in inpatient physicians.

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WHAT IMPACTS SPOUSE PREFERENCE AMONG COLLEGE STUDENTS IN MUMBAI, INDIA?

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Mate selection and marital choices reflect cultural values. Mate selection in the west is based primarily on attraction, dating, and falling-in-love whereas in many Eastern cultures, marriages are traditionally arranged, although “love” has begun to play a larger role recently. Purpose of this study was to assess how self-esteem, tradition, and family preferences influence choice of mate selection among young college students in Mumbai, India. Participants (N=356) completed questionnaires measuring self-esteem, family influence, influence exerted by tradition and spouse-selection preferences. Results computed using logistic regression analysis indicated that self-esteem (Exp(b)=.423; p=.003) and traditional influence (Exp(b)=-.249; p=.005) predicted spouse preference. However, family influence (Exp(b)=.147; p=.250) was not a significant predictor of spouse preference. To further investigate the difference across groups of students who chose arranged marriage vs. love marriage the Mann-Whitney-Wilcoxon test performed indicated significant differences between the two groups, where higher self esteem (p=.003) was associated with an increased preference for love marriage and greater traditional influence (p=.03) was associated with a preference for arranged marriage. Family influence (p=.51) did not differ between the groups. These data indicate the strong influence of tradition among participants that prefer an arranged marriage and the role of self-esteem in breaking with tradition in emphasizing the importance of love in selecting a spouse. Interestingly, while traditional influences were important in choosing arranged marriages, family does not appear to exert a strong influence. Further investigation of this difference between traditional and family influences may be needed to understand the changing role of family in a fast-globalizing community.

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THE RELATIONSHIP BETWEEN MOOD, SELF-REGULATORY STRATEGIES, AND DISORDERED EATING IN COLLEGE STUDENTS

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It has been estimated that over 60% of college students exhibit some form of disordered eating (Yager & O’Dea, 2008). Little is known, however, about the impact of specific cognitive and behavioral self-regulation strategies on problematic eating habits in young adults. Because college students are often faced with stressful situations, examining cognitive and behavioral self regulation within this population provides a unique opportunity to understand their relationship to disordered eating.

Participants were university undergraduate students who completed informed consent and surveys using a secure online database, PsychData. Surveys included demographic information, the Cognitive Emotion Regulation Questionnaire, the Problem Solving Inventory, the Ways of Coping Questionnaire - Revised, the Multidimensional Scale of Perceived Social Support, the Depression, Anxiety and Stress Scale, a Physical Exercise Scale, and the Three Factor Eating Questionnaire, Revised-18 Item. Participants were compensated with course extra credit and entered into a raffle.

The sample consisted of 101 undergraduates students from a university in the Northeast with 82.5% being female and 72.2% Caucasian. In order to examine predictors of emotional eating, mood and self regulatory process variables with significant correlations were entered into a step-wise regression to understand their unique contribution when controlling for gender. Results revealed that the personal control factor of the PSI, depression as measured by the DASS-21, and degree of rated importance of physical activity were significant predictors of scores on the emotional eating scale of the TFEQ-R18, when controlling for gender, $\Delta R2=.12$, $p=.004$. The overall model was significant, $F(4,96)=4.84$, $p=.001$. Lower perceived control over emotions when solving problems, higher depressive symptoms, and lower personal value of physical exercise predicted emotional eating.

These results suggest that maladaptive self-regulation strategies predict emotional eating. Given that college is a stage of transition and stress for young adults this is an important time to develop adaptive strategies to manage emotions and problem-solve.

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D-159

PEERS STRONGLY REINFORCE ENGAGEMENT IN EARLY SEXUAL BEHAVIOR, OR DO THEY?

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Early sexual behavior is associated with higher risks for sexually transmitted infections, teenage pregnancy, as well as emotional difficulties. This study uses recent findings from the peer relations literature to examine different types of social reinforcements that are associated with a range of sexual behaviors among young adolescents in a rural setting.

Two forms of peer reinforcement were examined; both were studied using peer-reported sociometric procedures. First, traditional measures of likeability were examined, indicating the extent to which adolescents were accepted or rejected by peers within their grade. Prior work suggests that peer rejection is associated with many indices of psychological maladjustment and risk behavior. A separate construct of popularity has been demonstrated to be distinct from likeability among peers. Interestingly, high levels of popularity are associated with deviant and risk behaviors. This study hypothesized that early sexual behavior is selectively reinforced by peers; some behaviors may be linked with high status, others with low status. To examine these hypotheses, curvilinear models were examined.

A rural Southeast US sample of 167 9th grade students (56% female; 56% non-White) was included in analyses. Standard sociometric procedures were used involving adolescents’ unlimited peer nominations from a grade wide roster to yield measures of peer acceptance/rejection and popularity. Adolescents reported their engagement in noncoital behaviors (e.g., “heavy making out”), intercourse, and the number of sexual partners for each type of behavior.

Results indicated that high and low numbers of sexual (both coital and noncoital) partners were associated with low likeability and low popularity. Moderate numbers of sexual partners were associated with high peer status. For girls only, engagement in sexual intercourse was associated with low likeability; virgins and non-virgins did not differ in popularity, however. Results offer implications for the complex nature of peer reinforcements on early sexual behaviors.

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D-160

THE ASSOCIATION OF PTSD WITH SEXUAL RISK BEHAVIORS AMONG INDIVIDUALS WITH SERIOUS MENTAL ILLNESS WHO ARE HIV-POSITIVE OR AT RISK FOR HIV

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Disruptions in interpersonal functioning can be a hallmark symptom of PTSD. PTSD has also been found to be strongly associated with HIV risk. The importance of understanding HIV/STI sexual and drug risk behaviors cannot be understated, and the challenges of addressing disrupted interpersonal interactions can be great. It is reasonable to intuit that PTSD related to criterion A events that are interpersonal in nature would have more of an impact on HIV sexual risk, whereby sex could trigger re-experiencing and/or avoidance symptoms and disrupt an individual’s ability to make healthy choices. In addition, people with PTSD may be more likely to engage in sexual intercourse while under the influence of alcohol/drugs given their dissociative properties. Utilizing existing data collected for a study funded by the National Institute of Mental Health(1 R34 MH075644-01A1) from 59 research participants with serious mental illness who were positive or at risk for HIV, we compared the sexual behaviors between those who met criteria for a diagnosis for PTSD (n=36) and individuals who did not meet criteria for PTSD (n=23). We examined the frequency of sexual intercourse (vaginal, oral and anal sex) in the past month, how many times they used a protective barrier when they had sex, and the number of times they had sex while under the influence of alcohol or other substances. As expected, participants with PTSD were significantly less likely to use a barrier during intercourse ($t(57)=2.14$, $p<0.05$). A PTSD diagnosis was not statistically associated with frequency of sexual intercourse or frequency of sex while under the influence of alcohol/drugs. We would expect there to be differences between genders, though the small sample size of our study did not allow us to make meaningful statistical comparisons by gender. Our findings have significant implications for addressing trauma and sexual risk simultaneously, and suggest that behavioral health providers might work toward enhancing sexual self-efficacy and motivation to negotiate for safer sex.

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Meritorious Poster

D-161

ACCEPTABILITY OF STD TESTING USING SELF-COLLECTED VAGINAL SWABS AMONG COLLEGE WOMEN

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Estimates suggest that 25% of young women may be infected with a sexually transmitted disease (STD). However, STDs are often asymptomatic and can go unrecognized until they cause more serious health problems. Testing for STDs using self-collected vaginal swabs provides an accurate and cost-effective alternative to more invasive methods (e.g., urine screening, provider-obtained endocervical swabs, pelvic exams). In this study, we investigated the acceptability of self-collected vaginal swabs for STD testing among 483 first-year college women who were participating in a larger study. All were offered free STD testing and treatment as well as $20 compensation for their time. Participants received verbal and written instructions for specimen collection and used private bathrooms or exam rooms at a university health center. The results showed that 64% (N=310) accepted testing. Of these, 98% rated the instructions for self-collection as "very easy" or "easy" to understand, and 93% rated self-collection of the vaginal specimen "very easy" or "easy." Overall, participants reported higher positive evaluations of testing (M=3.4, SD=0.6) than negative evaluations (M=1.8, SD=0.6), t(289)=24.6, p<.0001, d=1.45. Seventy-three percent of participants reported that they would test themselves more often for STDs if the self-collected vaginal swab method were more widely available. Among participants who did not participate in the testing, only 26% reported discomfort with the vaginal swab procedure as a reason for not participating. These results suggest that self-collected vaginal swabs are an acceptable method of STD testing among college women.

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SLEEP, DIURNAL PREFERENCE, AND DIETARY BEHAVIOR

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Both sleep fragmentation and circadian disruption (e.g., shift work) have been associated with obesity risk. However, it is unknown to what extent individual differences in circadian timing contribute to obesity. This study evaluated dietary behavior and body mass index (BMI) in participants with self-reported intermediate and evening diurnal preference (chronotype). Participants included 27 males and 25 females. Participants completed questionnaires, 7 days of wrist actigraphy to determine sleep timing and duration and a 7 day food diary. Food diaries were analyzed using publicly available databases. Based on responses to the Horne Ostberg Morningness Eveningness Questionnaire 42% were intermediate types and 58% were evening types. Evening types reported poorer self-reported sleep quality (p<.05) and demonstrated shorter objective sleep duration (p<.01) and lower objective sleep efficiency (p<.001). The timing of breakfast (p<.001), lunch (p<.01), and last meal (p<.001) were later in evening types compared to intermediate types but there was no difference in the timing of dinner. Evening types had higher caloric intake at dinner than intermediate types (619 versus 798 calories, p<.05) and higher caloric intake after 8 pm (365 versus 681, p<.001) but differences in average daily caloric intake were not statistically higher (1893 versus 2095 calories, p=.18). Evening types reported more frequent intake of fast food (p<.001) and fewer servings of fruits and vegetables (p<.001). Average BMI was 23.5 (3.0)kg/m2 in intermediate types and 25.5 (6.2) kg/m2 in evening types (p=.19). A greater percentage of evening types were obese, but this was not statistically significant (1 of 19 intermediate types and 7 of 23 evening types, p=.12). BMI was negatively correlated with sleep efficiency (p<.01) and there was a trend for a higher BMI in participants with a greater evening preference (p=.09). Results indicate that an evening type diurnal preference may be related to increased risk for higher caloric intake and poor quality diet. Further research is needed to determine the independent effects of circadian rhythms above and beyond sleep duration and quality on obesity.

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INTEGRATING A SMOKING CESSATION TREATMENT PROGRAM INTO AN INTENSIVE SUBSTANCE ABUSE OUTPATIENT PROGRAM: A TEACHABLE MOMENT

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This study analyses a patient-centered, integrated tobacco treatment in which substance abuse patients who smoke cigarettes have received multi-component tobacco assessment, education, motivational intervention, and behavioral and pharmacological, evidence-based treatments integrated in an intensive outpatient substance abuse day program (SADP). Upon admission to the SADP, smokers were assessed for cigarette consumption, smoking treatment history, and motivation for smoking cessation. They then received information on a range of voluntary tobacco treatment options, including group or brief individual treatments which they could elect to participate in during SADP, or could choose to decline. Upon discharge from SADP, smokers were again assessed for tobacco consumption, motivation to quit smoking, and treatment engagement.

One hundred and nine participants were screened at the tobacco screening/treatment planning session, with 84 of those (77.1%) being retained through post-treatment. Overall, 42 smokers (50%) participated in smoking cessation treatment during SADP. Short term tobacco outcomes indicated that 31% of participants quit smoking as measured by CO confirmed self report of smoking cessation. For participants who declined smoking cessation treatment, Contemplation Ladder scores improved significantly from pre to post-treatment t(1,33)=−2.64, p=.013.

Data suggest that when offered tobacco treatment integrated into an intensive substance abuse day program, many patients are interested in participating. It is notable that all of these individuals sought treatment for other addictions, and none initially sought treatment for tobacco cessation. Therefore such an integrated treatment is feasible and makes use of a teachable moment to assist substance abusers to stop smoking. Furthermore, such an integrated program may serve to enhance future motivation to quit smoking even in participants who initially declined smoking cessation treatment.

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D-166

EFFICACY OF DISTRESS TOLERANCE/ACT TREATMENT VS. STANDARD BEHAVIORAL TREATMENT FOR EARLY LAPSE SMOKERS

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Early lapse smokers, unable to sustain quit attempts beyond several days, are a high-risk group who would benefit from specialized smoking cessation treatment. This randomized, controlled pilot trial compared a distress tolerance treatment (DT) incorporating behavioral exposure to nicotine withdrawal and training in Acceptance and Commitment Therapy (ACT) skills vs. standard smoking cessation (ST) treatment [with both receiving 8 weeks of transdermal nicotine patch (TNP)]. At the completion of psychosocial treatment (4 weeks after quit date), DT participants (n=27) were 3.6 times more likely to be abstinent than ST (n=22) participants (66.7% vs. 40.9%; AOR=3.60, 95CI=1.01 - 12.90, p<.05). Among those who lapsed to smoking during the first week following quit date, DT participants were 4 times more likely (OR=4.00) to be abstinent at post-treatment. At the end of the TNP treatment (8 weeks after quit date), abstinence rates among smokers in DT and ST were 40.7% vs. 31.8%, respectively (AOR=1.7, 95CI=0.46 - 6.48, p>.05). Abstinence rates also did not differ significantly at 13- and 26-week assessments. Results of this preliminary RCT, while limited in statistical power, are encouraging and hold the promise of an effective distress tolerance/ACT treatment for at-risk smokers. Future work to investigate the efficacy of this treatment in a general population of smokers is also warranted. Clinical and theoretical implications of these findings are discussed.

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CESSATION METHODS IN AN INTERMITTENT AND LIGHT SMOKING HISPANIC SAMPLE: PREFERENCES AND CORRELATES

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Given the dearth of information on mechanisms to quit light and intermittent smoking , assessing behavioral and pharmacological preferences for cessation as well as correlates for these cessation methods are important in building attractive and efficacious programs for low level smokers.

A total of 250 participants (87% Hispanic; 52% male) were recruited at a family health clinic. Participants were eligible to participate if they smoked from one cigarette a month to ten cigarettes per day. Sociodemographic information was collected along with a questionnaire on behavioral and pharmacological preferences to quit smoking, the Fagerstrom Test for Nicotine Dependence (FTND), the Decisional Balance scale, the short form Stage of Change scale, the Treatment Self-Regulation Questionnaire (TSRQ), and the Perceived Competence Scale (PCS).

Descriptive analyses suggested that participants reported a stronger preference for behavioral methods for smoking cessation (M=21.95, SD=9.63) in comparison to pharmacological methods for smoking cessation (M=12.84, SD=8.12). Two separate linear regression models assessed potential correlates of greater behavioral method preference and greater pharamacological method preference for quitting. Behavioral method preference was significantly associated with nicotine dependence ($\beta=.21$, $p<.05$), perceived disadvantages (i.e., cons) of smoking ($\beta=.24$, $p<.05$), and higher stage of change ($\beta=-.24$, $p<.05$). Pharmacological method preference was significantly associated with nicotine dependence ($\beta=.23$, $p<.05$), TSRQ scores ($\beta=.26$, $p<.05$), and less time spent without smoking on previous quit attempts ($\beta=-.19$, $p<.05$).

These findings suggest that light and intermittent smokers reported greater preference of behavioral cessation methods and offer researchers and clinicians potential characteristics that may be associated with entry into more behaviorally or pharmacologically oriented cessation programs.

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CLINICIAN E-REFERRALS TO AN ONLINE SMOKING CESSATION SYSTEM: IMPACT OF MESSAGE FRAMING ON PATIENT REGISTRATION: THE QUIT PRIMO AND DENTAL PBRN STUDIES

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BACKGROUND: To increase patient participation in an online smoking cessation system, we implemented an e-referral system for providers. Referred smokers received a series of motivational emails encouraging registration. We tested the impact of varying the message framing on patient registration.

METHODS: The e-referral system (ReferaSmoker.org) was implemented in 27 medical and 56 dental practices. Providers referred smokers by entering their emails. Smokers were randomized to receive 10 emails framed either as 1) a doctor's message with the subject "Your Doctor's office left you a message." or 2) a generic prompt with the subject "You have been referred to an online smoking cessation program." We evaluated proportion of e-referred smokers who registered overall, and comparing the two message types. We implemented "tracking" programs on the website to record numbers of referrals, registered smokers, and log of email messages sent.

RESULTS: 615 smokers were referred into the system and 140 completed registration (22%). Registered smokers were 70% women, 15% minority, 52% over the age of 45, and smoked a mean of 16 cigarettes per day. The proportion of smokers registering was similar for the doctor office message (24% (76/312)) and the generic prompt (21% (64/303), p=0.3). 40% of smokers registered after the first email and over 80% registered by the third email. Some patients (n=9) required more than 5 emails to register.

CONCLUSIONS: Email messages were successful in encouraging patients to register to the website. However, numerous messages were required to achieve registration. In this preliminary analysis, message framing (doctor versus generic) did not significantly change the rate of registration (Funding: NCI 1R01-CA129091 and NIDCR U01-DE16747).

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D-169

EXAMINING SMOKING FOLLOWING A SENTINEL CARDIAC EVENT USING ECOLOGICAL MOMENTARY ASSESSMENT

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Objective: Smoking relapse among patients following a serious cardiac event approach 50% within one year. The current study explored a novel method for examining the post-sentinel cardiac event process of smoking abstinence/relapse.

Methods: Ecological momentary assessment (EMA) involves the repeated measurement of relevant variables at several random times over multiple consecutive days. The current study uses cell-phone EMA data collection (up to 8 calls/day) to examine the smoking behaviors of 23 patients for 28 days following presentation to a hospital for cardiac-related symptoms.

Results: One open empirical question related to cell-phone EMA in this population is compliance. The majority of patients (n=15; 70%) had a daily compliance rate (% of EMA calls completed on a given day)>60%, with many (n=7; 30%) having rates> 80%. Seven patients showed evidence of a fatigue effect, such that compliance was negatively associated with day of the study. Two patients improved compliance over time, and there was no association between length of monitoring and compliance for the remaining 61%. Compliance was increased when one callback attempt was made within 10 minutes of a missed call. The marginal benefits seen from making multiple callbacks were outweighed by concerns over patient burden. We also studied the influence of moving from 8 daily calls to 6. Results of this change were mixed; 35% of the sample increased compliance while the remaining 65% decreased or remained the same. However, the influence of this change was confounded with the aforementioned fatigue effects and patient reported preference of the 6/day (vs. 8/day) protocol.

Conclusion: This study shows that EMA can be an effective method for examining patients presenting with acute cardiac-related symptoms and provides suggestions for enhancing compliance. Further implications for data collection, analysis, and patient treatment will be discussed in depth.

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D-170

SOCIAL NORMS AND CIGARETTE SMOKING AMONG CHILEAN ADOLESCENTS AND YOUNG ADULTS

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Background: Cigarette smoking among adolescents and young adults is shaped by their perception of social norms about smoking. Researchers propose that acceptability of smoking will influence smoking behavior among youth.To study social norms about smoking maybe particularly relevant among population with high rates of cigarette use, such as Chile where over 40% of youth smoke despite changes in legislation that limit the access to cigarettes. Few studies have explored these perceptions and its relationship with current smoking status and parental and friends' smoking behavior.

Objectives: To explore the relationship between smoking status, parental and friend smoking on perceived smoking norms among adolescents and young adults in Chile.

Methods: Participants included 700 adolescents and young adults (age: 11 to 27) part of a longitudinal study of psychosocial determinants on tobacco use. Participants were asked to estimate how many persons (out of 100) from their age group and how many adults they think smoke. We used descriptive statistics and regression analyses to explore determinants.

Results: Participants perceived that 62.76% (S.D.=21.78) of youth and 71.23% (S.D.=23.52) of adults smoked. We found that perceiving that more persons from their age group smoke is associated with more smoking ($t=2.33$, $p<0.01$), and that perception of how many adults smoke was inversely associated with smoking ($t=-3.13$, $p<0.01$). We examined predictors of social norms of peer smoking and found that this belief was stronger among females ($t=2.85$, $p<0.01$), and if they had friends who smoke ($t=4.34$, $p<0.01$). When we explored the predictors of perceived social norms of smoking among adults, we found that father and mother smoking predicted higher perceived norms (father smoking $t=2.27$, $p<0.01$ and mother smoking $t=3.05$, $p<0.01$).

Conclusions: Perceived norms about smoking predict smoking behavior among youth. Our findings suggest that smoking in the environment also predict these beliefs. Further discussion focuses on implications for prevention of smoking among youth and to further understand this behavior.

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D-171

ANXIETY SENSITIVITY AND SMOKING: A MATTER OF GENDER?

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Anxiety Sensitivity (AS) refers to the fear of anxiety and physical sensations related to anxiety (Reiss & McNally, 1985). High levels of AS have been linked with certain forms of psychopathology, particularly anxiety disorders, as well as maladaptive behaviours such as smoking.

Previous research indicates that high AS is associated with numerous aspects of cigarette smoking, such as smoking motives, smoking outcome expectancies (e. g. negative affect reduction), and perceived barriers to quitting, as smokers with high AS perceive the prospect of quitting as both more difficult and more personally threatening compared to smokers with low ASI. The present study investigated the relation between AS and smoking in a sample of Cypriot college students, and its relation to dependence and motivation to quit among the smokers in the sample. Since previous research suggests that women usually report higher levels of AS compared to men, we also examined the relation between AS and smoking separately for men and women.

Results: Consistent with previous studies, women in the overall sample scored higher than men on the ASI, t(342)=6.92, p<.001 (women: M=22.94, S.D.= 10.97, men: M=14.64, S.D.=11.28). Male smokers had significantly higher ASI scores compared to male non-smokers, t(99.69)=7.94, p<.001, but no such difference was found between smoking and non-smoking women , t(101.08)= 0.32, p>.05. ASI did not relate to smoking heaviness, higher dependence, or previous quit attempts among smokers for either men or women. Our findings suggest that, in our sample, AS is linked to smoking specifically in men, whereas women smokers and nonsmokers had comparably high ASI scores. Also, contrary to previous studies, our findings suggest that, for our nonclinical sample of college students, AS did not relate to higher levels or dependence or greater effort to quit.

Further studies using longitudinal designs could inform as to whether AS can predict smoking-related outcomes later in life.

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D-172

HAPPY OR SAD, LONELY OR SOCIAL: CYPRIOT COLLEGE SMOKERS - WHY DO THEY SMOKE AND WHEN?

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Previous studies usually identify relaxation, stimulation, reduction of negative effect, addiction and habit as commonly reported reasons for smoking. There is evidence that women more frequently report smoking for relaxation and reduction of negative affect, and men more frequently for social reasons or due to addiction and habit. There is also evidence that certain reasons for smoking, particularly addiction- and habit-driven smoking, are linked to higher levels of nicotine dependence (ND). This study investigated reasons and situations of smoking in Cypriot college smokers, and compared men and women and high versus low dependent smokers in their reports for smoking motives. Smokers from various colleges and universities in Cyprus (N=187, 98 women)completed an adapted version of the Reasons for Smoking Questionnaire (RFS-Ikard et al., 1969), a questionnaire investigating the frequency of smoking under certain situations (e.g. smoking while watching TV, while being with friends etc.), and the Fagerström Test for Nicotine Dependence (FTND-Heatherton et al., 1991). Exploratory factor analyses indicated three broad factors for reasons for smoking, and three broad factors for the situations where participants reported frequent smoking. The most common reasons for smoking hierarchically were in the dimensions of 'Pleasure', 'Coping' and 'Addiction/Habit', while the most common situations were in the dimensions of 'Social Smoking', 'Smoking Alone' and 'Smoking during other activities'. Levels of ND were at moderate levels. Men and women did not present any differences in the reported reasons or situations for smoking, while more dependent smokers (FTND scores 1 S.D. above the mean) had higher scores on all reasons and situations, for smoking compared to lighter smokers (FTND scores 1 S. D. below the mean). In this age group, smoking behaviors, levels of dependence, and reasons for smoking appear similar for both men and women. Highly dependent smokers may tend to focus more on the negative reinforcement aspects of smoking. Such findings can inform relevant prevention and treatment programs.

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FACTORS ASSOCIATED WITH AWARENESS OF AND INTEREST IN USING A SMOKING CESSATION TELEPHONE HELPLINE

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Despite evidence supporting the effectiveness of smoking cessation telephone Helplines, these programs currently reach less than 5% of smokers and they largely target motivated smokers, whereas most smokers are not quite ready to quit. The purpose of this study was to determine factors associated with awareness of and interest in using the Minnesota Quitplan Helpline. Data was derived from an ongoing randomized clinical trial testing the efficacy of Motivational Interviewing versus written materials to increase the utilization of the Helpline. Smokers were identified from an electronic database of a health system and were mailed study invitation letters. Interested patients completed phone eligibility and those eligible completed a baseline survey by mail that included demographic and smoking characteristics. Analyses assessed associations between smoking related variables and awareness of the Helpline services as well as interest in using these services. Participants were predominantly female (65%), white (87.4%), high school (HS) graduate (91.1%), had mean age of 45.3 years, and smoked an of average of 16.8 cigarettes per day. Fifty-three percent were aware of the helpline but only 8.2% knew the services offered by the Helpline. Mean contemplation ladder score (0-10 scale) about interest in using the Helpline was 4.6. Logistic regression showed that awareness of the Helpline was negatively associated with older age (p=0.004), lower education (p=0.047), and lower readiness to quit smoking (0.046). Study findings showed low level of awareness of services offered by the Helpline especially among older smokers, those with less than HS education, and those with lower readiness to quit smoking. Programs designed to increase utilization of Helplines should incorporate measures targeting older, less educated, and unmotivated smokers.

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TARGETING TOBACCO QUITLINE CALLERS FOR ORAL HEALTH PROMOTION: OPPORTUNITIES AND CHALLENGES FROM THE PERSPECTIVE OF STATE QUITLINES

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Oral diseases exact a large human and economic toll in the US. Tobacco users are at particular risk for oral disease, including periodontal disease, dental caries, and oral and pharyngeal cancers. To date, most efforts to address oral health among smokers are targeted to individuals attending dental visits; however, many tobacco users fail to seek regular oral health care. To increase reach into this population, we propose integrating an oral health promotion program into state-sponsored tobacco quitlines. In an effort to inform the feasibility of this approach, we conducted qualitative interviews with key stakeholders from Free & Clear (n=15), the nation's largest provider of tobacco quitline services, and program officials from 21 states who contract with Free & Clear (n=28). We found general support for the program concept, although enthusiasm varied across stakeholder groups. Interventionists, behavioral scientists, and product development staff at Free & Clear were more supportive than individuals who managed individual state contracts. Most state program officials were also supportive of the concept, but raised pragmatic concerns about funding and competing treatment priorities. Other logistical concerns included consumers' access to dental care, impact of the program on tobacco cessation outcomes, cost of implementation, and questions about required counselor time and training. Often these sorts of pragmatic concerns are not addressed early enough in the intervention development process, hampering the dissemination potential of behavioral programs. We will present opportunities and challenges and discuss implications for program development and future research. In addition, we will discuss implications of lessons learned for others interested in promoting oral health or partnering with tobacco quitlines to offer multiple risk factor interventions targeted to smokers.

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D-176

RELIGION, OBESITY, AND HEALTH BEHAVIOR IN AFRICAN AMERICANS

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Studies on relationships between religion, body weight, and health have yielded mixed results, with some suggesting increased obesity in adults with greater religious involvement. Research on associations between specific aspects of religion and health among different cultural groups is needed. This study sought to elucidate relationships between religion, spirituality, body weight, and health behavior among African Americans in the Jackson Heart Study, a population-based cohort study of cardiovascular disease in African Americans. Questionnaires assessing church attendance, prayer, daily spiritual experiences, diet, physical activity, alcohol, and tobacco use were completed; height, weight, and waist circumference were measured. Participants (N=5214) had an average age of 55 (SD=13) and average body mass index (BMI) in the obese range (M=31.40, SD=6.52). The majority (63.3%) were female. Data were analyzed in a series of multiple regression analyses. Dependent variables were BMI, waist circumference, caloric intake, percent calories from fat, physical activity, alcohol use, and smoking status. Controlling for demographic variables, church attendance and spirituality were not related to BMI, waist circumference, fat intake, physical activity, or smoking, p's>.05. However, participants who reported attending church and praying more often consumed fewer calories per day, p's<.05. Also, attendance, prayer, and daily spiritual experiences were each uniquely related to less likelihood of alcohol use in the past year, p's <.001. Social support, cortisol, and depression were tested as potential mediators of relationships between religion and caloric intake and alcohol use, but no support for mediation was found. Religious participation may promote certain health behaviors but not necessarily lower body weight in African Americans. Future research should continue to investigate mediators of relationships between religion and health.

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D-177

EXPLAINING THE RELIGION-HEALTH CONNECTION: POTENTIAL MEDIATORS AMONG A NATIONAL SAMPLE OF AFRICAN AMERICANS

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Religious involvement is central to the lives of many African Americans, and is related to health cognitions, behaviors, and outcomes as well. Religious involvement is generally thought to play a positive role in health through several proposed mediators, such as performing health-related behaviors or avoiding unhealthy behaviors in accord with religious beliefs, social support, coping with stress, positive affect, and social norms. The purpose of the present research is to provide an empirical test of such mediators, thus testing a theoretical model of the religion-health connection. The present study collected primary data on a national probability sample of African Americans (N=2,370). Healthy African Americans age 21 and older completed a 45-minute telephone interview and were mailed a $25 gift card for their participation. Structural equation modeling was used to determine whether the aforementioned factors played a mediational role between religious involvement (beliefs, behaviors) and a broad range of health risk (e.g., smoking, alcohol), prevention (e.g., fruit and vegetable consumption, physical activity), and cancer screening behaviors (e.g., breast, prostate, colorectal). Several measurement and mediational models are presented. Analyses suggest that potential mediators include positive affect, negative affect, depression, and self-efficacy. Study findings have potential applied value for community-based health communication intervention development. This may include educational and/or screening programs delivered in faith-based settings, which emphasize particular mediators and capitalize upon their association with the target health behaviors.

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D-179

REAL TIME ASSESSMENT OF STRESS IN TELEPHONE HEALTH SERVICES: CARDIAC CONSEQUENCES FOR NURSES OF STRESSFUL CONSULTATIONS

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Stress in nurses is associated with burnout, clinical errors and the decision to leave the profession. Little is known about the immediate determinants and consequences of such stress as real time assessment is particularly difficult in the hospital setting. The present study investigated stress in nurses working for the telephone advice service NHS24, the gateway to out-of-hours healthcare in Scotland. This setting provided a unique opportunity to relate a continuous physiological measure of stress to nurses' clinical work in real time as all consultations are recorded.

Nurses (n=150) were studied over 2 shifts (average duration 7.5hours) during which they dealt with an average of 19 calls (average duration=17 minutes). Measures included (i) self ratings of the stressfulness of each call (1-5 scale) (ii) continuous measures of heart rate (HR) and activity (Actiheart, Cambridge Neurotechnology) and (iii) routinely gathered information on the nature of each call and action taken by the nurse. The data were analysed using multilevel modelling (MLwiN 2.20). Nurses reported experiencing stress during 34% of calls. HR was higher during stressful calls. The determinants of stress included the length of the call (longer calls were more stressful), the presenting problem and the action it required. However, the relationship between the nature of call and HR was complex (e.g., both calls concerning chest pain or that resulted in an ambulance being called were stressful but while chest pain calls were associated with a decrease in HR, calling emergency services led to an increase).

Nurses in a medical helpline service experienced stress during a significant number of calls and this is generally associated with higher HR. This stress and the related HR elevation may over time pose a risk to nurses' health and the service delivered.

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D-180

COPING STRATEGIES MODERATE THE RELATIONSHIP BETWEEN CULTURAL MISTRUST AND PERCEIVED STRESS IN AFRICAN AMERICANS

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This research proposes that cultural mistrust, specifically mistrust in education contexts, will impact perceived stress for African American students. If an individual knows how to utilize resources that are associated with effective coping strategies, the link between the perception of negative social situations and stress may weaken. Therefore, this research hypothesizes that perceived stress will be predicted by cultural mistrust and that coping strategies will moderate that relationship.

One hundred and forty-six African American college students in small groups completed measures of cultural mistrust, coping strategies and perceived stress. As expected, high cultural mistrust in education contexts (Rsquare=.03 β=.18, p<.05) predicted higher perceived stress. Behavioral disengagement, an avoidant coping strategy, and positive reinterpretation and growth, an approach-oriented coping strategy did not influence the individual's stress level if cultural mistrust was high. However, for individuals with low or moderate cultural mistrust, perceived stress decreased for those low in behavioral disengagement strategies (Rsquare=.09 β=.17, p<.05) or high in positive reinterpretation and growth strategies (Rsquare=.10 β=–.18, p<.05).

This study found that high cultural mistrust in educational contexts is directly related to high perceived stress among African American students. The act of behaviorally disengaging from an activity and positively reinterpreting outcomes moderates whether or not a person who is low or moderate in cultural mistrust perceives a situation as stressful, particularly when in an educational context. These findings suggest that cognitive-behavioral prevention programs that seek to alleviate stress among African Americans who are moderately mistrustful of Whites should encourage them to positively reinterpret a seemingly negative event as an opportunity to grow and emphasize the benefits of actively engaging in their environment, despite perceived mistrust.

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D-181

THE MODERATING EFFECTS OF COPING STYLE ON THE RELATION BETWEEN NEGATIVE LIFE EVENTS AND ALCOHOL USE AMONG COLLEGE STUDENTS

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Heavy alcohol use is pervasive among college students, and has prompted research on predictors of heavy use. Research on stress-alcohol models inconsistently supports a relation between stressors and heavy alcohol use among college students. The inconsistencies could be due to ignoring relevant individual differences, such as coping style, and qualitative differences in life events experienced. The current study examined if specific stressors uniquely predict heavy alcohol use among college students and if these relations differ depending on the individual's coping style.

Survey data from undergraduate social drinkers (N=349) were examined. A latent profile analysis of individuals' responses on the brief COPE identified participants' coping styles: Approach (N=263) or avoidant (N=86) coping. An exploratory factor analysis was used to construct qualitatively different categories of negative life events experienced between the last 3 and 12 months, including: Transition to college, academic stress, lifestyle changes, and romantic relationship stress. The severity of the negative impact of events in each category were summed and used to predict participant alcohol use in the past month. The relation between the stressors and alcohol use of the two coping groups were compared with a stacked model.

For individuals with an avoidant coping style, academic stressors ($\beta=-0.57$, $SE=0.22$, $p<.05$) and lifestyle changes ($\beta=-0.34$, $SE=0.17$, $p<.05$), were related to lower levels of alcohol use, while romantic relationship stress ($\beta=0.84$, $SE=0.24$, $p<.01$) was related to higher levels of alcohol use. None of the stressors were related to alcohol use in the approach coping group, but males reported heavier alcohol use ($\beta=-0.69$, $SE=0.28$, $p<.05$).

The current study suggests that college students' alcohol use may be affected differently by specific stressor types and that individuals with avoidant coping styles are most susceptible to stress-related drinking. These students may benefit from general coping skills training as well as strategies that target coping with social stressors.

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D-182

DOES DIFFERENTIAL COPING EXPLAIN THE HEALTH DISPARITIES AMONG KOREAN IMMIGRANTS?

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Studies of Korean immigrants have shown high levels of stress (Hurh & Kim, 1990), depression (Kiefer et al., 1985; Kuo, 1984), and somatic complaints (Lin et al., 1992; Pang, 1995, 2000). And within this population, recent arrivals suffer more than settled immigrants–a pattern opposite to that found in other immigrant groups (e.g. Mexicans, Escobar et al., 2000).

The AT-RISK Project (Applying Theory to Recent Immigration Stress among Koreans) seeks to explain this health disparity using psycho-social variables. One possible explanation is that of differential coping responses, such that recent immigrants bring with them "Korean" strategies, such as seeking familial support, which may not be as feasible or as effective in their new country. Participating in the study were 400 immigrants born in Korea and residing in Southern California. Quota sampling ensured a variegated sample in terms of gender, age, SES, and residency in the US (median=10 years). Nearly all completed surveys in Korean, which assessed their stressors, coping strategies, and health.

Preliminary results verified the health disparities reported earlier. Recent immigrants suffered significantly more mental [F (1. 385)=7.00, $p<.01$] and physical symptoms [F (1. 389)=9.97, $p<.001$], and rated their health as worse [F (1. 320)=6.35, $p<.01$] than established immigrants. Coping differences were also found, with recent immigrants indicating significantly more Seeking Support [F (1. 360)=6.34, $p<.01$] and Avoidance responses [F (1. 360)=4.49, $p<.05$]. These strategies were, in turn, related to greater pathology: Seeking Support was associated with more psychiatric symptoms ($r=.244$. $p<.0001$), and Avoidance with both more mental ($r=.245$. $p<.0001$) and somatic symptoms ($r=.406$. $p<.0001$) as well as more physical illnesses ($r=.323$. $p<.0001$).

Current findings suggest that processes as simple as differential coping might explain the health disparities documented among Korean immigrants. Moreover, as coping preferences are amenable to behavioral interventions, there is hope that these disparities might one day be erased.

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D-184

RACE DIFFERENCES IN ALCOHOL TREATMENT LINKAGE AMONG ALCOHOL DEPENDENT MEDICAL IN-PATIENTS

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Background: Research with community samples suggests that alcohol dependent patients who are Black may be less likely to link to treatment than Whites. There is relatively little known, however, about whether these disparities are observed for patients in general medical settings. Objective: To evaluate the association between race and treatment linkage among a sample of Black and White alcohol dependent medical in-patients identified by screening and assessment.

Method: This is a secondary analysis of a randomized controlled trial of brief motivational counseling among 341 medical inpatients with unhealthy drinking. We limited the current analysis to Black and White subjects with alcohol dependence at baseline, measured with the Composite International Diagnostic Interview Alcohol Module who completed the 3-month follow-up. The outcome of interest was self-reported receipt of alcohol assistance (e.g. residential or outpatient treatment, medication, mutual help groups, employee assistance programs) at 3-months. The main independent variable was race, classified as Black or White.

Results: Among the 175 subjects, (106 Black, 69 White), 69% were male; mean age was 45, and 46% reported drug use. In adjusted analyses that controlled for intervention, gender, age, drug use, and drinks per day, race was significantly associated with receipt of alcohol assistance. Black patients had significantly lower odds of reporting alcohol assistance at 3-months compared to Whites (40% for Blacks vs. 57% for Whites, adjusted odds ratio=.46 [95% confidence interval .23 to .91]).

Conclusions: Although all participants in this study were screened while hospital in-patients, Black patients had lower odds of linking to alcohol treatment. Potential mediators of these disparities and implications for screening and referral should be explored.

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D-185

THE UTILITY OF AUDIT-C CUT SCORES IN VA PRIMARY CARE SETTINGS

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BACKGROUND: The consumption questions of the AUDIT (AUDIT-C) are mandated for use in VA primary care settings. Scores≥4 for men have traditionally been considered positive, requiring further evaluation for hazardous drinking. A cut point of 4 has come under scrutiny due to a possibly inflated number of false positive screens. Consequently, the VA initiated a policy that scores≥5 must be used to avoid unnecessary alcohol use interventions for non-problematic drinking.

PURPOSE: This study's purpose was to evaluate the utility of AUDIT-C cut scores by investigating differences in alcohol use patterns and related consequences among individuals whose AUDIT-C scores were 4 or 5.

METHODS: Primary care patients who scored≥4 on the AUDIT-C were recruited for a longitudinal study. Seventy-seven males completed alcohol use questionnaires at baseline. Analyses of covariance were conducted to investigate group differences between men with AUDIT-C scores of 4 and 5 for the following variables: drinks per week, negative consequences (i.e., DrinC score), number of times a physician recommended changing drinking habits, and readiness to change alcohol use. Participant demographics (mean age=71.5, SD=14.01; 78% Caucasian; 59% married; 56% retired) served as covariates.

RESULTS: ANCOVA results revealed participants with a score of 5 had higher DrinC scores (i.e., more negative consequences) (F (1, 64)=10.55, $p<0.01$) and average drinks per week (F (1, 63)=6.70, $p=0.01$) than those with a score of 4. No differences were observed on physician recommendations or readiness to change.

CONCLUSIONS: Results suggest that an AUDIT-C cut score of 5 may be a better indicator of problematic drinking in men than a cut score of 4. Future research should compare the long-term outcomes of primary care patients with an AUDIT-C score of 4 versus 5 as a means to better determine the most appropriate cut score that will best predict problematic alcohol use.

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D-186

INTENTIONAL MISUSE OF OVER-THE-COUNTER MEDICATIONS AND POLYSUBSTANCE USE IN YOUNG ADULTS

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In recent years, the non-medical use of prescription drugs (without a doctor's prescription) has increased dramatically, particularly in young adults. Less attention has been paid to the intentional misuse of over-the-counter (OTC) medication. When taken in large doses, cough/cold medications containing dextromethorphan can cause hallucinations or dissociative experiences similar to those caused by hallucinogens. When mixed with alcohol or other drugs, these medications can also be dangerous: OTC-related emergency room visits increased 70% from 2004 to 2008. The present study examined the intentional misuse of OTC medications and use of traditional recreational drugs in young adult college students (N=435). Overall, 17.9% of the sample reported lifetime use of an OTC medication in a way not intended by the manufacturer. The most common class of OTC drugs for non-medical use was cough or cold medications (13% of the sample), followed by analgesics (4%), and medications to combat motion sickness (2%). Motivations described by participants included use as a sleep aid (53%), to get high (37%) and to cope with a difficult problem (15%). Participants who reported misusing OTC medications were also significantly more likely to report using marijuana (42% versus 26% among individuals who did not misuse OTC meds), ecstasy (13% versus 6%), cocaine (11% versus 2%) and poppers (7% versus 1%), all ps<.05. Individuals who had misused OTC medications scored significantly higher on a measure of sensation seeking than those who had not, t (423)=1.98, p<.05. Young adults are at risk for medical complications resulting from combining OTC use with the use of alcohol or street drugs.

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D-187

HAZARDOUS ALCOHOL USE AMONG VETERANS WITH HEPATITIS C: ALCOHOL-RELATED COPING, CONSEQUENCES, AND CONFIDENCE TO CHANGE

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Goals: We evaluated the impact of Hepatitis C (HCV) on differences in alcohol/drug-related coping (e.g., to cope with depressive symptoms), drinking-related negative consequences, and importance and confidence in ability to change alcohol use among hazardous drinkers.

Background: One major barrier to eligibility for antiviral treatment is hazardous drinking. Little is known about differences between hazardous drinking patients with HCV and other patients with similar drinking patterns.

Study: Hazardous drinking patients (n=554) completed a web-based assessment. Primary measures included risk factors for problematic alcohol use, Short Inventory of Problems, and importance and confidence to change drinking. Group differences were examined between HCV+ (n=43) and HCV- (n=511) groups using one way analyses of variance and chi-square tests. Identical analyses were conducted on diabetic and non-diabetic patients to demonstrate that observed differences may potentially be condition specific.

Results: Alcohol consumption was roughly equivalent between HCV+ and HCV- groups. A significantly higher percentage of HCV+ patients reported using substances to cope with symptoms of PTSD (p<.05) and depression (p<.01) and endorsed significantly more drinking-related negative consequences than patients without HCV (p<.01). HCV+patients place greater importance on changing alcohol use (p<.01) but report less confidence in their ability to make steps toward this change (p<.01) as compared to hazardous drinkers without HCV.

Conclusions: Although HCV+ and HCV- patients' drinking patterns are comparable, HCV+ patients differ significantly from other hazardous drinking patient populations on several clinically relevant factors possibly contributing to more problematic and complicated hazardous alcohol use and providing an opportunity to intervene. Addressing alcohol use within medical and mental health settings may be well-received by HCV patients.

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D-188

DRUG USE STIGMA IN THE CONTEXT OF METHADONE MAINTENANCE THERAPY

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Stigma (i.e., social devaluation and discrediting) has been widely recognized as a barrier to treatment and recovery efforts among populations such as people living with HIV and mental illness. However, very little is known about stigma experienced by drug-involved individuals, particularly those negotiating treatment and recovery. To better understand how drug use stigma may undermine treatment success, we conducted 12 qualitative interviews with patients receiving methadone maintenance therapy in an inner-city community-clinic setting. Participants' age, gender and ethnicity were representative of the clinic population. Participants were asked about their experiences with drug use stigma. Several themes emerged from their responses that reached saturation. Participants both experienced and anticipated stigma from friends and family, employers, and health care providers. Participants identified drug use stigma from these sources as a barrier to their recovery efforts. For example, continued mistrust and social isolation from friends and family, perceived job incompetence from employers, and discrimination from health care providers were identified as undermining their ability to sustain treatment success. Furthermore, participants viewed themselves as non- or former-drug users. However, they noted that others continued to view them as active drug users. This disconnect delegitimized their recovery efforts and was identified as a source of distress. The current work highlights the need for further exploration and understanding of how drug use stigma impacts individuals with a history of drug use throughout their recovery process.

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D-190

DEPRESSION, FAMILY ENVIRONMENT, AND PERCEIVED SOCIAL SUPPORT AS FACTORS IN ADHERENCE AMONG ADOLESCENT RENAL TRANSPLANT PATIENTS

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Adolescence is a developmental period characterized by biological and psychological changes that increase the risk of non-adherence and poor illness outcomes. The desire for independence, control, and reduced parental supervision while teens are still struggling with the responsibility of illness management can lead to increased teen-parent conflict and poor communication (Dobbels et al., 2005). In addition, depressed adolescents may be resistant to support from parents and peers. Although these psychosocial factors have been studied in other pediatric chronic illness groups, adolescent depression, family conflict, and perceived social support among adolescents has not been explored in pediatric renal transplantation.

Twenty adolescent renal transplant patients ages 13-18 (mean age 16.1 years, 55% female, 57.1% Caucasian) were recruited from a northeastern children's hospital. The current study examined the relationship between adherence and psychosocial factors, including adolescent depression, perceived social support, and perception of the family environment. The Child Adolescent Social Support Scale, the Child Depression Inventory, and the Family Environment Scale were administered. In order to assess adherence a semi-structured interview, the Medical Adherence Measure, was conducted to obtain patient report of missed and late doses. Immunosuppressant medication non-adherence (missed doses) was associated with greater depressive symptoms (r=.49, p=.017), increased conflict within familial relationships (r=.55, p=.005), perception of lower parental support (r=-.41, p=.05), and perception of lower importance of support from important people in school (r=-.43, p=.04). Late medication doses were not related to these psychosocial factors.

Given that non-adherence to immunosuppressants has been cited as a major cause of acute rejection episodes and graft loss among adolescent transplant patients [7], understanding which psychosocial factors impact medication-taking is essential for developing targeted interventions to support adolescents through challenging times.

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Saturday
April 30, 2011
10:00 AM–11:30 AM

Meritorious Paper

Paper Session 19 10:00 AM–10:18 AM 4000

INTRINSIC MOTIVATION MEDIATES THE RELATIONSHIP BETWEEN PEER BUT NOT PARENT SUPPORT AND PHYSICAL ACTIVITY IN UNDERSERVED ADOLESCENTS

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Previous research has shown that social contextual factors are important influences of physical activity (PA) yet researchers do not yet understand how those factors may be working. Self-Determination Theory (SDT) identifies motivation as a mechanism that social contextual variables may work through to influence PA. As suggested in SDT, this study expands on previous research by examining motivation as a mediator of the relationships between moderate-to-vigorous PA (MVPA, 7-day accelerometry estimates) and two measures of the social context, peer and parent social support, in underserved adolescents (low income, minorities). In the current study, peer and parent social support are hypothesized to positively effect motivation (theoretically via positive social contextual factors such as autonomy, belongingness, and competence) and, in turn, MVPA. Baseline data from the Active by Choice Today (ACT) Trial were analyzed using the product-as-coefficients methods of estimating a mediation relationship ($n=1422$, mean age 11.3 years, 54% female, 72% African American, 71% reduced lunch). Adolescents self-reported peer and parent social support and motivation using established scales. Multiple imputations were used to handle missing data (Schafer, 1997), and BMI and sex were covariates. Results showed steps for establishing mediation (MacKinnon, Fairchild, & Fritz, 2008) and a mediation effect tested using the first order test were statistically significant for peer support ($B=1.22$, $se=0.61$, $T(1416)=2.00$, $p<.05$), but parent support was not significantly related to MVPA. Results of the current study suggest that motivation may mediate the relationship been peer support and MVPA in underserved adolescents but that parent support may be operating in a different way to influence PA. While longitudinal research is needed to more fully understand the social conditions that influence motivation and the possible mediation relation, results of the current study suggest that these factors should be the focus of future interventions in underserved populations.

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Meritorious Paper

Paper Session 19 10:18 AM–10:36 AM 4001

EXECUTIVE FUNCTION, SELF-REGULATION, AND SELF-EFFICACY EFFECTS ON EXERCISE ADHERENCE IN OLDER ADULTS

Amanda N. Szabo, BS and BA,[1] Sean P. Mullen, PhD,[1] Siobhan M. White, BS,[1] Thomas R. Wójcicki, BS,[1] Arthur Kramer, PhD[2] and Edward McAuley, PhD[1]

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Exercise self-efficacy (SE) and use of self-regulation (SR) strategies are consistently associated with physical activity behavior. Similarly, behavioral inhibition and cognitive resource allocation, indices of executive functioning (EF), have also been linked to exercise. The purpose of this study was to examine the hypothesis that SE mediates the relationship between SR constructs, such as EF and SR strategy-use, and sustained exercise behavior. Older adults ($N=179$, 60–80 years old) were recruited to participate in a 12-month exercise intervention. Two measures of EF, the Wisconsin Card Sorting task (WCST) and the Ericksen Flanker task (EFT), were collected via a computer prior to the start of the trial. A self-report questionnaire of SR was also completed prior to the start of the trial, whereas the SE questionnaires were administered three weeks after program start. The percentage of exercise classes attended over the subsequent 11 months was used to represent adherence. Data were analyzed using a latent variable structure regression model with the full-information maximum likelihood estimator to test the fit of the hypothesized model. The proposed model provided a good fit to the data, $\chi 2=77.05(58)$, $p=.05$; $CFI=.97$; $RMSEA=.04$ (90% $CI=.00$ to $.07$), $SRMR=.05$, and predicted 15 % of the variance in adherence. As hypothesized, results showed direct effects of WCST on SE ($\beta=.20$), EFT on SE ($\beta=-.28$), and SR on SE ($\beta=.20$), in addition to a direct effect of SE on adherence ($\beta=.27$). There was also a significant indirect effect of EFT on adherence via efficacy ($\beta=-.08$). These results suggest that higher levels of EF at the start of an exercise program enhance beliefs in exercise capabilities which in turn, lead to greater program attendance. Additionally, these findings are supportive of the social cognitive perspective, which suggests SR capacities influence behavior through SE pathways.

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Citation Paper

Paper Session 19 10:36 AM–10:54 AM 4002

CORRESPONDENCE IN DAILY PHYSICAL ACTIVITY LEVELS IN PARENT-CHILD PAIRS BASED ON ACCELEROMETER AND GPS MONITORING

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Background: Evidence suggests that parents play an important role in shaping children's physical activity (PA) levels through behavioral modeling and support. However, little is known about the degree to which parents and children engage in PA together. This study examined moment-to-moment correspondence in PA levels in parent-child pairs who both wore an accelerometer and Global Positioning Systems (GPS) device over the same 7-day period.

Methods: The sample consisted of 94 parent-child pairs. Children were 51% female, 8–14 years, and 35% Hispanic. Parents were 82% female. An Actigraph GT2M accelerometer and GlobalSat BT-335 GPS device collected activity and geographic positioning data, respectively, using 30-sec. epochs. Overnight hours (11 pm–5 am), school time (8 am–3 pm on weekdays), and periods of accelerometer non-wear were removed. Whether an epoch reached moderate-to-vigorous physical activity (MVPA) was defined using age-specific cut-offs. Distance between the parent and child (0-50 m vs. >50 m) for each epoch was calculated using geographic coordinates. SAS PROC GLIMMIX estimated the likelihood of child MVPA at each epoch as a function of adult MVPA at that same epoch, with distance between the parent and child as a moderator.

Results: Compared with children whose parents engaged in MVPA at the same time, children whose parents did not engage in MVPA at the same time were less likely to engage in MVPA themselves ($p<.001$). The correspondence between parent and child activity levels was stronger when parent-child pairs were within 50 m of each other ($p<.001$); particularly for girls ($p=.04$), younger children (8-11 years) ($p<.001$), and higher-income families (>$100,000) ($p<.001$).

Conclusions: When in close proximity, the activity levels of girls, younger children, and children from higher-income households appear to reflect the activity levels of their parent. Psychological, social, and behavioral mechanisms explaining these associations should be further explored.

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Paper Session 19 10:54 AM–11:12 AM 4003

HEALTH BEHAVIORS ACROSS THE LIFESPAN: DIFFERENCES BY GENDER AND SEXUAL ORIENTATION

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Prior research suggests that sexual minorities (e.g., lesbian, gay, bisexual) engage in worse health behaviors compared to heterosexuals. Less is known about whether these sexual orientation differences are consistent throughout the lifespan. We pooled three years (2001, 2003, 2005) of the California Health Interview Survey to examine age (18-70 years), gender, and sexual orientation (heterosexual, lesbian/gay, bisexual) differences in health behaviors. We stratified the sample by gender (females=70,017; males=50,826) and computed multivariable logistic regression models for each health behavior. All models were adjusted for race/ethnicity, education, household income, and nativity. Across all ages, lesbians were more likely than heterosexual women to report lifetime cigarette use (OR=2.4, 95% CI=1.4, 4.0), current smoking (OR=2.5, 95% CI=1.4, 4.4), use alcohol in the past month (OR=2.2, 95% CI=1.1, 3.6), binge drinking (OR=1.9, 95% CI=1.1, 3.3), and participation in vigorous physical activity (OR=2.3, 95% CI=1.1, 4.8). Bisexual women were also more likely to be a current smoker (OR=3.0, 95% CI=2.1, 4.3), use alcohol in the past month (OR=2.0, 95% CI=1.4, 2.9) and be a binge drinker (OR=2.1, 95% CI=1.4, 3.2) at any age. Gay men were more likely than heterosexual men to report current smoking (OR=2.0, 95% CI=1.3, 2.9) across all ages. At age 18, gay men were three times more likely to drink alcohol in the past month than heterosexual men (OR=3.2, 95% CI=2.1, 4.8). The odds of consuming alcohol in the past month decreased slightly with each year of age for heterosexual men (OR=.99, 95% CI=0.99, 0.99), and decreased at only a slightly faster rate for gay men compared to heterosexuals (interaction OR=0.97, 95% CI=0.95, 0.98). Overall, there were few differences by sexual orientation among men over the life course. Among current cohorts, lesbian and bisexual women retain their greater use of tobacco and alcohol over the life course, indicating the need for healthy life style interventions for lesbian and bisexual women of any age.

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Paper Session 19 11:12 AM–11:30 AM 4004

AGING, PHYSICAL ACTIVITY CHANGE, AND SOCIAL COGNITIVE DETERMINANTS

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The effect of aging on social cognitive (SCT) determinants of physical activity (PA) was investigated using structural equation analysis (SEM) of data from adults ages 40-92 (n=703, age m=58.11, sd=11.08; 23% African American; 66% female, 48% inactive, 75% BMI>=25) participating at baseline of a health promotion intervention - Guide to Health (GTH) - yielding a good fit to the data (RMSEA=.046). Within the model, age (β[total]=-.41;P<.01), social support (β[total]=.12; P<.01), self-efficacy (β[total]=.12;P<.01), and self-regulation (β[total]=.17;P<.01) contributed to participants' PA levels (verified daily step counts, METhrs/week). Although self-efficacy (β[total]=−.14;P<.01) decreased with age, family social support (β[total]=.37;P<.01), negative outcome expectations (β[total]=−23;P<.01) and use of self-regulatory strategies (β[total]=.25;P<.01) improved with age. Among aging, weight challenged, inactive participants completing the GTH trial (n=202; BMI >=25;<7500 steps/day; <5 days exercise; age 40-83, m=59.18, sd=10.66; 30% African American; 65% female), the changes in SCT variables at 7 mo were modeled to predict change in PA and weight at 16 mo yielding good fit to the data (RMSEA<.001). GTH use was associated with increased PA (β[total]=.53;P<.01) and decreased body weight at 16 mo (β[total]=.11;P<.01). Increases in self-efficacy at 7 mo (β[total]=.23;P<.01) mediated treatment effects on PA (GTH-SE-PA ab=.091; CI=.006; .20), but increases in self-regulation (β[total]=.38; P<.01) did not (GTH-SR-PA ab=.16; CI=−.05; .38). Increased PA was associated with greater weight loss (β[total]=.25;P<.01). These long term data from a diverse aging sample suggest PA interventions that offset the effect of aging on self-efficacy may be more successful in helping older participants become more active and avoid weight gain.

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Paper Session 20 10:00 AM–10:18 AM 4005

PREVALENCE OF CANCER SCREENING AND PHYSICIAN RECOMMENDATIONS FOR SCREENING IN OLDER ADULTS FROM MINORITY BACKGROUNDS

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The aging of the baby boom generation coupled with the rising life expectancy of Americans, as well as the increase risk of cancer with age represents a major public health concern. Early detection of cancer has been found to contain health care costs, yet most cancer screening guidelines advocate discontinuing screening after age 75. Screening rates also tend to be lower for racial/ethnic minority groups; a concern due to the projected increases in racial diversity in the U.S. Using the National Health Interview Survey (NHIS), we investigated current cancer screening rates (FOBT within last year, Mammogram within last two years, Pap smear within last three years, PSA within last year) among older adults (75 and older) from minority backgrounds without cancer (n=2,328), as well as physician recommendations for screening by these different groups. Overall, >31% (range=31% to 64% depending on screening test) of older adults received cancer screening tests. Blacks, Hispanics and Asians were less likely than non-Hispanic whites (NHW) to receive FOBT (OR=0.8, 0.4, 0.7, respectively). Similar patterns were found with mammography and PSA for Hispanics and Asians. Hispanics were less likely (OR=0.5) than NHW to receive mammography screening and Pap Smear test (OR=0.5; 0.3). Physicians were significantly less likely to recommend FOBT screening to Blacks (OR= 0.4) and Hispanics (OR=0.5) compared to NHW. Similarly, Hispanics were less likely (OR=0.5) to receive doctor's recommendation for mammography screening (OR=0.5) and FOBT (OR=0.3) compared with NHW. Despite guidelines that advocate for discontinued screening in older adults after age 75, a significant proportion of older adults are continuing to get screened, with racial/ethnic disparities in screening rates and physician's recommendation for screening tests. Examining the costs versus benefits of continued screening in older minority adults will be critical in light of the changing demographics of the U.S., coupled with the fact that older Americans are living longer and healthier.

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Paper Session 20 10:18 AM–10:36 AM 4006

A PROSPECTIVE INVESTIGATION OF PSYCHOSOCIAL PREDICTORS OF UPTAKE OF FECAL OCCULT BLOOD TESTING IN THE UK

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Fecal occult blood testing (FOBt) can reduce mortality from colorectal cancer (CRC), but uptake rarely exceeds 60% even in organized screening programs, and is consistently lower among people from lower socioeconomic status (SES) groups. The present study examined associations between uptake and three domains of predictor variables: demographics (SES, age, ethnicity), health (self-rated health, family history of cancer) and psychological factors (anxiety, perceived cancer threat, perceived screening efficacy, cancer fear and fatalism), and assessed mediation of SES disparities in uptake. 529 adults in London, UK who were in the age range (60-69 yrs) for the organized national CRC screening program, completed a postal survey 2-3 years prior to being sent their first FOBt kit. Data from survey responses were linked with objective screening uptake records. Uptake was 56% overall, and higher among those who were higher SES, had a family history of cancer, better self-rated health, lower anxiety, higher efficacy beliefs and lower cancer fatalism. There was no association between uptake and any of the threat constructs (fear, perceived susceptibility, perceived severity), or age, gender or ethnicity. Structural equation modeling indicated that self-rated health (β=0.08; p<0.003) and cancer fatalism (β=−0.02; p<0.01) substantially mediated the association between SES and FOBt uptake (from β=−0.13 to β=−0.02). Reducing SES differences in screening uptake requires addressing fatalistic beliefs in lower SES communities and finding ways to help those in poorer health to complete the test.

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Paper Session 20 10:36 AM–10:54 AM 4007

DOES TIME PERSPECTIVE EXPLAIN SOCIOECONOMIC DISPARITIES IN COLORECTAL CANCER SCREENING UPTAKE?

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Socioeconomic disparities in cancer screening uptake are widely reported, but there has been less attention paid to the underlying mechanisms. This study examined the role of time perspective (assessed using the 'Consideration of Future Consequences (CFC) scale) in disparities in attendance for colorectal cancer screening. We tested a mediation model predicting that i) higher socioeconomic status (SES) would be associated with higher CFC, ii) higher CFC would be associated with higher perceived benefits and lower perceived barriers, and iii) barriers and benefits would be associated with screening attendance. Data for these analyses came from the control arm ($n=809$) of an intervention study testing an information leaflet as part of the UK Flexible Sigmoidoscopy Trial. Participants were adults aged between 55–64 yrs who had expressed uncertainty about whether they would attend. They completed a questionnaire assessing psychosocial variables before they received the screening invitation. Attendance at the screening clinic was recorded. SES was related to uptake (OR: 1.34, CI; 1.11–1.64, $p<.001$), with rates of 56%, 68% and 71% across tertiles of SES. As predicted, higher SES was associated with higher CFC ($\beta=0.19$, $p<.001$), higher CFC was associated with a higher perceived benefits ($\beta=0.44$, $p<.001$) and lower perceived barriers ($\beta=-0.17$, $p<.001$). Perceiving more benefits (OR: 2.85, CI; 1.93–4.20, $p<.001$) and fewer barriers (OR: 0.62, CI; 0.49–0.79, $p<.001$) was associated with higher attendance. Multivariate regression analyses demonstrated that CFC fully mediated the association between SES and perceived benefits/barriers, and perceived benefits/barriers fully mediated the association between CFC and screening uptake. Taking CFC into account in promoting cancer screening - for example by emphasising short-term benefits - could help reduce disparities in uptake.

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Paper Session 20 10:54 AM–11:12 AM 4008

THE IMPACT OF LIFESTYLE ADVICE AMONG ADULTS ATTENDING FLEXIBLE SIGMOIDOSCOPY COLORECTAL SCREENING: A PILOT STUDY

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The screening context may provide a 'window of opportunity' for promoting health behaviours. A previous study showed a short-term benefit of tailored advice on fruit and vegetable intake given as part of a trial of flexible sigmoidoscopy screening. The present study examined the impact of providing lifestyle advice with or without individually-tailored feedback compared with usual care (no advice) on a wider range of health behaviours and over a longer follow-up period, in the context of a pilot study of population-based flexible sigmoidoscopy (FS) screening for colorectal cancer in the UK.

Adults ($n=365$) aged 58–59 years who had been given a negative screening result were randomised to one of three groups: i) control group - usual care (no advice); ii) standard leaflet on healthy lifestyle; or iii) standard leaflet plus brief, tailored feedback. A follow-up questionnaire was sent six months later. Outcomes were change in fruit and vegetable consumption, alcohol intake, and physical activity.

More people in the feedback group were meeting the five-a-day fruit and vegetable recommendation at six months (OR:2.28, CI[1.09, 4.76]). For physical activity there was a non-significant trend towards improvement in meeting guidelines in the feedback group (OR:1.26, CI[.62, 2.55]). Alcohol intake was extremely low overall in the sample and did not change.

Tailored advice given in the context of cancer screening may provide an opportunity to improve dietary behaviours. Further research is needed to determine whether the screening context provides a unique 'teachable moment' or whether similar effects can be achieved in other health care settings.

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Paper Session 20 11:12 AM–11:30 AM 4009

GENDER PATTERNS IN DISTRESS AND WORRY AFTER A PANCREATIC CANCER SCREENING INTERVENTION

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Growing research has focused on cancer screening and emotional distress in those at high-risk for hereditary breast/ovarian cancer. However, scant data exist on the impact of screening on distress among those at high-risk for highly untreatable cancers, such as pancreatic cancer (PC), which was the goal of the current research. As women generally report greater cancer-related distress compared to men, we examined whether distress over time differed by gender.

Methods: Individuals with family histories of PC and BRCA2 mutations (due to increased PC risk) took part in a PC screening program ($N=198$; 68% female), which involved a baseline genetic counselling, screening MRI, and blood collection, followed by annual MRIs/blood collection. At baseline, 3-months, and 12-months post-baseline, study participants completed self-report questionnaires assessing general distress (Global Severity Index of the Brief Symptom Inventory-18), cancer-related distress (Impact of Events Scale), and a cancer worry index. Data were analyzed with multilevel mixed models allowing for random intercepts and slopes and utilizing a first-order autoregressive covariance matrix. All analyses were stratified by gender and controlled for prior cancer diagnosis, number of relatives with PC, and family history of PC vs. BRCA2 mutation.

Results: Baseline values of worry and distress did not significantly differ by gender. However, significant time effects were found for women on cancer-related distress ($F=6.2$, $p=0.003$) and cancer worry ($F=10.0$, $p<0.001$) such that distress and worry significantly decreased by the final follow-up compared to baseline values. No significant time effects were found for women on general distress. For men, no significant time effects were found on any outcome variable.

Conclusions: Data suggest that among those at high-risk for PC, gender may shape the subjective benefits of reduced cancer worry and distress in the context of participating in a PC screening program.

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Citation Paper

Paper Session 21 10:00 AM–10:18 AM 4010

FORGIVENESS AND IMMUNE FUNCTIONING IN PEOPLE LIVING WITH HIV-AIDS

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Forgiveness has been identified as a meaningful psychosocial and spiritual issue for people living with HIV (PLWHA), as they cope with stigma and potential past traumas. Both psychosocial and spiritual factors have been found to influence HIV disease progression in previous research, but the impact of forgiveness remains largely unexplored. This study assessed the relationship of forgiveness toward a specific person who caused a hurt and immune functioning markers among PLWHA on antiretroviral medications. In bivariate correlations, greater forgiveness was significantly associated with higher CD4 cell percentages, a widely used, stable indicator of better immune status in HIV treatment ($r=.249$, $p=.044$, $N=66$). Linear regression analyses found that this relationship remained significant after controlling for demographic variables (age, race, gender, and years with HIV), behavioral variables (substance use, medication adherence), and standard health indicators (viral load) ($\beta=.249$, $p=.039$, $N=59$). These findings indicate that forgiveness of another person may be beneficial for physical health among PLWHA, and support the inclusion of forgiveness education in interventions developed for this population.

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Citation Paper

Paper Session 21 10:18 AM–10:36 AM 4011

MINDFULNESS DISPOSITION AND DEFAULT-NETWORK CONNECTIVITY IN THE AGING BRAIN

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One of the remarkable advances in the neuroscientific study of the human brain has been the discovery of the "resting-state" brain. Examining patterns of activity during endogenous processing has provided evidence for the consistent presence of functionally connected networks. Aging studies examining the connectivity of the resting state networks have reported reduced connectivity of one of the primary networks of the brain, the default-mode network (DMN). The study of DMN has been particularly intriguing given it's functional associations with cognitive performance, affective functioning and disease severity. In here, we examined if mindfulness disposition, or the ability to stay focused on the present moment experience, was associated with increased functional connectivity of the regions of the DMN in older adults. Thirty older and thirty younger participants were recruited for the study and were scanned inside a 3 T scanner during a task that required them to passively view a fixation cross on screen. Functional imaging data was analyzed using spatial independent components analysis to generate maps of cortical networks. Employing a novel technique of dual-regression, we generated individual time courses for the DMN, along with individual spatial maps to examine individual differences in the connectivity of the DMN. Older adults were found to have reduced connectivity in the regions comprising the DMN, relative to younger adults. Specifically, older adults demonstrated a reduced connectivity in the precuneus and right superior frontal gyrus relative to younger adults. Interestingly, older adults, with higher levels of mindfulness disposition had increased connectivity in the precuneus, the midline cortical structure considered to be the hub of the DMN. These results present the first evidence for the prophylactic influence of mindfulness on brain connectivity of the elderly. Future research will examine the functional ramifications of such an increased connectivity, along with the influence of a randomized clinical trial of mindfulness training on functional connectivity of this task-negative network of the resting brain.

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Citation Paper

Paper Session 21 10:36 AM–10:54 AM 4012

A RANDOMIZED CONTROLLED TRIAL OF MINDFULNESS TRAINING FOR CANCER PATIENTS UNDERGOING STEM CELL TRANSPLANT

Susan Bauer-Wu, PhD,[1,4] James Carmody, PhD,[2] Mary Cooley, PhD,[3] George Reed, PhD,[2] Elana Rosenbaum, MSW,[2] Rachael Whitworth, MA,[1] Ann LaCasce, MD[3] and Christopher Flowers, MD[4]

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Individuals with cancer who undergo hematopoietic stem cell transplantation (HSCT) experience considerable emotional and physical challenges. This multi-site randomized controlled trial (RCT) evaluated the longitudinal and short-term effects of mindfulness meditation training in cancer patients hospitalized for HSCT. Participants ($N=241$) were randomized to either mindfulness training ($n=84$), nurse education/attention control ($n=80$), or usual care ($n=77$). The mindfulness intervention included individual sessions with an instructor (before and twice weekly in hospital) and between-session "homework" practice (meditation CD). Short-term effects were measured with Visual Analog Scales and heart and respiratory rates done several times (before and after each intervention session and 30 minutes apart in usual care group). Standardized measures of psychological functioning, perceived stress, physical symptoms, quality of life and spirituality were completed at eight time points from pre-hospitalization until six months post-HSCT. Biological stress markers (24 hour urinary cortisol and catecholamines) were done twice during HSCT. Medication use and complications were monitored over the six months on study. Results: Intent-to-treat analysis revealed no longitudinal group differences in any measures. Significant group differences were identified in short-term effects: mindfulness group demonstrated greater decreases in tension ($P<0.001$), unhappiness ($P<0.001$), pain ($P=0.006$), and respiratory rate ($P=0.001$) compared to control groups. Secondary analysis revealed effects of mindfulness training dose: significant associations between number of sessions and distress ($P=0.009$) and depression ($P=0.020$) at day of discharge, and number of CD listening times with depression ($P=0.009$) at six months. This is the first large scale RCT of a mindfulness intervention for seriously ill, hospitalized persons.

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Paper Session 21 10:54 AM–11:12 AM 4013

A BRIEF MIND-BODY INTERVENTION FOR WOMEN UNDERGOING BREAST BIOPSY: A PILOT STUDY

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Women with breast masses suggestive of malignancy are referred for biopsy. Distress during this period may be severe and persistent, even for women for whom malignancy is ruled out. While relaxation training and practice have been shown to reduce distress in adults with cancer, few studies have evaluated its efficacy during diagnostic testing. This intervention examined the feasibility, acceptability, and preliminary efficacy of a brief meditation-based Relaxation Response intervention for women undergoing breast biopsy. Women scheduled for percutaneous core-needle biopsy at an academic medical center were eligible to receive 3 relaxation training sessions from the recommendation for biopsy through receipt of results. Clinic integration was achieved by: 1) introducing the program via nurse consultation; 2) offering a combined in-person and telephone modality; 3) designing the intervention to fit the brief window between diagnostic imaging and biopsy; and 4) incorporating a relaxation session into the biopsy appointment. Between 6/10–8/10, 25 women were eligible, 80% ($n=20$) were reached prior to biopsy, and 75% ($n=15$) enrolled. Reasons for refusal included lack of time, interest, or elevated distress. Among enrollees, 80% ($n=12$) completed all sessions and pre- and post-assessments. Participants showed significant reductions in acute distress (10-point analog scale) following relaxation practice at each of the 3 sessions ($p<.01$), including immediately pre-biopsy (M change=2.83, $t=8.22$, $p<.001$). Furthermore, greater reduction in acute distress following the pre-biopsy relaxation practice was marginally associated with smaller increases in global distress (Brief Symptom Inventory-18; $r=.52$, $p=.09$). Qualitative feedback corroborated the need for psychosocial care during this period. Findings support the feasibility and acceptability of integrating a mind-body program into a biopsy clinic setting and warrant further testing to establish program efficacy.

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Paper Session 21 11:12 AM–11:30 AM 4014

LONGITUDINAL CHANGE IN MEANING IN LIFE DURING CHEMOTHERAPY FOR GYNECOLOGIC CANCER

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It has been theorized that negative life events such as cancer diagnosis and treatment may force patients to examine previously-held beliefs about the meaning in their lives. Meaning in life (MIL) refers broadly to the value and purpose of life, important life goals, and, for some, spirituality. Although patients have reported increases in MIL following cancer diagnosis, few studies have longitudinally examined change in meaning or predictors of change. To address this issue, the current study examined longitudinal change and predictors of change in MIL in women undergoing chemotherapy for gynecologic cancer.

Participants were 65 women (mean age=63, range 33–87) diagnosed with gynecologic cancer recruited prior to the start of platinum-based chemotherapy. MIL was assessed at recruitment (T1), coping was assessed after the second chemotherapy infusion (T2), and MIL was assessed again before the third chemotherapy infusion (T3). Dependent samples t-tests were used to examine changes in MIL; multiple regression was used to examine coping as a predictor of residualized change in MIL.

Total MIL significantly increased during chemotherapy ($p=.03$). Examination of dimensions of MIL revealed that inner peace and life purpose significantly increased ($ps<.01$), while spirituality and existential confusion did not change ($ps>.50$). The coping strategies of cognitive avoidance, resignation, and seeking alternative rewards predicted decreased total MIL ($ps<.01$), while problem solving trended towards predicting increased MIL ($p=.09$).

Longitudinal data suggest that MIL increases during chemotherapy in women diagnosed with gynecologic cancer and that coping predicts changes in MIL. Future studies should examine whether reducing maladaptive coping strategies is associated with increased MIL in cancer patients undergoing active treatment.

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Paper Session 22 10:00 AM–10:18 AM 4015

GUIDE TO HEALTH: EFFECTS OF A COMPLETELY WEB-BASED PROGRAM ON PHYSICAL ACTIVITY, FRUIT AND VEGETABLE CONSUMPTION, AND BODY WEIGHT

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The purpose of this efficacy study was to assess for cancer risk reduction with engaged participants (n=247), who completed baseline, 6-months post and, 16-months follow-up assessments, nutrition, physical activity, and weight gain prevention outcomes in the social cognitive theory (SCT) Guide to Health (WB-GTH) program with all recruitment, assessment, and intervention performed on the Internet. Eligible participants needed to be between 18-63, with a BMI between 23-39, sedentary to low-active but otherwise healthy. Participant had a mean age of 45.48 years (10.33), 86.2% were female, with 8.5% from minority groups, with a mean 17.54 (3.01) years of education, and had a median annual household income of about $85 k. Nevertheless, about 83% were overweight or obese and about 75% were sedentary (i.e., <5000 steps/day) or had low levels of physical activity (i.e., <7500 steps/day). Participants were randomized to the WB-GTH-Basic intervention or WB-GTH-Enhanced intervention. Content, overall target behaviors, program goals and strategies were the same in the two interventions but Basic included generic monitoring, planning, and feedback, and Enhanced included highly tailored monitoring, planning, and feedback. Participants reported at assessments pedometer step counts to assess physical activity, bodyweight from a scale provided, and fruit and vegetable (F&V) servings were assessed from the standard FFQ completed online. Participants in both Basic and Enhanced at follow-up increased physical activity by about 1400 steps/day, lost about 3% of bodyweight, and increased F&V by about 1.5 serving/day. There was evidence that the least physically active (+2300 steps/day), those who were obese (−3.5% bodyweight), and those with poorest nutrition (+2.0 F&V servings/day) made greater long-term improvements. Given similar outcomes for Basic and Enhanced, a relatively simple entirely Internet-based, SCT program can help people improve health behaviors and prevent weight gain.

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Paper Session 22 10:18 AM–10:36 AM 4016

USING THE INTERNET TO PROVIDE INSOMNIA TREATMENT FOR CANCER SURVIVORS

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Intro: Cancer survivors frequently experience insomnia. Although pharmacotherapy is often used to treat insomnia, cancer survivors may be reluctant to take sleep medications for a number of reasons, including fear of possible negative interactions with other medications they may take. Although behavioral treatments can effectively treat insomnia in cancer survivors, it is difficult to access this specialty treatment. To address this, we conducted an RCT examining the ability of an easily accessible Internet-delivered Cognitive Behavioral Therapy for insomnia (CBT-I) program to improve sleep in cancer survivors.

Method: 28 cancer survivors with insomnia were randomly assigned to either an Internet-delivered intervention (n=14) or a waitlist control group (n=14). The online program, Sleep Healthy Using the Internet (SHUTi), has previously been shown to improve sleep in adults with primary insomnia. It delivers the primary components of CBT-I (sleep restriction, stimulus control, cognitive restructuring, sleep hygiene, and relapse prevention). Pre- and post-treatment data were collected via online daily sleep diaries and questionnaires.

Results: A 2 Group (Internet vs. control) × 2 Time (pre- and post-treatment) repeated-measures ANOVA was used to compare changes across time for all sleep variables. Participants in the Internet group showed significant improvements at post-assessment compared to those in the control group in insomnia severity (P<.001), sleep efficiency (SE;P=.002), and sleep onset latency [SOL (minutes to fall asleep); P=.03]. Given the small sample size, overall adjusted treatment effect sizes (ES) were also calculated. Adjusted ES indicate small to large treatment effects for SHUTi on all sleep variables, including insomnia severity (d=1.84); SE (d=.72); SOL (d=.67); and wake after sleep onset (minutes awake during the night | d=.22).

Conclusion: CBT-I delivered as an interactive, individually-tailored Internet intervention may be a viable treatment option for cancer survivors with insomnia.

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Paper Session 22 10:36 AM–10:54 AM 4017

EFFICACY OF AN ONLINE STRESS MANAGEMENT INTERVENTION FOR WOMEN WITH EARLY STAGE BREAST CANCER

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Breast cancer diagnosis and treatment can have serious psychosocial consequences that impact patients' quality of life and overall health. Cognitive Behavioral Stress Management (CBSM) interventions decrease cancer-related distress, foster emotional growth and improve immune functioning in breast cancer patients. Unfortunately, there are numerous barriers to disseminating in-person CBSM interventions. To overcome these barriers, we developed a multimedia web-based CBSM intervention which includes education, interactive skill building exercises, guided relaxation exercises and a discussion board—all tailored to the needs of women with early stage breast cancer.

To evaluate the efficacy of the web intervention, we conducted a randomized trial with a sample of 134 early stage breast cancer breast survivors within 18 months of diagnosis. Women were primarily recruited through the Army of Women breast cancer research registry. Participants were predominantly white (88%), married or partnered (70%), ranged in age from 28 to 73 (M=50.92, SD=9.84) and were randomized to the intervention group or a 10-week waitlist control group.

Preliminary analysis of the first 74 women (30 int, 44 control) who completed the baseline and 10-week follow-up indicate that women in the intervention group reported significantly decreased depression (CESD, F (2, 74)=6.3, p=.01), confusion (POMS confusion, F(2, 74)=6.3, p=.01), negative mood regulation (NMR, F(2,70)=9.01, p=.004), and avoidance of stressful thoughts or stimuli (IES avoidance subscale, F(2,74)=4.62, p=.035). Finally, intervention participants also reported significant increases in finding benefit in having had breast cancer (BFS F (2,74)=5.6, p=.021). These preliminary results indicate that a web-based version of an existing CBSM intervention can be effective and achieve similar results to in-person groups. Data from the entire sample and sub group analyses will be presented.

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Paper Session 22 10:54 AM–11:12 AM 4018

TESTING A SELF-ADMINISTERED COMPUTERIZED COUNSELING TOOL TO IMPROVE CONTRACEPTIVE METHOD CHOICE

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Background: Half of all pregnancies in the United States are unplanned. Interventions are needed to help women choose acceptable and effective contraceptive methods.

Purpose: To test the efficacy of a self-administered computerized contraceptive method counseling tool in increasing the proportion of family planning patients choosing a more effective birth control method.

Method: The self-administered computerized counseling tool, with Spanish or English audio and touchscreen technology, was tested in two urban clinics serving low-income, predominantly immigrant populations. The counseling tool includes approximately 50 questions on birth control preferences, medical and contraceptive history, and sexual health risk factors. Participants were randomized to one of three arms: complete counseling tool with a tailored handout based on their answers (IT); counseling tool with a generic handout (IG); and a control condition with 10 demographic questions in the same computerized format (C). All participants completed a brief survey at the end of their visit.

Results: A total of 1,998 patients were enrolled: 69% were Latina, 76% were born outside the US, and 29% had not completed high school (among age 25 and older); no differences in sociodemographic characteristics were found at baseline across arms. Participants who used the counseling tool (IG and IT) were significantly more likely to choose a more effective birth control method during their family planning visit: 73% in the IT group (n=844) and 76% in the IG group (n=654), compared to 60% in the control group (n=500) (Chi-square p<0.0001). Acceptability of the counseling tool format was high, even among the 15% of participants who report they never use a computer.

Conclusions: In a family planning clinical setting, use of the computerized counseling tool was found to increase women's choice of more effective birth control methods. Follow-up studies of contraceptive method continuation after using the counseling tool are needed. Self-administered computerized counseling tools may be useful in improving other health behaviors.

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Citation Paper

Paper Session 22 1:12 AM–11:30 AM 4019

EVALUATION OF A RADIONOVELA TO PROMOTE HPV VACCINE AWARENESS AND KNOWLEDGE AMONG HISPANIC PARENTS

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US Hispanic women have more than a 1.5-fold increased cervical cancer incidence and mortality compared to non-Hispanic white women. To prevent cervical cancer, the Centers for Disease Control recommends the HPV vaccine for girls aged 11 and 12 years-old. The vaccine is also approved for females aged 9 - 26. Few culturally tailored Spanish language HPV vaccine awareness programs have been developed and evaluated. This study evaluates the efficacy of a Spanish radionovela at improving HPV and HPV vaccine knowledge among Hispanic parents in rural Washington.

Hispanic parents of daughters aged 9-17 (n=88; 78 mothers and 10 fathers) were recruited at local community events and randomized to listen to the HPV vaccine radionovela or to another public service announcement. Participants completed a 30-minute questionnaire before and after listening to the radio segment. The questionnaires addressed HPV and HPV vaccine awareness, knowledge, attitudes, and interest.

Parents who listened to the HPV radionovela (intervention group) scored higher on six knowledge and belief items. On the posttest, intervention group parents were more likely to confirm that HPV is a common infection (70% vs. 48%, p=.002), to deny that women are able to detect HPV (53% vs. 31%, p=.003), to know vaccine age recommendations (87% vs. 68%, p=.003), to confirm that multiple doses are required (48% vs. 26%, p=.03), and to know of insurance coverage options (78% vs. 60%, p=.04) than control group parents.

In this efficacy study, the HPV vaccine radionovela improved HPV and HPV vaccine knowledge and attitudes among rural Hispanic parents. Promoting parental engagement in actively learning more about cervical cancer, HPV, and the HPV vaccine may improve parental decision making related to supporting HPV vaccine uptake. Without targeted interventions, disparities related to cervical cancer may widen. Further development and evaluation of culturally and linguistically appropriate cervical cancer prevention and HPV vaccine awareness programs is needed.

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Paper Session 23 10:00 AM–10:18 AM 4020

PSYCHOLOGICAL PREDICTORS OF SELF-REPORTED PHYSICAL ACTIVITY INITIATION IN TYPE 2 DIABETES PATIENTS FOLLOWING DIABETES SELF-MANAGEMENT EDUCATION

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Type 2 diabetes presents a public health crisis. Physical activity has been demonstrated to improve glycemic control and quality of life among patients with diabetes. Diabetes self-management education (DSME) has become the hallmark for instructing patients with diabetes to engage in physical activity, yet physical activity patterns of DSME patients remains largely unknown and it remains unclear what factors could account for such behavior change.

Health behavior models have attempted to explain behavior change such as physical activity initiation. The Health Action Process Approach (HAPA) provides a parsimonious framework for understanding this process. Using the HAPA as a theoretical framework, the present study sought to examine the key social-cognitive determinants of physical activity initiation among patients with type 2 diabetes after DSME.

A three-wave, multi-site prospective study design utilized written and telephone-based surveys to assess study variables. Participants were 152 adults with type 2 diabetes attending DSME classes in a mid-west metropolitan city. Participants were predominantly middle-aged adults (M=53.9 years, SD=11.6 years), women (73.2%), Caucasian (82.6%) and had a post-high school education (61.4%). Most participants engaged in a low-level of physical activity across all three study waves: 85.5%, 78.3%, and 67.8%, respectively. Hierarchical linear and logistic regressions were used to test HAPA pathways.

Results revealed that several key social-cognitive factors predicted the formation of a behavioral intention: (p<.001; adjusted R2=.661). HAPA volitional stage constructs yielded support for behavioral intention only as a predictor of physical activity: $\chi2=38.20$, df=5, p<.001. pseudo-R2 .236 to .327. Implications from these findings highlight physical activity initiation remains a problem up to six weeks after participating in DSME. Further research is needed to clarify the causal role of social-cognitive factors in the HAPA model in order to better understand psychological predictors of physical activity initiation in this population.

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Paper Session 23 10:18 AM–10:36 AM 4021

SLEEP DURATION AND DIABETES SELF-MANAGEMENT AMONG POORLY CONTROLLED PATIENTS WITH DIABETES

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Short sleep duration has been associated with diabetes incidence and poorer disease management among those with diabetes. The goal of this study was to evaluate associations between sleep duration and diabetes management. Data were from an ongoing behavioral intervention for poorly controlled diabetics treated at federally qualified health centers in Missouri. Depression and anxiety were assessed by the 8-item PROMIS measures. Adherence was assessed by 8 questions about forgetting doses, mistakes, and intentional non-adherence. Self-efficacy for healthcare communication was assessed using the Communication and Attitudinal Self-Efficacy Scale and diabetes-related self efficacy was measured by the Diabetes Self-Efficacy Scale. The sample included 559 patients (367 women, age M(SD)=54.5 (11.0). Time since diagnosis was M(SD)=1.06 (.38) years. The majority, (79%) reported oral medications and 44% used insulin. Prevalence of short sleep duration (habitual sleep time <6 hours) was 21% and was not associated with age, sex, race, or education. Participants with short sleep duration reported higher anxiety (p<.001) and depression (p<.001), were more likely to report poor adherence (68% versus 51%, p<.05), had lower self-efficacy for communication with healthcare providers (p<.0001) and lower diabetes self-efficacy (p<.0001). Effects of sleep duration on adherence were reduced after controlling for depression and anxiety (p=.06) but effects of self-efficacy for communicating with healthcare providers (p<.01) and diabetes self-efficacy (p<.01) were independent of depression and anxiety. An HbA1C measurement within the prior year was available for 390 participants and was not associated with sleep duration in this sub analysis. Results demonstrate tat short sleep duration in patients with diabetes may reflect poorer psychological functioning, poorer medication adherence and lower self-efficacy for communication and disease management. Implications of these results for diabetes management are that sleep duration may affect diabetes not only through metabolic processes but also through poorer treatment adherence.

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Paper Session 23 10:36 AM–10:54 AM 4022

SELF-EFFICACY, SELF-AS-DOER, AND DIABETES SELF-CARE BEHAVIORS: INTERVENING EFFECTS OF THE SELF-AS-DOER

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Self-efficacy is associated with improved diabetes self-care behaviors (SCBs) for persons with Type I (T1DM) and Type II diabetes mellitus (T2DM). The mechanisms by which self-efficacy contribute to SCBs are poorly understood, however, which restricts our ability to develop effective behavioral interventions. We propose that a diabetes-specific identity construct might explain the relationship between self-efficacy and health behavior enactment. Thus, we tested whether the “self-as-doer” mediated the relationship between self-efficacy and diabetes SCBs. 367 adults with T1DM (N=207) or T2DM (N=148), ages 18–84, completed self-report measures assessing diabetes-specific self-efficacy, self-as-doer, and SCBs. Meditational analyses were conducted according to steps outlined by Preacher and Hayes (2008) to determine the indirect effect of self-efficacy on SCBs through self-as-doer. For persons with T1DM, self-as-doer significantly mediated the effects of self-efficacy on exercise (B=1.34, CI[.70,1.97]), blood glucose monitoring (B=.84, CI[.20,1.55]), diet (B=.91, CI[.51,1.30]), foot care (B=.45, CI[.07,.92]) and medication (B=.45, CI [.17,1.31]). For persons with T2DM significant indirect effects of self-as-doer were found for exercise (B=.66, CI[.08,1.43]), diet (B=.65, CI[.30,1.09]), and blood glucose monitoring (B=1.08, CI[.47,2.04]). No significant intervening effects were found for foot care and medication behaviors for persons with T2DM. Findings suggest that developing an identity as a “diabetes self-care behavior doer” may explain the mechanism by which perceived ability predicts the frequency of certain SCBs. Incorporating exercises designed to bolster a self-as-doer identity in diabetes education, interventions, and research may provide further understanding of the motivational mechanisms that promote health behaviors beyond the perceived ability to enact them. Thus we recommend that clinical interventions and diabetes education focus not only on enhancing perceived ability to enact behavior, but also on developing patients’ identities as the doers of their diabetes SCBs.

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Meritorious Paper

Paper Session 23 10:54 AM–11:12 AM 4023

MEDICATION TAKING BELIEFS AMONG AMERICAN SAMOAN ADULTS WITH TYPE 2 DIABETES

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Type 2 diabetes is a worldwide epidemic. Individuals from recently modernized regions, such as the Pacific Islands, have extremely high prevalence rates; in American Samoa (AS), nearly 22% of adults have diabetes. Diabetes is best managed by modifying diet and lifestyle and strict adherence to any medication regimens. Certain cultural aspects might affect beliefs about taking medication, and thereby influence medication adherence. No known research has explored the relationship between medication and culture in AS adults with diabetes. Here we seek to elucidate this relationship. Six focus groups (FGs) were conducted with 39 AS adults with diabetes as part of the formative step to culturally translate a diabetes intervention. Questions assessed participants' beliefs related to diabetes care. FG data were translated, transcribed, and analyzed using N Vivo 8. Thematic analyses on medication-based themes revealed that participants were confused about how and when to take medications and potential side effects. They were unclear about what constituted high vs. low blood sugar and often did not know how to use medication to regulate changes in blood sugar. They also expressed concern about medication costs. Participants reported that the roles of family, physicians, religion, and Samoan cultural events (e.g., participation in traditional celebrations) affected their medication-taking beliefs and behaviors. Samoan cultural beliefs were characterized as adherence to self-care and doctor's advice for the sake of, or to honor family, and in respect for God; non-adherence was described when faced with conflicts with family or cultural obligations, or due to belief in traditional Samoan medicines. Our findings suggest that barriers such as medication costs and confusion about medications might negatively influence medication taking, while cultural values may work both for and against medication adherence. Further research is needed to assess actual medication adherence in this population.

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Paper Session 23 11:12 AM–11:30 AM 4024

DIABETES HEALTH COACHING IN INTEGRATED CARE: BEHAVIORAL MEDICINE'S ROLE IN POPULATION HEALTH MANAGEMENT

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Behavioral medicine research demonstrates that increasing self management skills in diabetics can improve patient outcomes. Decision aids/videos can help activate a patient toward greater self-management. Behavioral medicine therapists integrated into primary care and using patient registry technology should increase the reach to more patients, activate patients in initial steps toward better self-management, and optimize outcomes.

Method: Twenty family physicians were randomized to treatment as usual (TAU) or provided a behavioral medicine therapist to serve as coach and registry manager for their diabetic patients (intervention). Patients of Intervention physicians were mailed invitations to watch a video on diabetes management and either contacted by phone encouraging them to view the video ($n=270$) or not ($n=294$). TAU patients ($n=350$) could be offered a video when seen in clinic. Video viewing rates and healthcare utilization reflecting self-management (e.g., presenting to clinic) were primary outcomes.

Results: Chi-Square analysis revealed more patients who received coaching calls watched the video ($n=60$) than either those not called ($n=22$) or TAU patients ($n=0$; $p<.01$). There were trends ($p<.10$) for more intervention patients to be referred to a diabetes education group, and for patients receiving coaching calls to have laboratory tests (i.e., A1c, LDL) performed within 60 days of receiving their invitation letter (27%) than those not called (14 %) and those in TAU (20 %). A greater proportion of intervention patients called presented to the clinic within 60 days (38%) than patients not called (21%) and TAU patients (14%; $p<.01$).

Conclusion: Behavioral medicine professionals can apply a diverse skill set to collaborate with physicians and use technology to the benefit of broader patient populations. Using health coaches and patient registry tools in a collaborative care environment is one way to achieve this goal.

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Paper Session 24 10:00 AM–10:18 AM 4025

DOES NORMATIVE INFLUENCE DEPEND ON BEHAVIOR OVERTNESS? SMOKING VERSUS SMOKELESS TOBACCO USE AMONG YOUNG ADULTS

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Recently, the tobacco industry has marketed smokeless tobacco products such as snus and other snuff products. We contend that predictors of smokeless tobacco use are not the same as for tobacco smoking. While social norm perceptions - both descriptive and injunctive - affect smoking behavior, we have insufficient evidence regarding smokeless tobacco use. Smokeless tobacco use is more discreet and less overt than smoking, theoretically making it less subject to others' scrutiny. We predicted less potential for normative influence in the case of smokeless tobacco use and tested that hypothesis among 301 young adults in Connecticut.

Method: We conducted a spring 2010 telephone survey of young adults (age 18- to 24-years-old) sampled through random digit dialing (RDD) and sampling of cellular phone exchanges and listed respondents. Weighted results demographically matched the state's 18 to 24 population. We asked respondents whether they had smoked a cigarette in past 30 days, whether they had used snuff or chewing tobacco in past 30 days, how many friends used tobacco, how many family members used tobacco, what important others would think of one's future tobacco use (even just a puff or a pinch), general attitude toward future tobacco use (using mean of two semantic differential items) and confidence in being able to use tobacco.

Results: Separate logistic regression models (including attitude, norm perceptions, and confidence) told different stories. Attitude toward tobacco use ($OR=2.99$, $p<.01$), proportion of friends using tobacco ($OR=1.88$, $p<.01$), and proportion of family members using tobacco ($OR=1.85$, $p<.01$) emerged as significant predictors of smoking ($n=279$), whereas only attitude toward tobacco use ($OR=5.73$, $p<.01$) significantly predicted smokeless tobacco use ($n=279$). Moreover, 64 percent of smokeless tobacco users reported no recent cigarette smoking.

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Paper Session 24 10:18 AM–10:36 AM 4026

HOOKAH TOBACCO SMOKING ESTABLISHMENT WEB SITES IN THE U.S

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Background: Tobacco smoking using a hookah (a.k.a. water-pipe or narghile) is an emerging trend among U.S. adolescents and young adults, who have documented misconceptions regarding the relative safety of this practice. Because these populations receive substantial health-related information via the Internet, we comprehensively analyzed Web-based content displayed by dedicated hookah tobacco smoking establishments across the U.S.

Methods: In February 2010, we systematically searched the Internet using a standardized protocol. Of 771 candidate sites, 144 remained after application of specific selection criteria. Our protocol was followed by two independently working researchers who obtained final lists of Web sites with outstanding agreement ($\kappa=0.93$). We used an iterative approach to codebook development guided by grounded theory. Coding was completed by two researchers working independently, all presented codes had excellent agreement ($\kappa>0.70$), and all coding differences were easily adjudicated.

Results: Of the 144 sites, only one displayed a tobacco warning on the opening (home) page, and none required age verification to enter. The actual word "tobacco" appeared on only 38 (26.4%) of establishment home pages, whereas flavorings (e.g., cherry, chocolate, mango) were mentioned on 56 (38.9%) of home pages. Many establishments also provide alcohol (41.0%), dancing (36.8%), and live music (36.8%). Mildness of smoking hookah (e.g., as compared with cigarette smoking) was suggested on 21.5% of sites, and 11.8% used specials, discounts and/or coupons to specifically target college students. Establishments also commonly present images that emphasize the potentially exotic, social, and sexually suggestive aspects of hookah tobacco smoking.

Discussion: While mildness and flavorings are emphasized on hookah smoking establishment Web sites, health warnings are not. In fact, most of the time the word "tobacco" is not presented. These misleading communications may in part explain misconceptions adolescents and young adults have regarding the potential harms and addictiveness of this practice.

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Paper Session 24 10:36 AM–10:54 AM 4027

ALCOHOL OUTLET DENSITY AND ITS ASSOCIATIONS WITH ALCOHOL RELATED HARMS IN LOS ANGELES COUNTY

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Introduction: High alcohol outlet density is a risk factor for excessive alcohol consumption. Decreasing alcohol outlet density may be an effective approach to reduce excessive drinking and alcohol-related harms. This study examined the distribution of alcohol outlets in Los Angeles County and determined the association between alcohol outlet density and alcohol-related harms.
Methods: Data on alcohol outlets and potential alcohol-related harms (including violent crime, alcohol-related motor vehicle crashes, and alcohol-related deaths) were obtained from California Department of Alcoholic Beverage Control and other governmental agencies. Data were aggregated at the city and community level using GIS techniques. The density of on-premises and off-premises alcohol outlets and the rates of alcohol-related harms were calculated and ranked. Logistic regression modeling was performed using SAS software to examine associations between alcohol outlet density and alcohol-related harms, adjusting for economic hardship.
Results: Alcohol outlet density varied widely across cities and communities in Los Angeles County, ranging from 0 to 47.3 on-premises alcohol outlets and 0 to 23.8 off-premises alcohol outlets per 10,000 residents. Higher on-premises alcohol outlet density was associated with higher rates of violent crime ($\beta=2.36$; OR=10.57, 95% CI =2.21, 65.17) and alcohol-related vehicle crashes ($\beta=1.10$; OR=3.00, 95% CI=1.06, 9.13). Higher off-premises alcohol outlet density was associated with higher rates of violent crime ($\beta=2.18$; OR=8.84, 95% CI=2.47, 36.99) and alcohol-related deaths ($\beta=1.56$; OR=4.76, 95% CI=1.68, 14.52).

Conclusions: This study examined the distribution of alcohol outlets throughout Los Angeles County, and identified important negative outcomes associated with higher alcohol outlet density at the city and community level. These findings should be considered in planning and implementation of local evidence-based programs seeking to reduce excessive drinking and related harms.

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Paper Session 24 10:54 AM–11:12 AM 4028

TRENDS IN HOME SMOKING BANS IN THE U.S., 1995–2007: PREVALENCE, DISCREPANCIES, AND DISPARITIES

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Background: Home smoking bans significantly reduce the likelihood of secondhand smoke exposure among children and nonsmoking adults. The purpose of this study was: 1) To track national trends in the prevalence of home smoking bans in households with underage children; 2) To investigate discrepancies between household members' reports ; and 3) To explore household and parental correlates of home smoking bans and discrepant reports from 1995 to 2007.
Methods: Using the 1995/1996, 1998/1999, 2001/2002, and 2006/2007 Tobacco Use Supplement of the U.S. Current Population Survey, we examined trends in the adoption of home smoking bans over time and discrepancies in parental reports among households with underage children. Logistic regressions and multinomial logistic regression models were estimated to explore sociodemographic and household-level correlates of complete smoking bans and consistent/discrepant reports by survey period.
Results: The overall prevalence of home smoking bans significantly increased from 50.9% in 1995 to 80.3% in 2007 ($p<0.001$). The increase was significant regardless of household characteristics. However, disparities in home smoking bans persisted. Households with single parent, low income, one or two current smokers, parents with less than a college education, or without infants were consistently less likely to report a home smoking ban ($p<0.05$). Discrepancies in parental reports significantly decreased from 12.5% to 4.6% over time($p<0.001$). Households with one or two current smokers, parents with less than a college education, or without infants were more likely to give discrepant reports ($p<0.05$).
Conclusion: Despite general improvements in the adoption of home smoking bans, children older than 1 year, living in households with single parents, low income, current smoker parents, or parents with lower levels of education are still less likely to be protected by a home smoking ban. These households are in particular need of education and assistance.

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Meritorious Paper

Paper Session 24 11:12 AM–11:30 AM 4029

ALCOHOL BRAND APPEARANCES IN U.S. POPULAR MUSIC

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Background: Alcohol is the leading root cause of mortality and morbidity in adolescence. Exposure to media representations of alcohol has emerged as a strong risk factor for adolescent alcohol use, and popular music is the most common of these alcohol-related media exposures. Because brand recognition is a potent risk factor for the initiation and maintenance of substance use among adolescents, the purpose of this study was to assess the prevalence and contextual elements associated with alcohol brand appearances in popular music.
Methods: We used Billboard Magazine to identify the songs to which U.S. adolescents were most exposed U.S. in 2005–2007. To assess in depth contextual features of these brand appearances, we qualitatively coded all songs using Atlas. ti and a code book systematically developing using an iterative process. Average inter-rater reliability among two independent coders was excellent ($\kappa=0.80$) and all differences were easily adjudicated.
Results: Of the 793 songs in our sample, 169 (21%) explicitly referred to alcohol, and of those, 41 (24%) contained an alcohol brand appearance. Tequila (e.g., Patron) and cognac (e.g., Hennessy) were the most frequently mentioned types of branded alcohol, at a prevalence of 29% each, with vodka (e.g., Grey Goose) at 27%. Of the songs with alcohol and an alcohol brand appearance, the majority of songs were Rap (63%), R&B/Hip-Hop (24%), or country (12%). Over three-fourths (78%) of alcohol brand appearances involved luxury brands. Consequences associated with alcohol in these songs were more often positive than negative (42% vs. 17%, $P<.001$). Alcohol brand appearances were commonly associated with wealth (63%), sex (59%), luxury objects (51%), partying (49%), other drugs (44%), and vehicles (39%).
Discussion: Extrapolating from national exposure data, the average adolescent is exposed to about 3100 alcohol brand appearances in music annually. Alcohol brand appearances are commonly associated with a luxury lifestyle. It may be valuable to assess associations between brand-name alcohol references in popular music and alcohol use outcomes.

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Meritorious Paper

Paper Session 25 10:00 AM–10:18 AM 4030

PREVALENCE OF MOOD AND ANXIETY DISORDERS IN CANCER PATIENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Psychological distress is associated with worse survival in cancer patients (Chida, et al, 2008). A meta-analysis of self-report measures showed depressive symptoms tended to be elevated in cancer patients (Van't Spijker, et al, 1997). However, self-report measures do not necessarily generalize to diagnoses of psychological disorders. Reports of prevalence rates of psychological disorders have been disparate. A meta-analysis was conducted to estimate the current prevalence of common mood and anxiety disorders in cancer patients.
Method: A search of three databases (Medline, PsycInfo, Web of Science) produced 1029 records that were reviewed for the following criteria: cancer sample; used reliable, validated diagnostic interview; adult (18+ years of age) sample; publication between 1995 (date of inclusion of cancer as a precipitating event for PTSD) and 2010. The full text of 137 articles was reviewed and 57 articles met inclusion criteria. Prevalence rates were extracted. Subgroup analyses on the following variables were also conducted: cancer site; time since diagnosis; adjuvant treatment status; and extent of disease.
Results: Rates of current MDD were elevated (11.2%) compared to rates in the general population (1.4% to 8.0%). Current prevalence for other affective and anxiety disorders was as follows: dysthymia 2.6%; minor depression 6.7%; Generalized Anxiety Disorder 3.5%; PTSD 3.1%; Panic Disorder 2.3%; and Social Anxiety Disorder 0.9%. These prevalence rates were consistent with rates reported in the general adult population. No differences were found on the subgroup analyzes.
Discussion: This study is the first meta-analysis of psychological disorders in cancer patients. It provides documentation that mood disorders, particularly MDD, are common and more prevalent than the base rate in the population. The combined rate of minor depression and MDD was 18%. This confirms prior research that resources may need to be allocated to the identification and treatment of depressive disorders in cancer patients.

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Paper Session 25 10:18 AM–10:36 AM 4031

DOES SCREENING FOR DISTRESS EFFECTIVELY DETECT UNTREATED DISORDER IN CANCER PATIENTS?

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PURPOSE: Psychosocial screening is widely endorsed to ensure that cancer patients receive appropriate mental health care that would not otherwise be provided. Screening for psychiatric disorders is particularly relevant, as these disorders have an agreed upon nosology and empirically-based treatment guidelines. Most screening studies, however, do not differentiate between individuals with a disorder who are already identified and receiving treatment and those who would be overlooked absent screening. Patients already identified and accepting treatment may differ from those who are not by having more conspicuous disorder or more positive attitudes about treatment. This study examines the effectiveness of screening for undetected disorder.
METHOD: 436 recently diagnosed breast cancer patients received in-clinic screening (HSCL-25) and telephone-based interviews (SCID). Analysis of screening efficiency used receipt of treatment in the context of a disorder as a proxy for identification.
RESULTS: Rates of elevated distress (33%), MDD (8%), minor depression (6%), dysthymia (2%), or GAD (3%) were similar to other samples. 36% of the sample were receiving psychotropic medication at cancer diagnosis, including 64% of those with a current psychiatric diagnosis. Screening was a significant predictor of undetected disorder ($p<.001$). Sensitivity and specificity, however, were modest (56% & 76%, respectively) while PPV was low (15%) and NPV high (96%).
CONCLUSION: Screening may not be efficient at identifying untreated disorder. Almost two-thirds of patients with disorders are already being treated but remain symptomatic, and difficulty should be expected engaging the few non-identified patients in treatment. Screening may be better utilized for monitoring ongoing treatment or ruling out disorder than case finding. Clinicians will require significant resources to coordinate or manage psychiatric care among cancer patients, as well as a willingness to intervene in existing relationships with other providers.

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Paper Session 25 10:36 AM–10:54 AM 4032

IDENTIFICATION OF BREAST CANCER PATIENTS WITH DISTINCT TRAJECTORIES OF DEPRESSIVE SYMPTOMS

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Depressive symptoms are relatively common in breast cancer patients, but the course of these symptoms is not well understood. Further, it is not clear whether there are subgroups of patients who differ in their symptom course. We sought to determine whether we could identify subgroups of patients based on their distinct trajectory of depressive symptoms using growth mixture modeling and whether these subgroups could be distinguished by demographic, clinical, and personal characteristics. Participants were 147 women scheduled to undergo chemotherapy or chemotherapy and radiotherapy for stage 0 to II breast cancer. They completed the Center for Epidemiologic Studies-Depression Scale on six occasions reflecting clinically meaningful events from just before adjuvant treatment to six months after treatment. Participants also completed the Illness Management Questionnaire prior to treatment. A three-class mixture model provided the best fit to the data: a high group (n=39) with clinically meaningful symptoms prior to treatment (mean CES-D score=20.2) that did not decline significantly over time, a medium group (n=70) with subclinical symptoms before treatment (mean CES-D score=13.7) that declined significantly over time, and a low group (n=38) with minimal symptoms before treatment (mean CES-D score=4.7) that declined significantly over time. In univariate analyses, the high group was more likely than the low group to be unmarried and to have a history of depression ($ps<.05$). Women in the low group were less likely to be preoccupied with symptoms in managing their illness than women in the high and medium groups ($ps<.05$). In multivariate analysis, marital status and focusing on symptoms remained significant ($ps<.05$) predictors of group membership. These findings suggest individual differences in women's patterns of adjustment after a breast cancer diagnosis. Interventions to treat depressive symptoms should be tailored to reflect these individual differences. Funded by NCI R01CA82822.

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Paper Session 25 10:54 AM–11:12 AM 4033

ANXIETY AND DEPRESSION AFTER CANCER DIAGNOSIS: DISEASE STAGE PREDICTS PSYCHOLOGICAL ADJUSTMENT IN SOME TYPES OF CANCERS ONLY

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Purpose: Anxiety and depressive symptoms are highly prevalent across the cancer trajectory. The present study examined the prevalence rates of anxiety and depression in cancer patients at the time of diagnosis, and evaluated the degree to which disease stage, age and gender serve as potential moderators.
Methods: Patients (n=8,640) had been consecutively assessed in two large cancer centers using the PSSCAN distress screening questionnaire at the time of cancer diagnosis between 2004 and 2008. Information on TNM classification was available for 51% of patients (n=4,645). Data were analyzed on the whole sample, as well as separately within the most prevalent cancer types (i.e., gastro-intestinal, lung, breast, and prostate cancer).
Results: Across all cancer types patients with metastasized cancer were more anxious (d=−.12*) and depressed (d=−.08*); the same applied to younger and to female patients. Patients with lung cancer showed higher levels of anxiety as a function of disease stage (d=.27*). Furthermore, male patients with metastasized lung cancer reported more depression (d=.40**). Surprisingly, in patients with gastro-intestinal and prostate cancer anxiety and depressive symptoms did not vary as a function of disease stage whereas older age predicted less emotional distress. Younger breast cancer patients with advanced disease experienced higher levels of anxiety (R2=.25) and depression (R2=.24).
Conclusions: The fact that disease stage predicts emotional distress at the time of cancer diagnosis is most pronounced in patients with lung cancer as well as in younger women with breast cancer; these patients deserve early attention with regards to their support needs.

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Paper Session 25 11:12 AM–11:30 AM 4034

PREDICTORS AND CONSEQEUENCES OF DEPRESSIVE SYMPTOMS IN POLYTRAUMA PATIENTS 10 OR MORE AFTER INJURY

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Objective: The aim of the present study were to (1) examine the prevalence of depressive symptoms among polytrauma patients 10 or more years after injury, (2) examine distal and proximal risk predictors for depression, and (3) explore the effects of depression on physical and psychological functioning 10 or more years after injury.
Participants: Six hundred and thirty seven polytrauma patients completed a structured interview and battery of questionnaires assessing the consequences of trauma, including: the Medical Outcomes Study-Short Form-12, a brief depression screening questionnaire, and a physical re-examination at 10 or more years after the traumatic injury. Injury-related characteristics were collected from medical records at the time of the accident. Non-parametric statistics and linear regression was performed to test hypotheses.
Results: Approximately 25% of patients reported mild to severe depressive symptoms 10 or more years after the trauma. Using linear regression, 20% of the variance of depressive symptoms was accounted for by the distal and proximal predictors included in the model. Significant 10 year sequelae of depressive symptoms included lower health related quality of life including lower subscale scores on the SF-12 Mental Component Subscale ($p=0.001$) and Physical Component Subscale ($p=0.001$) and less independence in regard to activities of daily living (ADLs; $p=0.001$).
Conclusions: Screening programs and interventions should be designed to reduce depressive symptoms and to improve quality of life and rehabilitation success. Additional predictors of depressive symptoms should be explored in future studies.

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Paper Session 26 10:00 AM–10:18 AM 4035

THE HEALTHY HARVEST PROGRAM TO IMPROVE ACCESS TO HEALTHY FOODS AND QUALITY OF LIFE IN LOW-INCOME COMMUNITIES

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Access to healthy foods is often limited in low-income communities and prevents the adoption of a healthy diet needed to meet national dietary recommendations, reduce chronic disease, and prevent obesity. The Healthy Harvest Community Gardening Partnership is a community-based participatory research program between faith-based organizations, academic institutions, local philanthropy, and other non-profit institutions, created in 2009 for improving access to healthy foods and quality of life through a community garden network. Healthy Harvest uses a social ecological framework combining individual, interpersonal, and community level influences into a single program, and employs a train-the-trainer approach for providing expertise in gardening and community-capacity building to low-income, predominately African American communities. To date, garden sites have been constructed at 4 churches (average church size N=353, 98% African American) and one school (287 students, 98% African American) in an inner city, low-income community. Six trainings have been conducted on gardening and community-capacity building. Monthly evaluations of gardening activity indicate that a total of 139 individual garden plots have been constructed of which 101 show signs of use, 79 have visible plants, and 31 have visible produce demonstrating initial feasibility. Qualitative data is being collected to evaluate the effect of Healthy Harvest on lifestyle (physical activity and diet) and social (perceptions of neighborhood, feelings of connectedness) variables. Furthermore, Healthy Harvest plans to develop a system for distributing produce, therefore providing access to healthy foods on a broader scale. Overall, this program provides a novel approach for improving access to healthy foods and improving quality of life in low-income communities that could have implications for reducing chronic disease and preventing obesity.

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Paper Session 26 10:18 AM–10:36 AM 4036

FAMILY REALITIES AND CHILDHOOD OBESITY PREVENTION IN LOW-INCOME FAMILIES: TESTING AND REFINING THE FAMILY ECOLOGICAL MODEL

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OBJECTIVE: According to the Family Ecological Model (FEM), parenting is influenced by intrafamilial, organizational, community, and policy-related factors. Very little is known about these factors' effects on parenting, which constrains the development of family-centered programs. We address this gap by (1) utilizing the FEM to guide formative research for a family-centered obesity prevention program, (2) summarizing the results, and (3) using the data to refine the FEM.

METHOD: Participants were 98 low-income caregivers of preschool-aged children in Head Start. We used mixed methods to examine the ecologies of parenting specific to children's diet and physical activity behaviors and summarized the results around key constructs outlined in the FEM. In turn, we refined the FEM to strengthen its application to program development.

RESULTS: Parents reported a broad range of factors affecting their parenting behaviors. Intrafamilial factors included parents' educational and cultural backgrounds, family size and children's age distribution, chronic health problems, lack of social support from partners, and parents' history with, and distrust of, the health care system. Organizational factors included parents' work schedules, staff stability at organizations such as Head Start, a lack of service integration, and differing school routines. Community factors included social connectedness to neighbors/friends, shared norms around parenting, the availability of safe public housing and play spaces, and the accessibility of community programs. Finally, policy-related factors included job training and public assistance requirements and the influences of child protective services. Based on these data, the FEM was refined to create an action-oriented, evidence-based logic model to guide family-centered intervention planning.

CONCLUSION: The effectiveness of family-centered programs depends in part on their correspondence to family ecologies. The refined FEM serves as a heuristic tool for intervention design, obesity research, and theory development.

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Paper Session 26 10:36 AM–10:54 AM 4037

REACHING A DISPARITY POPULATION IN PEDIATRIC PRIMARY CARE TO ADDRESS CHILDHOOD CBESITY

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Background: Thirty percent of American children are overweight or obese; ethnic minority and low income groups are at higher risk in part due to barriers to treatment access. The pediatric primary care office is an ideal setting to reach these children given their frequent preventive visits. It is unknown whether high risk subgroups are interested and will engage in treatment for obesity offered in this setting.

Specific Aim: As part of a 2-year ARRA grant, we recruited families to participate in a 6-month RCT testing a 14-session evidence-based intervention for pediatric obesity adapted for a low income population compared to a 4-session enhanced usual care control. We describe enrollment statistics and reasons families did not participate.

Method: Three large pediatric practices that serve low income and African American children participated. Clinic staff flagged charts of children meeting preliminary eligibility criteria (obese, ages 2 to 11 years, insured by Medicaid). Providers informed adult caregivers about the study and research nurses ascertained additional eligibility criteria. Eligible families were contacted by research staff who subsequently enrolled them into treatment.

Results: Preliminary eligibility was met by 341 children in 8 months; 67 (19.6%) adult caregivers were not interested in full study screening and 36 (10.6%) children or their adult caregiver were otherwise ineligible. Of the 238 families remaining 31 (13.0%) decided not to participate, 50 (21.0%) could not be contacted, and 58 (24.4%) no-showed for the baseline assessment and could not be recontacted. Consent was completed with 99 families (41.6%).

Conclusion: About 1 in 5 (22.0%) low income families with an obese child were uninterested in accessing treatment in pediatric practice. An additional 48.9% who initially said they were interested dropped out during the enrollment process. Less than one-third (29.2%) of referred low income families engaged in free obesity treatment offered in the pediatric setting.

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Paper Session 26 10:54 AM–11:12 AM 4038

FAMILY REALITIES AND PARENTS' CHILD FEEDING PRACTICES IN LOW INCOME FAMILIES

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Objective: Parents' child feeding practices are widely researched. Few studies have examined the context within which parents make decisions about how and what to feed their children. Guided by the Family Ecological Model (FEM), this Community-based Participator Research study examined the ecology of child feeding in low income families.

Methods: Photovoice and focus groups were conducted among parents with children enrolled in Head Start. A Community Advisory Board of predominantly Head Start parents participated in the development of research questions, focus group guides, recruitment, and data interpretation. Twenty-six parents participated in four focus groups or completed Photovoice. Content analysis was conducted using action codes to facilitate the identification of cross cutting themes. Several themes related to intra-familial, organizational and community factors of the FEM were identified as influential to parents' decisions specific to child feeding.

Results: While parents knew about healthy foods option for their children, many factors constrained their ability to serve these foods on a regular basis. In addition to known barriers such as the cost of feeding a family and picky eating, the most common and salient themes were broader ecological factors that influenced family realities. Stress and competing demands on a single parent with multiple children, family conflict, disjointed schooling and services that created chaotic schedules, work and sports schedules, parent fatigue and stress, and the need for time to themselves were all identified as factors that influenced their decisions about meal preparation, convenience foods, and eating out behaviors.

Conclusions: When intervening among low income families to address childhood obesity, the focus should expand beyond teaching parenting skills and providing nutrition education. Consideration of broader ecological factors that shape family realities and cut across health behaviors may help interventions be more salient and effective. Skills around conflict resolution, stress and time management may be fruitful.

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Paper Session 26 11:12 AM–11:30 AM 4039

PILOT PROGRAM FOR FACILITATING POSTPARTUM WEIGHT LOSS AMONG LOW-INCOME WOMEN

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Postpartum weight retention is a major risk factor for obesity and chronic diseases among young women of low socioeconomic status. In a collaboration of the Women, Infants and Children (WIC) program and the Worcester County Prevention Research Center, we developed an 8-session weight loss intervention tailored to the needs and motivations of low-income post-partum women. The intervention built from our prior formative research with this population and utilized evidence-based weight loss strategies. A pilot study was implemented to test the intervention's feasibility and preliminary effectiveness. The weight loss intervention was guided by social cognitive theory and thus targeted knowledge of evidence-based weight loss strategies, negative attitudes (i.e., self-efficacy for weight loss behaviors) and behavioral capabilities (e.g., goal-setting, planning and problem-solving; calorie counting and physical activity self-monitoring, label reading), and was delivered in a group format by WIC nutritionists and peer leaders. Using a single group, pre/post design, the intervention was tested in 27 WIC clients in Worcester, MA. Assessments were conducted at baseline and 4-month and 6-month follow-up. Outcome measures were change in weight and BMI. The association of number of sessions attended with weight outcomes was assessed. T-tests were used to test statistical significance. A rigorous process evaluation was implemented. Average participant age was 28, with 44% White, 22% Black and 30% Latino. Approximately half had a high school degree or less. Average baseline BMI was 32.0. Average weight loss at 4-month follow-up was 4.6 pounds (p=.004), with an average BMI decrease of .78 kg/m2. Average of 1.8 pounds was lost among those who attended 0–2 sessions, 5.8 pounds among those who attended 3–5 sessions and 9.2 pounds lost among those who attended 6 or more sessions. The intervention resulted in meaningful weight loss. Future work is needed to improve attendance and maximize the intervention's potential.

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Meritorious Paper

Paper Session 27 10:00 AM–10:18 AM 4040

THE EFFECT OF RACIAL DISCRIMINATION ON C-REACTIVE ?PROTEIN IS MODERATED BY IMPLICIT RACIAL BIAS

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An emerging line of research has focused on how experiences of racial discrimination may increase the risk of cardiovascular disease development and contribute to racial disparities in cardiovascular health. However, findings on the association between racial discrimination and cardiovascular outcomes have been inconsistent. Discrepant findings may be explained by the role of racial identity, which may be a significant moderator of the effect of discrimination on health. In this study, we examined whether racial discrimination is associated with C-Reactive Protein (CRP), an important predictor of future heart disease, among African American men between 30-50 years of age recruited from the San Francisco Bay Area (n=95). CRP may yield insights into precursors of clinical disease and be pertinent in studying the development of cardiovascular problems. We hypothesized a significant interaction between self-reported racial discrimination and internalized racial bias measured using the Black-White Implicit Association Test in predicting elevated CRP. While we did not find evidence for a main effect of either discrimination or internalized racial bias, we detected an interaction between the two in predicting elevated CRP at the p<0.10 level (OR=1.6, 95% CI=0.9, 2.7). While there was almost no relationship between discrimination and elevated CRP among those with a pro-Black bias, among those with an anti-Black bias, there was a graded positive association. Results suggest that the combination of internalizing racial bias and reporting high levels of discrimination is associated with the greatest risk of elevated CRP. These findings highlight the importance of jointly considering the impact of various levels of racism when studying inflammation among African American men. Steps to improve cardiovascular disease risk among African American men may include addressing externally experienced racial discrimination as well as its internalized consequences.

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Paper Session 27 10:18 AM–10:36 AM 4041

AFROCENTRIC FACIAL FEATURES PREDICT PERCEIVED DISCRIMINATION AND HEALTH

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People quickly categorize others into racial groups based on physical characteristics. This social categorization process often results in stereotyping and prejudice. Because physical characteristics play critical roles in racial bias, they also may influence racial minorities' health. This study examines if stereotypical Afrocentric Facial Features (AFF: thick lips, wide nose) influence Blacks' experiences with discrimination and health status.

Participants were 147 Black patients, who completed self-report measures of perceived discrimination and physical and mental health. Their health status was also objectively assessed via blind reviews of medical records. A single score representing AFF was computed for each patient by multiplying standardized lip ratio (lip thickness/face length) and nose ratio (nose width/face width), which were obtained from pictures extracted from video-recorded medical interactions. AFF was positively associated with perceived discrimination (r=.27, p<.05). AFF was also associated with health. Patients with more AFF reported poorer health (r=−.25, p<.05) and greater depression (r=.22, p<.05) than patients with less AFF. Examination of medical records showed that AFF was associated with a greater number of chronic illnesses (r=.23, p<.05) and the incidence of high cholesterol (b=.65, exp(b)=1.92, p=.05). This suggests that patients with more AFF not only report they have poorer health than their counterparts with less AFF, but also actually experience poorer health. Mediational analyses revealed that the effects of AFF on physical and mental health were both partially mediated by perceived discrimination.

Even subtle physical characteristics influence Blacks' health. Blacks with more stereotypical facial features experience poorer physical and mental health than Blacks with less stereotypical facial features. Importantly, the relationships between AFF and health status are partly explained by perceived discrimination. The study highlights the critical roles prejudice/discrimination can play in the health status of racial/ethnic minorities.

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Paper Session 27 10:36 AM–10:54 AM 4042

USING COGNITIVE COPING STRATEGIES TO MANAGE AFFECTIVE RESPONSES TO RACISM

Elizabeth Brondolo, PhD, Madeline Libretti, BS, Athena St. Juste, BA expected and Matthew Golebiewski, BA expected

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On an acute basis, experiences of racism or ethnicity-related maltreatment can evoke anger and depressive symptoms. The effects of race-related treatment on mood may be sustained, as studies have shown a relationship of racism to depressive symptoms and daily negative mood. Little is known about the effectiveness of strategies to cope with the affective consequences of race-related maltreatment. We present preliminary data on the first 38 participants in a study testing the hypothesis that cognitive coping strategies can reduce both acute and sustained levels of negative mood following the recollection of race-related maltreatment. Participants self-identified as Black (mean age=20.4 years, 17 women) and were randomly assigned to either a cognitive coping intervention or a control distraction condition. The laboratory protocol included in order: a math task, a race-related maltreatment recall task, a cognitive intervention (or control) condition, and another math task. All tasks were separated by 5 minute rest periods. Electronic diary data were collected following each task and every 20 minutes for up to 10 hours following the lab protocol. The diaries inquired about mood and social interaction quality. At the end of the rest period following the intervention (or control) task, the intervention group tended to feel less angry (mean=3.13) than the control group (mean=15.79:(F(1,35)=3.83, p=.058)) and were significantly less sad (mean intervention=3.66; mean control=15.09: (F(1,35)=5.55, p<.03), controlling for the level of anger evoked during the recall task. Mixed effects regression analyses revealed that the level of anger during the post-intervention rest was a significant predictor of daily diary levels of anger (Est.=.34, SE=.11, df=853, t=3.28, p<.002), controlling for baseline and recall task levels of anger. However, there were no between-group differences in daily mood. The findings suggest that cognitive interventions may be useful to reduce the acute effects of racism on negative mood.

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Paper Session 27 10:54 AM–11:12 AM 4043

DEVELOPING A MEASURE OF PERCEIVED DISCRIMINATION FOR LATINOS: RESULTS FROM QUALITATIVE INTERVIEWS AND COGNITIVE INTERVIEWS

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Racial discrimination is associated with disparate health outcomes among racial/ethnic minorities. Existing measures of perceived racial discrimination have been developed and tested primarily among African-American populations. In order to develop a more valid and reliable measure of perceived discrimination for Latino populations, we conducted a qualitative study of perceived discrimination, stress and health behaviors among Latinos in rural and urban settings in Washington state. A diverse sample of Latinos was recruited for the study through community based organizations serving Latinos. In-depth interviews were conducted in participants' preferred language (Spanish or English). Analysis of interview transcripts was conducted using a coding scheme based on theory and previous literature. Based on our initial findings, we adapted an existing measure of discrimination to include additional relevant domains. We then conducted cognitive interviews with Latinos to assess the comprehension and validity of an adapted measure. Results indicated that the majority of the participants had experienced discrimination in their lifetime, most often related to their race/ethnicity, Spanish language use, and/or perceived legal status. Some Spanish speaking participants were unfamiliar with the words "discrimination" and "racism." Experiences with discrimination ranged from daily stressors to traumatic life events. Avoidant coping responses to discrimination were common, including efforts to avoid it, ignore it, and forget about it. Active coping responses included talking with someone about it, or praying about it. Respondents also reported that discrimination and other stressors influenced their diet, physical activity, sleep quality, tobacco and alcohol use, and mental health. Existing measures of perceived discrimination may not be easily comprehended by some Latinos or capture the most salient types of discrimination, including experiences related to language and legal status.

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Paper Session 27 11:12 AM–11:30 AM 4044

PERSON X SITUATION INTERACTIONS THAT AFFECT ATTRIBUTIONS TO RACISM

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Racism has been identified as a psychosocial stressor linked to negative mental and physical health outcomes. However, community and individual interventions to reduce racism and its impact are hampered by a lack of consensus on the characteristics of social interactions that serve as subtle expressions of racial bias. The aim of this study is to investigate consensus among an ethnically diverse group of raters in the degree to which common episodes of maltreatment reflect racial bias. Participant raters included 298 adults (136 women, mean age=20.8 years, 47 Latino(a), 81 Asian, 106 Black, and 44 White and 20 other) drawn from a university community. Participants were given 12 vignettes, derived from real-life race-related experiences collected in a prior study. Vignettes varied in the race of the target and the perpetrator and in the level or degree of explicitness of the racial bias (i.e., use of racial or ethnic insults), and the degree to which the maltreatment appeared linked to common stereotypes about the targeted group (e.g., stereotypical beliefs about the targeted group's propensity for violence or dishonesty). Vignettes in which the perpetrator used an explicit racial slur were judged as significantly more likely to be motivated by racial bias than were those that were more ambiguous (e.g., not being invited to a party: $p<.001$). Situations in which the behavior conformed to common stereotypes (e.g., clutching a bag to avoid contact) were also rated as more likely to be motivated by racial bias than ambiguous situations ($p<.001$). Across vignettes, Asian and White participants rated vignettes as less likely to be motivated by racial bias than did Black and Latino (a) participants ($F(3, 3077)=8.52$, $p<.001$). Variations in rating of attributions to racism and the expected level of distress the target was expected to experience were also attributable to the race of the perpetrator, the target, and the participant. These data have implications for efforts to develop preventive interventions to decrease episodes of subtle racism.

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Saturday
April 30, 2011
11:45 AM–1:15 PM

Paper Session 28 11:45 AM–12:03 PM 4045

ECOLOGICAL MOMENTARY ASSESSMENT (EMA) OF MORNING SELF-EFFICACY AND POSITIVE OUTCOME EXPECTATIONS PREDICTS DAILY EXERCISE IN ENDOMETRIAL CANCER SURVIVORS

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BACKGROUND: Exercise is recommended for cancer survivors, but we know little about increasing exercise in this population. EMA can help us understand behavioral processes by examining within day influences on behaviors. In this study we apply EMA to evaluate whether social cognitive theory (SCT) variables of self-efficacy (SE) and positive and negative outcome expectations (OE+, OE-) measured each morning predict survivors' exercise that day.
METHOD: 100 endometrial cancer survivors participated in the 6 month study, completing questionnaires of SCT variables and exercise every two months. For 5 days before and 5 days after each assessment (total days=2,412) they used a handheld computer to complete morning SCT assessments and questions about exercise throughout the day. Several mixed model regressions were tested; the first analyzed the relationship between morning SCT variables and exercise minutes controlling for assessment wave, and each subsequent model controlled for an additional variable (2: baseline exercise; 3: SCT questionnaire; 4: mean minutes of exercise for EMA assessment period; 5: mean SCT measure for assessment period).
RESULTS: Morning SE was associated with exercise minutes in all models; in model 1 a 1-point increase in SE was associated with an increase of 6.3 minutes of exercise ($p<0.0001$). Daily assessment of OE+ was also associated with exercise minutes in all models; in model 1 a 1-point increase in OE+ was associated with 3.2 additional minutes of exercise ($p<0.0001$). OE- was not significant in any of the models.
CONCLUSION: Survivors' self-efficacy for successfully completing exercise and expectations of achieving positive outcomes predict their exercise that day. This indicates the importance of daily variability of SCT constructs in affecting behavior, and suggests that interventions to increase exercise should provide daily messages and prompts, particularly on days when SE and OE+ are low.

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Paper Session 28 12:03 PM–12:21 PM 4046

PHYSICAL ACTIVITY, FITNESS, AND MAMMOGRAPHIC BREAST DENSITY

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Mammographic breast density is an established risk factor for breast cancer and a potentially useful surrogate intermediate marker for studies of breast cancer prevention. Although research shows consistent associations of percent breast density with age, reproductive factors, body mass index (BMI) and use of postmenopausal hormone therapy (HT), there are fewer data on associations with modifiable lifestyle factors. Physical activity is a lifestyle factor that may play a role in breast cancer prevention. To date, research has been equivocal with respect to a relationship between physical activity and breast density. Inconsistent associations among previous studies might be due to the use of self-report assessments of physical activity and using estimates of physical activity that are too distal in time from the breast density assessment. Use of objective activity monitors, or assessment of physical fitness, provide alternative approaches to self-report for assessing activity levels. Indeed, individuals with higher fitness are known to have less chronic disease, lower resting heart rate and blood pressure, and improved insulin sensitivity. However, the relationship between cardiovascular fitness and breast density has not been examined. The aim of this pilot study was to examine relationships among objectively measured physical activity, cardiorespiratory fitness, and mammographic breast density. Ninety-one women (aged 40–75 years) underwent screening digital mammography, a VO2max test, and wore an accelerometer for one week. As expected, BMI and age were inversely associated with breast density in both univariate and multivariable analyses. Cardiorespiratory fitness (VO2max), but not physical activity, was associated with higher breast density in univariate analyses ($p=.006$). However, after controlling for BMI, age, and HT use, the relationship between fitness and breast density was attenuated. Implications for lifestyle modification are discussed.

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Paper Session 28 12:21 PM–12:39 PM 4047

THE EFFECTS OF A 4-MINUTE INTERVAL TRAINING PROTOCOL ON CARDIORESPIRATORY AND METABOLIC RISK FACTORS

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Re-analyses of the Aerobics Center Longitudinal Study showed that the presence of cardiorespiratory fitness (CRF) greatly reduced risk (~40%) of all-cause mortality, and to about the same extent whether or not physical activity (PA) guidelines were met, with PA alone having minimal impact on risk. Public health needs a renewed focus on actual aerobic training (AT) for CRF. Higher intensity aerobic interval training (AIT) has a profoundly positive effect, greater than continuous AT, on a range of mechanisms associated with diabetes, CHD, and some cancers. AIT studies have involved participants at higher risk, but with no adverse effects and minimal attrition. The most widely researched AIT protocol involves 4 minutes at 90% HRmax, repeated 4 times, with 3 easy work minutes in between each 4-minute work segment (4 × 4, or 4-AIT), and a training frequency of 3/wk. Other research suggested that the stimulus from AIT producing these risk reduction changes primarily involves intensity. The present 10-week study randomly assigned 26 healthy, untrained and slightly overweight (BMI: 25–30, age: 35–45) men to the 4-AIT or a 1-AIT (1, 4-minute work segment) protocol, performed 3/wk in a supervised setting. The 4-AIT and 1-AIT increased VO2max by 13% (~6.5 mL/kg/min) and 10% (~5.0 mL/kg/min) ($p<0.01$), respectively (no group difference). Stroke volume indicated by peak oxygen pulse (VO2max/maximal heart rate) increased by 15% in 4-AIT ($p<0.01$) and 14% ($p<0.01$) in 1-AIT (no group difference). Both 4-AIT and 1-AIT decreased mean arterial blood pressures, by ~6 mmHg (both, $p<0.05$); 4-AIT and 1-AIT induced significant reductions in fasting glucose by 5% and 6%, respectively ($p<0.05$), and both groups reduced body fat by about 2.5%. The 1-AIT can be adapted for disease prevention to a 4-minute quick walk up-hill at ~8% to 10% grade or rapidly walking up 6-10 flights of stairs 3/wk using RPE (16/20 on Borg scale) as a guide.

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Citation Paper
Meritorious Paper

Paper Session 28 12:39 PM–12:57 PM 4048

THE EFFECT OF PREOPERATIVE EXERCISE ON POSTOPERATIVE ?RECOVERY FOR ORTHOPEDIC PATIENTS: A META-ANALYSIS

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Context: Exercise has long been considered an important part of postsurgical rehabilitation for orthopedic patients. Exercise as a presurgical intervention, or prehabilitation, is now garnering more research interest. Preoperative exercise has been linked to reduced pain, faster return to functional independence, and better emotional recovery after surgery, although studies have been inconsistent in intervention type, dose, setting and, consequently, results.

Objective: To evaluate the effect of prehabilitation exercise on postoperative physical, psychological, and clinical outcomes after hip, knee, and lumbar spine surgery.

Data Sources: Studies were retrieved by searching four electronic databases: PubMed, Medline, PsychInfo, and SportDiscus. The search terms prehabilitation, presurgical, preoperative, exercise, training, orthopedic, osteoarthritis, arthroplasty, and surgery were used. Reference lists of all retrieved articles were also searched for relevant papers.

Study Selection: Studies were excluded if they did not report inclusion/exclusion criteria, exercise type, or data from at least one postoperative assessment. Studies without sufficient data to allow an effect size calculation were also excluded.

Data Extraction: Data on study design, characteristics of participants, intervention types, and physical and psychosocial outcomes were independently abstracted by 2 investigators using a standardized protocol.

Data Synthesis: A total of 13 studies were included. Using a random effects model, effect sizes were calculated with Hedge's g. Preoperative exercise had a small to medium effect on postoperative pain (ES=0.342, 95% CI: 0.159–0.525), self-reported physical function (ES=0.313, 95% CI: 0.130–0.495), and objective function measured by timed up and go (ES=0.384, 95% CI: 0.209–0.559), sit-to-stand (ES=0.536, 95% CI: 0.314–0.758) and time to ascend stairs (ES=−0.283; 95% CI: −0.502 – −0.064).

Conclusions: There is evidence to suggest that preoperative exercise contributes to both subjective and objective benefits following orthopedic surgery. Future research on the optimum type and dose of exercise is recommended.

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Paper Session 28 12:57 PM–1:15 PM 4049

MAINTAINING EXERCISE AFTER CARDIAC REHABILITATION

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Maintaining exercise in the general population and among patients continues to be a challenge. Phase II cardiac rehabilitation programs (CRPs) that include exercise are recommended for patients who have experienced myocardial infarctions, stenting procedures and other cardiac events. Although regular exercise may help reduce future risk of cardiac events and repeat surgery, exercise maintenance after CRP completion is poor. We offered a telephone counseling program to help patients adhere to exercise prescriptions provided at CRP discharge. 130 patients (mean age=63.6 years, SD=9.7, 21% female, 75% married/partnered, 50% employed, 93% White) were randomized to a 6-month home-based telephone counseling intervention (Exercise Group, EG) or contact control (Control Group, CG). The telephone counseling was based on the Transtheoretical Model and Motivational Interviewing. At CRP discharge and at 6 and 12-month follow-ups, participants completed self-reported measures of physical activity (7 Day PAR), motivational readiness and physical functioning (SF-36 PF). Maximal exercise tolerance tests and blood draws were conducted at baseline and 6 months. Regression analyses (controlling for baseline values) showed significant effects for the EG vs. CG for physical activity at 12 months (239.9 mins/week vs. 160.1 mins/week, $p<.01$). Positive effects were found in the EG for Physical Functioning (SF-36) at 12 months (81.7 vs. 73.9; $t=2.35$, $p<.05$). At baseline, 85% (CG) and 81% (EG) were in Action/Maintenance stage of motivational readiness. At 6 months, 43% (CG) and 59% (EG) were in Action/Maintenance (OR=1.8, $p=.10$) and at 12 months, 34% (CG) and 55% (CG) were in Action/Maintenance (OR=1.7, $p<.05$). Group differences on exercise tolerance tests and lipids were non-significant. A telephone counseling intervention can help maintain regular exercise and reduce regression in motivational readiness among patients who have completed Phase II CRP.

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Paper Session 29 11:45 AM–12:03 PM 4050

PHYSICAL ACTIVITY PARTICIPATION AND READINESS FOR CHANGE IN NINE SCHOOL COMMUNITIES AFTER THE READY FOR RECESS INTERVENTION

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Research has provided evidence of the school's vitality in promoting youth health behaviors, including physical activity (PA). Modifying the recess environment is one method of targeting youth PA. In order for PA interventions to be successful, understanding the school community's readiness (CR) for change may be necessary. The purpose of this study was to: 1) determine the effect of schools' baseline CR on baseline youth PA, and 2) determine whether baseline CR predicted changes in youth PA after Ready for Recess (RFR).

RFR aimed to modify the recess environment and included four interventions (training and equipment, training only, equipment only, and control). PA levels of students grades 3-6 from 3 school districts were measured at recess using the System for Observing Play and Leisure Activity in Youth (SOPLAY). School CR was measured using the Community Readiness Model (CRM) at baseline and post-intervention. Nine stages of CR characterize the CRM. A Poisson model was used to determine if baseline CR predicted baseline PA, and a Poisson GEE was used to determine if baseline CR predicted changes in PA.

At baseline two schools fell in the denial stage, four in vague awareness, and three in preplanning. The number of girls in moderate and vigorous PA (MVPA) and boys in vigorous PA at baseline were significantly higher at schools in preplanning ($p<0.01$). Significant decreases in MVPA were seen from baseline to post-intervention for girls in schools in the denial stage at baseline ($p<0.001$). No significant changes were observed in PA levels or total CR regardless of intervention arm or school district.

Though no changes in PA or CR were observed, schools with higher CR exhibited more MVPA. PA in girls at schools in the lowest stage of readiness decreased across intervention arms. These results suggest that efforts to increase school CR before implementing interventions may be necessary to promoting increased PA at recess.

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Paper Session 29 12:03 PM–12:21 PM 4051

BUILDING FOR DISSEMINATION: EFFICACY OF AN INTERNET PHYSICAL ACTIVITY INTERVENTION

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The Internet holds great promise as a delivery channel for behavior change (e.g., low cost, high reach) although findings from Internet physical activity (PA) interventions remain equivocal. Further, few Internet PA studies have tested programs designed specifically for dissemination (e.g., non face-to-face, fully automated designs). The purpose of this study was to test the efficacy of an Internet PA intervention designed for dissemination for promoting PA in sedentary adults from three states. We first conducted focus groups ($N=17$) to identify Internet features rated as "useful for increasing PA" and that targeted theoretical constructs predictive of PA. We then randomized 53 participants (73% female, mean age=37.9 years, mean BMI= 26.7 kg/m2) to either our Enhanced Intervention (EI) ($N=25$) or to a contact control (CC) ($N=28$) that received access to six publicly available PA websites (e.g., standard of care). Five theory-targeted Internet features were identified as "useful" for increasing PA: 1) an interactive PA tracking/logging calendar targeting self monitoring and goal setting; 2) a geographic mapping tool targeting perceived environment; 3) a discussion forum targeting social support; 4) exercise videos targeting observational learning; and 5) regular updates of peer PA progress targeting outcome expectations. Significantly more EI participants (40%) were meeting the federal PA guidelines (150 minutes moderate intensity PA/week) at 3 months relative to the CC arm ($p=0.01$) and nearly half (48%) of EI participants were meeting the guidelines at 6 months. The findings from this study suggest this Internet PA program to be effective at motivating sedentary adults to achieve the recommended PA guidelines. Future longer term trials are warranted as they are likely to contribute important information for policy makers interested in translating this low-cost, high reach PA intervention laying the groundwork for future dissemination efforts.

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Paper Session 29 12:21 PM–12:39 PM 4052

COMPARING TWO THEORY-BASED INTERVENTIONS TO ENHANCE THE MAINTENANCE OF FRUIT & VEGETABLE CONSUMPTION

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Few dietary interventions have been designed to address the maintenance of behavior change. Even fewer have used behavioral theories to examine how best to maintain intervention effects. This RCT compared two theory-based interventions, Social Cognitive Theory (SCT) v. Goal Systems Theory (GST), designed to maintain previously achieved improvements in fruit and vegetable (FV) intake. Both used 10 tailored, interactive conversations delivered by an automated telephony system [Telephone Linked Care (TLC)] over a 6-mo period. TLC-SCT used a skills-based approach in comparison to TLC-GST which used a more cognitive-based approach. TLC-GST conversations trained subjects in goal management to help integrate newly attained dietary goals into one's life. List-assisted methods were used to recruit subjects who consumed less than the FV recommendations. Subjects completed a behavioral run-in phase consisting of an evidence-based intervention (TLC-Eat). Those who increased by 1 FV serving after the run-in were randomized to 1 of 3 groups: SCT, GST or Control. Of the 397 randomized subjects, 77% white, 53% female, and mean age 42.4 yrs. FV intake was assessed at randomization, 6-, 12-, 18-, and 24-mo post-randomization using the NCI 19-item FV screener. This study includes the 6 mo results only. ANCOVA was used to compare mean group differences in FV with baseline FV as the covariate. Pairwise comparisons showed SCT ($p<.005$) and GST ($p<.04$) superior to control but no difference between GST and SCT ($p<.48$). Group differences in the percent of subjects who maintained FV at 6 mo was 42% SCT, 32% GST and 25% control; however, only SCT was different from control ($p<.004$). Results suggest that at the end of the maintenance intervention both theory-based interventions assisted in the maintenance of effects at 6 mo with a slight advantage to SCT.

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Paper Session 29 12:39 PM–12:57 PM 4053

H.U.B CITY STEPS: EARLY FINDINGS FROM A COMMUNITY-BASED PARTICIPATORY EFFECTIVENESS TRIAL TO REDUCE BLOOD PRESSURE AMONG AFRICAN AMERICANS

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Community-based participatory research (CBPR) has been recognized as an important approach to develop and execute health interventions among marginalized populations, and a key strategy to translate research into practice to help reduce health disparities. Despite growing interests in the CBPR approach, CBPR initiatives rarely use experimental or other rigorous research designs to evaluate health outcomes. This study is designed to test treatment effects of a 6-month CBPR walking intervention on blood pressure (BP) among all walking participants, and to test the dose effects of four versus 14 follow-up motivational interviewing telephone contacts on systolic blood SBP over a 12-month maintenance phase. A community advisory board contributed to the development and execution of the culturally-appropriate intervention components which included social support walking groups led by peer coaches, pedometer diary self-monitoring, monthly education sessions, and individualized motivational interviewing sessions. Although the study is on-going, three month data is available and reported. Paired t-tests were used to compare changes in blood pressure between baseline and 3-month follow-up. Of 269 enrolled participants, most were African American (94%) females (85%) with a mean age of 43.8 (SD=12.1) years. At the 3-month follow-up 227 (84%) participants were retained. From baseline to 3-months, systolic BP [126.0 (SD=19.1) to 120.3 (SD=17.9) mmHg; $p<0.001$] and diastolic BP [83. 2 (SD=12.3) and 80.2 (SD=11.6) mmHg; $p<0.001$] were significantly reduced. This study establishes feasibility and early effectiveness of a CBPR intervention to reduced BP in an African American community. Importantly, this study will evaluate both short- and long-term effectiveness of a CBPR intervention on health outcomes, and help inform the translational capabilities of CBPR efforts.

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Paper Session 29 12:57 PM–1:15 PM 4054

OUTCOMES FROM COMMIT TO QUIT YMCA: TRANSLATING AN EFFECTIVE QUIT SMOKING PROGRAM TO A YMCA SETTING

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Vigorous intensity exercise has been shown to aid in smoking cessation, especially among women for whom weight gain is a concern. In previous trials, our program of cognitive behavioral therapy (CBT) plus regular aerobic exercise significantly enhanced cessation rates, improved exercise capacity, and reduced weight gain compared to CBT plus equal contact time (Marcus et al., 1997; 1999). This trial takes the next step toward dissemination by testing the efficacy of CBT + Exercise (EX) vs. CBT + Contact Control (CC) in a YMCA setting. YMCA staff were trained to lead the manualized smoking cessation and exercise programs at four local YMCAs. The 330 women randomized to EX (n=166) or CC (n=164), were on average, 44 years old, had a BMI of 28.2, and had at least some college-level education (65.1%). 22% were of racial/ethnic minorities and 38.9% of the sample reported a total household income of at least $50,000. Results revealed no significant between-group differences in 7-day point prevalence (29.5% for EX vs. 29.9% for CC) nor continuous abstinence (13.9% for EX vs. 14.0% for CC) at end of treatment or at 3-, 6-, and 12-month follow-up. To further answer our research question, we examined the relationship between dose of exercise and quit status at end of treatment, among those randomized to EX. On average, over 12 weeks, exercise participants logged 294.6 minutes of aerobic activity (sd=361.4), including 4.2 strength training sessions (sd=6.0) and 9.7 aerobic exercise sessions (sd=10.1). There was a significant association between total number of exercise sessions and 7-day quit such that the odds of being 7-day quit grew by 4.5% for every 1-session increase over 12 weeks ($p<0.01$). Thus, it appears that if women can make modest physical activity increases in the Commit to Quit program at YMCAs, there could be a large public health impact.

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Paper Session 30 11:45 AM–12:03 PM 4055

RELATIONSHIP FUNCTIONING IN COUPLES PARENTING A CHILD WITH CANCER: ASSOCIATIONS WITH INDIVIDUAL AND PARENTAL FUNCTIONING

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Couples who have a child with cancer are faced with multiple and pervasive stressors from the time of the child's diagnosis, through treatment, and beyond. The ability of couples to effectively work together as a team to manage their own individual distress and that of their child(ren), juggle their typical responsibilities with those imposed by the child's cancer treatment, and maintain the quality of their relationship, is critical to the adjustment of the family. However, few empirical studies have focused on couples' relationship functioning in the context of parenting a child with cancer. The purpose of this study was to examine associations between relationship functioning and individual and parental functioning in 34 couples (average age=38.3 years for mothers, 41.6 years for fathers; 80% Caucasian) whose children (69% male, average age=8.8 years) were diagnosed with leukemias (50%), CNS malignancies (29%), and other cancers (21%). Couples completed questionnaires assessing relationship functioning (dyadic adjustment, partner support), individual functioning (cancer-specific distress and emotional resources), and parental functioning (parenting alliance). Results of mixed model dyadic analyses indicated that individuals who reported higher levels of partner support also reported significantly lower levels of cancer-specific distress, and higher levels of emotional resources and parenting alliance (p's<.05). Dyadic adjustment was positively associated with emotional resources and parenting alliance (p's<.05) but was not associated with cancer-specific distress. The magnitude of the significant associations was moderate to high. These finding suggest that, for couples who are parenting a child with cancer, their relationship functioning and particularly their ability to support each other are important factors related to their individual psychological adjustment and their ability to function effectively as parents.

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Paper Session 30 12:03 PM–12:21 PM 4056

PATTERNS AND CORRELATES OF MULTIPLE CANCER RISK BEHAVIORS AMONG ADOLESCENTS

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Background: Most forms of cancer in adulthood are linked to multiple health risk behaviors, such as tobacco and alcohol use, poor diet, and physical inactivity. Multiple cancer risk behaviors (MCRB) may also originate early in life and cluster together. However, a majority of MCRB research has been conducted with adults and evidence is scarce among adolescents.

Objective: To identify patterns and correlates of MCRBs among adolescents (N=50) participating in a multiple health behavior change intervention.

Method: Pre-treatment data were examined for patterns of co-occurring MCRBs and sociodemographic and theoretical (e.g., knowledge, prevention self-efficacy) correlates of total risk factors (sum of 9 MCRBs). Analyses included bivariate statistics and linear regression.

Results: The mean (SD) of total risk factors was 4.6 (1.6; range=0–9). The single most common behaviors contributing to risk were alcohol use intentions (80%), inadequate fruit/vegetable consumption (80%), and lifetime alcohol use (76%). Among adolescents who were overweight/obese, had family cancer history, or no/low cancer screening intentions on reaching adulthood, common cancer risk behaviors included: <5 daily servings of fruits/vegetables, smoking behaviors, and alcohol use. Smoking and alcohol behaviors also commonly co-occurred. In multivariate analyses, older age (B=0.19) and lower prevention self-efficacy (B=−0.16) were significantly ($p<0.05$) associated with greater behavioral risk (Adj. $R2=0.13$, $p=0.02$).

Conclusions: Age and self-efficacy display key associations with MCRBs during adolescence. The finding that older age is associated with greater risk is consistent with prior research and emphasizes the need for multiple health behavior change intervention among young people to prevent risk accumulation. Self-efficacy appears to be an important point of intervention and could guide the development of theory-driven approaches among youth.

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Paper Session 30 12:21 PM–12:39 PM 4057

NO WORRIES? ADAPTATION AND HEALTH BEHAVIORS AMONG YOUNG ADULT CANCER SURVIVORS

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The cancer experience can be viewed as a psychosocial transition capable of impacting survivors in positive and negative ways. The "reentry" period, as patients transition from active treatment to extended survivorship, can be particularly impactful. Young adult cancer survivors (ages 18-39) face interrupted developmental milestones and increased stressors , and demonstrate relatively low medical adherence rates, poor health behaviors, and lower 5-year survival rates relative to younger and older groups of cancer survivors. Few studies have examined this cohort and thus little is known about their experiences. As part of a larger study, a heterogeneous group of young adult cancer survivors (N=304, mean age=31.8, women=50.3%) was recruited from an online research panel and stratified by time post-active treatment (i.e., 0-12 months, 13-24 months, 25-60 months). Participants completed measures assessing demographic and clinical characteristics, beliefs (self-efficacy, fear of recurrence), health behaviors (diet, exercise, smoking), and quality of life (physical, social, emotional, spiritual). Participants endorsed eating five or more servings of fruits and vegetables a day (42.8%), engaging in moderate to vigorous exercise for 30 minutes for 5 or more days a week (51.5%), and abstaining from cigarettes or tobacco products daily (41.8%). Reports of positive changes in health behavior were associated with self-efficacy ($r=.31$, $p<.001$ for diet, $r=.43$, $p<.001$ for exercise, $r=-.161$, $p=.005$ for smoking) and fear of recurrence ($r=-.12$, $p=.036$ for exercise, $r=.23$, $p<.001$ for smoking). A cohort (0-12 months, 13-24 months, 25-60 months) X composite health behavior (0, 1, 2, or 3 health behaviors) MANCOVA found significant cohort and health behavior main effects (both ps<.001) for quality of life domains. Implications for the development of prevention and/or treatment programs for young adult survivors will be discussed.

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Paper Session 30 12:39 PM–12:57 PM 4058

PHYSICAL, MENTAL AND NEUROCOGNITIVE FUNCTION AND EMPLOYMENT IN CHILDHOOD CANCER SURVIVORS

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Childhood cancer survivors (CCS) report health-related unemployment and working in lower skill occupations. We examined these outcomes within the Childhood Cancer Survivor Study, with reference to mental, physical and neurocognitive functioning.

CCS$\geq$25 years of age were categorized on 1. health-related unemployment ($N=4735$) and 2. occupation (professional/managerial vs. service/blue collar employment; $N=3757$). Outcomes were examined in association with the Short Form-36 (physical and mental health), the Brief Symptom Inventory (depression, anxiety and somatization), and the Neurocognitive Questionnaire (task efficiency, emotional regulation, organization, and memory). Multivariable generalized linear models generated relative risks (RR) of these measures for unemployment and occupation adjusted for demographic and cancer-related factors.

Average current age was 34.2 years ($SD=6.2$) and 55% were male. Poor physical health was associated with an 8-fold higher risk of health-related unemployment ($p<.001$). Somatization (RR 1.31; $p<.01$), task efficiency (RR 2.57; $p<.001$) and memory (RR 1.29; $p<.05$) deficits were also significantly associated with unemployment, while poor organization was protective (RR 0.76; $p<.01$). For occupation, somatization was associated with a lower likelihood of professional work (RR 0.87; $p=.03$). Task efficiency, emotional regulation and memory deficits conferred a 10-15% lower likelihood of professional work, whereas poor organization was associated with a higher likelihood (RR 1.22; $p<.001$). The estimates remained significant when adjusted for cranial radiation therapy.

Physical symptoms, including somatization, strongly influence health-related unemployment among CCS. Deficits in task efficiency, emotional regulation and memory may impact CCS work ability and job type, whereas organizational problems may reflect occupational characteristics, not neurocognitive function. Screening for physical and neurocognitive needs could better target vocational services for this population.

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Paper Session 30 12:57 PM–1:15 PM 4059

CHILDHOOD CANCER SURVIVOR STUDY PARTICIPANTS' PERCEPTIONS & KNOWLEDGE OF HEALTH INSURANCE COVERAGE: IMPLICATIONS FOR THE 2010 HEALTH CARE REFORM LAW

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Quality health insurance coverage is critical for childhood cancer survivors (CCS) who face long-term health consequences. CCS are more likely to be uninsured than siblings and, if covered, are more likely to have public insurance. Improving health insurance, within the context the 2010 health care reform law, requires understanding CCS' perceived quality of coverage, coverage needs and barriers, & knowledge of health-insurance related legislation. From 09/09-02/10, we conducted in-depth interviews with 39 participants from the CCSS (a cohort of five-years survivors of cancers diagnosed<age 21). Interviews were recorded and transcribed; content analyses were conducted by 2 coders ($Kappa=0.88$) using NVivo 8. 25 participants were insured; 56% were<30 years, and 74% were White, non-Hispanic. Most insured survivors reported being satisfied with the quality of their coverage but had low expectations for coverage. Over half reported annual out of pocket costs>$2,000, an indicator of being underinsured, yet felt fortunate to simply have coverage. Most uninsured survivors were employed but had been uninsured for many years; cost and being unable to find a job that offered insurance were the most frequently cited coverage barriers. Understanding of insurance provisions was generally poor; few partipants were able to specify what types of services or coverage options they needed. Almost all participants lacked knowledge about existing insurance legislation (e.g. ADA).Our findings about CCS' coverage perceptions and knowledge are of concern. Insured CCS seemed primed for low coverage expectations, and uninsured CCS found insurance financial prohibitive. Both advocacy and education will likely be needed to assist CCS to access and utilize the new health care reform provisions (e.g., Medicaid expansion, eligibility for a high risk pool, or expansion of parents' insurance).

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Paper Session 31 11:45 AM–12:03 PM 4060

STRESS-INDUCED INCREASES IN PLASMA ADIPOKINE LEVELS IN HEALTHY WOMEN

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Background: In addition to its well-known function as a repository for lipids, adipose tissue is increasingly recognized to be an endocrine organ, secreting a large variety of proteins (adipokines) that have profound effects on metabolic and inflammatory processes. The present study tested the hypothesis that, like other endocrine responses, adipokine levels may be affected by acute psychological stress.

Methods: Participants ($n=25$) were nonsmoking, drug-free, premenopausal women in good health (by self-report, physical exam, and blood screens), with mean $age=37.4$ (range 25-49) and body mass index ($BMI=24.7$ (range 19.1-34.2). Experimental stress sessions (Trier Social Stress Test, TSST) were scheduled for the late afternoon in the luteal phase of the menstrual cycle. Baseline blood samples were collected from an indwelling venous catheter after a 15 min rest period, and post stress samples were collected 75 min after the TSST. Plasma levels of three representative adipokines: interleukin-6 (IL-6), interleukin-1 receptor antagonist (IL-1RA) and leptin were assessed blind with commercially available ELISA kits.

Results: Confirming the efficacy of the TSST in this study sample, self-reported tension-anxiety ratings, as well as heart rate and blood pressure (systolic and diastolic), were significantly ($p<0.05$) increased during the stress session, compared to pre- and post-levels. Consistent with the study hypothesis, plasma levels of IL-6 and leptin were significantly increased after the TSST, controlling for age, BMI, and BMI x Time. IL-1RA levels did not show a significant change. Consistent with the literature, BMI was a significant covariate for all three adipokines.

Conclusion: The stress-induced increases in systemic IL-6 and leptin levels seen in this proof of principle study suggest the importance of additional research to determine the extent of psychological influences on the endocrine activities of adipose tissue, and to explore the health consequences of such influences in an increasingly overweight society.

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Citation Paper
Meritorious Paper

Paper Session 31 12:03 PM–12:21 PM 4061

DEPRESSIVE SYMPTOMS AND CORTISOL VARIABILITY PRECEDING SURGERY FOR SUSPECTED ENDOMETRIAL CANCER

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Prior research suggests that negative psychological factors are associated with hypothalamic-pituitary-adrenal axis dysregulation, e.g., flattened diurnal cortisol slopes, in cancer populations. However, no research has examined these relations in endometrial cancer (EC), the 4th most common cancer in women. Furthermore, no research has examined the relationship between psychological factors and cortisol intraindividual variability in cancer, a variable that represents the extent to which cortisol production may be erratic throughout the day. This may be important to examine in cancer, given recent research suggesting greater cortisol variability in otherwise healthy individuals with major mood disorders. The current study examined the relationship between depressive/anxious symptoms and cortisol slope and intraindividual variability in women undergoing surgery for suspected EC. Anxiety and depressive symptoms were measured using the Structured Interview Guide for the Hamilton Anxiety and Depression Scales; salivary cortisol was assessed 4 times a day X 3 consecutive days before surgery. The relationship between anxiety/depression and cortisol slope/variability was examined using multilevel modeling. Participants were 74 women (M $age=62$ yrs; $SD=9$ yrs) with EC (Stage: $I=64\%$, $II=16\%$, $III=11\%$) or benign disease (9%). Greater depressive symptoms prior to surgery were significantly related to steeper cortisol slope ($B=-0.00052$, $SE=0.00024$, $p<.05$) and greater cortisol intraindividual variability ($r(72)=.24$; $p<.05$). Anxiety was not associated with either cortisol slope ($B=-0.00056$, $SE=0.00034$; $p=.09$) or intraindividual variability ($r(71)=.097$; ns). These results suggest that depressive symptomatology may be associated with steeper (rather than flatter) cortisol slope and greater cortisol intraindividual variability in women undergoing surgery for suspected EC. Future research should examine the ability of slope and intraindividual variability to predict health outcomes in this population.

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Paper Session 31 12:21 PM–12:39 PM 4062

RELATIONSHIPS AMONG AMBIVALENT SOCIAL SUPPORT, PSYCHOLOGICAL DISTRESS, AND CORTISOL DURING THE PERIOPERATIVE PERIOD FOR WOMEN WITH SUSPECTED ENDOMETRIAL CANCER

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Research has shown that distress is associated with higher levels of cortisol, while social support is associated with lower levels of cortisol. No research has examined potential relationships between ambivalent social support (SS), characterized by high levels of both positive and negative SS, and cortisol. The current study examined longitudinal relationships among distress, ambivalent marital SS, and daytime cortisol output (Area Under the Curve) among women undergoing surgery for suspected endometrial cancer. This study included 70 partnered women (mean age=60.5, SD=9.6 years). Women were assessed 1 day prior to surgery and 4-6 weeks after surgery. They collected saliva samples prior to each assessment. Path analysis demonstrated that greater pre-operative ambivalent SS was associated with greater pre-operative psychological distress (beta=.39, p<.001) and greater post-operative cortisol output (beta=.58, p=.002). Pre-operative ambivalent SS was unrelated to pre-operative cortisol output or post-operative psychological distress. Contrary to hypotheses, greater post-operative ambivalent SS was associated with lower post-operative cortisol output (beta=-.42, p=.017). Post-operative ambivalent SS was unrelated to post-operative psychological distress. These results suggest that both pre- and post-operative ambivalent SS are associated with post-operative cortisol output in women undergoing surgery for suspected endometrial cancer; however, the unexpected relationship between greater post-operative ambivalent SS and lower post-operative cortisol suggests that a third variable (e.g., surgical stress), may intervene during the perioperative period to moderate this relationship following surgery.

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Paper Session 31 12:39 PM–12:57 PM 4063

EXPOSURE TO ACUTE STRESS IS ASSOCIATED WITH ATTENUATED SWEET TASTE

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This study was conducted to examine effects of stress on taste perception. Participants (N=38, 21 female) completed two laboratory sessions: one stress and one rest session. Each laboratory session included a baseline (15 min), a period of stress or rest (30 min), a taste perception test (15 min), and a recovery period (50 min). The acute stressors included public speaking, math, and cold pressor test. During the taste perception, participants rated the intensity and pleasantness of sweet, salty, sour, and savory solutions at suprathreshold concentrations. Throughout the session, cardiovascular measures, hormonal stress response (salivary cortisol), and mood were assessed. Participants exhibited higher levels of cortisol (<.05), greater cardiovascular reactivity (ps<.01), and lower positive affect (p<.001) on the stress day than on the rest day. Reported intensity of the sweet solution was significantly lower on the stress day than on the rest day (p<.01). However, other solutions did not differ in intensity between the stress day and the rest day. On the stress day, cortisol level immediately after stress was negatively associated with the intensity of salt (r=-.38, p<.05) and sour (r=-.43, p<.01), suggesting that stress-related changes in adrenocortical activity were associated with desensitized taste intensity perception. These results were not found on the rest day. These findings indicate that acute stress may alter taste perception. It is possible that these changes mediate effects of stress on appetite. Ongoing research is exploring this hypothesis.

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Citation Paper

Paper Session 31 12:57 PM–1:15 PM 4064

ANGER REGULATION AND CULTURE: CULTURE MODERATES THE CARDIOVASCULAR CONSEQUENCES OF ANGER REGULATION STRATEGY

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Background: Anger/hostility has been identified as a risk factor for CHD with one pathophysiological mechanism believed to be elevated cardiovascular reactivity to anger provocation which in turn tends to promote atherosclerosis. A growing body of research demonstrates that different emotion regulation strategies have differential implications for cardiovascular reactivity with suppression of anger and other negative emotions having deleterious effects. This research has been done principally in North America with predominantly European American participants and it is not known the extent to which these results can be generalized across cultures.

Methods: Cultural differences in experiential and cardiovascular outcomes of three specific anger regulation strategies (expression, suppression and reappraisal) were examined in a laboratory experiment with 45 Chinese and 45 Caucasian female participants. Role play was used to induce anger with participants instructed to either express or suppress their feelings or engage in cognitive reappraisal. Emotional experience was measured before and after the role play. Cardiovascular indices (HR, SBP, DBP, CO, TPR, PEP) were measured continuously during the experiment.

Results: The findings revealed significant interactions between ethnic group and emotion regulation instructions such that Caucasians showed stronger cardiovascular responses to suppression than expression of anger whereas the opposite was true for Chinese. In addition, Chinese participants showed quicker HR and PEP recovery following suppression than did Caucasians.

Conclusion: Culture moderates the relationship between different emotion regulation strategies and their cardiovascular consequences. Possible explanations for the results, limitations of the present study and future direction are discussed.

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Paper Session 32 11:45 AM–12:03 PM 4065

HIV/STI TESTING, ACCESS TO HEALTH CARE, AND EXPOSURE TO HIV PREVENTION AMONG DEPORTED MEXICAN MIGRANTS

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Background. This study estimated rates of lifetime and recent testing for HIV and other sexually transmitted infections (STI), access to health care services, and exposure to HIV/STI prevention messages among Mexican migrants deported to Mexico.

Methods. From August to November 2009, a cross-sectional, probability survey was conducted with deported Mexican migrants immediately after their release by immigration authorities in Tijuana, Mexico. Respondents (642 males and 51 females; response rate 89.4%) completed an anonymous, interviewer-administered questionnaire on HIV/STI testing history, access to health care services, exposure to and sources of messages to reduce their risk for HIV/STI. We computed weighted estimates to characterize the demographic profile and the prevalence of HIV/STI related behavioral factors among the study population.

Results. About 24.8% of Mexican migrants deported through the city of Tijuana had been tested for HIV during the last 12 months; 26.6% had been tested for HIV, but not within the last 12 months; and 48.6% had never been tested for HIV. Lifetime and last-12 month history of other STIs was 22.3% and 12.2%, respectively. Among those who had had a STI during the last 12 months, only 38.6% had been treated by a health care professional. The majority (72.4%) never had health insurance while in the US. Nearly one out of four deported migrants (24.5%) had never been exposed to messages promoting safe sex, condom use, HIV/STI testing, or reduction of the number of sexual partners.

Conclusion. These results indicate limited access to health care services, especially HIV and STI testing and treatment, among deported Mexican migrants in both the US and Mexico and underscore the need for binational HIV prevention interventions targeting this population.

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Paper Session 32 12:03 PM–12:21 PM 4066

ALCOHOL USE AND RISKY SEXUAL BEHAVIORS AMONG HEAVY DRINKERS IN CAPE TOWN, SOUTH AFRICA

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South Africa has the highest levels of alcohol consumption per adult drinker than any other region in the world (Rehm et al., 2003). Heavy episodic alcohol use is also common with approximately one-third of South African adults reporting heavy alcohol use in the past month (Peltzer & Ramlagan, 2009). Alcohol consumption, before or during sex, is associated with risky sexual behaviors that may increase the risk of acquiring HIV infection (see Balinuas, Rehm, Irving, & Shuper, 2010, for a meta-analysis). The purpose of this study is to examine the association between alcohol use and prevention behaviors (communication with partners, number of sexual partners, and condom use) among South African adults (N=1,694; 98% Black, 34% women, mean age=32) residing in South African townships. Most participants (n=1,285, 76%) reported drinking alcohol in the past year. Among those who drank alcohol, 60% reported heavy alcohol use (i.e., at least 5 drinks on a single occasion) at least once per week in the past 30 days. Compared to non-heavy drinkers, participants who reported heavy drinking had more positive attitudes toward having sex when drunk (M=2.53, SD=0.92 vs. M=2.15, SD=0.91), were more likely to drink before sex (66% vs. 34%), and have sex with a partner who had been drinking (68% vs. 32%). After controlling for attitudes and drinking before sex (self and partner), heavy drinking was associated with condom use such that heavy drinkers were less likely to use condoms than non-heavy drinkers (β=-.09, p<.001). Heavy drinking was not associated with communication about condom use or the number of sexual partners. Explanations for these findings and implications for health promotion among heavy drinking South Africans will be discussed.

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Paper Session 32 12:21 PM–12:39 PM 4067

VAGINAL CLEANSING PRACTICES IN HIV INFECTED WOMEN IN ZAMBIA

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Vaginal practices (VP) increase the risk of Bacterial Vaginosis, a common cause of vaginal discharge associated with transmission and acquisition of Sexually Transmitted Infections (STI) and HIV. In sub-Saharan Africa VP are thought to be common. However, these practices and the reasons why women engage in them have not been evaluated in HIV positive women. This study evaluates the prevalence, types of practices and reasons why HIV positive women engage in VP, and proposes a culturally appropriate intervention to decrease VP in this population.
Methods: HIV infected women were screened for self-reported vaginal discharge and completed demographic, risk factor and VP questionnaires. Pearson Chi-square was used to evaluate the association between variables.
Results: 60 women were recruited from urban community health clinics in Lusaka, Zambia. Mean age was 36 years (20-61, SD 8.7); 85% women reported VP and 70% had vaginal discharge. There was an association between VP and the presence of vaginal discharge (r=10, p=.002). Women reported their reasons to engage in VP were to: feel clean (85%), clean blood after menses (77%), prevent STIs or HIV (67%), decrease discharge (35%) or please sexual partner (35%). Cleansing with water was the main product used (95%) followed by herbs (32%), soap and cloths (20%). Use of soap and herbs was associated with the presence of vaginal discharge (p<.001). 63% of women thought VP were beneficial and only 20% and 27% knew VP could increase transmission of STI or HIV, respectively. Although 95% or women said they would stop VP if VP are harmful, 32% of women that reported vaginal cleansing had been told in the past not to engage in VP. There was no association between VP and knowledge of potential harm related to VP.
Conclusion: Vaginal practices are very common in HIV positive women in Lusaka. A behavioral intervention to educate women about the potential harm of VP and strategies to decrease such practices is presented. The role of interventions about VP for HIV prevention in the African community is discussed. This study was funded by a grant from NICHD, R01HD058481-S2.

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Paper Session 32 12:39 PM–12:57 PM 4068

IMPACT OF HIV TESTING ON SEXUAL HEALTH COMMUNICATION IN SOUTH AFRICA

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The South African Government recently launched a national campaign to test 15 million South Africans for HIV by 2011. Little is known about how receipt of HIV testing might influence interpersonal communication. To explore these questions, we examine the effects of prior HIV testing on sexual health communication among South Africans adults (N=1,284; 98% Black, 36% women, mean age=31) residing in South African townships. Participants completed street-intercept surveys. Of the 1,284 participants, 811 (63%) had been tested for HIV. Among those who had been tested, 77% tested negative, 12% tested positive, and 11% did not know their test result or refused to answer. Compared to those who had not been tested, participants who had been tested for HIV were more likely to communicate with (a) community members about HIV/AIDS, getting tested for HIV, and using condoms and (b) sexual partner(s) about condom use. Testing positive for HIV was also associated with communications regarding (a) HIV/AIDS and getting tested for HIV with community members and (b) condom use with sexual partners. Among participants who had been tested for HIV, exploratory analyses revealed that those who had engaged in sexual health communication with community members or sexual partners reported more condom-protected sex than those who had not engaged in sexual health communication. HIV testing is associated with sexual health communication among South African community members and sexual partners. Offering HIV testing to all South Africans may increase communication and lead to reductions in sexual risk.

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Paper Session 32 12:57 PM–1:15 PM 4069

INFLUENCE NETWORK AGENT EFFECTIVENESS IN PROMOTING COUPLES HIV COUNSELING AND TESTING IN KIGALI, RWANDA

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Background: People in stable relationships but with different HIV status made up 6.2% of Kigali couples in 2004. This project proposed to broaden promotions of couples voluntary counseling and testing (CVCT) with influence network leaders (INLs) and influence network agents (INAs).
Methods: A quasi-experimental cross-over design employed to assess the impact of two community interventions to increase CVCT. INAs distributed invitations for CVCT and a mobile unit was added at cross-over. Demographic information for INLs, INAs and couples was collected upon recruitment. Invitation process data was gathered from invitation receipts. Univariate statistics were calculated for characteristics of INLs, INAs and couples along with invitation success rate. The relationship of INA and couple characteristics and whether the couple tested together or not are described by odds ratios.
Results: INLs (n=26) recruited 118 INAs from four networks. Men and women (INAs) had an 18% success rate/invitation. INAs working in agriculture were 28% more likely to successfully invite a couple vs. an INA who was not employed (OR 1.279 [CI 1.129, 1.449], p<0.000). INAs who were married were more successful than those who were single (OR 1.218 [CI 1.164-1.409], p<0.000). 4,513 couples tested. Stable couples were 19% more likely to test for HIV together (p<0.000) than those considered boy/girlfriend. The majority of invitations were delivered without any difficulty (n=20,351, 80%). Most (90%) couples tested at the fixed CVCT center. More couples tested if the INA invited them together (OR 1.149 [CI 1.053,1.253], p=0.002). Invitation delivery at the couple's home (OR 1.132 [CI 1.036, 1.236], p=0.006) and the INA's home (OR 1.683 [CI 1.421, 1.995]. p< 0.001) were more likely to result in a couple testing than if invited in the community.
Conclusion: A promotional model including INLs, INAs and a mobile unit can successfully increase the number of couples that access CVCT. Home-based invitations delivered to stable couples were most successful. The initial expensive and labor intensive methods were temporary with CVCT now a part of government services in Kigali.

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Paper Session 33 11:45 AM–12:03 PM 4070

PREDICTING HPV VACCINE UPTAKE IN YOUNG ADULT WOMEN: COMPARING THE HEALTH BELIEF MODEL AND THEORY OF PLANNED BEHAVIOR

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Background: Although numerous theories are used to guide health behavior research, surprisingly few studies have directly compared these theories against one another to evaluate which best predict health behavior. The purpose of the present study was to compare two widely used theories of health behavior—the Health Belief Model (HBM) and the Theory of Planned Behavior (TPB)—in predicting human papillomavirus (HPV) vaccination. Another goal was to identify predictors of HPV vaccination, as little is known about HPV vaccine uptake in young women.

Method: Young adult women ($N=739$; aged 18–26) who had not been vaccinated against HPV completed a baseline session during which they received information about HPV and the quadrivalent HPV vaccine. They also completed a survey assessing HBM and TPB constructs. Ten months later, participants completed an online follow-up survey that assessed vaccination behavior. Structural equation modeling was used to predict HPV vaccination (receipt of ≥ 1 shot) from latent variable constructs in the HBM versus TPB.

Results: Of the HBM constructs, perceived susceptibility to HPV infection, perceived barriers to HPV vaccination, and physician recommendation (a cue to action) were significant predictors of HPV vaccine uptake (pseudo $R^2=.42$). Of the TPB constructs, attitudes toward HPV vaccination, subjective norms, and self-efficacy significantly predicted vaccination intentions, which in turn predicted HPV vaccination behavior (pseudo $R^2=.52$). Standard fit indices suggested good model fit for both theories.

Conclusions: Constructs from both the HBM and TPB emerged as significant predictors of HPV vaccine uptake. Although both theories accounted for a substantial proportion of the variance in vaccination behavior, the TPB outperformed the HBM. Findings provide new insight into our understanding of HPV vaccination behavior in young adult women. Findings may also be useful in informing future HPV vaccination interventions and in advancing theories of health behavior.

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Meritorious Paper

Paper Session 33 12:03 PM–12:21 PM 4071

FINDINGS ABOUT MOTHERS, FATHERS, DAUGHTERS, AND SONS: HOW CAN WE BEST TAILOR HPV VACCINE PROMOTION MESSAGES? AN EXAMPLE FROM THE PHILIPPINES

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Few studies have assessed parental HPV vaccine acceptance for daughters and sons, especially in countries disproportionately affected by HPV. The purpose of this study was (1) to identify correlates of maternal and paternal HPV vaccine acceptance, and (2) to examine correlates of differential vaccine acceptance for sons or daughters. A sample of men and women (n=578) in the Philippines completed theory-grounded, self-administered surveys. HPV vaccine acceptance for sons and daughters was assessed by two Likert scale items. Nearly 75% were accepting of the vaccine for their sons and daughters. Perceived social support for vaccination and exposure to vaccine-promoting media were independently associated with maternal vaccine acceptance. Paternal acceptance for daughters was associated with paternal age, exposure to vaccine-promoting media, and ratings on the importance of obtaining protection from HPV. Paternal acceptance for sons was associated with perceived ability of the vaccine to protect against genital warts. Interestingly, respondents' ratings of their own likelihood of engaging in risk compensation if vaccinated were positively associated with vaccine acceptance for their sons and daughters. A comparison of scale ratings revealed that 28% of respondents gave differential ratings of acceptance for their sons and daughters. Preference for a son's vaccination was negatively associated with education level and positively associated with respondents' indication that it was important to obtain protection from HPV. Preference for a daughter's vaccination was associated with perceived ability of the vaccine to protect against cervical cancer and with respondents' indication that their partner would be influential in HPV vaccination decisions. These findings reveal that optimal HPV vaccination campaigns in this population would involve tailored messages for mothers and fathers and would be attentive to factors that uniquely affect uptake for their sons and daughters.

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Paper Session 33 12:21 PM–12:39 PM 4072

DIFFERENT PREDICTORS OF HPV VACCINATION INTENTIONS AMONG YOUNG WOMEN, PARENTS OF DAUGHTERS AND PARENTS OF SONS

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In order to increase the uptake of the human papillomavirus(HPV) vaccine, it is important to understand the determinants of vaccination intentions for various groups. We conducted a series of three studies to examine the theoretical constructs predicting young women's (n=286), parents of daughters' (n=230), and parents of sons' (n=137) HPV vaccination intentions. First participants read a message providing basic information about HPV and the vaccine. Participants then completed questionnaires assessing the theoretical constructs of Protection-Motivation Theory (PMT) and the Theory of Planned Behavior (TPB). Separate regression models were performed for each of the three interest groups. Beliefs against vaccination, message frame and, where applicable, sex of the parent were controlled for in the models (Step 1). TPB (Step 2) and PMT constructs (Step 3) were entered in separate steps. For young women, response efficacy, self-efficacy, perceived vulnerability to HPV and subjective norms predicted their vaccination intentions, $R^2=.50$, $F(8, 270)=32.04$, $p<.001$, $\beta>.10$. Among parents of daughters, response efficacy, attitudes, and subjective norms predicted intentions to have their daughter vaccinated, $R^2=.65$, $F(9, 226)=45.20$, $p<.001$ $\beta>.13$. Among parents of sons, response efficacy, attitudes and anxiety about their son contracting HPV predicted parents' intentions to vaccinate, $R^2=.54$, $F(9, 128)=15.38$, $p<.001$, $\beta>.14$. Results indicate that constructs from both PMT and TPB predict intentions for different groups considering HPV vaccination. Highlighting the response efficacy of the vaccine rather than the severity of contracting HPV may be an effective way to increase vaccination intentions among all three groups. Focusing on important others' opinions of HPV vaccination may only increase intentions among young women and parents of daughters. These findings have important implications for understanding differences among groups considering the HPV vaccine and for tailoring HPV vaccine interventions accordingly.

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Paper Session 33 12:39 PM–12:57 PM 4073

BARRIERS TO MALE HUMAN PAPILLOMAVIRUS VACCINATION AMONG AFRICAN-AMERICAN MOTHERS AND THEIR ADOLESCENT SONS

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The HPV vaccine offers hope that the incidence of HPV-related cancers can be greatly reduced. Because the vaccine is recommended for adolescents, vaccine acceptance among parents is critical to insuring uptake. Although Gardasil was recently approved for use among boys, little research has investigated the acceptability of male vaccination. This study characterizes correlates of willingness to vaccinate in a sample of African-American mothers (M age=39.7, SD=7.0) and their teenage sons (M age=14.0, SD=1.7). Mother-son dyads (N=113) completed computerized surveys that assessed demographics and HPV vaccination attitudes. Following an informational intervention, vaccination interest and intentions were assessed. Among boys, 39% expressed a willingness to seek vaccination, compared to 78% of mothers ($p<.001$). Among mothers, decreased willingness to vaccinate was associated with higher educational level ($p<.005$), vaccine safety concerns ($p<.001$), and the belief that vaccination may promote sexual activity ($p<.05$). Among boys, decreased intention to vaccinate was associated with stigmatization concerns ($p<.01$). For both mothers and boys, interest in vaccination was associated with perceived vulnerability to HPV and HPV-related cancers ($ps<.01$). Findings confirm high parental interest in vaccine uptake, but less interest among boys themselves. Fear of social repercussions may reduce boys' willingness to vaccinate, whereas safety concerns are influential in determining parental willingness to vaccinate their sons. Public health benefits may be enhanced by addressing distinct psychosocial barriers to vaccination among parents and their teenage children.

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Paper Session 33 12:57 PM–1:15 PM 4074

ADVERTISEMENTS PROMOTING HPV VACCINE: DOES MESSAGE SOURCE MATTER?

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BACKGROUND: The most common way parents report hearing of HPV vaccine is through paid drug company advertisements, yet no research has established the accuracy of these self reports. We conducted an experiment to examine whether parents could accurately identify the source of ads promoting HPV vaccine and whether the impact of ads varied by source.
METHODS: Participants were a national sample of 547 parents of adolescent males aged 11-17 years. The online between-subjects experiment presented parents with an advertisement encouraging HPV vaccination for boys with a logo from a randomly assigned message source (Merck, Gardasil, Centers for Disease Control and Prevention (CDC), American Cancer Society (ACS), or no logo). Parents offered three evaluations (trust, likability, and motivation for vaccination) while viewing the ad. After the ad was removed from the screen, parents indicated who they believed sponsored it.
RESULTS: Nearly half of parents who viewed an advertisement containing a logo incorrectly identified the message source (43%). Fewer parents incorrectly identified the source of drug company ads (26%) than ads from other sources (63%; p<.001). The majority of parents who saw the logo-free ad believed it was created by a drug company (59%), and they often made the same attribution for CDC and ACS ads. Among parents who correctly identified ad source, ads with drug company logos decreased motivation to vaccinate their sons. This effect was mediated by reduced liking of and trust in the ads.
DISCUSSION: Parent accuracy in identifying message source was relatively low. Parents were more accurate in identifying drug company ads, primarily because they tended to assume any ad was from a drug company. Public health organizations may need to take special measures to emphasize that their messages are not sponsored by pharmaceutical companies.
FUNDING: Supported by a research grant from Merck, with additional support from UNC Graduate School, Lineberger Comprehensive Cancer Center, and ACS.

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Paper Session 34 11:45 AM–12:03 PM 4075

DELIVERING BEHAVIORAL WEIGHT MANAGEMENT TO RURAL BREAST CANCER SURVIVORS

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Breast cancer survivors who are obese have increased risk of recurrence and death compared to their normal weight counterparts. Rural women, who comprise nearly 20% of the U.S. population of women, have significant health disparities in obesity and breast cancer. Thus, efforts to enhance survivorship through weight control need to include interventions that can be accessed by rural women. Group phone-based treatment has been shown to be more effective than individual phone-based treatment for weight control, and may be especially ideal for rural breast cancer survivors because it is easily accessible in remote locations and provides real-time peer support. In this pilot study, rural breast cancer survivors (Stage I-III) were assigned to receive a 6-month phone-based behavioral weight control intervention delivered to groups via conference call. Potential participants were identified through hospital registries and mailed study flyers. The enrollment rate was 22% (66% were interested of whom 51% were eligible). Intervention components included a reduced calorie diet incorporating 5 or more daily fruit and vegetables servings and prepackaged food, home-based physical activity, self-monitoring, and weekly 60-minute group phone sessions that addressed behavioral modification and breast cancer survivorship topics. Participants (n=20) were 59.8±9.8 years-old, 3.2±1.6 years out from treatment, had a BMI of 34.0±4.3 kg/m2, 65% were on anti-hormone therapy, and 55% resided in "small" to "isolated" rural areas. At 3 months, participants had achieved 8.2±3.1% weight loss from baseline (7.6±3.6 kg), increased their fruit and vegetable consumption to 39±14 servings per week, and increased their physical activity to 221±109 minutes per week. Average session attendance was 93%. Findings indicate feasibility and effective weight loss using the group phone-based treatment delivery approach among obese rural breast cancer survivors.

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Paper Session 34 12:03 PM–12:21 PM 4076

CORRELATES OF HPV VACCINE UPTAKE AMONG RURAL LATINA MOTHERS

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Human Papillomavirus (HPV) is one of the most common sexually transmitted infections. In 2006, the Centers for Disease Control voted unanimously to recommend that girls aged 11 and 12 receive routine vaccination against HPV; it can also be received at ages 9-26. Few previous investigations on correlates of vaccine uptake have included Hispanics, a group known to have a disproportionately high risk of cervical cancer. Furthermore, parental support is critical to the success of vaccine administration programs. To our knowledge, this study represents one of the first to investigate factors related to vaccine uptake among rural Hispanic parents.
In Eastern Washington, Hispanic mothers of daughters aged 9-17 (n=78) were recruited at local community events to participate in a short survey that examined sociodemographic, intrapersonal, and interpersonal correlates of HPV vaccine uptake. All surveys and instructions were in Spanish and administered using an audio format. Approximately 35% of the mothers reported that their daughter had received at least one HPV vaccine. Parents who had heard of HPV, had heard of the cervical cancer vaccine, and had heard of the vaccine on the radio or television were more likely to have had their daughter vaccinated (p=0.003, 0.002, 0.009; respectively). Parents with correct knowledge of the recommended ages for vaccine uptake and with familiarity that medical plans cover the HPV vaccine were also more likely to have a vaccinated daughter (p=0.001, <0.001; respectively). Parents who believed that only one injection is necessary were more likely to have a vaccinated daughter (p=0.009). Lastly, mothers who thought their daughter's father would want their daughter to receive the vaccine were more likely to have had their daughter vaccinated (p=0.004).
HPV vaccine education programs are needed that target rural Hispanic parents to ensure that Hispanic parents receive the HPV vaccine and complete the three-injection regimen. Without targeted interventions, disparities related to cervical cancer may widen.

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Paper Session 34 12:21 PM–12:39 PM 4077

DISPARITIES IN MENTAL HEALTH AND MENTAL HEALTH COPING RESOURCES BETWEEN RURAL AND NONRURAL LUNG CANCER SURVIVORS

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Psychological adjustment to cancer diagnosis and treatment is determined by access to and appropriate use of coping resources. Prior research suggests rural cancer survivors report poorer mental health (MH) status relative to nonrural cancer survivors. This may be due to disparities in MH coping resources between rural and nonrural survivors. 144 non-small cell lung cancer (LC) survivors (mean age= 62.7 yrs) completed an interview and questionnaire packet 12–15 months post-dx. Separate groups of rural (n=76) and nonrural (n=68) survivors were defined by county of residence using USDA RUC codes. Measures of MH status (M0S-MH Functioning, HADS Anxiety & Depression) and 4 categories of coping resources were obtained: interpersonal (social support, constraint, and network), intrapersonal (optimism, MH help-seeking efficacy, education), informational (awareness of cancer information resources, cancer information-seeking efficacy), and tangible (MH coverage in health insurance, income, home computer and internet access/use). Results of t-test and logistic regression analyses indicated rural LC survivors were characterized by greater social constraints (effect size (ES)=0.44; p<.01), lower MH help-seeking efficacy (ES=0.39; p<.02) and cancer information-seeking efficacy (ES=.34; p<.05), less education (ES=.69; p<.01), and less discretionary income (ES=0.39; p<.02), were less likely to report insurance coverage for MH services (odds ratio (OR)=0.43, p<.02), and home computer access (OR=0.43; p<.02) and reported less extensive internet (ES=0.40; p<.02) and email (ES=0.36; p<.03) use. Trends were also evident for rural survivors to report less extensive social networks (ES=.30; p<.07) and optimism (ES=.31; p<.07). Given these disparities in potential MH coping resources, it was unsurprising that rural LC survivors reported poorer MH functioning (ES=0.44; p<.01) and more anxiety (ES=0.40; p<.02) and depression (ES=0.50; <.01). In conclusion, rural cancer survivors are at greater risk for poorer MH, likely due to possession of fewer MH coping resources.

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Paper Session 34 12:39 PM–12:57 PM 4078

CANCER SURVIVOR SUPPORT GROUPS AND QUALITY OF LIFE IN RURAL HISPANICS

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Long-term physical, financial, and psychosocial burdens of cancer can negatively impact quality of life for cancer patients and survivors. While social support groups can help to alleviate such cancer-related burdens, among minority populations, linguistic and socio-cultural barriers can limit their availability and uptake. The goal of this pilot study was to evaluate the feasibility and impact of a Spanish-language support program on quality of life (QOL) among Hispanics in a rural community. Eighteen cancer patients (women=9) and survivors (men=5, women=4) took part in the study. Thirteen caregivers (men=3, women=10) also took part in the sessions but were not included in the primary analyses. Four gender-specific (1 male, 3 female) groups met separately on a biweekly basis for 9 two-hour sessions over a 5 month period. Topics discussed included self-esteem, nutrition, physical activity, conversations with physicians, medical advocacy, distress, and depression. The Functional Assessment of Chronic Illness Therapy (FACIT) questionnaire was used to assess QOL at baseline and immediately upon completion of the group sessions. FACIT subcategories include physical, social, functional, emotional, and spiritual QOL. Paired t-tests were used to assess preliminary outcomes. Following completion of the study, a qualitative assessment was conducted to assess participant perception of the program's impact. Sixteen patients and survivors (men=4, women=12) completed the study. Statistically significant improvements in patient and survivor physical ($p=0.02$) and emotional ($p=0.02$) QOL were present, while improvements in social ($p=0.08$) and functional ($p=0.09$) subcategories were marginally significant. No change in spiritual QOL was observed. Qualitative data will also be presented. Findings from this pilot study support the feasibility of a 9-week Spanish-language social support program and suggest a positive impact of the program on QOL among rural Hispanic cancer patients and survivors.

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Paper Session 34 12:57 PM–1:15 PM 4079

PERCEIVED RISK OF CERVICAL CANCER IN APPALACHIAN WOMEN

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Background: Cervical cancer is arguably one of the most preventable and treatable cancers; yet, a disproportionate number of women in the Appalachian region will develop and die of cervical cancer. The current study examines the perception of cervical cancer risk in the elevated risk, underserved Appalachian population.
Methods: Appalachian women ($n=571$) completed interviews examining key factors from the Self-Regulation Model (self, cognition, affect, and health behaviors/procedures) potentially relevant to perceived risk of cervical cancer.
Results: Only 19% of Appalachian women felt their risk was higher than other women. In the final logistic regression model, women with good or very good knowledge of cervical cancer ($p<.01$), those who worried about cervical cancer ($p<.01$), and those with a personal history of STI or abnormal Pap ($p<.01$, $p<.05$), had higher odds of rating their perceived risk of cervical cancer as somewhat or much higher than other women. Former smokers, compared to never smokers, had lower odds of perceiving their risk of cervical cancer as somewhat or much higher ($p>.05$).
Conclusion/Impact: Few Appalachian women believed themselves to be at elevated risk. Consistent with the Self-Regulation model, factors such as worry, knowledge, and past behaviors are important to understanding how an individual perceives her risk of cervical cancer and, potentially, the likelihood that an individual will engage in behaviors that enhance, or detract from health, such as having a Pap smear and the vaccine.

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Paper Session 35 11:45 AM–12:03 PM 4080

RACIAL DISPARITIES IN SCREENING AND ELIGIBILITY DETERMINATION IN A SMOKING CESSATION CLINICAL TRIAL

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Enrolling sufficient representation of minority smokers, particularly African Americans, into smoking cessation clinical trials has largely been unsuccessful. This study compared the recruitment of African American and non-Hispanic White smokers into a large pharmacotherapy and behavioral therapy treatment trial for smoking cessation to identify barriers to successful enrollment of African Americans. Date were taken from recruitment records from March 1, 2008 to February 28, 2009 within a randomized clinical trial examining a combined pharmacological (naltrexone, nicotine patch) and behavioral smoking cessation intervention. The clinical trial, conducted at a large urban medical center and two satellite locations within the Chicago metropolitan area, enrolled a racially diverse sample with 35% African American, 57% White, and 8% Other. Among the 1,316 smokers interested in and telephone screened for the study during the 12-month interval, there was a higher percentage of smokers identified as African American (62%) compared with White (28%) or other racial/ethnic groups (10%). While African American smokers reported a higher desire to quit smoking than Whites ($p<.001$), they were more likely to be determined ineligible for study inclusion during initial telephone screening (57% vs. 50%, respectively; $p<.05$), and more likely to fail to attend the in-person screening (55% vs. 39% non-attendance, $p<.01$). Of those who did attend the in-person screen, African Americans were more likely than Whites to be determined ineligible (68% vs. 28%, $p<.001$). Finally, within those candidates deemed eligible, African Americans were more likely to elect not to enroll (23% vs. 9%, $p<.05$). In sum, African American smokers were four times more likely to be non-participants in the clinical trial compared to their White counterparts [non-enrollment rates: 96% (785/819) vs. 83% (308/370); $OR=4.65$, $p<.001$). There were numerous barriers to their participation, including a higher likelihood of ineligibility and lower attendance rates at screening than observed in Whites. Further research addressing strategies to reduce this racial disparity is warranted.

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Citation Paper

Paper Session 35 12:03 PM–12:21 PM 4081

TELEPHONE SURVEYS UNDERESTIMATE RISK BEHAVIORS AMONG AFRICAN-AMERICANS

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Random digit-dial telephone surveys (RDDTS) are a common source of population data on health behavior (e.g., the BRFSS, the California Health Interview Survey [CHIS]). Because African-American rates of participation in RDDTS are extremely low (non-coverage and non-response bias), Black RDDTS samples may be non-representative, and may underestimate Black population prevalence of risk factors. To examine this, we used a novel, community-based surveillance (CBS) method in which health-behavior data were collected from a random, statewide sample of 2118 California (CA) Black adults, door-to-door on weekends by Black surveyors. We compared our random, CBS Black sample to the random, CHIS (annual, statewide RDDTS) Black sample ($N=2315$) acquired simultaneously. We hypothesized that the CBS Black sample would be more representative of the CA Black population, and would have higher smoking prevalence (a prototypical risk factor) than the CHIS Black sample.
Results revealed that the CBS sample contained significantly more Black men (43% vs. CHIS 35%), was significantly younger (58% of CBS vs. 77% of CHIS Blacks were $\geq$age 40), and contained significantly more low-income adults (22% of CBS vs. 13% of CHIS). Likewise, smoking was significantly higher among CBS (32.6%) than among CHIS (19.1%) Blacks, for women (CHIS=18%, CBS=29.7%) and men (CHIS=21%, CBS=37%). Hierarchical logistic regression revealed that even after controlling for sample-differences in income, age, gender, education, and telephone-status, CBS Blacks remained nearly twice as likely to be smokers than CHIS Blacks ($OR=1.91$, 95% $CI=1.61–2.28$). The latter finding probably reflects lower socially-desirable responding (i.e., denial of smoking) to Black surveyors (CBS) vs. presumed-White interviewers (RDDTS). These data provide support for growing concerns about the validity of RDDTS data on Blacks, and strongly suggest that RDDTS underestimate Black population prevalence of poor health behaviors.

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Citation Paper

Paper Session 35 12:21 PM–12:39 PM 4082

ASSESSMENT OF SMOKING BEHAVIOR IN PERSISTENT PAIN PATIENTS

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Smoking rates among persistent pain patients are high. Research suggests that uncontrolled pain may activate smoking urges in this population. However, there is little information on whether daily changes in pain intensity lead to smoking behavior and whether smoking relieves pain or pain-related distress. This study evaluated the role of pain intensity as a trigger for smoking behavior in pain patients using ecological momentary assessment. Eligible outpatients were diagnosed with chronic pain, smoked>3 cigarettes daily, and completed daily random assessments ($M=43.9$; $SD=28.2$) on a handheld computer for one week that evaluated pain, smoking, and other variables. Participants ($n=25$; 64% women, 44% Caucasian, 24% African American, 24% Latino, and 8% identifying as "other") smoked $M=16.3$ ($SD=10.1$) cigarettes daily, with 50.0% reporting severe nicotine dependency. Nearly all participants had back and lower extremity pain (80.0%), with M worst pain intensity in the past 24 hours$=8.5$ ($SD=1.6$). Findings showed that patients who were just "about to smoke" had significantly higher pain levels before smoking than those who did not smoke ($M=6.7$, $SD=2.2$ versus $M=4.9$; $SD=2.4$; $p<.01$). Patients who had smoked within the last 30 minutes had statistically significantly higher pain levels both before and after ($M=6.2$, $SD=2.1$ and $M=6.0$; $SD=2.1$) smoking than those who did not smoke ($M=5.0$, $SD=2.4$. all p's$<.01$). Patients who reported that smoking decreased pain-related distress had no statistically significant differences in pain levels before and after smoking. Results indicate that pain may be a trigger for smoking, and that smoking decreases pain-related distress, but smoking does not relieve pain intensity. Future studies should clarify potential modifiers (e.g., level of nicotine dependence; psychological distress; smoking outcome expectancies) of the relationship between pain intensity and smoking behavior, and develop tailored interventional strategies for smoking cessation in pain patients.

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Paper Session 35 12:39 PM–12:57 PM 4083

WHY DON'T THEY QUIT? IDENTIFYING REASONS FOR SEXUAL ORIENTATION DIFFERENCES IN SMOKING CESSATION USING A POPULATION-BASED SAMPLE

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Lesbian, gay, and bisexual (LGB) populations are at elevated risk for tobacco use compared to their heterosexual peers; odds ratios from empirical studies ranges between 1.5 and 2.5 relative to the general population. However, less is known about the smoking cessation patterns of LGB smokers, and the extent to which being LGB is associated with factors that reduce or enhance the likelihood of cessation. Understanding these factors may help improve cessation strategies and reduce tobacco-related health disparities among sexual minorities. Using population-based data from the Washington State BRFSS from 2003–2007 ($N=48{,}746$), we 1) compared LGB participants to heterosexual participants on smoking cessation outcomes, 2) identified factors associated with reduced or enhanced likelihood of cessation for men and women in the overall sample, and 3) identified the extent to which these factors were more prevalent for LGB participants compared to heterosexual participants. Analyses were done separately by gender. LGBs were similar to heterosexuals on desire, motivation, and attempts to quit, but were less likely to actually quit ($OR=0.54$ for gay men, 0.41 for bisexual men, 0.61 for lesbian women, and 0.44 for bisexual women; $p=0.001$ for all groups). Single relationship status and life dissatisfaction were associated with reduced likelihood of smoking cessation, and were more prevalent for LGB participants compared to heterosexuals. Other factors associated with reduced or enhanced likelihood of cessation varied by subgroup of LGB participants. LGBs did not differ from heterosexuals on attitudes and knowledge about tobacco. This study makes a unique contribution to the literature by identifying factors that help explain sexual orientation differences in smoking cessation. More research is needed to understand which smoking cessation strategies will be most effective for LGB populations and why.

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Paper Session 35 12:57 PM–1:15 PM 4084

MATERNAL DEPRESSION AMONG UNDERSERVED AFRICAN AMERICAN SMOKERS: OPPORTUNITY FOR INTERVENTION DURING PEDIATRIC SICK VISITS

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Objective: To test the hypothesis that pediatric sick visit utilization would relate to maternal depression among low-income, African American (AA) maternal smokers—an underserved and understudied population known to have children with increased health risks.

Methods: Among 307 AA maternal smokers enrolling in a clinical trial to reduce young children's (under 4 years old) secondhand smoke exposure, participants completed the CES-D and other pre-treatment, baseline questionnaires measuring stressful life events, nicotine dependence, social support, smoking history, child health, healthcare utilization, and demographics. CES-D was dichotomized at the clinical cutoff to create the criterion differentiating depressed vs. non-depressed mothers. Direct entry, multivariate logistic regression tested the hypothesized pediatric sick care-maternal depression association in the context of other known depression-related variables.

Results: Maternal smokers who reported more than one sick visit to their pediatrician's clinic (OR 1.38, $p<.001$), greater perceived life events stress (OR 1.05, $p<.001$) and less social support (OR 0.82, $p<.001$) within the last 3 months were more likely to be depressed than mothers with fewer clinic visits, less stress, and greater social support.

Conclusions: Results supported our hypothesis, suggesting strong implications for clinical intervention in pediatric settings that could simultaneously improve quality of pediatric care as well as both maternal and child health. We conceptualize maternal depression and smoking as a reciprocally-determined, cyclical phenomenon and suggest the utility of multilevel interventions whereby treating one chronic maternal condition would facilitate treatment of the other chronic condition, regardless of which primary presenting problem is addressed.

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Paper Session 36 11:45 AM–12:03 PM 4085

FINANCIAL MOTIVATION FOR HEALTHY BEHAVIOR CHANGE MORE HARMFUL FOR MEN

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Financial incentives are being widely used to induce healthy behavior change; and there is little doubt they are a powerful tool for motivating behavior. However, self-determination theory (SDT) posits that emphasizing financial incentives may have negative consequences when the use of money is experienced as manipulative. Feeling manipulated into performing a behavior reduces enjoyment of the behavior and fosters avoidance of the behavior after the manipulative financial contingency is removed (i.e., during maintenance). We assessed participants' financial motivation to participate in the Make Better Choices trial. Participants ($n=200$) had all of four health risk behaviors: low fruit and vegetable intake, high saturated fat intake, low physical activity, and high sedentary screen time. They were randomized to one of four prescriptions to change one diet and one activity behavior simultaneously. The primary outcome was overall healthy lifestyle change (a composite of all four behaviors); weight loss was a secondary outcome. Financial incentives were contingent upon meeting behavior goals for 3 weeks of prescription, and became contingent upon merely providing data during the 4.5 month maintenance period. Financial motivation was assessed at baseline using a 7-item scale (e.g., "Because I want to earn extra money"; $\alpha=.97$). Across conditions, financial motivation and gender interacted in predicting healthy lifestyle change, $t(160)=2.11$, $p=.037$. Weight change during the maintenance period was significantly predicted by financial motivation, $t(165)=2.09$, $p=.04$; and the interaction between financial motivation and gender was marginal, $t(165)=-1.69$, $p=.09$. The interaction pattern was consistent; motivation to obtain financial incentives had a deleterious influence during the maintenance period among men (less behavior change / more weight gained), but not among women. Results suggest that men may be more likely to experience financial incentives as manipulative and have their motivation undermined by them.

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Meritorious Paper

Paper Session 36 12:03 PM–12:21 PM 4086

IMPROVING LIFESTYLE INTERVENTIONS FOR OBESITY: THE EFFECTS OF MODERATE VERSUS MILD CALORIC RESTRICTION ?AND LARGE VERSUS SMALL GROUP SIZE

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We conducted a randomized trial to investigate two potential improvements to lifestyle interventions for obesity. First, because the benefits of different levels of caloric restriction remain unclear, we examined the effect of prescribing daily energy intake goals of 1000 vs. 1500 kcal/day. Second, we addressed the problem of limited access to lifestyle treatment by investigating the effects of conducting treatment in "large" vs. "small" groups. Participants included 123 obese women (mean BMI= 37.9 kg/m^2; mean age=52.0 yr) who volunteered for a 6-month lifestyle intervention. We employed a 2X2 factorial design to randomly assign women to groups of 30 or 12 participants (i.e., "large" vs. "small" groups) with energy intake prescriptions of either 1000 or 1500 kcal/day (i.e., "moderate" vs. "mild" caloric restriction). Change in body weight from pre to posttreatment was the primary outcome. At baseline, the conditions did not differ with respect to race/ethnicity, age, weight, or BMI (all *p*s>.10). At posttreatment, participants prescribed 1000 kcal/day showed significantly greater weight changes than those prescribed 1500 kcal/day (mean±SD=−10.2±7.9 and −6.3±6.1 kg, respectively, *p*<.001). Participants in the large and small groups experienced posttreatment weight changes of −8.7±7.5 and −7.8±7.2 kg, respectively; mean weight losses for the large groups appeared highly similar to (and no worse than) those for the small groups (*p*=.75). There was no significant interaction between group size and calorie prescription (*p*=.37). Prescribing "moderate" caloric restriction produced larger weight losses than "mild" restriction, and conducting treatment in "large" groups resulted in benefits highly similar to treatment in "small" groups. Collectively, these findings suggest that the use of an energy prescription of 1000 kcal/day and a group size of 30 participants may represent useful modifications to standard lifestyle interventions for obesity.

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Paper Session 36 12:21 PM–12:39 PM 4087

TYPE, VALUE, AND TIMING: THE RELATIONSHIP BETWEEN INCENTIVES FOR WEIGHT LOSS AND POTENTIAL PROGRAM REACH

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The use of incentives for weight loss is ubiquitous and has been tied to improvements in program reach. However, few studies exist that have systematically examined the relationships between incentive type, value, or timing on the potential reach of weight loss programs. The purpose of our study was to compare the likelihood that overweight and obese adults would participate in a standard weight loss program based upon varied incentive attributes. Random digit dialing identified 1,500 eligible adults to complete an attribute based choice questionnaire that asked the participants to choose between two randomly allocated incentive scenarios and indicate which program they would participate in or if they would not participate in either program. The survey response rate was 57% (n=861; 68% women; 82% White; age=55±10 years). Conditional logit modeling was used to test for significance and to determine potential interactions between type and value of incentives. Participants were roughly 5 times more likely to indicate they would participate in the standard weight loss program when a gift card or cash incentive was used rather a gym pass or co-pay wavier (p<.01). There was also a main effect for the value of the incentive that indicated as the value increased so too did the likelihood of participation (p<.01). Incentives delivered during the program were superior in increasing the likelihood of participation when compared to those that accumulated over time and were delivered at the end of the program (p<.01). Finally, value and type of incentive interacted with one another. For example, the optimal dollar value that would be required to motivate participation in a standard weight loss program when the incentive is delivered as a co-pay waiver would be $80.43. In contrast, the optimal value would decrease to $18.64 if the program used cash instead of the co-pay waiver. These findings have practical implications for developing efficient incentive programs and suggest that a relatively modest incentive amount could significantly improve program reach.

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Paper Session 36 12:39 PM–12:57 PM 4088

MONEY, MOTIVATION, AND WEIGHT LOSS: AN ANALYSIS OF MOTIVATION AND INCENTIVES IN A WORKSITE PROGRAM

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Interest in using financial incentives to promote weight loss has increased. Little research has evaluated the impact of incentives (an extrinsic motivator) on changes in motivation. The objectives here were to examine: 1) if receipt of incentives for weight loss led to decreases in autonomous motivation and 2) if the effect of incentives was moderated by level of controlled motivation at baseline and 3 months.

Data for this study came from WAY to Health, a RCT worksite weight loss intervention trial. Participants were randomized to web-based weight loss (WEB; n=336), web-based weight loss plus incentives ($5 per 1% weight loss; WPI; n=273), or no individual intervention (not included here). At baseline, WEB and WPI groups were similar (BMI= 33.5±6.6; 47.5±10.1 years) but differed on percent women (77 vs. 89%). The Treatment Self-Regulation Questionnaire (TSRQ) was administered at baseline, 3, and 6 months to assess autonomous and controlled motivation. Baseline motivation did not differ between groups (autonomous 5.66±.93; controlled 2.23±1.05; p's>.55).

For the first objective, individuals in WPI who lost weight at 3 months (n=113) were compared to individuals who lost weight in WEB (n=126). There were no differences between these groups at baseline (p's>.16). At 3 months, controlling for weight loss, there was a trend for WPI weight losers to have higher autonomous motivation than those in WEB (5.66±1.08 vs. 5.35±1.24, p=.06). Between 3 and 6 months, there were no differences in the changes in motivation between these groups (p=.64).

Controlling for worksite and BL weight, controlled motivation assessed at baseline did not predict weight loss at 3 months (p=.27) nor did it moderate the group/weight relationship (p=.17). Similar results were found using 3 month controlled motivation and 6 month weight losses (p=.16 and .20).

These results suggest that small financial incentives for weight loss do not undermine autonomous motivation and the impact of a modest incentive to lose weight did not depend on controlled motivation. Future studies could examine the influence of larger and longer-term incentives.

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Paper Session 36 12:57 PM–1:15 PM 4089

WEIGHT LOSS IN A FREE ONLINE WEIGHT LOSS PROGRAM

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Online weight loss programs are growing in popularity. We evaluated the magnitude and predictors of weight loss in members of SparkPeople.com, a free online weight loss program. We obtained retrospective data on a systematic random sample of members who joined the program between February-April 2008, with follow-up until May 2010. The main outcome was net weight change, per self-reported weight entries. We conducted simple and multivariate linear regressions with weight change as the outcome, stratified by time between first & last weight entry. The predictors were demographics (age, gender, referral source, geographic location, baseline body mass index [BMI]) and website usage metrics (log-ins, weight entries, SparkPoints [website usage incentives], SparkFriends [friends in the SparkPeople community], message board posts, days food tracked, days exercise tracked, exercise minutes logged). Of 26,113 members in the sample, the 5595 members with at least 2 weight entries were 91% female, 87% from the US, with age 35 (SD 11) and baseline BMI 32 (SD 8). Overall weight change was −3.0 pounds (95% CI −3.5, −2.6). Obese members (BMI≥30) lost more weight than non-obese: −5.6 pounds (95% CI −6.3, −4.8) vs −0.5 (95% CI −0.9, −0.1), difference=5.1 (95% CI 4.2, 6.0), p<.001. Independent predictors of weight change were baseline BMI (beta −0.49, p<0.001), number of weight entries (beta −0.23, p<0.001), SparkPoints (beta 0.0003, p=.003), number of days exercise tracked (–.04, p<.001), and friend referral (beta 1.24 compared to non-friend, non-advertisement referral, p=0.02). Baseline BMI and number of weight entries were independent predictors of weight change in all strata of time between first & last weight entry. Number of days exercise tracked was an independent predictor of weight change in the 9–11 month stratum (n=491, beta −0.07, p=.025) and the ≥12 month stratum (n=2057, beta −0.05, p<0.001). Weight loss success among members of this online program was linked to higher baseline BMI and self-monitoring of weight and exercise.

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