Wednesday
April 7, 2010

Seminar 01 12:00 PM–2:45 PM 1000

ADVANCES IN LONGITUDINAL DATA ANALYSIS: LONGITUDINAL MIXTURE MODELING

Katie Witkiewitz, PhD

Psychology, Washington State University, Vancouver, WA.

Over the past decade methodology has been developed that provides the opportunity to identify variability in behavioral patterns within and between individuals as a function of time and covariates. This seminar will provide a broad overview and hands-on introduction to recent developments in longitudinal data analysis, focusing specifically on longitudinal mixture modeling approaches. Latent growth curve models have been increasingly used to model inter- and intraindividual change across time, however in the specification of the latent growth model it is assumed that the latent variables represent an underlying continuous growth pattern, in other words the latent variables are assumed to be continuous and normally distributed. However this assumption might not always be appropriate, particularly when change over time differs across individuals or is discontinuous. To deal with this possibility longitudinal mixture modeling takes advantage of categorical latent variables or a combination of categorical and continuous latent variables to characterize population heterogeneity and discontinuity in change over time. For example, latent growth mixture models combine the latent growth curve with a categorical latent variable, where the latent categorical variable is used to identify discrete subgroups of individuals who follow a similar pattern of change over time. Each individual has their own unique growth curve and the heterogeneity in growth curves across individuals is summarized by a finite number of growth trajectory classes. This seminar will introduce several types of longitudin00.al mixture modeling approaches using real-world examples from longitudinal alcohol and smoking datasets. The goal of these analyses will be to learn how these different approaches can be used to understand behavior over time, as well as the advantages, disadvantages and limitations of each approach. A hands-on demonstration of the Mplus statistical software syntax necessary to construct and analyze these models will also be described.

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Seminar 02 12:00 PM–2:45 PM 1001

HOW TO CATALYZE LEARNING IN THE ONLINE ENVIRONMENT

Brian Knudson, MA,[2] Arlen Moller, PhD[1] and Bonnie Spring, PhD[1]

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New cutting edge technologies are increasingly driving classroom-based learning and office-based intervention into the online environment. Seminar speakers drawn from academia and industry will demonstrate how practices grounded in theories of learning and motivation can catalyze the adult online learning process. The first speaker, a social psychologist, will describe the relevance of self-determination theory (SDT) to e-learning. He will review evidence that the activation of autonomous forms of motivation facilitates deep processing and conceptual understanding, in virtual as well as natural environments. The next speaker is the founder and CEO of a custom e-learning firm at the forefront of research and technology dedicated to e-learning. He will use award-winning products produced by his firm to show how human learning theory can be applied to create exceptionally powerful learning tools. Principles to be demonstrated include cognitive apprenticeship, four-component instructional design, and the development of goal-based scenarios. The final speaker will describe lessons learned in the process of creating two sets of online learning modules: one to foster research to practice translation, and the other to support the formation of successful of scientific teams. A portion of time will be devoted to discussing challenging on-line instructional and interventional cases brought forward by the audience. In addition to providing expert consultation, this exercise will provide a selection of active illustrations that apply theories of learning and motivation to an electronic context.

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Seminar 03 12:00 PM–2:45 PM 1002

SUBLIMINAL THERAPY: ACCESSING AND UTILIZING A HIGHER LEVEL OF CONSCIOUSNESS

Edwin K. Yager, PhD

Psychiatry, UCSD - SOM, San Diego, CA.

Subliminal Therapy is a technique that utilizes hypnotic phenomena for therapeutic purpose without requiring formal trance induction. The protocol is effective as a sole intervention or adjunctively to other treatment. Participants will be introduced to the concepts and applications of Subliminal Therapy and taught its protocol. This includes establishing identifiable communication with the unconscious domain, uncovering influences that are causing current problems, and resolving those influences.

The logically applied protocol of Subliminal Therapy engages unconscious process to uncover the causes of presenting problems, whether manifesting physically, emotionally, intellectually or behaviorally, and then to resolve that influence through re-framing and re-conditioning. The causes of psychogenic problems are usually not consciously recognized by the patient; only the resultant symptom - the disability - is apparent. Subliminal Therapy provides a practical, efficient and logical way to identify the cause, as well as a practical, efficient and logical way to resolve its influence. All this while concurrently ensuring conscious awareness of, and concurrence with, the work as it progresses.

Although not yet commonly known to professionals, Subliminal Therapy has evolved over the past thirty years into the most efficient protocol available. If incorporated it will change your practice of psychotherapy. The technique has proved especially effective in the treatment of anxiety and the consequences of early abuse such as sexual dysfunction, unresolved anger and psychogenic medical problems.

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Seminar 04 12:00 PM–2:45 PM 1003

UNDERSTANDING PATIENT PREFERENCES FOR PREVENTION AND TREATMENT

Sara J. Knight, PhD,[1,2] Jamie L. Studts, PhD,[3] David M. Latini, PhD[4,5] and Laura P. Sands, PhD[6]

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Understanding patient preferences for prevention and treatment is critical in the prediction of patient involvement in health behavior and medical care. While preferences can be evaluated with ratings, rankings, utilities elicitation, and conjoint analysis, few of these methods have been developed to meet rigorous psychometric standards. In this seminar, we will discuss theories of patient preferences and methods for preference measurement, focusing especially on building instruments that have strong psychometric qualities. We will provide an overview of current conceptual models from behavioral science and health economics and we will demonstrate measurement methods including standard gamble, time trade-off, conjoint analysis, best worst scaling, and importance ratings. Using hands-on exercises, we will demonstrate how qualitative data can be used to generate the health state descriptions and choice alternative attributes that form the foundation of a preference measure. Finally, we will present a framework for evaluating the validity and reliability of preference measures. Examples from research on geriatric medicine, cancer treatment, and palliative care will provide concrete illustrations. Using a small group format, participants will have an opportunity to practice preference assessment and to discuss the best strategies for measuring patient preferences in their own research and clinical applications.

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Seminar 05 12:00 PM–2:45 PM 1004

EVALUATING META ANALYSES: A CRITICAL CONSUMERS' GUIDE

Rodger Kessler, Ph,[1] James C. Coyne, PhD[2] and Mariet Hagedoorn, PhD[3]

[1]Center for Translational Science, University of Vermont, Burlington, VT; [2]School of Medicine, University of Pennsylvania, Philadelphia, PA and [3]Dept of Health Psychology, University Medical Center Gronigen, Gronigen, Netherlands.

This workshop will present basic principles for evaluating the credibility of the conclusions of a meta-analysis. Increasingly, researchers and evidence-oriented clinicians and policy makers are urged to rely on the results of meta-analyses for decision-making. Yet, recent criticisms of meta-analyses that have appeared in Annals of Behavioral Medicine, Health Psychology, and even JAMA demonstrate that meta-analysis is hardly a straightforward, objective procedure, but one for which there is considerable room for subjective and arbitrary judgment. Further, a meta-analysis depends on the quality of the studies on which it draws and how their limitations are accommodated. Overall, it is quite possible for two meta-analyses to differ greatly in their results and recommendations because of differences in search strategies, selection criteria, and choices made as to how to deal with the methodological limitations of the available trials. Thus, meta analyses can fall short, either because their failure to observe basic principles for how they should be conducted and reported, or because of how decisions that were made as to how to deal with the available trials. The latter decisions require a familiarity with the interventions being studied and the clinical context in which they will be implemented, or, as the presenters have termed it, a clinical connoisseurship. This workshop is most appropriate for consumers of meta-analyses having to make clinical or policy decisions, those who might be contemplating doing a critical re-analysis of a published meta-analysis, and those who are conducting a meta-analysis of their own in which they avoid likely problems and pitfalls. Discussion will center not only on how to do a meta-analysis, but also on how to publish one with adequate transparency. It will present a guide to some necessary summary statistics and their interpretation. Participants will be able to appreciate when results of a meta-analysis "ain't necessarily so". Both primary presenters have published primary meta-analyses as well as critiques of published meta-analyses.

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Seminar 06 12:00 PM–2:45 PM 1005

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

Sherry Pagoto, PhD,[1] Kristin Schneider, PhD,[1] Jessica Magisdon, MA[2] and Carl W. Lejuez, PhD[2]

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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. In addition to depression, BATD has been applied successfully to health conditions such as obesity, type 2 diabetes, HIV/AIDS, anxiety disorders, cancer, smoking, and substance abuse. The purpose of this clinical seminar is for participants to learn 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). In this seminar, 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 medical conditions with practical recommendations on addressing barriers, including treatment resistance and integration into other treatments. Participants will receive a treatment manual and reference list. All skill levels are welcome.

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Wednesday April 7, 2010

Seminar 07 3:15 PM–6:00 PM 1006

TRANSLATION RESEARCH: DESIGN AND METHODOLOGY CONSIDERATIONS

Christine Hunter, PhD,[1] Marci K. Campbell, PhD[2] and Rodger Kessler, PhD[3]

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Although basic science and efficacy research play a critical role in scientific advancement, improved public health is not always realized because of challenges related to translation from bench to beside and bedside to community. Analogous to the search for biological mechanisms as targets for drugs, basic behavioral and social science research requires translation into novel clinical approaches. Once efficacy of a new approach is established, later phase translation research is then needed to address generalizability, adoption, implementation, cost, and sustainability. Promoting high quality translation research is an important step towards bridging the gap between science and practice. For many investigators trained in traditional randomized controlled trial design and methodology, moving into translation research requires a new skill set that includes an appreciation of the strengths and limitations of various types of translation research. Early phase translation often requires transdiciplinary teams to conduct formative and pilot research. Moving from established efficacy research into effectiveness trials requires research designs that balance internal and external validity and researchers that understand the unique issues related to selecting a sample, considering comparison condition options, and approach to causal inference. This seminar is designed to provide a beginner to intermediate level overview of factors to consider when approaching translation research. The specific topics covered in the seminar include an overview of the continuum of translational research and discussion of research opportunities including designs and methodologies that are useful for the different phases of translation. The seminar format will include instruction and active discussion between speakers and attendees.

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Seminar 08 3:15 PM–6:00 PM 1007

EMERGENT VIEWS OF DIGITAL DIVIDE: THE ROLE OF COMPUTER AND INTERNET USE ON SOCIAL CAPITAL

Behjat A. Sharif, PhD, CHES

Health Science, California State University at Los Angeles, Irvine, CA.

This presentation discusses social capital as a strong indicator of health. Data is presented to supports the impact of social capital on health at the individual and community levels. Significant findings are highlighted such as the index of collective efficacy (social cohesion and social control). It is significantly inversely associated with reports of neighborhood violence. About two standard deviation elevations in collective efficacy associate with 39.7% reduction in homicide rate. About 26% reduction in individual risk of being drinking is reported in campuses with higher than average levels of social capital. The World Bank's data also support increasing interest to invest in social capital as a strategy to improve population health and development.

In a study of relationship between Internet use and social capital, the strength of the relationship between Internet use and different facets of social capital is explored. This includes examination of civic engagement, interpersonal trust and contentment. Internet use is found to be positively related to civic engagement($r =. 07$, $p<. 001$) and interpersonal trust ($r =. 04$, $p<. 05$) while it is not related to contentment ($r =. 00$, ns). Unlike overall Internet use, specific types of Internet usage have significant and systematic correlation with the production of social capital. Further analysis suggest that social capital is related to Internet use among Generation X, while it is tied to television use among Baby Boomers and newspaper use among the members of Civic Generation. More stringent analyses indicate influential factors such as demographic and contextual variables including traditional media use consistent with previous studies.

It is essential to bolster levels of social capital by promoting healthy relationships among the individuals and a greater sense of care in the community. This presentation discusses current issues related to social capital and makes policy suggestions for improving public health.

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Seminar 09 3:15 PM–6:00 PM 1008

TOBACCO CESSATION QUITLINES: A PLATFORM FOR BEHAVIOR CHANGE RESEARCH

Jessie Saul, PhD,[1] Paula Keller, MPH,[2] Emily Burns, MD[3] and Michele Walsh, PhD[4]

[1]Research, North American Quitline Consortium, Phoenix, AZ; [2]Center for Tobacco Research and Intervention, University of Wisconsin School of Medicine and Public Health, Madison, WI; [3]Epidemiology, University of Colorado Denver, Denver, CO and [4]Evaluation, Research, and Development Unit, University of Arizona, Tucson, AZ.

Tobacco cessation quitlines are an evidence-based, population-wide smoking cessation service. Currently, all U.S. states and territories and Canadian provinces provide quitline services. Demand is high: in the first 8 months of 2009, over 2.2 million calls were routed through the national 1-800-QUIT-NOW number to U.S. quitlines. The vast majority of quitlines in both countries also ask a standard set of intake and follow-up questions which serves as a basis for discussion of process and outcomes across the quitline community of practice.

The current quitline infrastructure could provide a unique model for addressing multiple behavior change issues. Because of their population-wide access, large call volume, reach to diverse populations, and ability to modify existing protocols to address emerging issues with relative ease, quitlines could provide a platform from which a number of key behavioral health issues can be explored within real world settings.

Equally important, quitlines can serve as mechanisms for translating research to practice and vice versa. Research findings can be readily shared within the quitline community of practice using established communication mechanisms, facilitating uptake of innovations by practitioners. In addition, by leveraging the existing links between quitlines and health care providers, community-based organizations, and other partners, lessons learned from practice can be transformed into new research questions.

Participants will review the existing quitline infrastructure and tools for conducting quitline-related research. Examples of how these data have been used to inform policy and practice will be shared. Participants will also discuss opportunities for using quitlines to engage in new collaborative research to advance the science of both tobacco cessation and other behavioral health interventions.

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Seminar 10 3:15 PM–6:00 PM 1009

IMPLICATIONS OF CULTURAL HEALTH BELIEFS AND PRACTICES IN WORKPLACE INJURY AND ILLNESS

Theodore C. Hanf, JD, MPH

Health Policy & Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.

The purpose of this presentation is to introduce the attendee to many of the health beliefs and practices prevalent in today's multi-cultural workforce. We will review the elements of these beliefs, the diagnostic criteria for several commonly encountered culture bound diseases, and explore refinements to the clinical history taking process which will elicit helpful and meaningful responses from patients.

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Seminar 11 3:15 PM–6:00 PM 1010

ELIMINATING HEALTH DISPARITIES THROUGH MEDICAL EDUCATION: A HANDS-ON WORKSHOP FOR BUILDING AND ENHANCING YOUR CURRICULUM

Jeffrey Ring, PhD and Julie Nyquist, PhD

Family Medicine Residency Program, White Memorial Medical Center, Los Angeles, CA.

The session will begin with a review of how and why students and practicing health care providers must receive training in the awareness, knowledge and skills aspects of culturally responsive medicine, particularly as connected to the goal of elimination of health care disparities. Next, the presenter will describe and demonstrate a number of creative experiential learning activities in awareness, knowledge and skills development components of culturally responsive care. Participants will receive ample curricular materials to empower their own confident and creative teaching in the area of culturally responsive care.

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Seminar 12 3:15 PM–6:00 PM 1011

WE'RE IN THIS TOGETHER: MANAGEMENT OF PATIENT COMPLEXITY AND CLINICIAN UNCERTAINTY THROUGH SMALL GROUP LEARNING

Claudia Allen, PhD,[1] Lucia S. Sommers, DrPH,[2] Tina Kenyon, ACSW,[3] Michael Potter, MD,[4] Kim Duir, MD[5] and Nancy Morioka-Douglas, MD[6]

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The clinical uncertainty endemic to primary care practice is seldom solved by practice guidelines. Curbsiding and surfing the Web as needed, clinicians traditionally navigate alone through their patients' undifferentiated symptoms, health worries, and psychosocial challenges. Safe and effective havens for learning the skills to manage patient complexity and clinician uncertainty are much needed as today's offices and clinics evolve into patient-centered medical homes. "Practice Inquiry" (PI), a small group learning model, uses case-based complexity and uncertainty as content for regularly-scheduled practice meetings. In these settings clinician colleagues collaborate to understand the patient's story, tease out the nature of a colleague's uncertainty and personal context, reflect upon the group's experience with similar patients, identify evidence and expertise that could be valuable, and blend these "inputs to judgment" to craft interventions that, with the support of the health care team, can be explored with the patient. Over 120 clinicians in Northern California currently participate in 12 PI groups. Family medicine residents in programs in New Hampshire, Virginia, and California meet in PI groups as part of curricula that integrate medical knowledge, interpersonal and communication skills, team-based care, professionalism, and reflective practice/decision making. In this interactive seminar we will demonstrate practice inquiry methods by involving participants in a live PI group, review small group collaborative tactics for managing complexity and uncertainty, and identify strategies for testing PI-like methods in participants' home settings.

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Seminar 13 3:15 PM–6:00 PM 1012

CONTEMPORARY SOCIAL CONFLICT THEORY: IMPLICATIONS FOR HEALTH

Michael R. Van Slyck, PhD[1] and Marilyn Stern, PhD[2]

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Research documents the impact of social environments on health related communication and behavior, and actual health. One aspect of the environment, its area of scientific investigation and professional application, with clear implications for health issues, has received less attention than is warranted: Interpersonal conflict as described by Contemporary Social Conflict Theory (CSCT), which is not well known or understood. Its implications for health issues are underestimated or ignored.

Conventional views equate conflict with behavior (arguing/fighting), view it as "bad," and advocate avoidance as a response to prevent violence. CSCT views conflict as a cognitive process based on beliefs concerning needs and the expectations for satisfying them. Conflict, defined as "perceived divergence of interest" is regarded as inevitable, ubiquitous and necessary for change. For CSCT, contention (fighting) is one of five response modalities - accommodation, avoidance, compromise, and problem solving – are the other "Conflict Management Styles (CMS's), each with predictable consequences.

Conventional views of conflict limit us to consideration of the contentious CMS which has implications for health ranging from covert effects of stress from using this CMS on a regular basis to overt effects of violence that can result from this CMS. However, other CMS's have implications for health outcomes, raising a variety of research questions, e.g., who gets better treatment, the demanding "contentious" patient or the compliant "accommodating" patient? Does an avoidant CMS result in lessened ability to address important health care issues with family or healthcare providers (HCP"s)? Does a problem solving CMS result in proactive health behavior, better communication with HCP's, and higher rates of compliance?

In this context the role of interpersonal conflict and conflict management in health and health related behaviors will be discussed. Both research questions and practical applications will be explored.

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Wednesday
April 7, 2010
6:30 PM–8:00 PM

Poster A

A-001

A COMPARISON BETWEEN COMPLETERS AND NON-COMPLETERS OF A PSYCHOSOCIAL INTERVENTION FOR HEAD AND NECK CANCER PATIENTS

Derek Anderson, MA,[1] Kristin Kilbourn, PhD, MPH,[2] Kate DeRoche, MA,[2] Evelinn Borrayo, PhD,[2] Allison Costenaro, MA[2] and David Raben, MD[2]

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There is a demonstrated need for psychosocial interventions aimed at improving symptoms and quality of life in Head and Neck Cancer (HNC) patients. In order to develop feasible, acceptable programs, researchers and clinicians need to understand and identify the specific characteristics that differentiate those participants who will be likely to adhere to the psychosocial interventions versus those that will not (Ostroff et al., 2004). An awareness of potential barriers to intervention adherence could lead to a better understanding of the most effective recruitment approaches and successful participant retention strategies. The goal of this study was to identify characteristics of HNC patients who successfully complete or dropout of an intervention designed to alleviate distress and improve quality of life. The current study examined selected physical, psychosocial, and demographic variables to determine if they were associated with adherence to a telephone counseling intervention for HNC patients undergoing cancer treatment. Although age was not found to be significant, the effect size ($d = .70$) suggests a large difference with the mean age of completers ($M = 62.82$, $SD = 9.70$) 6.62 years older than non-completers ($M = 56.20$, $SD = 9.09$). Completers were 6.21 times more like to be unemployed and 10.21 times more likely to be in a committed relationship than non-completers. Also, intervention completers reported better physical ($t=2.44$, $p < .05$, $d= 1.06$) and functional well-being ($t=2.12$, $p < .05$, $d=.92$), as well as a lower level of pain disability ($t=2.32$, $p < .05$, $d=.1.03$). This study suggests that there may be specific demographic, quality of life and social support variables that may help to predict those who are at risk of not completing psychosocial programs. Having a better understanding of some of these characteristics will benefit future research by providing information that can be used to design more effective recruitment and retention strategies.

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A-002

ORGANIZATIONAL CULTURE IN MAMMOGRAPHY FACILITIES

Kimberly Engelman, PhD,[1] Linda Jianas, BA,[1] Niaman Nazir, MPH,[1] Jonathan Mahnken, PhD[2] and Ed Ellerbeck, MD[1]

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Organizational culture is associated with health care quality. Culture may also impact patients' appointment experience and decision to return to a particular facility or adhere to a routine screening schedule.

A 37-item survey was mailed to mammography facilities across KS, MO, IA and NE ($N=491$). Culture was rated by indicating agreement or disagreement with 17 statements. A final question rated cohesiveness on a 10 pt. scale (1=independent staff in a common building;10=highly cohesive group committed to the department and entire organization). Procedural (e.g., scheduling & appt. timing) and facility (e.g., number of technologists & facility type) questions also were included.

Respondents ($N=359$) were from urban (43%), semi-urban (27%) and rural (30%) areas. Department supervisors (84%) and non-supervisory technologists (16%) completed the survey. Most (48%) had been at the facility >10 yrs, 27% for 6–10 yrs, and 25% for <5 yrs. More than half (56%) had been a manager or supervisor at this facility for >6 years. Most reported agreement with the following: administrators are an important part of our patient care team (77%), administrators consult with staff on daily problems (67%), and staff participates in administrative decision making process (77%). Only 19% reported their department's overall ethic is to complete exams as quickly as possible. Group cohesiveness ratings ranged from 1–10 ($m=8$). The number of technologists at each facility ranged from 1–21 ($m= 3.8$). Cohesion ratings were positively correlated with the number of technologists ($r=0.14$, $p<0.01$). Cohesion differences between urban/semi-urban/rural facilities and facility type (hospital/imaging center/physician office) were not significant.

Organizational culture may trickle down to impact the patient's experience. Yet mammography facility culture has not been reported. The cultures in mammography organizations across four Midwestern states are healthy in general with room for improvement. Facilities with more technologists tend to be more cohesive.

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A-003

PROVIDER INTERACTIONS WITH PARTNERS OF MEN NEWLY DIAGNOSED WITH PROSTATE CANCER

Steven Zeliadt, PhD,[1,2] David F. Penson, MD, MPH,[2] arol M. Moinpour, PhD,[3] David K. Blough, PhD,[4] Catherine R. Fedorenko, MMSc,[3] Ingrid J. Hall, PhD, MPH,[5] Judith Lee Smith, PhD,[5] Donatus Ekwueme, PhD,[5] Ian M. Thompson, MD,[6] Thomas E. Keane, MB, ChB, FRCSI, FACS[7] and Scott D. Ramsey, MD, PhD[3]

[1]VA Puget Sound Health Care System, Seattle, WA; [2]Vanderbilt University Medical Center, Nashville, TN; [3]Fred Hutchinson Cancer Research Center, Seattle, WA; [4]University of Washington, Seattle, WA; [5]Centers for Disease Control & Prevention, Atlanta, GA; [6]University of Texas Health Science Center, San Antonio, TX and [7]Medical University of South Carolina, Charleston, SC.

Objective. To evaluate how the triad of individuals (patients, partners, and providers) communicate and how their interactions influence shared decision making for initial prostate cancer treatment.

Methods. We recruited 166 newly diagnosed local stage prostate cancer patients and their partners to participate in a take-home survey following biopsy but prior to initiating treatment at urology practices in three states. Primary outcomes were partner-patient shared decision making and partner-provider satisfaction.

Results. The average age of the patients was 62.7 years, 77% were white, and 56% were college graduates. The average age of partners was 57.8 years, with similar racial and SES characteristics. Overall, 91% of partners reported very frequent discussions with their loved one about the pending treatment decision. A majority of partners (67%) were very satisfied with the patient's providers and 80% indicated the doctor encouraged them to participate in the treatment decision. In multivariate models, provider encouragement was associated with higher partner satisfaction (OR 3.4, 95% CI: 1.4, 8.4) and an increased likelihood of partners reporting very frequent discussions with their loved one (OR 6.1, 95% CI 1.3, 27.7).

Conclusions. Provider encouragement of partners is strongly associated with increased participation of patients in shared decision making for localized prostate cancer treatment, including facilitating partner-patient communication at home.

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A-004

ATTITUDES ABOUT THE COORDINATION OF CARE AMONG A POPULATION OF DIVERSE BREAST CANCER PATIENTS

Sarah Lillie, MPH,[1] Christopher R. Friese, RN, PhD, AOCN,[2] John J. Graff, MS, PhD,[3] Ann S. Hamilton, PhD,[4] Steven J. Katz, MD, MPH[5,6] and Sarah T. Hawley, PhD, MPH[5,6]

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Objective: To identify the factors associated with breast cancer patients' attitudes towards the coordination of their treatment care.
Methods: A population-based sample of women with ductal carcinoma in situ or invasive breast cancer who were diagnosed from 07/2005–01/2007 and reported to the Detroit and Los Angeles SEER registries were surveyed shortly after receipt of surgical treatment (n=2,813; response rate 73%). The primary dependent variable was patients' reports of the coordination of their breast cancer treatment care, measured using a summary scale created from 5 questions (range=5–25). Primary independent variables were race/ethnicity (categorized into white, African American and Latina) and health literacy (low, moderate, high). Additional independent variables included the number of providers consulted. Regression was used to evaluate factors associated with high perceived care coordination.
Results: The majority of patients reported positive attitudes towards the coordination of breast cancer treatment care (mean score=19.7). Neither race/ethnicity nor number of providers consulted was significantly associated with reports of care coordination, however there was an association with health literacy ($t=4.97; p<0.05$)
Conclusions: Overall, patients perceived their breast cancer treatment care to be highly coordinated. There appears to be an association between higher levels of health literacy and perception of highly coordinated care; it is possible that these women better understood how each physician contributed to their overall care.

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A-005

FACTORS ASSOCIATED WITH AMERICANS' RATINGS OF HEALTHCARE QUALITY: WHAT DO THEY TELL US ABOUT THE RATERS AND THE HEALTHCARE SYSTEM?

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Patient satisfaction ratings of healthcare quality represent most common measure of healthcare performance. Identifying factors associated with ratings will help us ascertain the relative influence of socio-demographic and health factors on ratings; such knowledge will inform research, practice, and healthcare reform, all of which rely heavily on patient-reported satisfactions. Using a nationally representative data set, the Health Information National Trends Survey (HINTS 2007), this study aims to identify predictors of ratings of healthcare quality. Weighted bivariate analysis and multinomial logistic regression models were conducted to predict ratings of care. Study variables included demographics (gender, age, race/ethnicity, education), self-rated health status (general health, distress level, cancer history), healthcare access (healthcare coverage, regular provider), and perceptions of health and healthcare (confidence in ability for self care; avoidance of doctors). Overall, ratings were positively skewed; nearly 70% of US population described their care as 'excellent' or 'very good'. Male gender(OR=1.26), minorities (Hispanics OR=1.61; Blacks OR=1.48), psychological distress(OR=2.2), not having been diagnosed with cancer(OR=1.24), lacking health care coverage (OR=1.94) or a regular provider(OR=1.53), lacking confidence in self care (OR=4.12), and tendency to avoid the doctor(OR=1.59)were significantly associated with poorer overall ratings of health care. The systematic rating differences identified by care access, utilization pattern, and most significantly negative affect pointed to the key role of an activated patient, underscoring the advantages of a system where activated patients regularly interact with a responsive care team. Special attention needs to be paid to the vulnerable population with negative affect and low self-advocacy.

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A-006

INFORMATION AND SUPPORT NEEDS OF ADULT CANCER PATIENTS IN NORTH CAROLINA: IMPLICATIONS FOR A COMPREHENSIVE CANCER CENTER SURVIVORSHIP PROGRAM

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Cancer patients and survivors have increased medical and psychosocial needs during and after treatment. We examined the information and support needs of adult cancer patients and survivors served by the UNC Lineberger Comprehensive Cancer Center to inform program development and delivery. Cancer patients from various multidisciplinary oncology clinics were recruited to complete a self-administered survey. The survey assessed information needs, preferred information sources and delivery methods, healthcare-related and sociodemographic variables. We report on a cross-sectional analysis of data from 139 surveys. Over half of the participants were ages 40–64 (56%), female (63%), and had graduated from high school (79%). African Americans comprised 17% of the sample, and the majority of participants were in active treatment (84%). The most prevalent information needs reported were: complementary and alternative therapies (66%), clinical trials (60%), managing stress (59%), finding reliable information on cancer-related topics (58%), and support for caregiver(s) (58%). Forty-nine percent of participants preferred learning about resources and services in person, and 42% preferred information from the Cancer Center website. Over half of the patients expressed interest in using videos or interactive web-based tools as information sources (60%); presentations (58%) and peer counseling were also highly endorsed (54%). The most prevalent barrier to participating in support programs was distance from home (69%). Gender was related to information needs, such that females reported significantly more information needs ($p<.05$).
Assessment of patient information needs is useful for guiding the development of future cancer care support programs and services. Most cancer patients and survivors desire more information to support them through their journey from cancer treatment through survivorship.

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A-007

CANCER SURVIVORS' USE OF COMPLEMENTARY AND ALTERNATIVE MEDICINE AND DISCLOSURE OF USE TO PHYSICIANS

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Objectives: To characterize: (1) Complementary and Alternative Medicine (CAM) use among cancer survivors of leukemia, colorectal and bladder cancer; (2) Decisions to discuss CAM use with follow-up care physicians.
Methods: This cross-sectional study of follow-up cancer care examined a population-based sample of leukemia, colorectal, and bladder cancer survivors in the Northern California Cancer Center's Surveillance, Epidemiology, and End Results (SEER) registry. Respondents were 774 male and female survivors, ages 23–95, diagnosed 2–5 years before the study. Multivariate logistic regression analyses were performed.
Results: Overall, 35% of the sample reported having used CAM. The modalities reported were: movement or physical therapies (39%), high dose or mega vitamins/supplements/herbs (38%), mind-body therapies (26%), psychological therapy or counseling (18%), and self-help or support groups (18%). CAM use varied by age and cancer type, and was more prevalent among women, those with higher education, a cancer recurrence, and those diagnosed with depression/anxiety ($p<.05$). Among survivors who received follow-up care in the last 12 months, less than half (46%) discussed their CAM use with their physician. Choices to discuss CAM were associated with higher education, recent treatment, physician specialty, and physician communication about health promotion ($p<.05$). Of those who discussed CAM, most reported that their physicians encouraged CAM use or made no comment. Only 2% reported that their physicians encouraged them to stop using CAM. The main reasons that survivors did not discuss CAM use were that they thought CAM had nothing to do with conventional treatment (68%) and their physician never asked (42%).
Conclusion: The use of CAM is fairly common among this sample of survivors. The majority of survivors did not discuss CAM use with their physicians. However, when they did discuss their CAM usage the majority reported receiving a positive response.

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A-008

ACCURACY OF BREAST CANCER BELIEFS IN RURAL HISPANIC WOMEN WITH A SELF-REPORTED HISTORY OF MAMMOGRAPHY

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Qualitative research suggests that within the Hispanic population is a blend of cultural folk beliefs and western knowledge about breast cancer. The goal of this study was to examine factors associated with accuracy of breast cancer beliefs in Hispanic women with a self-reported history of mammography. METHODS: Participants ($n=63$) were between the ages of age 40–78 and lived in a rural agricultural community in Washington State. Ten belief statements reflecting breast cancer prevention, etiology, diagnosis, treatment, and prognosis were included as part of a baseline assessment for a larger intervention study. Response was categorized as accurate or inaccurate based on western medical knowledge of breast cancer. The total number of accurate responses was categorized into 3 levels of accuracy (low=0–4, moderate=5–7, high=8–10). Predictor variables were language of interview, age, education, and access to health clinic. Categories for education were $\leq$ 4th grade (n=26), 5th-8th grade (n=25), and$\geq$9th grade (n=12). Overall assessment was conducted using ordinal regression and post hoc analyses using cross tabulations. Significance was held at $p \leq 0.05$. RESULTS: Education emerged as the only significant factor associated with accuracy of belief. Overall, participants with$\geq$9th grade education were more likely to accurately respond to each statement compared to those with a$\leq$4th grade education ($p=0.04$). However, post hoc analyses revealed a mix of folk beliefs and western knowledge at all levels of education. For example, while response to the statement, “you can catch cancer from other people” was answered with 100% accuracy at all education levels, the statement, “exposing cancer to air causes it to spread” was answered accurately for only 40% of participants with$\leq$4th grade education and 60% with an education of$\geq$9th grade. CONCLUSION: While higher levels of education are associated with higher belief accuracy about breast cancer among Hispanic women with a history of mammography, folk beliefs, and western knowledge about breast cancer remain regardless of education.

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A-009

CHARACTERIZING INTEREST IN ONLINE AND FACE-TO-FACE SUPPORT GROUPS AMONG INDIVIDUALS WITH LUNG CANCER

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Lung cancer survivors’ interest in and use of supportive psychosocial services remains poorly understood, and Internet-based services may be of particular benefit to this population. Andersen and Newman’s model of healthcare utilization, which emphasizes predisposing (i.e., demographic as well as attitudes about support services), enabling (i.e., accessibility of services), and illness (i.e., need for services or health barriers) factors, was applied to the prediction of survivors’ behavioral intention to participate in online support groups (OSGs) and face to face support groups (F2F). Adult lung cancer survivors (n = 119) were recruited across 2 cancer treatment facilities and were asked to complete a series of self-report measures. Interest levels in F2F (20.1%) and OSGs (21.0%) were comparable. Predisposing [F (8, 91 = 3.020, p=0.005] and enabling factors [F (4, 76)=5.171, p = .001], but not illness factors [F (7, 91) = 1.757, p = .106] were predictive of behavioral intention to use F2F groups (full model R^2 = .205). The most salient F2F predictor was amount of time required to attend a support group (β=-.453, p < .001). For OSGs, predisposing [F (9, 84)=7.055, p < .001], enabling [F (5, 69)=3.139, p =.013], and illness factors [F (7, 86) = 2.204, p = .042] were predictive (full model R^2 = .358) with perceived helpfulness of OSGs (β = .479, p < .001) and familiarity with computers (β= .289, p = .001) remaining significant in the multivariate model. These findings suggest that a modified healthcare utilization model is predictive of intentions to use F2F and OSGs, and distinct models were identified for each type of service. These findings may inform future efforts to better address the psychosocial needs of lung cancer survivors.

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A-010

BARRIERS TO ACCESSING INTERNET HEALTH INFORMATION AMONG CANCER PATIENTS AND SURVIVORS

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When communicating cancer-related information, understanding the channels through which patients and others gain access to it is critical. As communication technologies advance, there is an increasing enthusiasm for delivering health information through digital means. Often times, advocates of these methods do not take into consideration that underserved populations may face major difficulties in accessing these technologies. Even with access to digital information, like others, they may find using health websites challenging, or of questionable benefit.

We utilized a staged mixed-method approach for the study, conducting formative research (focus groups and cognitive testing) to guide the design of a quantitative survey. We surveyed 504 patients/survivors (PSs) treated at the Dana-Farber Cancer Institute to examine access to and use of cancer-related information on Internet.

First, our data supports the well-documented claim that income, education, race and age are associated with access to and use of digital health information. For instance, while only 8% of white PSs reported insufficient internet access, 37% of their non-white counterparts did. This trend was also evident when examining high vs. low income PSs (50% vs. 3%) or education level (elementary school degree, 100% vs. postgraduate, 3%). Second, there was a general concern about the amount of existing information (50%), its relevance (56%), accuracy (70%), trustworthiness (27%), and of it being up-to-date (61%).

These results demonstrate the inequalities in the access and use of internet health information among patients with cancer and address the need to revise the nature of current internet-based communication approaches for them to reach certain population subgroups. Additionally, these findings bring to light the need to address the general population’s concerns regarding the amount, legitimacy and relevance of available internet health-information.

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A-011

TEACHING FAMILY HISTORY COLLECTION

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Family history is important for both assessing risk of disease and diagnosing disease. The current study aimed: (1) to improve the collection of cancer family history data through training in the collection and interpretation of pedigrees and (2) to determine if a particular affective message type (positive, negative, or neutral) would impact the ability to understand and construct pedigrees. Participants were undergraduate students in a large, Midwestern university. In the first stage of the study, affective messages were developed and tested (n=40). In the second stage, participants (n=200) completed a pre-intervention survey, participated in an intervention to teach pedigree construction randomized by motivational message type, and completed a post-intervention and 1 week follow-up survey to assess understanding of pedigrees and ability to construct pedigrees. As a result of the intervention, significant increases from pre-intervention to post-intervention were observed for positive attitude about collecting family history information [t(181)= 3.6, adjusted p=0.003], intention to talk to family [t(169)=9.20, adjusted p <0.001] and physicians [t(169)=6.0, adjusted p<0.001] about cancer risk, pedigree comprehension [t(180)= 25.6, adjusted p <0.001], the Pedigree Checklist (detail of personal pedigrees) [t(180)=14.5, adjusted p<0.001], and number of people included on personal pedigree [t(180)=7.6, adjusted p<0.001]. Perhaps more encouraging, 25% of undergraduate students had spoken with their families about their cancer risk by 1 week after the intervention. No change was observed for cancer worry, perceived cancer risk, or subjective knowledge of genetics. Message type had no impact on results. Thus, our intervention improved the comprehension and collection of pedigrees, as well as communication about cancer risk with family members, for all participants. Thus, our intervention could be used among families to stimulate conversations about cancer risk and in the context of health care to improve the identification of those elevated risk due to family history of cancer.

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Meritorious Student Poster
Citation Poster
A-012

EXERCISE FOLLOWING TREATMENT FOR EARLY-STAGE BREAST CANCER: A LONGITUDINAL, CONTROLLED COMPARISON

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Cancer treatment (Tx) has been shown to have a negative impact on exercise. Little is known, however, about long-term changes in exercise following Tx completion and how these compare to women with no history of cancer. To address these limitations, this study examined changes in exercise, over a 3 year period, in early-stage breast cancer (BC) patients and non-cancer controls. It was hypothesized that BC patients would report lower post-Tx exercise than controls, but by 3 years would recover exercise levels comparable to controls. For controls, exercise was not expected to change over time. Participants were women with stage 0-II BC, previously treated with chemotherapy (with or without radiation; CT n=109) or radiotherapy only (RT n=112), and age-matched women with no history of cancer (Control n=193). Patients completed the Godin Leisure-Time Exercise Questionnaire at the end of Tx (T1) and approximately 3 years later (T2); controls also completed the measure 3 years apart. Results from a mixed model ANOVA yielded a group x time interaction effect (p=.03). At T1, both the CT (p=.02) and RT (p=.03) groups reported significantly less exercise than controls; there was no difference in exercise between the CT and RT groups (ps>.05). From T1 to T2, both the CT and RT groups increased their exercise (ps<.01); the exercise levels of controls did not change. At T2, exercise levels were equivalent across all groups (ps>.05). Findings support the hypotheses and suggest that patients' diminished exercise levels at the end of Tx recover to levels comparable to controls over a 3 year period. Nevertheless, exercise levels remain suboptimal for a majority of patients; at T2, 70% of CT patients, 73% of RT patients, and 76% of controls did not meet recommended exercise guidelines. Thus, from post-Tx through the survivorship stage, there appears to be a persistent need for interventions to promote exercise and help BC survivors maximize its associated health benefits. Funded by: NCI R01 CA82822

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A-013

A CONFIRMATORY FACTOR ANALYSIS OF THE FEAR OF CANCER RECURRENCE INVENTORY

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BACKGROUND: According to Leventhal's Self Regulation Model (Leventhal & al., 1980) and Lee-Jones's initial formulation (Lee-Jones & al., 1997), fear of recurrence (FoR) is not simply an emotional reaction in cancer survivors, it is a multidimensional and heterogeneous construct. Recently, we developed and validated the Fear of Cancer Recurrence Inventory (FCRI), a questionnaire evaluating seven multidimensional aspects of FoR (Simard & Savard, 2009). Although our previous work supported the reliability and validity of the questionnaire, the factor structure was originally evaluated using exploratory factor analysis only. The purpose of this study was to confirm the original seven structure factors of the FCRI-French version and to support the multidimensional conceptualization of FoR. METHODS: A provincial medical databank (RAMQ) was used to randomly select a large pool of 5 000 French-Canadian patients who had been treated for breast, prostate, lung and colon cancer within the past ten years. Of these, 1 986 patients completed by mail a battery of self-report questionnaires including the FCRI. Confirmatory factor analysis (CFA) was used to test the original factor structure. RESULTS: The final CFA model for the total sample indicated a reasonably good fitting with the original seven factor structure ($\chi2$ =.(812)=3126, p=.001; RMSEA=0.56; CFI= .91; PNFI = .84). Using modification indices, five additional paths were added between items correlated in the same factor in order to obtain the best model fit. In addition, CFA were performed separately for breast (n= 977, RMSEA=0.56; CFI= .90; PNFI = .82) and prostate (n=727; RMSEA=0.56; CFI= .91; PNFI = .83) cancer groups and supported the stability of the original model. CONCLUSIONS: The findings confirmed the seven multidimensional factor structure of the FCRI in cancer patients and its validity. In addition, this study supported the importance of viewing FoR multidimensionally. Further research is needed to validate the FCRI-English version.

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A-014

PATIENT DECISION MAKING REGARDING LUNG CANCER SCREENING (LCS)

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While ongoing studies explore the efficacy of lung cancer screening (LCS) via low dose computed tomography (LDCT), public interest in and uptake of this procedure raises questions regarding knowledge and understanding of LCS and its potential risks and benefits. The primary aim of this study was to identify cognitive (risk perception), affective (cancer worry), and social influences (friends, family, physicians) characteristic of individuals who undergo LCS and to describe decision satisfaction (DS) associated with LCS. Participants (N=28;M=60 yrs) had undergone LDCT within 12 months prior to study participation. The protocol included a survey and semi-structured interview addressing cancer worry (CW), perceived risk (PR), and social factors influencing LCS decisions. Participants reported high lifetime PR for developing LC (46%±35) but generally low levels of CW (7±3). Items rated as most important in the decision to undergo a LCS included: the test's ability to detect cancer early (96%), reassurance of lung health (85%), reduction in risk of death from LC (78%), smoking history (65%), and fear of being diagnosed with LC (60%). Social influences, including a friend, family member, or doctor's recommendation were endorsed as very important by less than 1/3 of the sample. Finally, the majority of the sample (58%) reported the highest possible level of decision satisfaction regarding LCS. Overall, data suggest many participants may undergo LCS with the expectation that it effectively detects cancer early, reduces risk of death from LC, and/or provides reassurance of lung health. In addition, decisions to undergo LCS may be associated with a high PR of LC but minimally influenced by social factors. Unlike most cancer screenings, physician recommendations appear uncommon among LCS participants. However, high levels of satisfaction regarding the decision to undergo LCS were reported. Results raise issues regarding informed decision making about LCS, specifically pertaining to the uncertain efficacy of LCS, its potential risks and benefits, and accurate understanding of LC risk.

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A-015

PROXY INFORMATION AGENTS (PIAS) THROUGH THE EYES OF CANCER PATIENTS AND SURVIVORS

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As treatments and the health information environment become more complex, cancer patients / survivors face a formidable set of challenges to become informed and make decisions about their care, as well as post-treatment issues such as secondary prevention and quality of life. Obtaining timely and accurate information can mitigate these difficulties, but is also a complicated undertaking. Thus, many patients / survivors rely on Proxy Information Agents (PIAs), family members and other contacts who seek information on their behalf, to supplement information-seeking efforts. Although self-driven information-seeking has been studied extensively, the role and impact of PIAs still remains unclear, which prompted our exploration into the experience of patients / survivors with PIAs and the information they find.

We utilized a staged mixed-method approach for the study, conducting formative research (focus groups and cognitive testing) to guide the design of a quantitative survey. We surveyed 504 patients / survivors treated at the Dana-Farber Cancer Institute.

About 80% of respondents reported having a PIA look for cancer information on their behalf and most reported using multiple PIAs. PIAs were typically spouses (48%), friends (41%), or siblings (39%). About 71% of patients / survivors agreed that most of the information found by others was helpful and 43% agreed that others found information they would not have found. About one-quarter of respondents reported difficulties managing the volume of information found by PIAs or being frightened by the information found by PIAs. Patients / survivors suggested that PIAs were motivated to seek information by an interest in learning more or being reassured, rather than by the inability of the patient / survivor to do so.

This study suggests that PIAs perform a useful and valued function as patients / survivors navigate the cancer information environment, which can inform outreach and educational efforts.

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A-016

BARRIERS TO HPV VACCINATION IN YOUNG ADULT WOMEN

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Background: Infection with human papillomavirus (HPV) can cause cervical cancer. A vaccine to prevent HPV infection was approved for females aged 9–26 in 2006. Although the vaccine has been available for over three years, uptake has been relatively low: 25% among 13–17 year-olds and only 10% among 18–26 year-olds. Understanding barriers to HPV vaccination is essential for increasing uptake. This study identified barriers to HPV vaccine uptake in 18–26 year-old women. **Method:** Women (n=758) were recruited for an HPV vaccination intervention study. Participants completed a baseline/intervention session and an initial follow-up assessment 2 months later. Participants who had not received an HPV shot at 2-month follow-up reported whether they were still planning to get vaccinated. They also rated the extent to which potential barriers had prevented them from getting vaccinated and reported the most important barrier. **Results:** Results are based on 527 women already assessed at 2-month follow-up (data collection is ongoing). Less than 2% had received a dose of the HPV vaccine. Of those remaining, 29% planned to get vaccinated, 30% were not planning to get vaccinated, and 41% were undecided. The three groups endorsed markedly different barriers. Among women planning to get vaccinated, practical/logistic barriers (cost/limited health insurance; time constraints; fear of needles) were most important. Although cost was also important for women not planning to get vaccinated, perceived lack of need, not feeling at risk for HPV, and concerns about safety and side effects were predominant. “Undecided” participants reported a mix of practical/logistic barriers and safety/side effect concerns. **Conclusions:** Vaccination barriers vary as a function of women’s interest in receiving the HPV vaccine. Interventions promoting vaccine uptake should be tailored to the most relevant barriers. Although vaccine cost is a barrier for most women in this age range, cost is more critical for women seriously considering vaccination. Among women less interested in HPV vaccination, addressing lack of perceived need and safety concerns will be essential.

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A-017

MESSAGE TAILORING FOR HEALTH PROMOTION AMONG LIMITED-LITERACY MEDICALLY UNDERSERVED ADULTS

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Regulatory Focus Theory states that the dominant motivational system driving goal-directed behavior is either promotion or prevention oriented (Higgins et. al, 2002). Promoters orient their behavior around advancement and accomplishment and are motivated to achieve desired outcomes. Preventers direct their behavior to safety and security and are motivated to avoid undesired outcomes. According to Higgins, individuals “feel right” about their behaviors (i.e., experience regulatory fit) when thinking about or utilizing behavioral strategies that match their regulatory focus. We conducted a pilot study to test the effectiveness of regulatory fit messages encouraging physical activity among a medically underserved limited-literacy population. We hypothesized that chronic regulatory focus would moderate the effect of prevention- and promotion-framed health messages on intentions to engage in physical activity. The study was conducted in five adult English as a Second or Other Language (ESOL) classrooms in a medically underserved community. Three classrooms were randomly assigned to the promotion condition. Over the course of the semester students (N=132) received either prevention or promotion messages as part of their ESOL curriculum. Chronic regulatory focus was measured at baseline and intentions to engage in physical activity were measured at baseline and at the end of the semester. A 2 x 2 ANCOVA using baseline intentions as a covariate revealed a main effect for message condition, $F(1, 53)=6.50$, $p = .01$, such that students who received promotion messages reported higher intentions to engage in physical activity than students who received prevention messages. The regulatory fit hypothesis was not supported as the interaction was not significant, $p>.05$. These findings support the use of promotion-framed messages but not regulatory fit messages as a strategy to increase intentions to engage in healthy lifestyle behaviors.

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A-018

PHYSICAL ACTIVITY AND FRUIT AND VEGETABLE INTAKE IN SISTERS OF BREAST CANCER PATIENTS

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Women with one first degree relative diagnosed with breast cancer have a two to four times increased risk for developing breast cancer compared to women with no family history. While many risk factors for breast cancer are not modifiable, others, such as engaging in regular physical activity (PA) and eating a diet high in fruits and vegetables (F/V) to help maintain or lower weight, can be changed. The aim of the current study was to examine PA and F/V consumption in sisters of breast cancer patients. Participants completed a questionnaire assessing leisure-time PA (Godin Leisure-Time Exercise Questionnaire) and F/V intake (By Meal Screener). Participants were 120 healthy sisters from 89 different families who were an average of 52 years old. The majority had partial college education or greater (82%), were non-Hispanic (94%), White (95%) and married (72%). The sisters were eating an average of 3 F/V a day with only 17 (14%) meeting the recommended guidelines of eating 5 or more F/V per day. They were engaging in an average of 81 minutes of moderate intensity PA per week with 29 (24%) meeting the recommended guidelines of 150 minutes per week. Fifty-three sisters (44%) reported no moderate PA per week. F/V intake and moderate PA were significantly related to the belief that engaging in that behavior would decrease risk of breast cancer ($r=.18$, $p < .05$ each). Sisters were also asked if they had increased their F/V intake or PA following their sister’s breast cancer diagnosis. Only 19 (16%) women reported increasing F/V intake, 19 (16%) reported increasing PA, and 9 (8%) reported increasing both. Self-reported increase in PA or F/V was not significantly related to the belief that the behavior would decrease cancer risk ($p > .05$). These findings highlight the need for interventions to increase PA and F/V intake in women at increased risk for breast cancer and suggest that increasing women’s beliefs about the benefits of PA and F/V intake for breast cancer risk reduction may help to increase these behaviors in women at increased risk for breast cancer.

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A-019

COMMUNICATION STYLE PREDICTS PHYSIOLOGICAL RESPONSE AMONG INDIVIDUALS WITH A FAMILY HISTORY OF CANCER

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According to the Social Cognitive Process Model, facilitative health care providers (HCP) can impact patients’ understanding, likelihood of taking action, and adjustment to health threats. In contrast, constraining/directive HCP behaviors can inhibit emotional and cognitive processing of health threats leading to distress. We thus predicted that a facilitative HCP style provides both informational and emotional support, which may be especially important for patients with a cancer family history given potential impact on screening, detection and other health decisions. 119 participants with a cancer family history were assigned to facilitative or directive simulated clinical HCP encounters to discuss stress management and cancer prevention strategies. Heart rate reactivity (HRR) was assessed continuously and the Impact Message Inventory (IMI) was completed post-task. The facilitative HCP was rated as more likely to ask for ideas ($t=4.62$, $p<.01$), ask about emotions and relay emotional understanding (ts(3.28; 2.04) ps<.01) suggesting that the facilitative HCP provided support and promoted cognitive/emotional processing. Regression analyses on HRR and IMI ($B=0.09$, $p<.01$) showed condition impacts HRR differentially based on participant IMI interpersonal ratings. At lower levels of friendly-dominance, participants interacting with a facilitative HCP showed lower HRR than those interacting with a directive HCP. Additionally, even when the HCP was seen as higher in hostility, interactions with a facilitative HCP had lower HRR than directive ($B=-0.10$, $p= .01$). These findings suggest that facilitative HCP behavior may buffer patient stress, regardless of patients’ interpersonal perceptions of the HCP. Our results have implications for training HCPs in communication which may not only decrease patient stress, but improve patient-provider relationships and impact health care decisions.

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A-020

EXPLORATION OF THE FACETS OF FAMILY CANCER HISTORY ON PSYCHOLOGICAL AND PHYSIOLOGICAL RESPONSES

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Prior research suggests that family cancer history (FCH) can be viewed as a chronic stressor. However, few studies have explored how different aspects of the FCH experience impact the diversity of psychological and physiological responses in individuals with these histories. It has been posited that certain facets of the chronic stress process (i.e., nature of the stressor, currency/duration, and stress appraisal) may play roles in responses to acute stressors. This study explored the cardiovascular reactivity and affective responses of 40 individuals with first-degree FCH during and after two laboratory acute stress tasks (cancer-specific and neutral Stroop tests). The analyses revealed Proximity X Gender, (F (1,33)=5.92, p=.02), and Time of Diagnosis X Gender, (F (1,33)=3.84, p=.06), interactions, in which males who lived with the affected relative and had a more recently diagnosed relative displayed greater task systolic blood pressure (SBP) change. Similarly, a Proximity X Gender interaction showed that males who lived with their affected relative also had worse SBP, (F (1,31)=4.58, p = .04), and diastolic blood pressure (DBP), (F (1,31)=8.18, p = .008), recoveries. In addition, main effects for task SBP were found for relative diagnosed, living proximity, and time since diagnosis. This study demonstrates that important facets of the family cancer history experience may explain some of the variability noted in previous research in terms of the physiological responses of those with FCH.

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A-021

GENDER DIFFERENCES IN OUTCOMES OF COLORECTAL CANCER FEAR OF RECURRENCE

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Fear of recurrence (FOR) is common among colorectal cancer patients (Mullens et al., 2003) and has been linked to increased anxiety and depression (Deimling, 2005; Park & Gaffey, 2006). Although research has demonstrated that male cancer survivors often experience more anxiety than their female counterparts (Middendorp et al., 2005), the impact of high FOR on men versus women is unknown. This study examined gender differences in the relationship between FOR and life satisfaction (LS), depression, and life appreciation (LA). Method: 70 men and 58 women, diagnosed with colorectal cancer 12-months prior, completed questionnaires assessing FOR (Concerns About Recurrence Scale: Health, Gender, Role, Death and Overall subscales), LS(Satisfaction with Life Scale), depression (CES-D), and LA (Posttraumatic Growth Index: LA Subscale). Results: Univariate ANOVAs indicated that for LS, interactions existed between FOR-health and gender, F (1, 72)=5.79, p=.02, and FOR-role and gender F(1, 72)=3.95, p=.05, such that, for men, high FOR in these domains was associated with decreased LS, whereas the level of FOR did not impact LS for women. For Depression, an interaction was found for overall FOR and gender, F(1, 75)=9.22, p<.01, such that, for men, high overall FOR was associated with greater depression, whereas the level of FOR did not impact depression scores for women. Conclusion: High FOR impacts men differently than women. While women's LS and depression scores remained relatively stable, men who reported high FOR demonstrated significantly poorer LS and higher depression than men who reported low FOR. Potential explanations for such findings include men's tendency to be less emotionally expressive (Muddendorp et al., 2005), engage in more avoidant coping behaviours (Peleg-Oren et al., 2003) and experience an increased perception of social constraint (Zakowski et al., 2003) than women; factors which have been linked to decreased quality of life and increased mood disturbance. Such findings highlight the importance of directly targeting FOR in men.

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A-023

TREATMENT DECISION MAKING IN FOLLICULAR LYMPHOMA: PATIENT PREFERENCES REGARDING INVOLVEMENT OF PHYSICIANS AND SIGNIFICANT OTHERS

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Although follicular lymphoma (FL) is considered indolent, patients commonly experience multiple relapses and face complicated treatment decision making (TDM) due to a lack of clear treatment guidelines. Watchful waiting is an oft-recommended treatment approach, allowing patients to avoid therapy until significant disease-related symptoms occur. Research has suggested that watchful waiting may prompt family and friends to pressure patients to seek active treatment when not medically necessary. This exploratory study examined preferences and attitudes of FL survivors on the involvement of significant others (SOs) in TDM. FL survivors (N=31) completed questionnaires assessing the desired TDM roles of physicians, family and friends. Participants were an average age of 57 (±10), predominately Caucasian (97%), female (60%), and married (83%). In terms of the preferred TDM role of physicians, participants indicated either a preference to share responsibility with their doctors (56%) or make a personal decision after considering their doctor's opinion (25%). Nearly all (96%) participants reported taking their specialist's opinion very seriously regarding whether they should receive chemotherapy. Regarding family and friends, 61% of participants reported preferences to make treatment decisions after considering SOs opinions, while 29% preferred to make the decision alone. As expected, participants reported taking the opinions of spouses most seriously regarding the decision to receive chemotherapy (78%), followed by those of children (63%) and other family members (48%). Some participants also reported considering the opinions of friends (33%) and colleagues (22%). Previous research has demonstrated the importance of shared TDM in oncology but has not generally considered the potential influence of SOs on TDM. Data suggest that the vast majority of patients wish to have SOs integrated into the TDM process, and future research should explore the role of social influences on TDM in more detail, particularly in the context of FL.

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Citation Poster

A-024

PRELIMINARY FINDINGS OF A TELEPHONE BASED COGNITIVE BEHAVIORAL STRESS MANAGEMENT INTERVENTION IN PROSTATE CANCER SURVIVORS UNDERGOING HORMONE THERAPY

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Prostate cancer (PC) treatment is associated with several disruptions that can compromise quality of life (QOL). Hormone therapy (HT) often results in a range of side effects (e.g., fatigue, hot flashes, urinating problems, pain) that can further impact QOL. Despite these decrements, limited work has addressed the efficacy of psychosocial interventions in improving QOL among PC survivors on HT. The current study evaluated the effects of a telephone-based Cognitive Behavioral Stress Management (CBSM) intervention designed to improve QOL in men with PC undergoing HT. Participants (N=83) were randomized to either CBSM or a time-matched health promotion (HP) condition and were assessed at two time points (T1; baseline, and T2; post-intervention). The mean age was 70 years (SD=9.5) and the sample was ethnically diverse (66% White, 18% Black, 12% Hispanic, 4% Other). Participants had undergone an average of 19.1 months (SD=17.4) of HT. Measures included the RAND Short Form 36 (SF36) for QOL; the Expanded PC Index Composite (EPIC) for treatment-related symptoms; the COPE Inventory (COPE); and Measure of Current Status (MOS) for perceived stress management skills. Analyses were conducted using repeated-measures group by time ANOVAs, controlling for relevant covariates. Participation in the CBSM intervention condition, relative to the HP control condition, was associated with greater general and disease-specific QOL (i.e., social functioning, urinary and bowel function), adaptive coping strategies, and stress management skills (all p's<.05). Trends in several QOL domains (i.e., physical functioning, hormonal bother) were also identified (all p's<.10). These results indicate that a telephone-based CBSM intervention may be effective in improving general and disease-specific QOL, as well as several intervention targets, such as coping and stress management strategies.

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A-025

COMBINED COGNITIVE BEHAVIORAL/BIOBEHAVIORAL INTERVENTION EFFECTIVE FOR DEPRESSED CANCER SURVIVORS

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Various psychological interventions are efficacious in reducing cancer-related distress but have seldom been tested in depressed samples. Cognitive behavior therapy (CBT) is efficacious for treating depression, but few studies have evaluated it in cancer survivors. Depressive symptoms are also associated with feelings of hopelessness, stress, and comorbid anxiety. The aim of the current phase II trial was to evaluate the effectiveness of a novel combined biobehavioral/CBT intervention (BBI/CBT). Method: Female cancer survivors diagnosed with Major Depressive Disorder (MDD) were accrued ($n=32$). Participants were on average assessed 4 years post-diagnosis ($SD=4$), 48 years old ($SD = 10$), married (81%), and Caucasian (84%). Half were breast cancer survivors. Using a pre-test/post-test design, we examined improvement of depressive symptoms over time and effects of person-specific factors (hopelessness, cancer-specific stress, and psychological history). Control variables correlated with depressive symptoms were included. Results: As hypothesized, mixed-effects models demonstrated pre- to post-treatment symptom improvement for both the Beck Depression Inventory (BDI; $p<.001$) and observer-rated Hamilton Rating Scale for Depression (HRSD, $p=.003$). Baseline depressive symptoms were greater in those high in hopelessness (Beck Hopelessness Scale; $ps>.02$), diagnosed with a comorbid anxiety disorder ($p=.03$ in HRSD; ns BDI), and diagnosed with a prior depressive episode ($ps>.01$). No differences were noted in cancer-specific stress (Impact of Events Scale; $ps>.2$). Response to treatment was similar for all person-specific factors ($ps>.10$). Conclusion: In summary, a pilot study of the novel combined BBI/CBT intervention was successful in reducing depressive symptoms in a sample of female cancer survivors with MDD. A randomized clinical trial is warranted to further explore the efficacy of this treatment. Patients with prior depression, comorbid anxiety, or feelings of hopelessness warrant additional clinical attention as these are related to increased baseline depressive symptoms.

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A-026

ANXIETY IN TERMINALLY ILL CANCER PATIENTS: PALLIATIVE VS LIFE-PROLONGING CARE

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This study provides a systematic examination of anxiety in terminally ill cancer patients. We examined the prevalence of anxiety, identified differences in anxiety between participants receiving palliative care and those receiving life-prolonging care, and identified characteristics that distinguished highly anxious from less anxious patients. METHOD: The participants were 200 patients with terminal cancer, 103 of whom were receiving palliative care and 97 of whom were receiving life-prolonging care. The Hospital Anxiety and Depression Scale was used to assess anxiety. Self-report and clinician-rated measures were used to assess depression, hopelessness, desire for hastened death, religiosity, awareness of terminal prognosis, and social support. RESULTS: Nearly 70% ($n = 139$) of participants reported anxiety levels in the average range while 18% ($n=37$) reported borderline elevated scores of anxiety and 12% of participants ($n = 24$) had levels of anxiety suggesting the presence of an anxiety disorder. Level of anxiety did not differ between the two groups of participants. However, participants receiving palliative care reported significantly higher levels of depression and desire for hastened death than those receiving life-prolonging care. A multivariate prediction model indicated that belief in an afterlife, social support, and anxiolytic and antidepressant use were unique, significant predictors of anxiety level. CONCLUSION: A third of participants suffered from elevated levels of anxiety. Social support and belief in an afterlife were identified as potential protective factors against anxiety. Level of anxiety did not differ between participants receiving palliative and life-prolonging care, which suggests no increase in anxiety as patients approach death. The significantly higher levels of depression and desire for hastened death in patients receiving palliative care suggests that anxiety may differ from the more commonly studied aspects of psychological distress over the duration of terminal cancer.

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A-027

IMPACT OF PALLIATIVE CARE ON MAINTAINING QUALITY OF LIFE IN AN END-STAGE ONCOLOGY POPULATION

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While patients across the cancer care spectrum encounter a range of intense stressors, the palliative care population has emerged as one of the most challenging. Patients referred for palliative care bring with them diminished quality of life, concerns related to advanced illness, as well as pain and other symptoms. A core component of state-of-the-art palliative care, therefore, is the empirical evaluation of both the physical and psychosocial domains, particularly quality of life. Based on this assessment, the goal of palliative care is to maintain quality of life in the face of increasing symptom burden and deteriorating functional status. The present study examined 101 mixed site cancer patients attending a palliative care clinic for symptom control related to advanced illness. Several critical patient domains were assessed with standardized and validated measures. These included health-related quality of life (EORTC QLQ-C15-PAL), psychological distress (BSI-18), pain (Short-Form McGill Pain Questionnaire), and 5 analog scales assessing additional aspects of patients' pain experience. Strikingly, our analysis showed that, despite decreased physical functioning and increased symptom burden, patients maintained their quality of life. Patients with more than one visit ($n=47$) reported decreased global distress ($p<.03$), primarily as a result of decreased anxiety, from visits 1 to 2 ($p<.02$). After just a single visit to the palliative clinic, the percentage of patients reporting clinically elevated distress decreased from 25% to 7%. This is particularly noteworthy given the fact that these patients continued to report decreased physical functioning ($p<.00$) and moderate-to-severe pain levels. Additionally, the patients that completed 3 clinic visits ($n=13$) continued to report maintained quality of life despite escalating symptom burden. Overall, our results demonstrate a continued quality of life for patients receiving multidisciplinary palliative care, and clearly support the feasibility of maintaining quality of life in this critical end-of-life population.

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A-028

SYMPTOM AND TREATMENT BURDEN ASSOCIATED WITH OPIOID-INDUCED CONSTIPATION IN CANCER PATIENTS WITH ADVANCED DISEASE

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Although constipation affects many patients receiving long-term opioid therapy for cancer pain, remarkably little is known about its impact on quality of life (QOL). Given the limited knowledge of the problem, qualitative research can be useful to understand the burden associated with opioid-induced constipation and its treatment. Eligible participants in this study were diagnosed with advanced cancer who self-reported constipation due to opioid use. Participants completed semi-structured interviews containing exploratory questions developed by experts in palliative care. Responses were analyzed using a systematic process of descriptive and interpretive coding. Analysis indicated that the negative impact of constipation and constipation treatments on QOL (26.3% of codes), psychological distress (20.7% of codes), and irrational thoughts (9.2% of codes) were the major themes. Negative impact was comprised of deficits in role functioning and social functioning due to constipation, adverse physical consequences of constipation treatments, and intrusiveness of treatments on daily activities. Psychological distress was comprised of depression or irritability due to constipation, and anticipatory anxiety related to constipation symptoms and treatment effects. Irrational thoughts were comprised of beliefs that constipation was a serious threat to health, beliefs that nutrition can improve constipation, and catastrophic thinking about constipation. These results suggest that opioid-induced constipation compromises multiple QOL domains and that this burden is augmented by negative affect and cognitions. Understanding the nature of burden associated with opioid-induced constipation may improve clinical recognition and assessment of this problem, and promote more intensive management consistent with the distress it produces.

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A-029

PREDICTORS OF POSTTRAUMATIC GROWTH AFTER LUNG CANCER

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We tested cancer-related stress and coping as predictors of posttraumatic growth (PTG) in a longitudinal sample of patients with newly diagnosed lung cancer. We hypothesized higher levels of PTG at study entry (T1; n=94) and 3 months later (T2; n=59) in patients endorsing more stress, higher approach-oriented coping and lower avoidant coping. Patients completed measures of approach (emotional approach, support, positive reframing, problem-solving) and avoidant coping, cancer-related stress symptoms (IES), perceived stress (PS), and PTG (PTGI). T1 and T2 PTGI scores were moderate (Ms=55.06 and 53.43). T1 PTG correlated with higher stress (rIES = .45, rPS = .20) and more approach-oriented and avoidant coping (rs > .25), all ps < .05. A multiple regression with these variables was significant, F(7, 78)=8.48, p < .001, explaining 43% of the variance in PTG, with the IES (β = .32), positive reframing (β = .30), and avoidant (β = .24) coping remaining significant in the final model (all ps < .05). No medical or demographic variables were significant. Similar correlations were found between the T1 predictors and T2 PTG with the exception of PS (ns). In addition, T2 PTG was higher in women (t[55]=-2.02, p < .05), patients with small cell (SC) lung cancer (t[22.55] = 2.12, p < .05), and those closer to diagnosis (r=- .24, p < .08). Multiple regression predicting T2 PTG with the T1 predictors and these covariates was significant, F(9, 43)=3.97, p < .001, with an R2 of 45%. Only emotional approach coping (β = .39, p < .05) contributed unique variance to the final model. Including T1 PTG increased the R2 to 64%, and both T1 PTG (β = .54, p < .001) and emotional approach coping (β = .28, p < .09) contributed uniquely. In general, results support the contribution of stressor impact and active engagement to PTG. Avoidant coping also was related to PTG at T1 which may indicate that people who simply endorse more coping also report more benefits in their cancer experience.

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A-030

COGNITIVE DIFFICULTIES, FATIGUE AND SLEEP IN CANCER PATIENTS AT PRE-CHEMOTHERAPY, POST-CHEMOTHERAPY AND AT THREE MONTHS FOLLOW-UP

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Cognitive difficulties, such as problems with memory, are frequently experienced by cancer patients during chemotherapy and can persist for many years post-treatment. While the complete etiology of chemotherapy-related cognitive difficulties is unknown, factors such as fatigue and sleep likely play a role in the development or persistence of these difficulties. In this secondary analysis, we explored longitudinal associations between memory, fatigue and sleep in 29 subjects (mean age=53 yrs., 91.2% female) at 3 time-points: pre-chemotherapy (T1), post-chemotherapy (T2), and at 3 months follow-up (T3). Memory problems were assessed by a single item on an 11-point scale where 0="not present" and 10 ="as bad as you can imagine", fatigue was measured by the fatigue subscale of the FACIT, and sleep quality was measured by the Pittsburgh Sleep Quality Inventory (PSQI). At T1, 24.2% had no memory difficulties; 41.4% had mild (score 1–3), 24.1% had moderate (score 4–6), and 10.3% had severe (score 7–10) difficulties. At T2, 20% had no memory difficulties; 24% had mild, 32% had moderate, and 24% had severe difficulties. At T3, 19.2% had no difficulties; 46.2% had mild, 15.4% had moderate, and 19.2% had severe memory difficulties. At T1, there were positive associations between memory and fatigue and sleep but none were significant. At T2, memory difficulty was significantly correlated with higher fatigue (r=.59, p=.002) and poorer sleep (r=.49, p=.013). Memory difficulty and higher fatigue were even more strongly correlated at T3 (r=.81, p≤.0001), and sleep and memory showed a positive trend (r=.36, p=.088). Memory difficulties, fatigue, and sleep problems are more inter-related immediately post-chemotherapy, with fatigue and memory sharing 64% of the variance at 3 months follow-up. These data suggest that psychological variables might contribute to memory difficulties post-chemotherapy; however, these results are preliminary and larger studies are needed to replicate these findings.

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A-031

ASSOCIATIONS BETWEEN CANCER SURVIVORS' SPIRITUAL WELL-BEING AND HEALTH BEHAVIORS

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Healthy behaviors are particularly important for cancer survivors, who are at risk for recurrences and new cancers. Although studies have explored associations between health practices and spirituality/religion in general, few have explored such associations among cancer survivors. We examined the relation between spiritual well-being (SWB) and post-diagnosis changes in health behaviors in cancer survivors, hypothesizing that higher SWB would be associated with improved health behaviors. We analyzed data from 4,055 survivors surveyed on average 27 months after diagnosis who participated in the ACS Studies of Cancer Survivors-I (SCS-I), a nationwide quality-of-life assessment of survivors. The population-based sample of survivors across 10 types of cancer was drawn from 11 state cancer registries. We examined the associations of SWB (FACIT-Sp subscales of Meaning, Peace, and Faith) and self-reported post-diagnosis changes in 5 health behaviors (check-ups, diet, exercise, alcohol, and smoking) both before and after controlling for medico-demographic variables in multinomial logistic regressions. Bivariate analyses revealed that higher Meaning or Peace was associated with improvements in 4 behaviors: regular health check-ups, healthy eating, exercise, and alcohol use. Faith was associated with all of these except check-ups. Only Faith was associated with less smoking. After adjusting for medico-demographic covariates, lower Peace was associated with getting more check-ups (OR=0.953); higher Faith, with healthier eating (OR=1.058); and both Peace and Faith, with exercising more (ORPeace=1.099, ORFaith=1.031) and drinking less (ORPeace=0.887, ORFaith=0.917). Only Faith was related to smoking less (OR=0.939). Meaning was insignificant. All P-values are <0.01. These analyses confirmed an association between SWB and improved health behaviors after cancer. Faith was associated with the most improved behaviors (4 of 5), followed by Peace (3 of 5). Further research should explore the negative association between Peace and check-ups, which may relate to coping with fear of cancer recurrence.

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A-033

WEIGHT CHANGE AND HTN CONTROL IN THE E-BP STUDY

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Background: The e-BP study was a randomized control trial designed to test a new model of care using home BP monitoring and Web communications to improve hypertension (HTN) control. We describe here the effect of weight change on hypertension control.

Study setting: The study setting was Group Health an integrated group practice with a patient Web portal and patient shared EMR, secure e-mail, and links to healthy lifestyles resources.

Methods: 778 participants age 25–75 with uncontrolled HTN and Internet access were randomly assigned to (1) Usual Care, (2) home BP monitoring and secure patient Website training, or (3) this plus pharmacist care management delivered via Web communications. Web training included use of secure e-mail, medication refills, and resources for improving healthy lifestyles. Pharmacists and patients created action plans for HTN management including medication lifestyle change plans. All analyses were conducted using generalized linear models.

Results: 730 patients (94%) completed 1-year follow-up. At baseline only 7.2% of study participants had a normal BMI, 31.6% were overweight, and 61.1% were obese. At 12 months there were no significant changes in BMI or body weight in the study population or by intervention group. However, there was a linear relationship between weight change and BP control regardless of group assignment. Compared to those who gained weight, BP was significantly more likely to be controlled in those loosing 4 kg or more (1.45 [95% CI 1.17 -1.81], p<.001) and 2–4 kg (1.34 [95% CI 1.02 - 1.77]; p =0.037), but not significantly more than those who lost <2 kg (1.08 [95% CI 0.85 - 1.38]; p=0.520). Being severely obese (BMI 40 or more) at baseline was also a risk for lack of BP control at 12 months (p=.05).

Conclusions: Small amounts of weight loss, independent of study group assignment, lead to significant improvements in BP control. Interventions specifically aimed at small amounts of weight loss or prevention of weight gain combined with medication intensification might lead to greater improvements in HTN control.

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Citation Poster

A-034

TEND AND BEFRIEND OR LACTATION AGGRESSION IN RESPONSE TO THREAT?

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This study investigated two competing hypotheses regarding the role of the hormone oxytocin (which is released during breastfeeding) on responses to a threat. (1) Do human females have a form of lactation aggression, similar to that found in many other mammals, that facilitates defensive aggression in response to a threatening stimulus? Or (2) do females avoid confrontation and show increased desire to tend to their child in response to a stressor or threat, as would be predicted by the Tend and Befriend theoretical model–a female alternative to the Fight or Flight response. We examined the influence of oxytocin among breastfeeding (n=17) , bottle feeding (n=18), and never pregnant women (n=19), as well as a group of men (n=20) on behavioral aggression and cardiovascular reactivity. In a similar protocol as has been used in aggression research (e.g., Bushman) we compared the groups' willingness to deliver annoying sound bursts to an unduly aggressive confederate, both before and after an infant feeding session (or comparable rest period for never pregnant women or men) while simultaneously assessing blood pressure and heart rate. Results revealed that the breastfeeding women had significantly heightened aggression (B = 1.40, p< .05) relative to the other groups, even after controlling for age, income, employment, gender, marital and motherhood status. In addition, breastfeeders' had lower SBP (p=.018), DBP (p= .045), and MAP (p= .039) during the aggressive encounter than bottle-feeders (with no difference between bottle-feeders and the controls; p>.10). Results suggest that the behavioral response to a threat is not consistent with the Tend and Befriend model; however, the physiological response to a threat does suggest that lactation (i.e., oxytocin) may be physiologically protective. Together these findings lend support to the hypothesis that oxytocin-mediated reductions in fear related to lactation increases women's willingness to aggress, extends to humans, and may be adaptive both physiologically and to protect offspring.

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A-035

BEHAVIORAL RESPONSES TO INTERPERSONAL TASKS AMONG HIGH- AND LOW-HOSTILE INDIVIDUALS

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Previous studies have reported observable behavioral differences among high-hostile individuals when they are engaged in conflict (e.g. Smith, Sanders, & Alexander, 1990). The current study examined behaviors during two interpersonal tasks: a conflict task and a comfort task (Whited & Larkin, 2009). Participants were 57 undergraduates at West Virginia University (31 female, 26 male, M age = 20.2). Median splits were performed on the Cook Medley Hostility Questionnaire to achieve groups of low- and high-hostile individuals (Mdn = 21 for women, 26 for men). Behaviors were grouped into classes using the Marital Interaction Coding System (MICS; Wieder & Weiss, 1980). Only behaviors that achieved inter-rater agreement of 80 percent or better were used. ANOVAs were computed to examine the differences in verbal and nonverbal behaviors among high- and low-hostile individuals during the interpersonal tasks. Differences were observed only during the conflict task. Low-hostile individuals were more likely to engage in negative nonverbal cues and negative statements, F(1,54)=3.72, p<.05, and F (1,54)=4.83, p<.03, respectively. When examining the individual codes, an ANOVA revealed that low-hostile individuals were more likely to engage in eye-gaze avoidance, F(1,54)=5.22, p<.02, and there was a trend for these individuals to express complaints during the conflict task, F(1,54)= 2.93, p=.09. These results contradict what has been reported in the literature, but they may help to explain results previously reported from the current study, in which high-hostile individuals were not found to exhibit increased physiological reactivity, as is typically observed. It is possible that the cynical component of hostility influenced the high-hostile participants' perceptions of and reactions to the tasks, contributing to a disengaged style of interacting and less responsiveness overall. These results indicate that careful consideration of social tasks is required when investigating individual differences in cardiovascular reactivity.

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A-036

CARDIOVASCULAR REACTIVITY AND BEHAVIORAL RESPONDING TO AN INTERPERSONAL STRESSOR TASK

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Social confrontation role-play has been previously used by Larkin et al. (1998) to measure physiological, behavioral, cognitive, and affective responses in regard to individual differences in reactivity during a confrontation task. The current study examined cardiovascular reactivity and behavior during two interpersonal tasks: a conflict task and a comfort task (as described in, Whited & Larkin, 2009). Heart rate was measured continuously, and blood pressure was measured every two minutes during the tasks. Participants were 57 undergraduates at West Virginia University (31 female, 26 male, M age = 20.2). Participants were classified as high reactors if their standardized reactivity change scores fell 1.5 standard deviations above the mean. Behaviors were grouped into classes using the Marital Interaction Coding System (MICS; Wieder & Weiss, 1980). Only behaviors that achieved inter-rater agreement of 80 percent or better were used. Comparisons of high reactors to low reactors revealed that during both tasks low SBP reactors were more likely to use positive verbal statements (Conflict: F (1, 25)=5. 15, $p < .03$; Comfort: F (1, 25)=4.15, $p < .05$). Additionally, there was a trend for high HR reactors to exhibit negative nonverbal cues, F (1, 21)=3. 97, $p = .06$ during the conflict task. During the comfort task, high DBP reactors displayed more positive nonverbal cues, F (1, 26)=8.46, $p < .007$, and there was a trend for high SBP reactors to display more positive nonverbal cues as well, F (1, 25)=3. 61, $p = .06$. These results demonstrate that positive verbal statements are related to a lower reactivity in general. The relation between reactivity and non-verbal cues changes in reference to the situation. In this case, high reactivity predicts positive interpersonal behaviors in a pro-social interaction (i.e. the comfort task), and it predicts negative interpersonal behaviors in an anti-social interaction.

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A-037

THE RELATIONSHIP BETWEEN SPOUSAL SUPPORT FOR EXERCISE AND DIET BEHAVIORS

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Spouses often have similar major cardiovascular risk factors. Less clear is the degree of concordance in spousal support for the health behaviors associated with major risk factors. We examined the degree of concordance between patient and spouse reports of social support for exercise and dietary behavior and the association between concordance and patients' low-density lipoprotein (LDL-C) levels.

We analyzed baseline data from an ongoing randomized, controlled trial evaluating a spousal support intervention to help veteran patients lower their LDL-C. At baseline, patients and spouses (N=251 couples) reported how much support they receive from their spouse for exercise and eating a lipid-lowering diet and had blood drawn for LDL-C. Intraclass correlations (ICC) were calculated to reflect the magnitude of consistency between patient- and spouse-reported spousal support for each behavior. Differences between patient and spouse scores were computed, with positive values indicating patients' perceived support is greater than that of their spouse. Each difference score was entered into a multiple regression model with patient race and age as covariates and LDL-C as the outcome.

Patients were 95% male and 64% White. There was a high level of consistency between patient and spouse reports of support for exercise (ICC = .49, 95%CI = .39 to .58) and a lower level for eating a lipid-lowering diet (ICC =.15, 95%CI = .02 to .27). Patients who perceived greater perceived support than their spouses for exercise (F=4.54, p =.03, std beta = .14) and for eating a lipid-lowering diet (F=3.61, p <.06, std beta = .12) had higher (worse) LDL-C levels.

Given the weaker spousal concordance with diet, spousal support interventions should attempt to increase spousal support for dietary behavior. Patients perceiving greater support than spouses for the relevant lifestyle behaviors may have the greatest potential to reduce cardiovascular risk.

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A-039

DIABETES SELF-CARE RECOMMENDATIONS AND BEHAVIORS AMONG YOUTH WITH TYPE 1 DIABETES

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Self-care (SC) is critical but challenging for youth with type 1 diabetes (T1D). We explored associations between sociodemographic and clinical characteristics, SC, and reported provider recommendations for SC in 408 youth ages 10–23 (mean 14.9 ± 2.9) with T1D$\geq$1 year and a research visit for the SEARCH for Diabetes in Youth Study.

SC behaviors were assessed using an 8-item composite score assessing blood sugar (BS) testing, insulin adjustment, checking ketones, and missed medication (range 2–32; Cronbach alpha=0.76). Higher SC scores were associated with being younger (<16 years), non-Hispanic White (NHW), of higher household income, insulin pump use, less SC autonomy, and HbA1c< 9%. Sex, T1D duration, family composition, insurance type, and depression were not associated with SC behaviors.

Youth were also asked about provider recommendations they received for testing BS and BS targets. Most youth (98%) reported being taught at least 3 of the 4 provider recommendations, but 26% reported not being taught how to adjust medications based on BS. Most (89%) reported being told to test BS$\geq$4 times/day while 72% reported testing this often. Those who reported testing more, and those who were told to test more were younger, NHW, pump users, from a 2-parent household, had higher household income, and HbA1c<7%. Full adherence to testing was reported by 58% of the sample, 28% tested less, and 13% tested more. Those who were younger, had less SC autonomy, and HbA1c<9% were more likely to meet or exceed provider recommendations.

These results may help identify the patients who would benefit from more intensive interventions or re-education efforts to improve self-care.

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A-040

RACIAL DISPARITIES IN THE TREATMENT OF DEPRESSION IN LOW INCOME PATIENTS WITH DIABETES

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OBJECTIVE: Although depression can be treated with antidepressant medications, patients with diabetes and depression often go untreated. The goal of this study was to examine racial disparities in the treatment of depression with antidepressant medication in the southeastern US. METHODS: Cross-sectional data were collected via in-person interview from individuals (71% AA, 60% female, 82% annual incomes<$25,000) recruited from community health centers in 12 southeastern states and enrolled in the Southern Community Cohort Study (SCCS). The SCCS is a prospective epidemiological study designed to explore causes of health disparities in adults 40–79 years of age. A diagnosis of diabetes as well as use of antidepressant medications were self-reported by participants. Among the 65,767 (95% of the SCCS cohort) individuals with available data for diabetes status, antidepressant use, and covariates, 14,279 self-reporting a diagnosis of diabetes were included in this analysis. Binary logistic regression was used to identify factors associated with antidepressant use among those with diabetes. Individuals were classified as not depressed (54.7%), mildly depressed (24.2%), moderately depressed (12.8%), or severely depressed (8.3%) based on the Center for Epidemiologic Studies Depression Scale (CES-D). RESULTS: After controlling for gender, age, insurance, income, education, body mass index, cigarette smoking status, alcohol consumption, and level of depression, AAs with diabetes were significantly less likely to report taking antidepressant medication than Whites with diabetes (AOR=0.32, 95% CI0.29 - 0.35, p<0.0001). CONCLUSIONS: Antidepressant use is much less common among AAs than Whites with diabetes. Reasons for racial disparities in treatment of depression are unclear, but might include a combination of differential diagnosis and treatment by health professionals as well as cultural differences in seeking help for emotional distress.

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A-041

TRANSPORT PHYSICAL ACTIVITY AND DIABETES RISK IN AFRICAN AMERICANS

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Significant disparities in diabetes prevalence exist between African Americans and whites in the US. At least some of this difference may be due to differences in the prevalence of leisure-time physical activity with 24.6% for non-Hispanic black adults reporting regular leisure-time activity compared to 35.4% for non-Hispanic white adults. While leisure-time activity is one source, other sources of physical activity, particularly transport physical activity, may be more relevant in an urban African American population. This study examined the associations of multiple domains of physical activity (leisure, work, household, and transport) to diabetes risk in a sample of low-income, urban African Americans (n=201) and also identified environmental correlates of increased diabetes risk in this population. Self-reported measures of diabetes risk factors, physical activity, and neighborhood environment were obtained. Diabetes risk was calculated using an adaptation of a previously validated measure based on demographic factors, hypertension status, BMI, family history of diabetes, diet, and leisure time physical activity. Diabetes Risk Scores ranged from <.001 to .127 with a mean of .026. A median split (.018) was used to divide the diabetes risk into higher and lower risk groups. Diabetes risk was negatively related to amount of transport physical activity (p=.010) and leisure-time physical activity (p=.001). A number of environmental factors were marginally associated with greater diabetes risk including: poor availability of many destinations within easy walking distance of home, fewer number of nearby destinations, and greater endorsement that traffic makes it difficult to walk in the neighborhood. Among those employed (n=123), number of destinations walked to from work in a usual week was associated with diabetes risk (p=.025). These results suggest that greater diabetes risk in this African American population are associated with lower levels of transport and leisure-time physical activity , and that environmental attributes also contribute to this risk.

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A-042

CHILDREN WITH DIABETES - DEPRESSED, DISTRESSED? A META-ANALYTIC REVIEW

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The results of 22 recent studies were meta-analyzed to determine the extent to which children with diabetes differ from healthy peers in a variety of domains reflecting psychological and physical well-being. Studies were restricted to published reports that compared children with diabetes to a control group. Several domains of psychological and physical well-being were examined, including depression, anxiety, behavioral problems and other constructs. Children with diabetes were more likely than controls to experience a variety of psychological difficulties. However, these effects were small to medium in magnitude and were typically smaller among more recent studies and studies with well-matched control groups. This meta-analysis suggests that children with diabetes are at slightly elevated risk for psychological difficulties. Future work will need to help identify children at the highest risk, and to identify factors associated with resilience.

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A-043

ASSOCIATIONS OF CHILD POSITIVE QUALITIES, PARENTING STRESS, AND SELF-CARE IN ADOLESCENTS WITH TYPE 1 DIABETES

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Predictors of poor self-care behaviors include parenting stress and child psychosocial problems. Little research has examined protective factors related to self-care in youth with type 1 diabetes (T1D). Specifically, a strength-based model linking psychosocial well-being and daily self-care behaviors has not been developed within the family context. The current study examined the relationship of child positive qualities/socially desirable behaviors and daily self-care behaviors in youth with T1D, hypothesizing parenting stress as a mediating factor. Baseline data including measures of parent-reported parenting stress, self-reported child positive qualities, and child-reported T1D self-care from an RCT to promote adolescent T1D adherence were used. Participants were 184 parent-youth dyads, youth age 11 to 14 years. A mediation model (Holmbeck, 2001) was tested controlling for child age, insulin regimen, and ethnicity. White parents and those whose children reported more positive qualities endorsed less parenting stress ($F(4,177)=4.22$, $p = .003$). Positive qualities, younger age, and basal/bolus regimens were associated with reports of more self-care behaviors ($F(4,179) = 10.13$, $p < .001$). With all variables entered into the regression equation, the association between positive qualities and self-care behaviors retained significance and was partially mediated by less parenting stress ($F(5,176)=9.91$, $p < .001$). In sum, positive qualities in youth with T1D were linked with more reported daily self-care behaviors, partly explained by the relationship of child positive qualities to less pediatric parenting stress. These findings highlight the clinical importance of enhancing youths' positive qualities and decreasing pediatric parenting stress in self-care interventions. These factors may be of particular relevance with older youth, those on conventional insulin regimens, and with non-white parents.

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A-044

CAN RISK PERCEPTIONS FOR DIABETES BE CHANGED AND ARE THEY PREDICTIVE OF ACTION TO PREVENT DIABETES?

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BACKGROUND: Large clinical trials have shown that helping people lose weight and increase physical activity can decrease the risk of type 2 diabetes by over 50%. The challenge is to communicate the importance of lifestyle change and motivate patients to action. The purpose of this presentation is to describe risk perceptions for developing diabetes among relatively high risk patients in a primary care setting, examine whether risk perceptions change as a result of brief advice, and investigate whether risk perceptions are predictive of participation in a weight loss program. METHODS: Participants were adult primary care patients with a BMI ≥ 24 kg/m^2 and fasting plasma blood glucose 100–125 mg/dL. After enrollment, all participants were given brief advice to lose weight by changing their diet and exercise and were informed about additional community-based resources to help them make these changes. We evaluated associations between risk perceptions and risk factor burden (categorized as high or low using the ADA Diabetes Risk Test Score) and self-reported attendance at a weight loss program following receipt of advice. RESULTS: Among the 112 participants completing 2 week follow-up to date, 69% were male and 61% were white. There were no significant differences between ADA Risk subgroups $p>.15$. Participants who believed they were less likely than other people to get a serious disease at baseline were more likely to report at the 2 week phone call that they were at increased risk for diabetes, $p=.035$. Risk perceptions at 2 weeks were not related to likelihood of attending a diabetes prevention resource in the community, $p=1.00$. CONCLUSIONS: Prior to counseling, patients with more risk factors did not perceive that they were at higher risk than patients with fewer risk factors. Patients who perceived less risk for serious disease at baseline did perceive more risk of developing diabetes after brief counseling. However, risk perceptions, at least as measured in this study, did not predict participation in a diabetes prevention intervention.

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A-045

PERSONAL MODELS IN YOUTH WITH DIABETES OR SICKLE CELL

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Personal models of illness in youth with type 1 diabetes (T1D) or sickle cell disease (SCD) are not well understood. Structured individual interviews were conducted with a total of 24 youth from a children's hospital medical clinic to investigate the usefulness of Leventhal's Common Sense model of Self-regulation (CSM) among youth, and to identify similarities and differences between disease, age group, and level of disease control. There were 12 interviews within each disease category (T1D and SCD); within each disease group there were four youth from each of three age groups, 8 to 12, 13 to 17, and 18 to 21 years of age. Interviews were analyzed and coded by the primary investigator; coding and analysis was peer-checked by the second investigator. Variables of interest were compared and contrasted between the well- and poorly controlled groups described above. Youth in all three age groups conceptualize disease in terms of identity, cause, timeline, control, and consequences, and both cognitive and emotional dimensions are apparent, supporting CSM use in youth with T1D and SCD. Important differences, as well as similarities, were found. The number and sophistication of illness ideas increased with age. Youth with poor T1D control were more likely to say they didn't know what caused T1D than youth with good control. Only youth with poor control said T1D could be caused by poor eating habits. All interviewed youth with SCD knew their disease was inherited. Diabetes youth discussed more symptoms than did youth with sickle cell. Adolescents and young adults with good T1D control were more likely than those with poor control to view symptoms as a signal to test blood sugar more frequently. Excluding symptoms, disease impacted: 1) the need to perform self-regulatory activities, 2) physical outcomes, 3) health-system activities, 4) emotions, and 5) non-medical impact.

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A-047

PRIMARY CARE PROVIDERS' PERCEPTIONS AND SATISFACTION WITH AN INTEGRATED MENTAL HEALTHCARE MODEL IN A UNIVERSITY SETTING

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Nearly, 44 million people within the United States suffer from mental health disorders.Roughly 80% of these individuals will visit their primary care provider at least once annually. Policy makers have recommended integrated health care models which emphasize collaboration between primary care and mental health providers.Given the growing need for collaborative mental health care, it is important to illuminate the experiences of primary care providers involved in integrated care. This study examined the experiences of primary care providers participating in an integrated mental healthcare service in a university healthcare setting. In this program, doctoral students served as behavioral healthcare providers (BHP) collaborating with primary care providers in the treatment of university students. The program was evaluated using a survey of providers' perceptions and satisfaction with the current program. Participants consisted of 5 Caucasian primary care providers (3 female 1male) ages 49 to 63 years. The sample consisted of 1 physician's assistant, 2 family nurse practitioners, and two nurses. On average the participants rated their ability to treat depression and anxiety as good (75%) while they rated their abilities to treat psychosis, adjustment disorders, bipolar disorder, substance abuse, and somatization as poor (100%).The providers appeared more willing to treat depression and anxiety than any other disorders. The majority of the providers interacted with BHPs during short term care management (66.7%) and transferred information with BHPs only sometimes. The providers were satisfied with the referral relationship (100%); believed that patients at the center received very good to excellent mental health care (100%); and felt that patients' mental healthcare needs were met moderately to very well (100%). These results suggest while this integrative mental health model has been successful in this university environment, there are opportunities for improving communication between BHPs and primary care providers.

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A-048

DOSOMETHINGONTHE.NET: HEALTH MARKETING FOR NEW MEDIA

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DoSomethingOnThe.net is a web-based social marketing tutorial designed to educate emerging media developers about the basics of social marketing strategies and health communication. The program endeavors to expose tomorrow's advertisers and marketers to health oriented content and encourages them to think more carefully about the types strategies they use to develop messages. The development and initial testing of DoSomethingOnThe.net was funded by a small grant from the Colorado Department of Public Health and Environment. The web-based tutorial was designed to take community college students through a series of modules about social marketing and skin cancer prevention, finishing with a module that described a viral video project that students were to build and submit to a user-generated content marketing contest aimed at reducing tanning bed use and improving sun protection behaviors amongst young adults in Colorado. Instructors at Front Range Community College (FRCC) used DoSomethingOnThe.net as their mid-term project. Twenty-one students completed the tutorial and 18 submitted videos to the contest. Expert judges were recruited from the fields of multimedia development, social marketing and skin cancer prevention. Judges found that all students demonstrated use of social marketing techniques and over a third (33%) demonstrated advanced use of social marketing practices. While all students showed they understood the audience, almost half (46%) produced videos that the judges felt would resonate highly with the target audience. All of the students used a clear and accurate skin cancer prevention message with over half (56%) producing videos with very strong skin cancer prevention message. Most (94%) students created original videos that demonstrated their unique understanding of the concepts presented in the tutorial. These promising results encouraged one instructor at FRCC to adopt DoSomethingOnThe.net as a part of his curriculum and inspired two additional versions of DoSomethingOnThe.net.

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A-049

STATISTICAL CONCLUSION VALIDITY IN PUBLISHED RESEARCH: PRELIMINARY FINDINGS FROM NURSING

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Evidence-Based Practice (EBP) refers to the provision of care based on the best available evidence, critical evaluation of the evidence within the care-recipient context, and availability of resources to provide that care. Currently, the use of EBP is the standard in many health disciplines and direction for it comes from published scientific literature. Clinicians look to published findings during reviews of the literature to inform their nursing practice. Educators incorporate the latest evidence into course and clinical activities. Researchers use published findings when planning for anticipated studies, when appraising current state of the science in an area, and when or comparing their study findings with those already published. Health professionals reviewing research to inform practice expect valid analysis and interpretation of the data; however, errors in the analysis of data or reporting of findings have been documented.

The purpose of this inquiry was to examine analytic quality of quantitative studies published within one randomly selected research journal. All articles published in the year 2007 (N=62) were eligible; however, only 34 (55%) met the inclusion criteria. Data were collected on parameters expected to be in published research reports.

Our findings indicate many quantitative studies reviewed from the target journal lacked sufficient description concerning statistical procedures and analyses. Omissions concerning sample size justification (n=13; 59%), procedures for missing data (n=28; 82%), examination of parametric assumptions (n=17; 61%), and indicators useful in determining effect size (n=14; 64%) were prevalent. These findings may be useful to clinicians to caution them about casually accepting research findings. Findings may also be useful for researchers in highlighting the need to adequately describe analytic procedures in the dissemination of quantitative research results. The findings from this preliminary study suggest the science underlying nursing practice can be strengthened when appropriate analytic attention is provided and reported.

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Meritorious Student Poster

A-051

HIV-POSITIVE PATIENTS' ASSESSMENT OF LIFEWINDOWS: A COMPUTER-DELIVERED ARV ADHERENCE INTERVENTION

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Adherence to antiretroviral (ARV) therapy among HIV-positive individuals is essential to maintaining optimal health status and reducing transmission risk. In supporting the role of adherence, a theory-based, individually-tailored, computer-delivered adherence promotion intervention (LifeWindows) was developed and recently reported to be effective in improving and maintaining high adherence levels in those regularly attending clinical care. To have a significant public health impact, such interventions must demonstrate acceptability and positive appraisal from those interacting with the intervention technology and content. The present study examined the feasibility and acceptability of the LifeWindows program from the patients' perspective. A total of 398 (197=intervention, 201 = control) of the 594 LifeWindows participants completed brief exit questionnaires containing structured and open-ended questions regarding their experiences in the project and with the intervention. More than two thirds of respondents indicated the computer was easy to use and would continue using the program without study incentives. Overall, the program was well received by participants. Those in the intervention arm were also significantly more likely to report the program helped them to take their medications as prescribed (χ2 = 11.77, p=0.003), finding the program to be informative/helpful (χ2 = 6.722, p=0.010). There was no difference by arm regarding recommendations of what to add or remove from the program. Findings indicate that an interactive computer-based approach to ARV adherence enhancement is feasible and well-accepted by patients, including those with limited computer skills, demonstrating a practical clinic-based approach that requires minimal additional clinic resources to implement or sustain.

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A-052

ACCEPTABILITY OF CIRCUMCISION AMONG HISPANIC MEN AND WOMEN IN STD AND PRENATAL CLINICS

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Male circumcision (MC) has been demonstrated to significantly reduce HIV, HPV and HSV-2 transmission. While rates of HIV are higher among minorities, rates of MC are particularly low in the US among Hispanic males. We conducted two studies of MC acceptability among Hispanic men and women in Miami, Florida. This study examines qualitative data obtained from participants recruited from Miami STD and Prenatal Clinics. Gender concordant focus groups were held to assess the acceptability of adult and neonate MC. STD Clinic focus groups (3 male, 3 female) and Prenatal Clinic focus groups (1 male, 4 female) were lead by facilitators. Qualitative data was analyzed for dominant themes by site and gender group and collapsed into overarching themes by site. Participants' attitudes differed by site and gender. STD Clinic men associated acceptability with sexual performance, women's anticipated responses to circumcision and scientific proof of STD protection, while Prenatal Clinic fathers associated acceptability with the attitudes of health care professionals, knowledge about the procedure and hygiene. STD Clinic women focused on experiences with previous partners and hygiene while Prenatal clinic mothers focused on cost, cultural differences, circumcised family members and decision making for circumcising children. Sites also differed as a function of perceived risk, STD and circumcision knowledge, and the distal or proximal relevance of circumcision for neonates versus adults. This study illustrates the differing attitudes on circumcision between genders and within clinical populations and Hispanic culture groups. Results suggest that promotion of MC as a strategy to reduce HIV transmission must include a variety of culturally tailored messages targeting MC for both adults and neonates. Additionally, obtaining the support of pediatricians and insurance providers for neonatal MC as a long range HIV risk reduction strategy is addressed. Study supported by NIH grants P30AI073961 & P60MD002266.

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A-053

SOCIAL SUPPORT MEDIATES THE RELATIONSHIP BETWEEN HIV STIGMA, DEPRESSION, AND QUALITY OF LIFE AMONG PEOPLE LIVING WITH HIV IN BEIJING, CHINA

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Stigma is pervasive toward people living with HIV in China, as it has been associated with poor service utilization, psychosocial distress, and poor quality of life. In an effort to isolate mechanisms that can reduce HIV stigma or diminish its negative consequences, we examined whether social support mediates the relationship between enacted stigma, depression, and quality of life among 120 Chinese people living with HIV seeking treatment at Ditan Hospital in Beijing, China. Overall, social support was significantly associated with less stigma, less depression, and better quality of life. Using regression, we found that social support was a full mediator between stigma and depression as well as stigma and quality of life. The findings suggest that social support is an important mechanism that can reduce the impact of stigma on poor psychosocial health outcomes for people living with HIV in Beijing, China.

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A-054

PREVENTIVE HEALTH BEHAVIORS AMONG HIV+MOTHERS

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HIV is increasingly affecting women in the US. As HIV is now a chronic condition, women are living longer, raising families and managing secondary health issues. Engagement in preventive health behaviors is an important means to increase quality of life among HIV+mothers. We examined baseline data from the Making Our Mothers Stronger (MOMS) Project, a randomized controlled trial comparing parenting and health-focused interventions for a sample of 116 HIV+mothers in the southern US. Preventive behaviors examined were: 1) mammogram, 2) breast examination, 3) PAP test, 4) physical activity, 5) smoking cessation, 6) medication adherence and 7) condom use. About 43% of participants had missed one or more doses of antiretroviral medications in the past 7 days. Over 90% obtained a PAP exam within the past year, and 71% obtained a breast exam in the past year. However, only 54.3% engaged in weekly exercise while 57% reported daily tobacco use. Over 75% of mothers reported a condom use rate of 50% or higher and African American mothers ($p<.01$) and older mothers ($p<.05$) were more likely to use condoms consistently. Mothers with children older than 9 years of age were more likely to have had a PAP test in last 12 months. ($p< .01$) To improve their quality of life and health status, HIV+mothers should receive targeted, culturally-relevant intervention to improve their health behaviors and participate in basic health screenings beyond regular HIV care.

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A-055

CONDOM RESPONSIBILITY: WHO'S THE BOSS?

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The goals of this pilot study were: to determine if condom responsibility was affected by vignette perspective (i.e. 2nd or 3rd person) or if decisions were made based on beliefs that a specific gender should be responsible for providing or suggesting condom use. 130 participants read 2 vignettes, one written in the 2nd person and one in the 3rd person. ANOVAs were used to test hypotheses. Vignette perspective significantly impacted beliefs about responsibility for suggesting condom use ($F = 13.54$, $p=0.00$, $\eta2 = 0.10$). Specifically, men and women were more likely to indicate responsibility to suggest condom use themselves (77%) if the vignette was written in the second person, than place the responsibility on their partner (8.5%), or both themself and their partner (13.8%). In contrast, if the vignette was written in the third person, beliefs about responsibility for suggesting condom use were more diverse (self: 50%; partner: 30%; both: 20%). No significant effect was found for perspective on beliefs about responsibility for providing the condom. Participants instead demonstrated a belief, across gender and perspective, that the male partner (3rd: 77.7%; to 78.5%) should be responsible for providing condoms (woman: 12.3% to 13.8%; both: 7.6% to 9.9%). Suggesting a gender bias in the belief about who is responsible for the provision of condoms. Overall, the results support the use of downward social comparison biases when determining responsibility for suggesting condom use, in that students chose the socially appropriate behavior when the vignette referenced themselves versus an unknown other. In contrast, gender biases were more likely to be used for deciding who was responsible for actually providing the condom.

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A-056

NEGOTIATE CONDOMS NOW OR DELAY: WHAT VIRTUAL SELF-REGULATORY CHOICES IN THE PRESENT MAY TELL US ABOUT SELF-EFFICACY AND SEXUAL RISK-TAKING IN THE PAST

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A key component of HIV risk-reduction is successfully negotiating safer sex, which may often include initiating a discussion about condoms. Men who have sex with men (MSM) may delay condom initiation until a point in the scenario when "the heat of the moment" may overwhelm safer sex intentions. Because it is difficult to measure such delays in ongoing real-life sexual interactions, we examined early versus late initiation of condom discussions in "virtual" interactions. We hypothesized that (1) a history of unprotected anal intercourse (UAI) would correlate with lower levels of condom initiation self-efficacy; (2) later (vs. earlier) virtual condom initiation choices would be associated with lower mean levels of self-efficacy and higher mean UAI rates (prior 3 months measured at baseline). To examine these hypotheses, 204 MSM self-reported rates of prior UAI and responded to a condom initiation self-efficacy scale. MSM then interacted with a video-based, HIV-prevention training simulation in which they made virtual decisions in sexual contexts similar to those they might encounter in reality. Early in the scenario, MSM chose whether they wanted to initiate a conversation then or whether they felt more comfortable waiting a little while longer. In both cases, MSM could initiate the conversation either directly or indirectly. As hypothesized, higher rates of prior UAI were associated with lower levels of self-efficacy ($Rho=.226$, $p<.001$). Furthermore, early initiators (compared to those who waited), had reported higher levels of baseline self-efficacy, $t(1, 202)=-2.70$, $p=.008$) as well as lower levels of prior real-life UAI, $z=-2.02$, $p=.043$. No effects were found for direct/indirect strategy choice (p's>.05). In addition to further explicating the complex relationship between sexual risk-taking and self-regulatory risk-avoidance strategies, our findings suggest that virtual environments may be useful in unobtrusively measuring psychological states relevant to risk-reduction.

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A-057

SELF-EFFICACY FOR MANAGING HIV: LIFE REGARD, MINDFULNESS, AND FORGIVENESS

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Self-efficacy, a personal sense of control, facilitates behavior change. Believing in our ability at problem solving, we are more inclined to act and feel more committed to the decision (Bandura, 1997). Life regard, having a sense of purpose and meaning in life, may enhance a personal sense of control over our health. Similarly, being aware of changes in health may also empower us to feel a sense of control over our well being. Forgiving failed goals, e.g. missing a dose, may encourage HIV+individuals to control what they can fix and dismiss what they cannot. Forgiveness may be the wisdom required to distinguish between controllable and uncontrollable factors. Lazarus and Folkman's (1984) coping deficit theory suggests that how we appraise stress (e.g. using life regard, mindfulness, and forgiveness) may influence how we manage HIV. We hypothesize that life regard, mindfulness, and forgiveness will be significantly positively associated with self-efficacy for managing HIV. Data came from 73 HIV+adults (35 women) from a Dallas-based AIDS service organization. Mean sample age was 47.4(SD=8.2) years, 62% were African American, 33% European American, 3% Latino, and 2% Other. On average participants reported 13.16(SD=3.3) years of education and 37 participants earned less than $10,000 annually. The Life Regard Index Revised (α=.93), Kentucky Inventory of Mindfulness (α=.88), and the Heartland Forgiveness Scale (α=.76) were our independent variables. Our dependent variable was the Self-Efficacy for Managing a Chronic Disease Scale (α=.91). After controlling for gender, ethnicity, and income a regression analysis revealed that only life regard (β=.51, t=4.21, p<.001) was significantly correlated with self-efficacy, and accounted for 26% of variance in our model (Adj. R^2= .26,F(6, 66)=5.26, p<.001). Life regard may buffer stress and enhance self-efficacy, as it is negatively correlated with depressive symptoms and positively correlated with hope (Mascaro & Rosen, 2006). Incorporating factors that improve self-efficacy into program design may improve medical adherence in the management of HIV.

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A-058

HIV SUPER-INFECTION BELIEFS AND SEROCONCORDANT SEXUAL PRACTICES OF PEOPLE LIVING WITH HIV/AIDS

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Background: People infected with HIV can become re-infected with a new viral strain resulting in a potentially more virulent and treatment resistant virus known as HIV super-infection. Although HIV super-infection is relatively rare, people living with HIV/AIDS may believe that HIV super-infection is common and these beliefs, reality-based or not, may have significant effects on behavior. Despite the emergence of HIV super-infection, there is surprisingly little research on the sexual behavior ramifications of super-infection among people living with HIV/AIDS. Purpose: The current study examined HIV super-infection beliefs and sexual behaviors among 490 men and women living with HIV/AIDS. Methods: Participants were 490 people living with HIV/AIDS recruited from community services in Atlanta, GA. Participants completed measures of demographics, health status, health beliefs, and sexual behaviors using computerized interviews. Results: Seventy-nine percent of participants were aware of HIV super-infection. Greater than 80% believed that HIV re-infection is detrimental to the health of HIV positive persons and 70% indicated having changed their sexual practices in response to super-infection risks. Beliefs about super-infection were associated with fewer same HIV status (seroconcordant) sex partners, lower rates of unprotected sex with seroconcordant and serodiscordant sex partners, and less total seroconcordant intercourse. Super-infection beliefs were also significantly related to greater condom use with seroconcordant partners. Hierarchical multiple regression predicting protected sex behaviors with seroconcordant partners showed that older age and less alcohol use were associated with greater protected behaviors. In addition, HIV super-infection beliefs predicted condom protected sexual behavior over and above common correlates of sexual risks, including age and alcohol use. Conclusions: People living with HIV commonly select same HIV status sex partners to avoid infecting others with HIV and their beliefs about HIV super-infection impact their seroconcordant sexual relationships.

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A-060

MINDFULNESS & HEALTH BEHAVIORS

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Inadequate nutrition and physical inactivity have been recognized as key sources of morbidity and mortality (U.S. Dept. of Health and Human Services and U.S. Dept. of Agriculture, 2005). The current study is interested in integrating mindfulness into interventions geared towards changing health behaviors. Mindfulness is a Buddhist-based concept that has received an increasing amount of attention by clinicians and researchers in the field of psychology and medicine over the past 20 years (Bishop et al., 2004). Although mindfulness has its roots in Buddhist spiritual practices, the integration of mindfulness into medical and mental health treatment has transpired primarily in a secular manner (Baer, 2003). Mindfulness has already been incorporated into the treatment of many psychological and physical disorders (e.g., Kabat-Zinn, 2003). The ultimate goal of this line of research is to develop and test a mindfulness-based intervention for health behavior change. As an initial step, the current study examined whether mindfulness is related to diet, physical activity, and self-efficacy. Method: Participants (204 females and 93 males, mean age = 20.9 years) were recruited from the Introduction to Psychology subject pool at the University of Montana for participation in this study. Participants completed the Five Factor Mindfulness Questionnaire (FFMQ), the FFMQ modified for mindful eating, as well as measures of physical activity, diet, self-efficacy, and stress. Results: Certain aspects of mindfulness appear to be related to specific health behaviors, lending partial support to the research hypotheses. Degree of mindfulness in everyday life was correlated with physical activity, fruit and vegetable intake, fat intake (males only), and self-efficacy. The results suggest that different aspects of mindfulness are important for males versus females. Clinical implications and future research areas are discussed.

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A-061

TIRED OF PREJUDICE: THE SELF-REGULATORY EFFECT OF DISCRIMINATION ON HEALTH-RELATED BEHAVIORS

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Within a self-regulatory framework, three studies examined the causal effect of discrimination on health-related behaviors. In study 1, reflection upon a past personal experience of discrimination led to more unhealthy food-related decision-making. Study 2 revealed increased endorsement of unhealthy food items following a discriminatory experience for individuals who experienced low levels of past-year discrimination. Individuals reporting high levels of discrimination within the past year endorsed high numbers of unhealthy foods regardless of experimental condition. Also, individuals who decided to accept a snack from the experimenter were marginally more likely to select an unhealthy option after experiencing discrimination. Finally, study 3 found that the anticipation of conversing with an individual who espoused benevolently sexist attitudes marginally increased individuals' willingness to accept a snack from an experimenter than did the anticipation of hostile sexism. For individuals who accepted a snack, higher levels of gender identification were found to protect individuals from choosing an unhealthy snack over a healthy one. These results provide initial evidence that the experience of discrimination over several temporal formats can result in a reduced ability to refrain from unhealthy eating behavior. These findings represent an important advance in framing how exactly discrimination may affect health through interruptions in individuals' ability to self-regulate in health behavior-related domains.

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A-062

INTENTIONS MEDIATE PROGRAM IMPACT ON INCREASED FRUIT AND VEGETABLE INTAKE FOLLOWING A NUTRITION EDUCATION INTERVENTION: VALIDATION OF A DIETARY INTENTIONS SCALE

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Nutritional factors, including fruit and vegetable intake, play significant roles in cancer risk, and interventions specifically tailored to high-risk subgroups to improve diet are needed. We conducted a seven-session small group nutrition education intervention with African American women in Washington, D.C. public housing communities. Data collection included three 24-hour dietary recalls at each of three timepoints (baseline, post-intervention, and four month follow-up). Here we examine the psychometric and predictive properties of our scale measuring participant intentions for nutritional behavior change, and investigate whether intentions predict dietary change, and possibly mediate the impact of program attendance on diet.

Our 8-item scale (Cronbach's alpha=0.872), collected at both post-intervention and follow-up, measured planned behavior change regarding shopping, menu planning, food preparation, and consumption. Participants generally expressed high levels of intentions to change behaviors at post-intervention (M: 25.8 [10.0-32.0] and follow- up (M: 25.7 [8.0- 32.0]). Participants with better attendance had more positive attitudes (26.52 vs 23.93, $p < 0.05$). Using multi-level random effects models, we examined possible mediating effects of intentions on the relationship of attendance to improvements in actual fruit and vegetable consumption. Among women attending six or seven sessions, increased fruit and vegetable consumption at four months was significantly associated with higher intention scale scores. At four month follow-up, we observed an increase in fruit and vegetable intake of 0.13 servings per day ($p<0.04$) for each one unit increase in scale score at post-intervention, and an increase of 0.21 servings per day ($p<0.001$) for each one unit increase in scale score at follow-up. This suggests that women who express sustained intention to change behavior are most likely to do so.

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A-063

DO YOU LIKE NON-FAT MILK? CAN YOU TASTE THE DIFFERENCE?

Ftan 2008 Obesity Workgroup, 2008

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Large parts of the world are experiencing an epidemic of obesity. High fat nutrition choices, such as whole milk, are contributing factors. Studies have shown that samples of grocery shoppers could not reliably identify fat levels or taste across different fat levels. Our study investigated if individuals 1) showed taste preferences and 2) could correctly identify the different levels of fat in milk. University students (n = 20; 14 females; 6 males; 15 medicine, 3 psychology, 1 biology and 1 pharmacy students) from across Germany who enrolled in a summer course tasted room temperature pasteurized milk of 4 different levels of fat (0.1%, 1.5%, 2.7%, 3.5%) in random order. For uniformity, white plastic cups were used. The students rated whether they liked the taste and then ordered the milk from lowest to highest fat content. There was no clear preference by fat content: 11 liked 0.1%, 12 liked 1.5%, 14 liked 2.7%, and 13 liked 3.5% milk. We observed some gender differences. 6/6 males versus 4/14 females liked 0.1%. 5/6 males versus 8/14 females liked 3.5%. The majority of subjects (15/20) correctly identified the 0.1% milk. However, they could not reliably differentiate the milk with higher fat levels (5/20 correctly identified 1.5%, 3/20 identified 2.7%, and 7/20 identified 3.5%). Only 3/20 correctly identified all four products; conversely, 3/20 did not assign any milk correctly. In agreement with previous research, choosing milk with a lower fat content does not affect how subjects like the taste of milk, but consuming lower fat milk may have beneficial health implications.

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A-065

WEIGHT LOSS FOLLOWING BARIATRIC SURGERY FOR VETERANS WITH AND WITHOUT PSYCHIATRIC DIAGNOSES

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Bariatric surgery is considered highly effective for morbidly obese patients but many factors impact the success and maintenance of weight loss. Conflicting evidence exists regarding the effect of psychiatric diagnosis on post-surgery weight loss with limited knowledge of this among Veterans. The current study investigated the differential impact of psychiatric conditions on post-surgery weight loss. The sample included 61 men (61%) and women (39%) who underwent bariatric surgery between 2003 & 2008. Mean (SD) age, weight, and BMI at surgery was 48.2 (17.3), 303.1 (48.7), and 45.5 (5.9), respectively. Participants lost 68.5±40.2 lbs. (-5.4 to 164.4) with 41% of the sample undergoing gastric bypass and 59% lap band. About 54% of the sample were diagnosed with depression, 28% with anxiety, and 69% of the total sample had ≥ 1 psychiatric diagnosis ($M= 1.3 \pm 1.4$). In addition to depression and anxiety disorder, psychiatric diagnoses included psychosis, bipolar, and axis II disorders. Results indicate that patients with depression, anxiety, or any psychiatric disorder lost similar amounts of weight post- surgery compared to those without. Patients with depression, anxiety, or any psychiatric diagnosis lost a mean (SD) of 68.0 (44.2), 83.6 (50.8), 67.9 (43.5) lbs. respectively. Age and sex were not associated with weight loss in this sample but pre-surgery weight ($r =.45$, $p < .001$), surgery type ($r =.50$, $p < .001$), and time to follow-up ($r =.37$, $p < .01$) were significantly correlated with post-surgery weight loss. A multiple regression model including these variables significantly predicted total weight loss (R2=.47, Adj R2=.42, F (5, 53)=9.21, $p < .001$). Adding psychiatric diagnoses to the model did not improve the explained variance. These findings suggest that Veterans with psychiatric illness can achieve similar weight losses post-surgery as their non-psychiatric counterparts, and should not be excluded from surgery based on this information alone.

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A-066

SAGITTAL ABDOMINAL DIAMETER AND CARDIOVASCULAR RISK IN ADOLESCENT BOYS WITH ELEVATED BLOOD PRESSURE

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Sagittal abdominal diameter (SAD), a validated measure of visceral adiposity, has been linked to cardiovascular (CV) risk factors. This study examined the relationship of SAD quartile cutoffs and lipid levels, inflammation and insulin resistance in boys with elevated blood pressure.

The participants, 120 boys ages 15–17, were screened as part of a larger study of adolescents with elevated blood pressure (BP) (systolic BP and/or diastolic BP≥the 90th percentile adjusted for gender, age, and height). The following were assessed: SAD while supine; systolic and diastolic BP; low density lipoprotein cholesterol (LDL-C); high density lipoprotein cholesterol (HDL-C), total cholesterol (TC), c-reactive protein (CRP), and insulin resistance measured by the homeostatic model assessment (HOMA). The sample was divided into quartiles based on SAD in cm: quartile (Q)1 (< 17.85), Q2 (17.85-20.19), Q3 (20.20–24.49), and Q4 (≥ 24.50).

Differences among the quartile groups were observed for log triglycerides, LDL-C, HOMA, TC, HDL-C and log CRP (all $ps < .01$). Post hoc tests (all $ps < .05$) revealed that boys in Q4 ($M=4.9$) had higher HOMA than the other 3 groups. Similar results were observed for log CRP and log triglycerides with Q4 and Q3 higher than Q1 and Q2. Lower HDL-C (in mg/dl) was seen in Q3 ($M=42.5$) and Q4 ($M=39.3$) versus Q2 ($M=49.8$). Boys in Q4 ($M=111.7$) had higher LDL-C (in mg/dl) than those in Q1 ($M=91.8$) and Q2 ($M=91.6$). Higher TC (in mg/dl) was observed in Q4 ($M=172.8$) and Q3 ($M=172.1$) than in Q1 ($M=150.2$).

These findings indicate that clinically relevant values for lipids, inflammation, and insulin resistance characterized adolescent boys in the highest SAD quartile. Furthermore, boys with a SAD at or above the 50th percentile showed a significant risk profile for TC, HDL-C and triglycerides. Thus, even a moderate amount of visceral adiposity in adolescent boys has implications for CV health and should be targeted for reduction through healthy eating and increased physical activity.

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A-067

PERCEPTIONS OF BODY WEIGHT AND WEIGHT CONCERN AMONG AFRICAN AMERICAN WOMEN

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Background: Obesity is a major health concern for African American women. Approximately 80% of African American women are overweight or obese. An individual's perception of weight and concern for their own weight are thought to be good indicators of their likelihood to engage in efforts to maintain or reduce their weight. Objective: The objective of this study was to examine body image perceptions and weight concern among African American women. Methods: A survey was administered to participants recruited at an annual festival in New Orleans, Louisiana. Participants in the study were a random sample (N=188) of African American women who completed measures on socioeconomic demographics, health status, body image perceptions, and overconcern with weight and shape. Self-reported height and weight measures were used to compute body mass index (BMI). Results: The average age of the respondents was 43.4 years (SD=10.8) and the mean BMI was 30.1 (SD=6.87). When asked to classify their own weight status, 47.9% selected "a little overweight" and 29.8% chose "very overweight." Based on BMI, the majority (42.6%) of the respondents were categorized as obese and 33.5% were overweight. A greater number of African American women reported weight concern (e.g., worried about having fat on their body) than expected (M= 3.27, SD=1.0). BMI was positively correlated with overconcern with weight and shape (r=.349, p<.01) indicating that respondents with a higher BMI report greater concern about weight. The mean body image discrepancy (difference between current and ideal body image) for the sample was 1.42 (SD=1.37). A greater percentage of overweight and obese African American women had a body image discrepancy rating of >0 indicating their current body image was heavier than their ideal body image. Conclusion: African American women with a higher BMI report concern for their weight and a greater body image discrepancy. Additional health education research should focus on the factors that inhibit the transition of weight concern to active weight reduction behaviors among African American women.

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A-068

CHILDCARE PROVIDER KNOWLEDGE BELIEFS BEHAVIORS AND INTENTIONS REGARDING INFANT/TODDLER WEIGHT, FEEDING AND PHYSICAL ACTIVITY (PA)

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Childcare settings are one of the environments in which children receive nutrition and are exposed to PA. Providers may influence the development of eating and activity patterns. In this pilot study of 38 providers (X age=40, range 18–61; X BMI=32.6±7.5; 84% at most some col; 74% B, 58% commercial, 42% homecare; 84% on food programs) BMI was measured and women completed the Knowledge Beliefs and Intentions Questionnaire-Caregiver (KBIQ-C), which asseses knowledge, attitudes, beliefs and intentions regarding responsibility for child nutrition and weight, whether healthy living is provided/modeled (1–7 strongly agree (SA) to strongly disagree). Providers SA in helping children live a healthy lifestyle (X=1±.23), that overweight is not healthy in young children (X=1.45±1.3), keeping children from becoming overweight is important (X=1.5±1.2), and good nutrition includes a variety of foods (X=1.34±.85). However responses varied on whether it is "ok to feed young children some junk food" (X=4.5±1.9). 53% knew that fruits and vegetables (F&V) should be started at 6mos. Feeding sweets (candy, cake and cookies) by 6/8mos was endorsed by 9%, 40% by 1 yr and 34% by 2 yrs. Knowledge about the benefits of eating 5–9 F&V@day was mixed, with the avg. indicating slight agreement (X=3.2 ±2.0). 79% of caregivers provided PA, believed PA to be important and believed modeling of PA would teach the children to be active (both 74%). However, 45% slightly to SA that children learn to be physically active on their own. 79% SA that healthy eating is in their control, but only 47% SA that PA is in their control. Provider BMI was not correlated with knowledge, beliefs or behaviors about healthy eating and PA for themselves or the children, but was inversely related with intentions to help children lead a healthy lifestyle (r=-.39, p<.02). This suggests that despite good intentions, there are knowledge and attitude gaps which may contribute to an obesigenic environment. Childcare environments for very young children need to be the focus of future research and interventions.

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A-069

ASSOCIATIONS BETWEEN SMOKING AND BODY WEIGHT AMONG YOUNG ADULTS: RESULTS FROM THE MINNESOTA ADOLESCENT COMMUNITY COHORT STUDY

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Introduction: Little research has focused on the relationship between weight status and smoking status, especially among young adults. Although there is an inverse association between smoking and body weight among adults, this relationship may not be as clear earlier in the lifespan. Methods: Data from the Minnesota Adolescent Community Cohort study (n=2,657) were used to evaluate the cross-sectional and longitudinal association between body mass index (BMI) and number of days the participant smoked in the past month. Participants were surveyed by phone every six months over a 2.5 year period, and those aged 18 or older were included in the study sample. Results: The mean age at baseline was 19.9 years (range: 18 - 22). Approximately 30% reported past month smoking at each time point over the 2.5 years of follow-up. At baseline, 65% of the sample was categorized as normal weight, 25% were overweight, and 10% were obese, based on the CDC categories for weight status. After adjustment for age, the cross-sectional associations between BMI and smoking were not statistically significant, although overweight and obese participants generally smoked more days than normal weight participants. Compared to normal weight young adults, overweight young adults smoked one and a half more days in the past month (p<0.01), after adjustment for age. Obese young adults smoked nearly a half a day more than their normal weight counterparts, although this was not statistically significant (p=0.12). Conclusion: Over time, young adults with a higher BMI status reported smoking more days than those with normal weight. Despite the conventional wisdom common among young people, smokers were not more likely to weigh less nor do they gain less over time. In fact our study suggests that smokers are actually at increased risk for weight gain.

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A-070

SOCIAL PROBLEM-SOLVING INVENTORY-REVISED: PSYCHOMETRIC PROPERTIES IN WEIGHT LOSS PARTICIPANTS

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Few studies have measured the effect of problem solving on weight loss success even though it has been traditionally included in behavioral weight loss interventions. We evaluated the psychometric properties of the Social Problem Solving Inventory-Revised (SPSI-R), which has a total scale and five subscales: rational problem orientation (RPO), negative problem orientation, rational problem solving (RPS), impulsive/careless style, and avoidance style. This is a secondary data analysis of baseline data from the SMART trial, a behavioral weight loss study (N=210). We used Cronbach's alpha value to evaluate internal consistency and confirmatory factor analysis to examine construct validity. We used correlational analyses to examine the convergent validity of the SPSI-R with instruments measuring barriers to healthy eating, cholesterol-lowering self-efficacy, and binge eating, as well as its predictive validity with stress, mental health, diet, and exercise behaviors. The sample was white (78%), female (85%), on average 47 years old, with a mean BMI of 34. Cronbach's alpha was .95 for the total score and ranged from .67 (RPO) to .92 (RPS) for subscales. The hypothesized five factor structure did not fit the data well ($\chi 2$=1750, p=.00; RMSEA=.09; CFI=.89). The SPSI-R was negatively associated with barriers to healthy eating (r=-.31, p<.01) and binge eating (r=-.24, p<.01) and positively associated with self-efficacy in following a cholesterol-lowering diet (r=.22, p<.01). The SPSI-R significantly (p<.05) predicted health behaviors and outcomes where weight loss participants indicated better problem-solving skills: consumed fewer calories (r=-.19) and fat grams (r=-.17), exercised more frequently (r=.19), reported lower psychological distress (r=-.48), and higher mental quality of life (r=.40). The SPSI-R appears to be a promising tool to predict health behaviors and outcomes in weight loss studies, however, further work in a larger sample is needed to confirm the five-factor structure of the SPSI-R.

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A-071

USING POSITIVE DEVIANCE TO IDENTIFY EFFECTIVE WEIGHT CONTROL PRACTICES IN THE US

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Long-term weight loss maintenance is far less successful than short-term weight loss. Our objective was to identify effective weight control practices for weight loss maintenance and short-term weight loss. We applied principles of positive deviance to create a survey of the 36 most common weight control practices using data collected during in-depth interviews with 65 individuals successful in long-term weight loss maintenance. We then surveyed a random sample of 1255 US adults on their use of each of 36 weight control practices in the past week, as well as two measures of weight control success: success in short-term weight loss (>5 lbs lost in the current attempt) and long-term weight loss (≥ 10% lost and maintained for ≥ 1 year among those who were overweight at their maximum weight). RESULTS: Though 15 diet-related practices (e.g., "eat plenty of low-fat sources of protein") were associated with short-term success, only 7 were associated with long-term success. Only one of 6 exercise-related practices (e.g., "follow a consistent exercise routine") was associated with long-term success. Four cognitive practices (e.g., "think about your goal for a healthy weight") were associated with long-term success but not short-term success. Though tracking caloric intake and exercise were associated with short-term success, only one tracking practice, self-weighing, was associated with long-term success. CONCLUSIONS: After initial success in weight loss, it appears that further success requires a major shift in practices, which may account for the low rates of long-term success. Future studies may use this method to identify the most effective weight control practices to encourage at different periods in the weight loss process.

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A-072

REDUCED SLEEP QUALITY AND INCREASED STRESS RELATED TO INCREASE IN ADIPOSITY

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Obesity in America is a growing problem that has been resistant to intervention strategies. Thus, new mechanistic pathways and intervention targets are needed. Increased psychological distress has been associated with increased adiposity in some studies but not others. One pathway by which stress may impact adiposity is sleep. Poor sleep quality can disrupt hormone levels and may lead to increases in adiposity by contributing to increases in eating and reductions in exercise. Chronic stress has been shown to increase cortisol and high bedtime levels of cortisol are associated with poor sleep quality.

We tested the hypothesis that elevated levels of perceived stress (PSS) and poor sleep quality (PSQI) would be related to increases in adiposity. Using a cross-sectional population of 158 women from the greater Seattle area we conducted a series of linear regressions controlling for age, exercise, and consumption of high fat foods. We found a significant interaction between stress and sleep quality predicting waist circumference (WC) (β=-0.14, s.e.= 0.06, p<0.02), trend towards significance with body mass index (BMI) (β= -0.04, s.e.= 0.21, p=0.06); and no association with waist-to-hip ratio (WHR) (β=0.00, s.e.= 0.00, p=n.s). These findings suggest that for cases where sleep quality is poor, increased stress leads to an increase in WC and BMI independent of exercise, age, and eating of fatty foods. Future directions include considering biological correlates of stress and sleep, such as salivary cortisol and serum leptin levels.

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A-073

THE ROLE OF EATING STYLE IN CENTRAL OBESITY AND INSULIN RESISTANCE

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Maladaptive eating style has been suggested to increase risk for central obesity and insulin resistance, conditions that have been linked to type 2 diabetes mellitus and atherosclerotic disease. Thus, the purpose of this study was to examine eating styles (i.e., restrained, emotional, and external eating) in 112 healthy men and women, aged 18–55 yr, and evaluate their relationship with central obesity, indexed by waist girth, and insulin sensitivity, obtained using the euglycemic hyperinsulinemia clamp. Eating styles were assessed by the Dutch Eating Behavior Questionnaire, Three-Factor Eating Questionnaire, and Restraint Scale. Maladaptive eating style was hypothesized to directly predict greater central obesity and insulin resistance. Structural equation modeling (SEM) was used to evaluate this hypothesis. Aims of SEM analyses were to: 1) using confirmatory factor analysis (CFA), validate constructs of restrained, emotional, and external eating, and examine whether these 3 first-order factors load onto a second-order factor, and 2) examine hybrid SEM models to assess the effect of eating style on waist girth and insulin sensitivity. CFA results showed that the final measurement model of eating style fit the data [χ2(7)=6.37, p=0.50], with standardized factor loadings >0.5 (p<.05). Eating style indicators loaded to create 3 factors: restrained, emotional, and external eating. These factors each loaded significantly onto a second-order latent factor, maladaptive eating style. The final hybrid model fit the data [χ2(20)=30.65, p=0.06], and results revealed that maladaptive eating style was directly related to greater waist girth, an effect that could be fully accounted for by a direct effect of restrained eating on waist girth (β=0.36, p<0.05) but not on insulin sensitivity (β=-0.02,n.s.). Greater waist girth, in turn, was directly related to worse insulin sensitivity (β=-0.58, p<0.05). These findings suggest that maladaptive eating style, particularly restrained eating, may be linked to increased cardiometabolic risk via central obesity.

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A-074

EMOTIONAL EATING AS COPING: UNDERSTANDING THE ROLE OF ALEXITHYMIA AND FOOD TYPE

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Emotional eating (EE) is reported in binge eaters, restrained eaters, obese, and healthy individuals. Models of coping, defined as efforts to reduce or minimize stress, have not been applied in the EE literature, despite evidence that some individuals eat during stress. Also, the link between alexithymia (difficulty expressing emotions in words), EE, and coping has not been studied. The present study sought to 1) determine if eating buffers the stress response across 3 outcomes (attention/distraction, blood pressure, and mood) more for those who report greater tendency for EE; 2) compare comfort food (M&Ms) with non-comfort food (grapes); and 3) explore the function of EE and alexithymia in the context of coping. 117 healthy, overweight women (M age 35±11; M BMI 31±5.9) were randomly assigned 1 of 2 films (stressful/neutral) and foods (M&Ms/grapes). Measures of physiology, mood, and hedonic ratings were collected repeatedly during a 2-hour lab visit. The diverse sample (47% Caucasian,30% African American,9% African,9% Hispanic,4% Asian) reported an active coping style (93%), minimal depressive (M BDI-II 8.28±8.48) or anxiety symptoms (M BAI 7.79±7.87), & moderate alexithymia (M TAS-20 43.29±10.92). Multiple regression analysis was used to examine physiological and mood changes. Systolic blood pressure reactivity was blunted during stress when eating M&Ms but not grapes (p<0.05). Eating either food distracted emotional eaters from the stressor (p<0.01) and improved mood in those with lower alexithymia. However, for those higher in alexithymia, mood improved only when eating M&Ms (p< 0.05). Finally, those reporting more EE also reported more avoidant coping methods(p<0.05). Emotional eaters may use food to distract themselves from stressors and to regulate mood, particularly for those higher in alexithymia. Comfort food was a more salient mood regulator than non-comfort food, despite reported hedonic preferences for non-comfort food. Future studies should explore the relationship between EE, coping style, and alexithymia.

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A-075

SELF-MONITORING AND THE MAINTENANCE OF LOST WEIGHT IN LIFESTYLE TREATMENT OF OBESITY

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Numerous studies have demonstrated the beneficial effects of dietary self-monitoring in promoting initial weight loss. However, less is known about the contribution of self-monitoring to the maintenance of lost weight. In the current study, we examined the role of self-monitoring in the long-term management of obesity. We hypothesized that during the year following initial treatment, self-monitoring would facilitate adherence to dietary intake goals and thereby improve weight management. This question was addressed in the context of a randomized trial in which 234 obese women (mean age= 59.1 years and mean BMI=36.8) underwent six months of lifestyle treatment followed by 12 months of extended care. We used the Baron and Kenny model to determine whether the relation between self-monitoring and weight change was mediated by adherence to daily caloric intake goals. Mean (± SD) percent changes in body weight were -10.4±5.18 during initial treatment and 2.4±7.1 during extended care. Higher frequency of dietary self-monitoring was associated with lower percent weight regain (r=-.43, p < .01) and greater likelihood of meeting daily caloric intake goals (r = .88, p < .01). After controlling for percent days of meeting daily caloric intake goals, the association between self-monitoring and weight regain became non-significant (p = .12), suggesting the potential for a mediating pathway. The Sobel test (z=-2.13, p = .03) verified that full mediation occurred. Thus, self-monitoring appears to facilitate the maintenance of lost weight by helping participants to adhere to daily caloric intake goals. The findings highlight the potential of self-monitoring for improving the long-term management of obesity.

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A-076

PERCEPTIONS OF CHILDHOOD OVERWEIGHT IN PARENTS OF PRESCHOOL-AGE CHILDREN

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Childhood overweight is a public health challenge with widely recognized health risks, and parents play a key role in its prevention. The purpose of this study was to examine parents' perceptions of childhood overweight to identify needs and barriers for its reduction in young children. Parents (N= 71) of preschool-aged children completed an 88-item questionnaire with qualitative and quantitative items assessing parent perceptions of childhood overweight in domains awareness, influences, concerns, practices, resources, barriers, and needs for support. Differences in mean scores were examined using analysis of variance. Men's scores on the awareness domain (M=33.1, SD=3.1) were significantly lower than those of women (M=36.6, SD=2.2; t =4.6, p<.01), and parents whose children were enrolled in childcare 40 or more hours per week reported the lowest scores [F(4, 66)=4.3, p<.01]. Significant differences were also observed in awareness based on parental work status [F(2,68)=8.81, p<.01], with those working full-time (M=35, SD=2.9) scoring lower than parents either working part-time (M=37.4, SD= 1.6) or staying at home (M=37.3, SD=1.6). For resources to prevent childhood overweight, parents older than the median age of 38 scored lower than younger parents (M=16.3, SD=3.1; versus M=17.8, SD=2.6; respectively; t=2.1, p<.05). Most were familiar with recommended preventive strategies, but 56% reported a need for support to prevent childhood overweight. The most commonly reported nutritional barriers included limited food choices, external influences (e.g., media representations), and inadequate knowledge. Common emergent themes reflecting barriers for increasing physical activity were limited time, childcare needs, and limitations imposed by family or peers. This combination of quantitative and qualitative data identifies specific needs for interventions among parents of preschool-aged children to prevent overweight. These data highlight the need to increase awareness and resources for those working full-time, parents of children in childcare, men, and older parents.

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A-077

PREDICTORS OF USING HEALTHY WEIGHT MANAGEMENT BEHAVIORS IN LOW-INCOME OBESE MOTHERS

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Objective: To examine the influence of personal and environmental factors on healthy weight management behaviors mediated through self-efficacy among low-income obese mothers.
Design: Cross-sectional design.
Setting and participants: Obese African American and white mothers (ages 18–34, n = 284) were recruited from the Special Supplemental Nutrition Program for Women, Infants, and Children in Wisconsin.
Measures: Personal factors (beliefs in diet and health, beliefs in diet and body shape, eating low-fat/calorie foods for weight management, emotional coping, and self-efficacy), environmental factors (accessibility to purchase foods, availability of time to prepare foods, and cost of foods), and weight management behaviors.
Analysis: Latent class cluster analysis and structural logistic regression.
Results: Healthy weight management practices were the basis for 2 behavioral clusters, using fewer (1–3) and more (4–5) strategies. Women who perceived more importance of eating low- fat/calorie foods for weight management were more likely to practice more strategies of healthy weight management behaviors (odds ratio=0.37) as women who perceived less importance of eating low-fat/calorie foods for weight management. Women who reported higher positive mood self-efficacy (more confidence in eating healthfully when experiencing positive mood) were 1.6 times (odds ratio = 1.63) as likely to practice more strategies of healthy weight management behaviors as women who reported lower positive mood self-efficacy. Environmental factors did not predict use of more healthy weight management behaviors. No mediation effect was found.
Conclusion and implications: To encourage obese women to use a combination of healthy weight management behaviors, reinforcing learners' self-efficacy for weight management may be more beneficial than advice about choosing low-fat, low-calorie foods, especially for low-income African American and white mothers.

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A-078

PREDICTORS OF DISEASE SPECIFIC QUALITY OF LIFE IN OBESE CHILDREN

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Background: Pediatric obesity is a significant health issue. Past research has examined predictors of quality of life (QOL) but have important areas of weakness. The purpose of this study was to examine whether family functioning and body dissatisfaction are predictors of disease specific QOL in obese children.
Methods: To date, 46 children 10 to 17 years of age (M = 13.02 years, SD = 2.15 years) attending a pediatric endocrinology obesity clinic and their parents participated. Parents completed the Family Assessment Device (FAD) and Sizing Them Up, a parent proxy report of child disease specific QOL. Children completed the Children's Body Image Scale (CBIS) and Sizing Me Up, a child-reported disease specific QOL measure. Data collection is currently on-going.
Results: Hierarchical regressions were used. Covariates (age, gender, and BMI) were entered in the first step and family functioning (FAD Overall Functioning) and body dissatisfaction (CBIS Dissatisfaction) were entered in the second step. The dependent measures were total disease specific QOL from Sizing Them Up and Sizing Me Up. Body dissatisfaction was a significant predictor of parent-reported child QOL, β=0.34, and child-reported QOL, β = 0.52. Exploratory analyses examined subscales of family functioning and QOL. Body dissatisfaction significantly predicted parent-reported child teasing QOL and child-reported emotional, teasing, and avoidance QOL. Family roles significantly predicted child-reported avoidance QOL.
Conclusions: Results revealed that more body dissatisfaction was a significant predictor of lower parent and child report of disease specific QOL. Overall family functioning was not a significant predictor of disease specific QOL, however, family roles may be important to consider when specific aspects of QOL are examined. As this was a preliminary evaluation, further examining specific associations between body dissatisfaction and specific subscales of family functioning and QOL would be warranted.

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A-079

BMI AND SEXUAL ORIENTATION: SPORTS, SPAGHETTI, OR STEREOTYPE

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Background: Prior research has suggested that sexual minority (SMW; e.g., lesbian and bisexual) women may have higher prevalence of overweight and obesity than heterosexual women (HSW) and may differ on risk factors such as physical activity, eating patterns, and body image.
Methods: We interviewed 90 sexual minority and 176 heterosexual unmarried middle-aged and older women (ages 44–80) about physical activity, diet, and weight. We computed univariable and multivariable regression models to (1) compare body mass index (BMI) between SMW and HSW; (2) assess correlates of BMI≥25 (e.g., overweight or obese); and (3) determine whether the correlates differed by sexual orientation.
Results: 65% of participants had a BMI≥25 and there were no differences by sexual orientation (mean BMI: SMW=28.4, range=19.0–49.9; HSW=28.7, range=18.1–51.5). In multivariable analyses, a BMI≥25 was associated with less education (OR=3.1, 95% CI=1.4, 6.6), having a previous injury that currently limited physical activity (OR=3.5, 95% CI=1.1, 11.0), more emotional reasons for eating (OR= 1.2, 95% CI=1.1, 1.4), and lower body image scores (OR=0.4, 95% CI=0.2, 0.6). Measures of age, partner status, activity level, food frequencies, poor mental health, childhood experiences with eating (e.g., forced to clean plate; rewarded with food; frequency of family eating together) and having a sibling who was overweight/obese were not associated with a BMI≥25. There were no significant interactions between sexual orientation and any of the correlates. There was some indication that SMW regardless of partner status were more likely than HSW with a male partner were more likely to have a BMI≥25 (OR=2.0, 95% CI=0.9, 4.2).
Discussion: Sexual minority women were equally likely to be overweight or obese as a comparably-aged group of unmarried heterosexual women. Interventions should consider targeting middle-aged and older women who have had a previous injury as a result of participating in exercise, physical activity, or sports.

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A-080

PERCEIVED WORK DEMANDS DIFFERENTIALLY INFLUENCE KEYBOARD FORCE, POSTURE, AND PERFORMANCE IN OFFICE WORKERS WITH HIGH AND LOW WORKSTYLE

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The behavioral, cognitive, and physiological response of a worker to increased job demands is characteristic of Workstyle. Adverse workstyles may be associated with risk of developing and/or exacerbating job-related upper extremity symptoms among office workers. The current study assessed the relationship between workstyle and the presence of behavioral and biomechanical risk factors for upper extremity symptoms including, keyboard force, posture, and performance in asymptomatic workers.
This laboratory experiment compared asymptomatic office workers (n=80) with high (high risk) and low (low risk) scores on a measure of workstyle. These groups were compared on their keyboard force, posture, and performance demonstrated during a laboratory simulated high demand work task.
Results indicated that individuals scoring high on the workstyle measure typed with higher keyboard force compared to low workstyle workers (F (1,74)=3.99, p < .05). There also was greater ulnar and/or radial wrist deviations in the high workstyle group compared to the low workstyle group (F(1,69)=4.85, p < .05). Lastly, using number of words typed as a proxy for performance, the high workstyle group performed at a higher rate compared to the low workstyle group (F(2,77)=990.19, p < .001).
Previous work has shown that high workstyle workers have more negative mood and cognitions compared to low workstyle workers in response to increased work demands. The present results show that in addition to these psychological factors, behavior and biomechanical factors also are indicative of a certain workstyle. Future work should investigate the causal relationship between workstyle and upper extremity symptoms.

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A-081

DIAGNOSTIC AND PREVENTIVE METHODS COMMONLY USED WITH CHILDREN WITH HEMOPHILIA

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Hemophilia, an X-linked recessive genetic disorder affecting blood clotting, affects approximately 1 of 5,000 boys born in the United States annually. Federally-funded Hemophilia Treatment Centers (HTCs) offer a comprehensive approach to the care of those affected by bleeding disorders with the goal of enhancing patient potential through education, ultimately leading to an independent and informed healthcare consumer. The purpose of this study was to identify “typical” diagnostic and preventive approaches taken by key members of the multidisciplinary HTC team. The present study compares the frequency of diagnostic and preventative methods used by physical therapists (PTs), doctors (MDs), and nurses (RNs). The data were obtained from participants attending the 2009 annual meeting the HTCs in regions VIII, IX, and IX. A 75 % response rate was obtained.
Three domains of primary interest were investigated, including patient history, objective medical data, and use of preventive strategies. The three most important pieces of information obtained for injury diagnosis were pain (79%PTs, 53%RNs, and 53% of MDs), coagulation factor levels (MDs 73%, 57% RNs, and 56% of PTs), and range of motion (45% MDs, 45% RNs, and 42% PTs). The uses of x-rays as well as injury appearance assessment data were the most frequently used objective medical strategies across disciplines (76%RNs, 68%MDs, and 68% of PTs), (45%MDs, 42%RNs, and 43% of PTs). However, referrals to behavioral medicine specialists as an injury preventative measure was more common for nurses, than for PTs, and MDs. 57% of the RNs agreed that hyperactivity was the best predictor of pediatric injury, while only 37% PTs, and 27% of MDs agreed. In conclusion, there is relative consistency between clinical and objective data. However, preventative and behavioral medicine components are less frequently obtained and more inconsistently found across disciplines.

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A-082

ASSESSING SOMATIC ANXIETY USING SELF-REPORTS AND SALIVARY CORTISOL

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Somatic anxiety (about pain or physical threat) is increasingly recognized as a significant barrier to medical treatment seeking, adherence and many other important health behaviors. Because assessments of somatic anxiety have been developed principally through self reports, we know relatively little about other potential indices. The current research involves two pre-post studies that examined both self-reported anxiety and a potential biomarker, salivary cortisol, in response to pain-related situations. Seventy-one participants in Study 1 were exposed to a detailed written description of a repeatedly botched and painful blood draw. Relative to baseline, self-reported anxiety increased significantly after presentation of the blood draw (t=2.81, p<.01), while cortisol levels were not significantly different (p>.28). To test the effects of a more intense stimulus, the written description was combined with a video of an actual blood draw, and both were presented to 40 participants in Study 2. Although self-reported anxiety increased even more (t =5.85, p<.001), cortisol levels were again essentially unchanged (p>.47). Potential explanations for these findings are examined, and their practical and theoretical implications are discussed.

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A-083

AVERSIVE RACISM AND MEDICAL INTERACTIONS WITH BLACK PATIENTS: A FIELD STUDY

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Medical interactions between Black patients and nonBlack physicians are usually less positive and productive than same-race interactions. The present research investigated the role that physician explicit and implicit biases play in shaping physician and patient reactions in these racially discordant medical interactions. The participants were 156 Black patients at a primary care clinic and 17 medical residents who worked at the clinic. Physicians completed validated measures of explicit and implicit racial bias before they interacted with the patients. Immediately following the interactions patients and physicians completed measures of patient involvement in the treatment decision, and sense of being on the same team. Patients also reported on perceived physician warmth and satisfaction with the interaction. We hypothesized that whereas physicians' explicit bias would predict their own reactions, physicians' implicit bias, in combination with physician explicit (self-reported) bias, would predict patients' reactions. Specifically, we predicted that patients would react most negatively when their physicians fit the profile of an aversive racist (i.e., low explicit-high implicit bias). The hypothesis about the effects of explicit bias on physicians' reactions was partially supported. The aversive racism hypothesis received strong support. Black patients gave aversive racist physicians lower ratings on sense of team, perceived physician warmth/friendliness and satisfaction than physicians low on both explicit and implicit bias and physicians high on both explicit and implicit bias.

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A-084

TO WHOM DO PATIENTS TALK WITH ABOUT THEIR MEDICATIONS? THE ROLE OF INFORMAL INFORMATION SOURCES

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Background. Patients often consult multiple sources for medication information, yet little is known about which types of information patients obtain from each source. Our purpose was to determine whether there were differences in the types of medication information patients discussed/obtained from six sources (physicians, the Internet, spouse/partner, family members, other vasculitis patients, and pharmacists).

Methods. We used data from the Accessing Social Support in Symptom Treatment (ASSIST) Study, in which vasculitis patients (n=232) completed an online survey. We assessed how often patients obtained eight types of medication information from the six sources and generated ordered logistic regression models and eight source by information type interaction terms. Significant interaction terms were further explored using least-significant difference (LSD) tests.

Results. All eight interaction terms were significant ($p<0.001$). LSD tests revealed that patients were most likely to discuss how to take medications with their pharmacist and medication costs with their spouses/partners. Patients consulted the Internet and other vasculitis patients for information about side effects, alternative medicines, and drug trials/studies and discussed medication effectiveness with physicians, spouses/partners, and other vasculitis patients. Patients consulted the Internet and pharmacist for drug interaction information and the Internet and physician for general medication information.

Conclusions. Formal sources (physicians and pharmacists) were the primary source for information about how to take medications correctly and general medication information. Otherwise, patients consulted informal sources, including other patients and the Internet, for medication information, which may reflect patients' desire for personal experiences with medications versus factual knowledge.

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A-085

IMPACT OF GROWING UP WITH A CHRONICALLY ILL SIBLING ON WELL SIBLINGS' EARLY ADULTHOOD FUNCTIONING

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Adjustment and coping of children with pediatric illness has been extensively researched with some emphasis placed on family adjustment and the reciprocal influence it has on ill children's adjustment. For example, many researchers have examined parental adjustment. However, relatively few studies have focused on psychosocial adjustment and functioning of siblings of chronically ill children, specifically the continuing impact of growing up with a sibling with a chronic illness on well siblings' early adulthood functioning. Further research on the impact of experiencing childhood illness on siblings is warranted to better understand and address the psychosocial needs of well siblings in early adulthood. To identify the fears/worries/benefits associated with growing up with an ill sibling that well siblings continue to experience in early adulthood. Participants (n=25) were randomly selected from enrollees in a university psychology pool who identified themselves as having grown up with an ill sibling. Participants' ill siblings varied in diagnosis. Participants (M Age=19, SD=0.58) completed a semi-structured interview, demographic questionnaire and measures of functioning and retrospective perceptions of ill siblings. Questions elicited perceptions of retrospective and current adaptation and coping with having an ill sibling. Transcripts were content-analyzed to elicit relevant themes and constructs. Siblings recalled being fearful and worried about their ill sibling dying, being debilitated by their disease, or requiring major surgery. Regarding current fears and worries, those whose siblings were coping well with the illness had minimal fears and worries; those whose siblings were not adhering to their regimen or were carriers of the diseases reported more fears and worries. Well siblings' early adulthood functioning continues to be affected by growing up with an ill sibling in the form of "paranoia," cautiousness, awareness of own health, empathy to others, and more. Findings were dependent on a number of variables including parent and ill sibling adjustment to illness.

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A-086

RETHINKING THE PERCEIVED STRESS SCALE: CONTRASTING THE PSS WITH AN ALTERNATIVE SCALE

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Objective: Cohen and Williamson's (1988) Perceived Stress Scale (PSS) was designed to measure the degree to which individuals judge potentially stressful events as actually stressful, pursuant to Lazarus's theories of appraisal (e.g., Lazarus & Folkman, 1984). However, few studies have adequately examined the PSS's factor structure. This presentation aims to 1) factor analyze the 10-item PSS, 2) propose an alternative scale with improved psychometric properties by merging items from the PSS and Levenstein et al.'s (1993) Perceived Stress Questionnaire (PSQ), and 3) compare the scales in a longitudinal design of stress and depressive symptoms in patients with multiple sclerosis.

Results: Exploratory factor analysis (EFA; direct quartimin rotation) of the PSS suggested a 2-factor structure ("Stress" and "Counterstress") of acceptable-to-mediocre fit, CFI = .951, RMSEA = .086. EFAs conducted on PSS and PSQ items led to construction of a 9-item, 3-factor measure ("Out of Control", "Social Pressure", and "Overloaded") with good fit, CFI = .987, RMSEA = .044. Subscales for these instruments, inserted as mediators of CES-D scores regressed onto financial and social stressors, yielded differential loadings. Both uni- and bidimensional PSS scores failed to be reliably predicted by stressors. The revised instrument, in contrast, yielded consistent loadings of financial stress onto "Out of Control" and social stress onto "Social Pressure". Additionally, "Out of Control" reliably predicted CES-D scores across time points, while "Social Pressure" initially predicted depressive symptoms.

Conclusions: Despite widespread use, the PSS does not appear to perform as well as our 9-item, alternate instrument among patients with MS. In particular, the PSS does not appear to be reliably predicted by discrete sources of stress. Additionally, little support exists for the field's typical use of the PSS as a single-factor scale. The subscales from our alternative instrument appear to predict depressive outcomes differently and reflect varied appraisals of different stressors.

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A-087

SOCIAL DESIRABILITY OR ACQUIESCENCE? A COMPARISON OF POSITIVELY- AND NEGATIVELY- WORDED SUBSCALES WITHIN THE MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE

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Behavioral medicine researchers must often rely on self-report to measure health behavior, yet self-reports are often disputed due to a tendency for some to "put their best foot forward." Despite criticism, the Marlowe-Crowne Social Desirability Scale (MCSDS) is a widely used measure to assess an individual's desire to be seen in a positive light. Although this measure is typically treated as a unidimensional construct, the MCSDS includes both positively- and negatively-worded items to reduce acquiescence bias. In this study, we examine the relation between the positively- and negatively-worded items and dental care attitudes, beliefs and behaviors. Online surveys were administered to 1,939 adults in the U.S.. Included in the survey were the 10-item shortened form of the MCSDS as well as measures of dental care practices, intentions, knowledge, and concern about dental health. Based on factor analysis, the MCSDS was split into two subscales, one including the positively worded (desirable) items and one including the reverse-coded negatively worded (undesirable) items. The bivariate correlation between the desirable and undesirable subscales (r=.23) suggested only a modest relation between the two sets of items. Small but significantly positive correlations were also observed between each subscale and the frequency and duration with which participants reported brushing their teeth. Correlations between each subscale and the remaining items indicated that the desirable items were positively correlated with each; however, the undesirable items were negatively correlated with each. The finding that dental intentions, knowledge and concern were higher among those who endorsed both desirable and undesirable items within the MCSDS may be indicative of acquiescence bias. Researchers who use the MCSDS should consider breaking it into subscales rather than treating it as a unidimensional measure.

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A-088

MARKETING FALLS PREVENTION: A QUALITATIVE STUDY EXPLORING OPPORTUNITIES AND CHALLENGES

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AIMS: 1)To explain limited fall prevention program uptake and 2) to propose marketing strategies to address these barriers.
METHODS: We performed in-person qualitative interviews with King County, WA, older adults who previously accepted or declined to participate in either an in-home or clinic-based fall prevention program. We developed themes on participation barriers and motivators and categorized them into the 5 P's (Product, Price, Promotion, Placement, and Policy) health marketing framework.
RESULTS: Of the 38 interviewees (mean age 76 years), 52% participated in a program, 76% were female, and 97% were white. Using responses, we classified respondents into 3 distinct segments based on consumer behavior theory: Always, Marginal, and Never Joiners. Few respondents could describe fall prevention or fall prevention programs. Always Joiners often participated because of doctor's orders. Never Joiners often felt that they did not need programs yet. Marginal Joiners often decided whether to participate based on influential people, emphasized negative emotional reactions after falls, and displayed interest in preventive care in other health arenas. Always Joiners noted physical fall consequences more often compared to Marginal Joiners and Never Joiners.
DISCUSSION: Marketing campaigns should focus on responses from Marginal Joiners—the persons who consider advertisements and referral messages. Fall prevention's identity as a product must be enhanced, and each program should improve branding; messages must emphasize that programs are free or low-cost; messages should appeal to emotional (not physical) fall consequences experienced by fallers and family members; fall prevention should compete with interventions that maintain independence; in-home and clinic-based programs should collaborate to deliver services at the consumer's preferable location.

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A-089

STRESS-BUFFERING EFFECTS OF PERCEIVED SOCIAL SUPPORT

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Stress-buffering theory asserts that the perception of social support (or the belief that social relationships will provide tangible aid, emotional support, informational support, etc.) may protect individuals from perceived stress and symptoms of negative affect such as depression and anxiety. Previous research has examined the stress-buffering hypothesis but, to date, few systematic attempts have been made to test the association between various types of social support with perceived stress and negative affect in college-student samples. As such, the purpose of this study was to examine the direct and interactive (or moderating) effects of perceived stress and multidimensional social support in the prediction of depression and anxiety in college students. A cross-sectional, self-report format was used, with participants (198 females; 186 males) completing previously validated measures of perceived stress, social support, depression, and anxiety. Hierarchical regression procedures revealed a significant main effect for perceived stress in the prediction of both depression and anxiety. Significant inverse relations also emerged for the social support scales of reliable alliance (the assurance that others can be counted upon for assistance) and reassurance of worth (recognition of one's value by others) in the prediction of depression and anxiety. The interaction term reflecting the product of perceived stress and reliable alliance also was significant and indicated that increases in this dimension of social support buffered the association between perceived stress with both depression and anxiety. The results are consistent with the stress-buffering hypothesis and suggest that stress, depression, and anxiety are ameliorated by specific types of perceived social support. By deriving predictions about the most relevant support functions and testing their effects, researchers can provide a better understanding of how social support operates to influence stress outcomes.

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A-090

GENDER, ACCOMMODATION & PSYCHOLOGICAL ADJUSTMENT OF SPOUSES IN THE CONTEXT OF CHRONIC ILLNESS

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Background: Based on Interdependence Theory, accommodation occurs when, in response to one partner's negative behavior, the other partner inhibits the natural impulse to respond destructively and instead responds constructively. Little is known about accommodation's influence on patient and spouse functioning in the face of chronic illness or potential gender differences in accommodation in this context.
Methods: PAIRS was an observational study of married couples (n=140) where one spouse had ANCA-vasculitis or lupus. At baseline and 1-year follow-up, couples completed mailed surveys assessing physical health, psychological adjustment, and psychosocial and socio-demographic variables. Psychological adjustment was assessed using a composite of established measures of depression, affect, satisfaction with life, and optimism (α=.83). Patients and spouses described their partners' accommodation using an 8-item scale previously adapted for chronic illness. Higher scores represented a stronger belief in partners' accommodation. We regressed psychological adjustment cross-sectionally while controlling for age, race, education, and number of years married.
Results: At baseline, there was a significant interaction between gender and accommodation (β=.574, p<.05) such that wives experienced a stronger positive association between perceived accommodation and psychological adjustment than did their husbands. At follow-up, analyses demonstrated a significant interaction effect (β=.828, p<.01), with a strong positive association between perceived accommodation and psychological adjustment for women and no association for men.
Conclusion: Among women, greater perceptions of spousal accommodation were associated with better psychological well-being, while the relationship between perceived constructive response and well-being was weaker or non-existent for men. Future studies are needed to explore the possible interaction of gender and patient/spouse role and to consider how research on accommodation can extend the existing social support literature.

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A-091

AGGRESSIVE BEHAVIOR AMONG INDIVIDUALS WITH AND WITHOUT A HISTORY OF DATING VIOLENCE: THE ROLE OF SEVERITY PERCEPTION

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Dating violence is a serious public health concern, with one-third of adolescents reporting some form of dating violence during the previous year (Halpern et al., 2001; Hettrich & O'Leary, 2007). Many factors are associated with dating violence (e.g., childhood abuse), but individual perceptions of aggression may be the factor with the greatest influence on the behavior. For example, individuals with a history of dating aggression may perceive aggressive behaviors as less severe or more acceptable, and therefore be more likely to act aggressively based on their misperception of aggression (Smith, Waterman, & Ward, 2006). The current study explored perceptions of dating violence and behavioral aggression among individuals with and without a history of dating violence. Participants (N=58; 53.4% women) completed assessments of their history of dating violence, perception of aggression severity and acceptability, and a behavioral task that assessed aggression. The perception of aggression severity and acceptability, and the behavioral task were administered after participants listened to an audio taped scenario of a dating couple have a conflict that escalated from verbal to minor physical aggression. We found that individuals with a history of dating violence perceived aggressive situations as less severe than individuals without a history of dating violence, however, these perceptions were unrelated to the behavioral measure of aggression in the laboratory. These findings broaden the understanding of dating violence by showing that individuals who have perpetrated dating violence view aggressive behaviors as less severe. This misperception could lead the perpetrator to cause significant harm to his or her partner due to underestimating the severity of his or her actions.

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A-092

THE LONG-TERM EFFECT OF ADOLESCENT IDIOPATHIC SCOLIOSIS (AIS) ON QUALITY OF LIFE (QOL) IN ADULTS

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Treatment guidelines for AIS in adolescence, dependent on severity of curve and stage of growth, include structured observation, bracing, or spinal fusion surgery. However, little is known definitively about the long term effects of these treatments on adult QoL, because studies of the effects of individual treatment types produced contradictory results and few explored QoL across treatments. Whereas most extant studies utilized clinic samples, our online study sampled adults across the United States to investigate differences in QoL among treatment groups and as compared to individuals with healthy backs (HB) and chronic lower back pain without AIS (CLBP).

Participants were 532 adults recruited via AIS websites and at a Midwestern University (M age=35.1 years; 85% female; 85% white; 14% structured observation; 11% post-bracing; 26% post-surgery for AIS; 35% HB; 6% CLBP). MANOVA was used to compare QoL scores on the SF12, *F*(32, 1611.11)=5.10, *p* < .001. Overall, AIS treatment groups did not differ significantly from each other or the CLBP group, and all groups were comparable on the general health subscale. However, AIS groups reported significantly worse physical functioning, physical role, bodily pain and vitality than HB. AIS surgical and braced groups reported significantly worse social functioning, role interference from emotional problems and mental health than HB. Regression analyses suggest these findings are independent of the influence of age.

Our results suggest adult QoL does not differ significantly by treatment modality, consistent with two existing studies. However, QoL of adults with AIS is comparable to that of adults with CLBP, and both groups report worse QoL than adults with HB. Our study highlights the importance of assessing QoL of adults with AIS and investigating specific factors contributing to decreased QoL. Doing so would help to inform treatment decisions in adolescence and facilitate development of interventions to improve QoL.

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A-093

PHYSICAL ACTIVITY AND FATIGUE IN MULTIPLE SCLEROSIS: PSYCHOSOCIAL MECHANISMS

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Evidence suggests physical activity (PA) has the potential to reduce fatigue, a common debilitating symptom of multiple sclerosis (MS). This study examined the role of self-efficacy (SE) and depression as potential psychosocial mechanisms underlying the association between PA and fatigue in persons with MS. Participants (N=292) completed measures of health status, PA, depression, fatigue, and SE. Data were analyzed using a longitudinal panel model within a covariance modeling framework. This model proposed that baseline and change in PA indirectly influences fatigue through its effect on SE which, in turn, both directly and indirectly (through depression) affects fatigue. The hypothesized panel model provided a reasonable fit to the data (χ^2 = 54.22, df = 16, p < .001; SRMR=0.08, CFI=0.97). All paths were significant and in the expected direction. However, the modification indices suggested the model could be improved with a direct path between PA and fatigue. The model including this path provided an excellent fit to the data (χ^2 = 29.86, df = 14, p < .005; SRMR=0.05, CFI=0.99) accounting for 36% and 68.4% of the variation in fatigue at baseline and follow-up, respectively, and provided a significantly better fit(χ^2diff = 14.36, df = 2, p < .01). We also tested the hypothesized model controlling for demographics and disease related variables. This model was also an excellent fit to the data (χ^2 = 25.86, df = 18, p = .10; SRMR=0.01, CFI = .99) accounting for 42.8% and 71% of the variance in fatigue at baseline and follow-up, respectively. The magnitude and direction of the hypothesized relationships did not change. However, the previously significant baseline path between PA and fatigue was nonsignificant. Our findings suggest support for one set of psychosocial pathways from PA to fatigue. Future studies should attempt to replicate this model in other diseased populations and determine whether model relations change with PA interventions and the extent to which other correlates of fatigue can be incorporated into this model.

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A-094

CORRELATES OF MENTAL QUALITY OF LIFE IN LESBIANS AND GAY MEN: DISCRIMINATION, NEGATIVE SOCIAL EXCHANGE AND LOW SELF-ESTEEM

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Although overt discrimination against the lesbian and gay (LG) community has decreased, more subtle and chronic forms of discrimination still remain (Pascoe, 2009). Being a sexual minority can undermine one's mental health by eroding self-esteem (Corning, 2002) and elevating risk for poor mental health (Cochran, 2007). Studies show that discrimination can lead to "depressive distress and some psychiatric disorders" (Cochran, 2001). Additionally, LG individuals with low self-esteem are more vulnerable to lower psychological health (Corning, 2002). Our variables of interest (discrimination, negative social exchange, and self-esteem) may be associated with mental quality of life in LG.

Using the Minority Stress Model (Meyer, 2003), we hypothesize that individuals who identify as LG, who experience discrimination and other negative social exchange (distal stress), who disclose their sexual orientation (proximal stress), and who portray low self-esteem (characteristic) will develop low mental quality of life.

Participants (96 LG) completed the Heterosexist Harassment, Rejection, and Discrimination Scale, Test of Negative Social Exchange, Rosenberg Self-Esteem Scale, and Short Form 36 QOL. Multiple regression analysis shows that our model explains 53% of the variance in mental QOL (adj.R^2=.53,F (7,88)=16.2,p<.0005). As anticipated, discrimination (β=-.19,t=-2.4,p<.05) and negative social exchange (β=-.20,t=-2.4,p<.05) were negatively correlated, while self-esteem (β=.59,t=7.5,p<.0005) was positively correlated with mental QOL.

Results suggest that negative social exchange and discrimination are associated with lower mental QOL. In addition, higher self-esteem was associated with better mental QOL. By improving self-esteem, LGs can learn to cope with discrimination and work to improve their mental QOL.

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A-095

MENTAL HEALTH STATUS OF VETERANS SERVING IN THE FIRST GULF WAR

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Introduction: Gulf War Syndrome (GWS) is a multi-symptom illness associated with the 1991 Gulf War. Three primary syndromes with distinct cognitive and/or physiological symptoms have been identified. This study utilized psychological measures to assess current mental health, level of functioning, and quality of life in GW veterans.

Method: Subjects included 4 groups of veterans from the 24th Reserve Naval Mobile Construction Battalion. Subjects with GWS included groups A ($n=18$), C ($n=12$), and D ($n=11$). The control group B ($n=15$) included subjects who were asymptomatic. Mental health data were obtained from clinician-administered structured interviews and self-report questionnaires. Data were analyzed with one way ANOVAs. The Tukey HSD test was applied to pair wise comparisons.

Results: Veterans with GWS (As=94%; Cs=67%; Ds=90%) reported a higher percentage of current DSM-IV-TR mental disorders at the time of assessment as compared to the control group (13%). On the QIDS-SR, subjects with GWS were significantly depressed whereas the controls were within the nondepressed range [$F(3, 50) = 13.83$, $p=<0.0001$]. The 3 ill veterans groups reported greater emotional distress on the SCL90-R global severity index as compared to the control group [$F(3, 48)=8.95$, $p=<0.0001$]. On the MPI Interference scale, groups A, C, and D endorsed daily chronic pain that significantly interfered with their daily life [$F(3, 50) = 14.43$, $p=<0.0001$]. In addition, ill veterans reported significant impairment in their daily/leisure activities, interpersonal/social and work functioning, and poorer quality of life as compared to the control group.

Summary: This study suggests that GW veterans remain ill with multiple physical and emotional symptoms 18 years after deployment. Future research should focus on providing ill veterans with both medical and psychological evidence-based treatments while researchers simultaneously continue to determine the underlying causes of Gulf War illnesses.

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A-096

THE IMPACT OF WORRY ABOUT MEDICATIONS, DEPRESSIVE MOOD, AND PERCEIVED LOSS OF CONTROL ON ADHERENCE TO INHALED CORTICOSTEROID AMONG ADULT ASTHMATIC PATIENTS

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Based on the commonsense model of self-regulation, we examined the impact of emotional responses and perceived loss of control on adherence as measured. We posited that worry about medications and perceived loss of control but not trait negative affect would have a direct effect on adherence to inhaled corticosteroids among adult asthmatic patients. Additionally, we hypothesized that increased asthma-related symptoms and functional limitations would impact adherence indirectly by affecting perceived loss of control. Data were obtained from a sample of 300 asthmatic outpatients who received care in two clinics in a large metropolitan area. Adherence was assessed with the Medical Adherence Rating Scale (MARS). The validity of this scale was assessed with electronic monitoring data in a subsample of participants. Results from a path analysis model showed that after controlling for demographics (e.g., age and sex) and clinical (i.e., asthma severity) variables, increased levels of perceived loss of control ($\beta=-.23$, $p<.01$) and increases in worry about asthma medications ($\beta=-.16$, $p<.01$) led to poor adherence. Perceived loss of control mediated the effect of asthma symptoms ($\beta=.19$, $p<.01$) but not that of functional limitations ($\beta=-.08$, NS) on adherence. The overall fit of the model was excellent $\chi2(11)=6.51$, $p=.84$. The results support the idea that illness and treatment of emotional and cognitive representations are critical for self-regulation and illness self-management.

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A-097

CONVERGENCE: A NEW WAY OF LOOKING AT BEHAVIORAL FEATURES OF PAIN CHRONICITY

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Understanding the features that distinguish those who go on to a life of chronic pain from those who do not remains elusive. Behavioral medicine has focused on such factors as beliefs, reinforcement, depression, fear of pain and catastrophic thinking as important variables linked to persistence of pain and dysfunction. We report on a novel concept—convergence–that may help differentiate pain trajectories. Convergence refers to the degree of consistency between pain communications and pain outcomes. We report analyses of 148 workers suffering from a first episode of low back pain (subacute patients) and 28 workers suffering from chronic low back pain examined on two occasions, three months apart. Observational measures of pain behavior and self-report measures of pain intensity, pain-related disability, anxiety and depression were obtained. Among subacute patients, pain behaviors at intake were significantly but weakly correlated with pain intensity, disability and depression. By the three month follow up, pain behaviors were robustly correlated with all self-report variables. Among chronic patients there were few significant relationships between pain behaviors and pain, disability and psychopathology at intake while at follow-up, the number of significant correlations was fewer than would be expected by chance. The findings suggest that chronic low back sufferers evince a dissociation between pain behaviors and subjective experiences that are ordinarily linked to pain. By contrast, patients in the early stages following a back injury show convergence increasingly over time. The findings can be interpreted in terms of a failure of perceptual-motor integration or in terms of a disturbed communication model of pain and have implications for the development of chronic pain conditions.

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A-098

ACCURACY OF PERCEPTIONS OF “GOOD” VERSUS “POOR” SLEEP IN AN ONLINE CHRONIC PAIN SAMPLE

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Of the estimated 40–70 million individuals experiencing Chronic Pain (CP), nearly two-thirds report diminished sleep quality. CP’s intrusion on sleep quality can have numerous deleterious effects on physical and psychological health. Recent findings suggest that patients with higher CP Acceptance have more positive medical, psychological and functional outcomes. We recruited CP patients via online CP support groups to complete an internet-based survey. Participants who completed at least the demographic portion of the survey were included and yielded a total sample ($N=148$; Mean age=48, $SD=10.1$) that was primarily female (85.1%), Caucasian (92%), Married/Partnered (68.9%), Insured (88.5%), and well-educated (Mean=15.1 yrs, $SD=2.2$), with a mean income of $44,228 ($SD=$39,474). Years with CP was Mean=16.8 ($SD=12.8$) and pain intensity Mean=7.10/10 ($SD=1.7$), with nearly half receiving disability and 20% indicating pain-related legal involvement. Objective measures of sleep quality from the Pittsburgh Sleep Quality Index (PSQI) indicated that few in the sample achieved recommended sleep efficiency of >80% (M efficiency=72%, $SD=0.35$). Despite less than optimal sleep efficiency, 62% of the sample rated their sleep as “good” or “very good” (GS), as opposed to 38% who perceived their sleep to be "poor" or "very poor" (PS). Both groups averaged 5–6.5 hours of sleep/night and did not differ across reports of sleep disturbances, sleep medication use, or daytime dysfunction (all p’s>.05). MANOVA revealed overall differences between groups ($F(4, 104)=6.132$, $p<.001$); specifically, GS reported higher levels of CP Acceptance ($p<.001$), lower pain severity ($p=.001$) and disability ($p=.009$). This sample subset may have higher CP Acceptance and, thus, view their pain as less interfering in their sleep. These findings warrant increased focus on the potential benefits of Acceptance-based interventions in CP populations.

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A-099

THE EFFECTS OF SELF-WORTH AND CATASTROPHIZING ON PAIN AMONG CHILDREN WITH FUNCTIONAL ABDOMINAL PAIN

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Functional abdominal pain (FAP) is a widespread problem among children and adolescents, affecting up to one-quarter of this population. While clear associations have been drawn between catastrophizing and abdominal pain and between self-worth and individual characteristics of FAP (such as functional disability), the potentially interactive effects of self-worth and catastrophizing on pain have not, to our knowledge, been examined - the purpose of the present investigation. Participants were 200 children with gastroenterologist-documented FAP (mean age 11; 73% female; 86% Caucasian) and their parents (mean age 44; 94% female; 92% Caucasian). Children completed measures of global self-worth (Self-perception Profile for Children), catastrophizing (Pain Response Inventory) and pain (FACES Pain Scale). Parents also completed the FACES scale to report their child's pain. A 2 (child self-worth: high, low) x 2 (child catastrophizing: high, low) ANOVA conducted on child-reported usual pain yielded a main effect of catastrophizing ($p < .001$) and a self-worth x catastrophizing interaction ($p = .01$). Children high in catastrophizing reported greater pain than those low in catastrophizing, but this effect was stronger for children low versus high in self-worth. This suggests that children with low self-worth are particularly vulnerable to the maladaptive effects of catastrophizing.

As such, interventions designed to increase self-worth and decrease catastrophic thinking among children with FAP are warranted, targeted to those most in need.

Given that other manifestations of low self-worth, such as negative body image and underdeveloped social skills can start in childhood and continue to develop in adolescence, further research should be aimed at identifying and addressing these issues early on.

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A-100

FUNCTIONAL DISABILITY PREDICTS LONG-TERM HEALTH OUTCOMES IN CHILDREN WITH CHRONIC ABDOMINAL PAIN

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Prospective studies indicate 30% to 50% of children with chronic abdominal pain (CAP) continue to have chronic or recurrent pain in adolescence and young adulthood, but little is known about what predicts long term health outcomes. We tested the hypothesis that the extent to which children with CAP restrict their daily activities due to CAP would significantly predict physical and emotional health outcomes assessed 4–13 years later. We assessed activity limitation-functional disability-at the time of the medical evaluation and at 2-week and 3-month follow-ups. We expected that short-term follow-up assessments would be better predictors of long-term health outcomes than the baseline assessment of functional disability. As part of an ongoing prospective study, adolescents and young adults with a childhood history of CAP (N=99; mean age =18.89 years, 57% female) completed the Functional Disability Inventory (FDI) at baseline and at short-term (2-week, 3-month) and long-term (4–13 years) follow-ups. They also completed the SF-36 at the long-term follow-up. Baseline assessment was administered by an interview at the clinic at the time medical evaluation for CAP and follow-up assessments were by telephone or online. FDI scores at baseline, 2-weeks, and 3-months significantly correlated with long-term outcomes including current levels of FDI (r's=.34, .60, .42, p's<=.001), mean SF-36 scores (r's=-.29, -.57, -.29, p's<=.004), and psychological functioning (r's= -.25, -.44, -.22, p's<=.034). The 2-week FDI assessment was the strongest predictor of long-term outcome scores on the FDI, and mean SF-36 (FDI: $\beta=.566$, $p=.000$, $\Delta R2=.316$; mean SF-36: $\beta=-.562$, $p=.001$, $\Delta R2=.312$). Functional disability has utility in predicting long-term outcomes in children with CAP. This suggests that one's ability to function physically while in pain has far reaching effects. T consistency of the 2 week follow-up as the strongest predictor of long-term functioning highlights the importance of a follow-up appointment soon after the initial visit and suggests that functioning at this point may be a good indicator of long-term health outcomes.

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CATASTROPHIZING, PAIN, AND FUNCTIONING IN PERSONS WITH A DISABILITY: SEX AND DIAGNOSTIC GROUP DIFFERENCES

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Individuals with chronic pain who catastrophize report greater pain, distress, and disability. Catastrophizing may also play a role in the sex differences in pain and functioning that are often reported in the literature. However, whether such differences extend to individuals with chronic pain secondary to a disability is not clear. The current study sought to: (1) determine if the sex differences in catastrophizing that have previously been found in other pain groups replicate in a sample of patients with chronic pain secondary to MS or SCI; (2) examine the possible moderating effects of sex on the associations between catastrophizing, pain, and functioning; and (3) explore differences in catastrophizing between MS and SCI groups, and whether the associations between catastrophizing, pain, and functioning vary across group. Adults with SCI (n=124) and MS (n=124) completed measures of pain intensity (0–10 scale), pain interference (Brief Pain Inventory), psychologic functioning (SF-36 Mental Health Scale), and catastrophizing (Coping Strategies Questionnaire). ANOVA results indicated that, across both disability groups, men had marginally higher catastrophizing than women ($p=.09$). In regression analyses, catastrophizing significantly predicted pain intensity ($\beta=.44$), pain interference ($\beta=0.40$), and psychologic functioning ($\beta=-0.59$). The catastrophizing-by-sex interaction approached significance as a predictor of pain interference ($\beta=0.28$, $p=0.06$); women ($r=0.50$) evinced a slightly stronger relationship between these variables than men ($r=0.42$). Diagnosis group was not a significant factor in any of the analyses. Consistent with previous research, catastrophizing was an important factor predicting patient functioning. However, previously observed sex differences were not replicated; if anything, men tended to catastrophize more than women in our samples. Overall, this study supports a biopsychosocial model of pain and functioning in MS and SCI, and the need to assess and address catastrophizing cognitions as a way to increase patient quality of life.

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APPLYING THE FEAR-AVOIDANCE MODEL OF CHRONIC PAIN TO A PEDIATRIC POPULATION

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Research supports a model of fear-avoidance in adult chronic pain patients in which individuals who are high in pain catastrophizing (PC) are more motivated to employ avoidance behaviors to escape pain. The reinforcing escape from painful sensations limits activity and can result in disability. These outcomes may result in increased sensitivity to pain and PC furthering pain, and continuing the cycle (Asmundson, 1999; Vlaeyen & Linton, 2000). Although the individual relationships between pain and PC; PC and disability have been examined (Meyer, Tschopp, & Sprott, 2009; Buer & Linton, 2002), this comprehensive model has yet to be tested in a child population.

Based on the literature, it was hypothesized that PC would be positively correlated with pain intensity. A second hypothesis was that PC would be more predictive of disability and health-related quality of life (HRQOL) than pain intensity alone, such that with increased PC, HRQOL would decrease and disability would increase.

Participants were 583 youth presenting to an interdisciplinary pain clinic at a large Midwestern children's hospital. The mean age of the participants was 13.64 years (SD=2.86), and the population was 74.5% Caucasian and 67.9% female. Participants completed measures as a part of their intake to the pain clinic. PC was measured by the Pain Catastrophizing Scale (PCS); HRQOL was measured with the PedsQL™; disability was measured by the Child Activity Limitations Questionnaire; pain was measured by child self report of usual pain intensity in the primary location of pain.

Usual pain in the primary location was significantly correlated with total child reported score on the PCS ($r=.25$, $p<.001$). The PCS subscales created a significant model predicting pain intensity ($R2=.08$, $F(3,452)=12.33$, $p<.001$). The second hypothesis was supported; the helplessness subscale of the PCS significantly predicted disability ($R2=.21$, $F(2,449)=59.38$, $p<.001$) and total PCS significantly predicted HRQOL ($R2=.24$, $F(2, 453)=72.54$, $p<.001$) more than pain intensity.

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SOMATIZATION AND FUNCTIONAL IMPAIRMENT IN CHILDREN WITH NON-CARDIAC CHEST PAIN

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The most common causes of pediatric chest pain are non-cardiac in nature, and non-cardiac chest pain (NCCP) has been previously described as "psychogenic" in the literature. The goal of this investigation was to extend our understanding of the relationship between children's NCCP and functional disability, and how children's general somatic symptoms influence that relationship. The participants were 62 patients ages 8–18 who were diagnosed as having NCCP. Children and their parents completed questionnaires assessing the severity of their NCCP, somatization symptoms (CSI), and functional disability (FDI).

There were statistically significant differences in the child and parent CSI scores (t (61)=4.41, p<.000) and in the child and parent FDI scores (t(61)= 2.76, p=.008). Parent report of children's functional disability was significantly related to parent report (r=.76, p<.000) and child report (r=.52, p<.000) of child somatization, and to usual (r=.25, p=.049) and worst (r=.34, p=.007) pain severity ratings. Child report of functional disability was significantly related to parent report (r=.55, p<.000) and child report (r=.70, p<.000) of child somatization, and also showed significant relationships with usual (r=.27, p=.037) and worst (r=.28, p=.027) pain severity. Partial correlation analyses were used to further explore the relationship between children's reported pain severity and functional disability, controlling for parent and child report of somatic symptoms. After controlling for somatic symptoms, all correlations between NCCP severity and children's functional disability became non-significant.

In total, these findings imply that both parent and child report of somatic symptoms and functional impairment should be collected and that children's functional disability may be more related to a larger pattern of health complaints, in which NCCP appears, as opposed to the symptoms of chest pain itself.

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A-105

MAINTENANCE OF CARDIAC REHABILITATION EXERCISE THERAPY: ENHANCING SELF-REGULATORY EFFICACY FOR ADDITIONAL SELF-MANAGED PHYSICAL ACTIVITY

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Older adults' maintenance of long-term lifestyle change after cardiac rehabilitation (CR) is complex and challenging. Recent reviews and practice guidelines advocate studying maintenance and assessing self-regulatory efficacy as a primary CR outcome. CR maintainers (CRM) sustain physical activity (PA) sufficient to reduce risk but insufficient to meet health benefit recommendations for older adults. CRM do not typically self-regulate additional PA outside their structured programs, which recommend additional PA but offer limited instruction and practice for PA self-management. A theoretical and practical question is: How might CRM be readied to engage in additional, self-managed PA? A previous experiment with CRM used a persuasive message to successfully improve participants' efficacy to self-manage PA compared to standard CRM counterparts. Using social cognitive theory, we designed a field experiment and a) used a message targeting 2 aspects of self-regulatory efficacy, b) examined behavioral commitment and action plans, and c) assessed behavioral first steps toward self-managed PA. CRM (N=42, CR M= 57 mos., M Age=71) were randomly assigned to either efficacy-enhancing (EE) or information control (IC) message conditions. Pre-post test measures of self-regulatory efficacy and post-test measures of action plans, behavioral commitment, and first behavioral steps were obtained. Mixed model ANOVAs revealed a group by time interaction favoring EE participants for scheduling efficacy (p<.03) and a similar trend for concurrent self-regulatory efficacy (p<.07). MANOVA (p<.006) with ANOVA follow-ups revealed that behavioral commitment was greater in the EE condition (p<.001). Chi-square revealed that more EE than IC participants took the behavioral first steps of enrolling in class and discussion to learn to self-manage PA outside CR (p's<.05). Persuasive, efficacy-enhancing messages may be one potential way of readying CRM to learn about self-managing exercise more days of the week.

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SIX MINUTE WALK TEST PREDICTS DAILY ACTIVITY IN PATIENTS WITH COPD

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Chronic Obstructive Pulmonary Disease (COPD) is a devastating airway disease, which affects approximately 12.1 million Americans. COPD can be fatal for many patients, and is the fourth leading cause of preventable death for both men and women in the United States. Previously we reported that functional capacity, as assessed in the laboratory by the Six Minute Walk Test (6MWT) predicts clinical outcomes in patients with end stage lung disease. The purpose of the present study was to examine the relationship of 6MWT performance and physical activity during daily life. Thirty COPD patients (12 males, 18 females, mean age of 62.5 years±9.9) completed a 6MWT and subsequently wore an accelerometer (Lifecorder Plus) for three consecutive days. Our primary endpoints included steps per day and total minutes spent in light and moderate activity. Results revealed that 6MWT distance was highly correlated with daily activity (r = .69, p < .001), independent of pulmonary function assessed by FEV_1. Furthermore, 6MWT performance was positively associated with moderate to intense activity during the day. Every 50 meter increase in 6MWT distance was associated with an additional 20 minutes per day in moderate to intense activity (r = .64, p < .001). Results suggest that greater activity during daily life is a potential mediating variable, explaining the relationship between 6MWT performance and clinical outcomes.

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GENDER AND AGE DIFFERENCES IN PHYSICAL ACTIVITY AMONG OLDER LATINO ADULTS

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Research on physical activity of older Latino adults has been primarily limited to highly acculturated, English speaking Latinos and to surveillance studies. The goal of the current study was to explore gender and age differences in physical activity among urban dwelling, older, traditionally Latino men and women. A total of 48 older Latinos (14 men, 34 women) over the age of 50 (Mean=63.0; SD=9.5; Range=50–83) volunteered to participate and of these 98% chose to respond using the Spanish version of the CHAMPS physical activity questionnaire for older adults (Stewart et al., 2001). Overall, the majority (54%) of this predominately Latino acculturated group (M=4.29 Latino orientation versus M= 2.35 Anglo orientation; ARSMA II, Cuellar et al. 1995) met the Federal guidelines of 150 minutes of moderate/vigorous physical activity per week. Effect sizes (Cohen's d) were computed to examine gender and age differences in physical activity, as they have been advocated as a robust metric of significance (Wilkinson, 1999). Analyses revealed that the women engaged in more minutes of moderate/vigorous leisure activity than the men (d= .49), however when non-leisure moderate/vigorous activity was included the effect was small (d= .19). Women reported engaging in six physical activity behaviors (e.g., dance, aerobics) more frequently than men, whereas men reported engaging in four physical activity behaviors (e.g., light strength training, heavy house work) more frequently than women. Age effects on moderate or vigorous leisure physical activity were found to be small for comparisons of adults in their 50 s, 60 s, and 70+ (ds= .00-.13). Preliminary evidence suggests the importance of taking gender differences into consideration when recommending physical activities to older Latino adults.

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PHYSICAL ACTIVITY, SELF-EFFICACY AND SELF-ESTEEM: HIERARCHICAL AND LONGITUDINAL RELATIONSHIPS AS A FUNCTION OF EXERCISE INTERVENTION

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Self-esteem (SE) is important for a successful satisfying life and is a central aspect of psychological well-being. The relationship between SE and physical activity (PA) has been equivocal and it is important to consider it in the context of contemporary multidimensional and hierarchical models. We examined the structure of the Exercise and Self Esteem Model (EXSEM) in a sample of older adults (N=179;age,M=66.38) participating in a 12-month exercise trial. The participants completed measures of PA, self efficacy, physical and global SE. Body Mass Index (BMI) and fitness were also assessed. Data were analyzed using panel analysis with a covariance modeling framework to test the fit of the hypothesized model across time. The model provided a good fit to the data ($\chi2$=153.29 ,df=100 , p=0.0005 ;CFI=0.971 ,SRMR=0.1, RMSEA=0.05). Panel model revealed support for the indirect effects of PA and self efficacy on physical self worth (PSW) and global SE through subdomain levels of esteem. BMI and changes in physical fitness were related to improvements in perceptions of physical condition, body attractiveness and strength at baseline. Analyses of the relationships among model components over time indicated that there were statistically significant direct effects of both change in physical activity and change in self efficacy on residual change in the physical condition and strength sub domain-level esteem variables. There were direct effects of change in the physical condition, attractive body, and strength sub domain-level esteem variables on residual change in PSW, and a direct effect of change in PSW on change in global SE. Overall the model accounted for 53% and 69% of the variation in changes in global SE and PSW. Our findings suggest support for the EXSEM pathways from PA to global SE and offer further support for the hierarchical and multidimensional nature of SE. This is one of the first longitudinal studies to assess relations among change in multidimensional esteem as a function of exercise intervention.

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HOUSING ALTERS BODY WEIGHT, FOOD CONSUMPTION, AND ACTIVITY IN FEMALE ADOLESCENT RATS

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The U.S. is in the midst of an obesity epidemic with females more prone to overweight than males. Many factors influence obesity, including energy intake and physical activity. Enriched environments can alter behavior and biology in rats and humans relevant to body weight (Elliott & Grunberg, 2005). The present experiment assessed effects of environmental enrichment on body weight, food consumption, and activity (locomotor activity, home cage activity, and exercise) comparing four different housing environments (isolation [1 rat/cage], social enrichment [2 rats/cage], physical enrichment [1 rat/cage + 2 toys] or super enrichment [8 rats/large cage+toys]). Subjects were Sprague-Dawley adolescent female rats.

Over the five week experiment, super enriched rats gained less weight than did isolated rats [F (3, 45)=3.32, p<0.05]. The social or physical enriched rats gained weight in between the isolated and super enriched groups. Isolated rats ate more food than did the physical, social, or super enriched rats [F (3, 32)=3.047, p< 0.05]. In home cages, super and social enriched rats were more active than isolated and physical enriched rats [F (3, 16) = 10.237, p=0.001]. Super and social enriched rats also exerted more effort during activity than did isolated or physical enriched rats [F (3, 16) = 13.235, p<0.001]. There were no significant housing differences in voluntary exercise (i.e., exercise wheel).

These results indicate that environment significantly affects activity and food intake by rats. If these findings generalize to humans, then they suggest that social interaction with opportunities for activity may be particularly beneficial to help adolescent females control body weight gains. Parallel human studies to the present work might reveal valuable information to help avoid excessive body weight.

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ASSOCIATION OF PSYCHOSOCIAL VARIABLES WITH HEALTH BEHAVIORS PRE AND POST-KATRINA AMONG NEW ORLEANS SCHOOL PERSONNEL

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Purpose: To investigate the association of diet and physical activity (PA) with depressive symptoms, perceived stress and anxiety among New Orleans school personnel post-Hurricane Katrina.

Method: A convenience sample (n=34) of LA Recovery School District personnel completed a pilot study self-report survey.

Results: The sample was predominantly female, African-American, between 35 and 54 yrs old, college graduate, and teacher. 94% evacuated prior to storm, >50% suffered residence damage, and more than 80% indicated everyday living more difficult post-Katrina. Means for state anxiety (Spielberger), perceived stress, and depressive symptoms (CES-D) were 41.5, 43.3 and 15.2, respectively, but more than 40% scored above 18 on the CES-D. About 59% indicated PA levels were better pre compared to post-Katrina and more than 51% indicated no change between post-Katrina and currently. Depressive symptoms were negatively correlated with total mins of PA, MVPA (p=0.01) and Moderate PA (p=0.006). Perceived stress was negatively correlated with MVPA (p=0.06). About 75% said eating habits changed for the worse pre to post-Katrina and only 38% noted some improvement from post-Katrina to currently. Consumption of fruit/vegetables and regular/diet soft drinks were not significantly associated with any of the psychosocial variables; however, “emotional eating” was positively associated with state anxiety (p=0.0006), and depressive symptoms (p=p.03).

Conclusions: Conditions surrounding post-Katrina New Orleans were manifest in depressive symptoms. Inner-city school personnel continue to experience negative effects from Hurricane Katrina and are in need of support and mediation.

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MEASURING PHYSICAL ACTIVITY OVER TIME: IS THERE A BETTER WAY?

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Physical activity (pa) is typically assessed using both objective and subjective measures in physical activity interventions. Methods for analysis depend on both the distribution of the outcomes (i.e. whether a normality assumption is met) and the missing data mechanism (i.e. is missingness associated with the outcome). This is problematic for two reasons. First, it is unclear whether a participant can accurately report their pa. Second, intensive procedures can put excess burden on participants, which can potentially lead to higher dropout rates. Hence, the question arises as to which measure of pa should be used, specifically when the goal is to collect data at frequent time points. The purpose of this study is to examine pa data from two interventions aimed at increasing activity among previously sedentary adults. Both Step into Motion (SIM) and STRIDE were longitudinal studies that collected data over 12-months. We used three different measures of pa: self-reported minutes of pa, 7-day PAR and objective continuous pa minutes from the ActiGraph. Two potential limitations include the tendency to produce skewed data (PAR) and inability to recognize all types of moderate intensity activity (ActiGraph). The self-reported minutes of pa are based on two-items and hence is easy to collect and poses minimal burden on participants. This lends itself to more frequent collection and with that, an opportunity to better describe a participants’ response trajectory over time. Retention rates would presumably only benefit from reduced demand on participants. Results from both SIM and STRIDE suggest significant correlations between all three measures of pa at 6 and 12 months, with correlations ranging from 0.2–0.5. In addition, higher correlations between self-reported minutes of pa and ActiGraph data compared to the correlation between PAR and the ActiGraph. These findings have implications for physical activity interventions; specifically, the potential for more cost-effective and less burdensome way of measuring physical activity over lengthy follow-up.

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PATTERNS OF HEALTH-ENHANCING PHYSICAL ACTIVITY IN CANADIANS LIVING WITH OSTEOPOROSIS: PREVALENCE ESTIMATES AND GENDER DIFFERENCES

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Objective: Health-enhancing physical activity (HEPA) is an important part of symptom and disease management for people living with osteoporosis. There is limited evidence available in the literature concerning the optimal approach for promoting HEPA in this population during leisure-time. The main objective of this investigation was to document the prevalence of HEPA modes across gender in a population-based sample of people living with osteoporosis in Canada.

Method: Data were collected in a cross-sectional design from a purposive sample of Canadians (N = 1538; 89.10% female) living with osteoporosis who responded to the Canadian Community Health Survey (Cycle 2.2). Most of the sample (59.50%) reported being 71 years of age or older at the time of data collection. Body mass index values ranged from 17.32 to 50.32 kg/m2 (M = 26.90 kg/m2; SD=5.45 kg/m2; 35.40% between 18.00–24.99 kg/m2).

Results: Prevalence estimates indicated that walking (60.70%), gardening/ yard work (35.90%), and home-based exercise (23.60%) were the most frequent modes of HEPA while weight-training (3.10%) and exercise classes/ aerobics (7.70%) were infrequently endorsed as a mode of HEPA in this sample. Chi-square tests indicated men participated in gardening/yard work, bicycling, golf, and fishing more often than women (all p's < .05; Phi's ranged from 0.00 to 0.15). Women reported more frequent participation in exercise classes/aerobics compared to men (p<005; Phi=0.05).

Conclusions: Overall, the prevalence data imply that most people living with osteoporosis in Canada participate in lifestyle-based as opposed to structured or class-based HEPA, although this observation varied by gender. Health promotion initiatives seeking to engage people with osteoporosis in HEPA need to be mindful of gender and mode of physical activity when implementing programs and designing marketing campaigns for this population.

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OLD DOGS AND NEW TRICKS: A QUALITATIVE STUDY OF OLDER ADULTS' EXPERIENCES WITH EXERGAMES

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Video games that require physical activity ("exergames") have potential to improve the physical, cognitive, and emotional health of older adults and provide an enjoyable and rewarding alternative to TV viewing. The purpose of this study was to understand the exergame experience among older adults, identify game preferences, and describe the perceived benefits and barriers to game play. Fifteen older adults (range=67–87 yr; 9 men, 6 women) volunteered to participate in a 60 minute "taster session" of seven different exergames (Wii® golf, hula hoop and snowboarding, Xavix® boxing, J-Mat, and bowling, and Dancetown®) followed by 45 minute focus group. Verbal and behavioral utterances were recorded and transcribed for both experiences, and inductive and deductive thematic analysis was used to describe and organize data into meaningful themes. Results suggested that in-game experiences focused on seeking out strategies to improve (27% of total utterances), verbal and behavioral enjoyment (25%), and perceptions of challenge (22%). Games that elicited the most enjoyment were bowling (34% of all bowling utterances), golf (29%) and Dancetown (25%). Hula hoop elicited the fewest (8%) enjoyment related behaviors. Perceived benefits of game play included (i) increased balance, (ii) improved motor coordination, and (iii) new skill development. Barriers to game play included (i) a perceived lack of cardiovascular benefit, (ii) low perceptions of competence, (iii) a lack of realism, and (iv) poor equipment responsiveness. The presence of music, competition, and realism appeared to increase enjoyment. Combined, these data suggest that older adults enjoy playing exergames, and perceive benefits that are related to functional fitness. However, further research should attempt to quantify the health-related benefits of game play in this population.

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PREDICTING REGULAR PHYSICAL ACTIVITY CONTINUATION AFTER THE ONSET OF FIRST-TIME PARENTHOOD

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The demands of parenthood necessitate lifestyle changes that may compromise physical activity (PA). The purpose of this study was to predict continuation of PA in couples six-months after the onset of parenthood when compared to baseline (pre-pregnancy) and nonparent couples. Participants were couples aged 25–40 who comprised either expectant parents (n=65) or nonparents (n=34). Participants each completed measures of the theory of planned behaviour (TPB), and self-reported PA (Godin LT Questionnaire). PA was subsequently measured six-months after the birth of their first child (equivalent time-frame for nonparents). PA was coded in terms of meeting/not meeting public health guidelines. A comparison across baseline and six-month PA showed that 53.5% of the sample maintained PA while 22% who were active at baseline were no longer active at follow-up. This relationship was moderated by parenthood status (chi-square=3.51, p < .05), with half of previously active parents failing to continue PA at follow-up. No gender effects were significant. Predictors of PA continuation with analysis of variance showed that affective attitude (F 3,111 = 4.42; $\eta2$ = .11), perceived behavioural control (F 3,111 = 6.09; $\eta2$ = .14), and control beliefs about work hours (F 3,111 = 5.24; $\eta2$ = .13), social support (F 3,111 = 4.01; $\eta2$ = .10), finances (F 3,111 = 5.85; $\eta2$ = .14), and weather (F 3,111 = 5.03; $\eta2$ = .13) were significant (p < .05) variables, and all favoured participants who continued with PA. Only the behavioural belief that PA reduces stress (F=5.03; $\eta2$ = .13) explained the parenthood status x PA continuation relationship. The continuation of PA for couples after the onset of parenthood is difficult to maintain. Interventions targeting the affective benefits of PA while facilitating higher behavioural control would seem an appropriate focus in intervention efforts.

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IMPORTANCE, OUTCOME EXPECTATIONS, AND PHYSICAL ACTIVITY IN COMMUNITY-DWELLING OLDER ADULTS

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The perceived importance of and outcome expectations for physical activity have been identified as potential determinants of physical activity outcomes but have received little empirical attention. The purpose of this study was to examine the extent to which the importance of the benefits of physical activity and the outcome expectations change over time, and to determine whether these changes are related to changes in physical activity over time. Community-dwelling older adults (N=227; M age=64.01) were recruited to participate in a study about the benefits of physical activity and were asked to complete a battery of self-report measures which included assessments of physical activity, the importance of the benefits of physical activity, and associated outcome expectations at baseline and during an 18 month follow-up. A repeated measures ANOVA found significant changes in the importance of benefits (η^2=.80, p<.001), as well as in physical (η^2=.07, p<.001), social (η^2=.07, p<.001), and self-evaluative (η^2=.06, p<.001) outcome expectations over the 18 month period. Correlational analyses among the residual change scores of these variables indicated that increases in physical activity were significantly associated with an increase in the importance of benefits (r=.21, p<.01) and improvements in physical and self-evaluative outcome expectations (r=.18, p<.01; r=.13, p=.05) but not social outcome expectations. A subsequent multiple regression analyses revealed only changes in the importance of benefits (β=.17; p=.01) to be associated with changes in physical activity over the 18 month period. Future research might consider how perception of physical activity importance could be manipulated in an effort to examine whether it might contribute further to predicting physical activity behavior over other known determinants.

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EFFECT OF A 12-MONTH EXERCISE INTERVENTION ON SELF-EFFICACY AND HEALTH-RELATED QUALITY OF LIFE: ROLE OF GENDER AND WEIGHT

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BACKGROUND: Adherence to an exercise intervention is necessary for the study's internal validity and maintenance of behavior change. Compared to non-obese persons, obese individuals exercise with less frequency, duration, and intensity in intervention studies, but the reasons for lower adherence are not established. Positive changes in exercise self-efficacy (SE) and health-related quality of life (HRQOL) resulting from interventions may reinforce adherence; however, it is not known whether these changes differ between obese and non-obese participants. This study examined the effect of a 12-month exercise intervention on SE and HRQOL and investigated whether baseline body mass index (BMI) modified these intervention effects.

METHODS: A total of 202 middle-aged men and women were randomly assigned to a control group or intervention of 360 min/week, moderate-to-vigorous intensity aerobic exercise. Demographic information, SE (5-item scale), and HRQOL (SF-36) were collected at baseline and 12 months. Participants were classified as normal weight, overweight, or obese using baseline BMI. ANCOVA adjusting for baseline values tested differences in 12-month SE and HRQOL by study arm; interaction with BMI tested for effect modification.

RESULTS: At 12 months, SE was significantly higher in exercisers ($p<0.01$) than controls, but there were no differences in HRQOL. There was no effect modification by BMI alone; however, a significant 3-way interaction (gender x BMI x study arm) for vitality ($p=0.03$) indicated that vitality was higher in overweight male ($p=0.01$) and obese female exercisers ($p=0.07$) compared to controls. Further, SE, vitality, role-physical, social functioning, and mental health scales were higher ($p<0.05$) among overweight male exercisers compared to controls.

CONCLUSIONS: Changes in SE and HRQOL after exercise intervention may vary by gender and baseline BMI. Tailoring interventions accordingly may improve adherence in exercise intervention studies.

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PHYSIOLOGICAL AND AFFECTIVE RESPONSES TO EXERCISE MODERATE LONG-TERM EXERCISE INTERVENTION EFFECTS

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Exercise behavior is complex and is influenced by a number of factors. This study tested the extent to which immediate physiological and affective responses to exercise moderated the effectiveness of a 12-month exercise intervention. Inactive individuals were randomly assigned to an exercise intervention (STRIDE; Marcus et al., 1998; n = 123) or a health-and-wellness control intervention (n = 115). At baseline, participants reported their current level of physical activity using a 7-day physical activity recall (PAR; Blair et al., 1985) and then completed a 30-minute exercise session at a moderate level of exertion (65% of their previously estimated VO2max). Every ten minutes, individuals rated their mood, perceived exertion, and physiological measurements were taken. Follow-up behavioral measures assessing change in physical activity were taken at 6 and 12 months after the baseline exercise session. Change slopes were created for each individual for assessments taken during the exercise session. In a series of tests predicting 12-month activity level, a three-way intervention x time (i.e., baseline, 6 months, and 12 months) x slope interaction was found for systolic blood pressure (p = .05), perceived pain (p =.07), negative affect (p = .02), and positive affect (p =.13). An intervention x slope interaction was found for perceived exertion (p = .06), perceived pain (p = .07), and negative affect (p = .01). Our results suggest that the effect of an exercise intervention on long-term behavior may be—at least partially—contingent upon an individual's immediate reactions to physical activity. Researchers may create more powerful and successful long-term exercise interventions if these immediate reactions to exercise are incorporated into future interventions.

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ASSOCIATION BETWEEN CONFIDENCE IN OVERCOMING BARRIERS, FREQUENCY OF ENCOUNTERING BARRIERS, AND ADHERENCE TO EXERCISE IN 16-WEEK WALKING AND FITNESS CENTRE PROGRAMS AMONG SEDENTARY ADULTS

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This study examines trajectories of confidence in overcoming barriers (COB) and frequency of encountering barriers (FEB) across two different 16-week physical activity programs among people who adhere and people who drop out. A total of 350 people attended an information session and were randomized to either a fitness centre or walking program involving equivalent energy expenditure. Survey-based measurements of outcomes and experimenter-directed fitness parameters were taken at baseline, 8-weeks, and 16-weeks. The COB measure involved participant ratings of confidence in overcoming 14 barriers (e.g., not enough time, feeling sluggish) that were framed as a function of the specific exercise mode (i.e., going to a fitness centre 3 days per week or walking 10,000 steps). The FEB measure involved ratings the frequency of occurrence of the same 14 barriers. Sociodemographic variables were assessed via self-report questionnaires whereas BMI was estimated from experimenter-measured height and weight. The sample was mostly(78%)over 35 years of age, female(76%), overweight/obese(82%), without University degrees(57%), and with a personal income above $25,000 per year(67%). After controlling for sociodemographic factors, growth curve modeling showed that COB increased significantly over the 16-week study in both exercise conditions but that COB was higher for people randomized to the fitness group. Additionally, participants dropping out after 8-weeks had significantly lower COB at that time period than completers. FEB was significantly higher for participants that dropped out after 8-weeks than those that completed the 16-weeks program although FEB did not differ across exercise. Analyses showed that COB was significantly lower among those that had greater FEB. These findings suggest that adults that drop-out of walking and fitness centre programs have less COB and more FEB than those that complete exercise programs independent of personal demographic factors.

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THE LONG AND WINDING ROAD TO PHYSICAL ACTIVITY MAINTENANCE: THEORY-DRIVEN MEDIATION ANALYSIS IN THE KEEP ACTIVE MINNESOTA (KAM) TRIAL

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Increasing population level physical activity (PA) requires initiation of new PA among the sedentary and maintenance of PA once initiated. The PA intervention literature has tended to focus on initiation and its mediators more than on maintenance. Our work integrates previous findings on mediators of initiation with theory about maintenance-specific mediation to identify empirically viable mediators of PA maintenance.

Adults (N=1049) 50–70 years old were randomly assigned to the phone-based KAM intervention or usual care. All participants self-reported their moderate and vigorous PA (MVPA) and on 6 mediators pre-randomization, and 6, 12 and 24 months later. The mediators assessed were exercise self-efficacy (SE), barriers, and enjoyment; incorporation of PA into the self-concept; and social support received from family and friends.

A structural equation model specifying 7 indirect effects of KAM on MVPA kcal/wk was an excellent fit, $\chi2(141)=282.11$, CFI=.98, RMSEA=.03. KAM participants expended about 190 more MVPA kcal/wk, $\beta c=.105$, $z=2.90$, $p=.004$. The total effect was comprised of the direct KAM-MVPA path, $\beta c'=.052$, $z=1.52$, $p=.13$, and the significant total indirect KAM-MVPA effects, total $\beta=.050$, $z=3.23$, $p<.001$. The significance of all but one KAM-mediator path, and all mediator-MVPA paths, demonstrate that KAM positively impacted constructs predictive of MVPA. The one significant indirect effect, $\beta=.009$, $z=1.99$, $p<.05$, showed that KAM significantly increased SE, which was positively related to PA self-concept, which was itself predictive of higher MVPA.

Although there was significant total mediation, only one indirect effect was significant by itself. SE was upstream to two endogenously mediated effects. Self-concept was the strongest predictor of PA and figural in two indirect effects. Adequate PA maintenance models will need to be more complex than initiation models, and should incorporate relationships among multiple mediators and bidirectional mediator-PA relationships.

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PHYSICAL ACTIVITY, WEIGHT, AND HEALTH-RISK BEHAVIORS AMONG COLLEGE STUDENTS

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Female college students (n=715; 77.2% Caucasian, 13.4% African American (AA), 7.2% Asian, 2.2% other races) at an urban university completed an online survey. The sample was approximately 19.87 years + 1.16, of normal weight (BMI=23.2+ 4.7), and physically active (mean number of physical activity (PA) minutes was 179.4; SD=177.5). Caucasian students reported the most minutes of PA (191.4; SD=182.6) compared with AA (116.3; SD= 132.8) and Asian students (114.5; SD=114.1) (p<.0001), no differences were found between Asian and AA students. In terms of stage of change, 7.6% were in Precontemplation, 3.0% in Contemplation, 35.1% in Preparation, 14.5% in Action, and 39.8% were in Maintenance. Race differences in stage of change were found (X2= 30.8; p<.0001), with AA students more likely to be in Precontemplation/Contemplation and less likely to be in Maintenance. There were differences by BMI on stage of change (with lighter women being more likely to be in maintenance; F=6.62; p<.0001) and PA behavior (with normal-weight women reporting more activity than obese women; F=4.70; p<.01). In terms of other health-risk behaviors, of those who met the national guidelines of 150 minutes per week, 34.2% were smokers, 43.9% had high levels of depressive symptoms, 27.4% met criteria for binge eating disorder; 53.6% scored high on binge eating pathology; 67.8% were high on drive for thinness and 84.1% rated high on body dissatisfaction. While the adoption and maintenance of physical activity is important for lifelong health, the reasons college students are active should be explored, particularly in the context of weight control and eating disordered behaviors. Implications of the findings on race and BMI differences in PA will be discussed particularly related to intervention and maintenance strategies.

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OWNERS AND PETS EXERCISING TOGETHER (OPET): STUDY DESIGN AND BIOPSYCHOSOCIAL DESCRIPTORS OF DOGS AND THEIR OWNERS

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The health benefits of physical activity are well recognized. Unfortunately, too few Americans engage in the recommended levels of physical activity. Physical inactivity affects not only humans, but their pet dogs as well. Veterinarians can play an important role in counseling owners to increase time spent in physical activity with their dogs. Our study explores biopsychosocial relations between owners and their dogs presenting to a tertiary veterinary clinic. Using a two-phase design, we are initially collecting self-reported health and physical activity data and conducting biomedical and physical evaluations of 300 owners and their dogs. This provides a baseline assessment of owner and dog health, physical activity, and metabolic status. During the second phase of the study, 76 owners of overweight dogs are being enrolled in a randomized trial to determine the effectiveness of brief counseling by veterinarians on dog owners' activity levels. Phase 2 also tracks the metabolic status of owners and their dogs. Currently, 46 dog owners have completed the baseline assessment. The average baseline body mass index for owners is M=28.8 (SD=7.4). The average baseline energy expenditure is a weekly total of METs of M=2867 (SD=2481). At baseline, the average body condition score (BCS) of dogs is M=5.9 (SD=1.3); a BCS of 6 suggesting excess fat. To date, sixteen participants have entered the second phase of the study. The average number at baseline is M=7306 (SD=2850) steps per day. Our multidisciplinary team approach suggests that it is possible to recruit participants and target physical activity among dog owners in a veterinary clinic.

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EFFECT OF SEASONS ON GESTATIONAL WEIGHT GAIN

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Seasonal trends in physical activity and birth weights have been previously described. Specifically, people engage in lower levels of physical activity and give birth to heavier infants in winter (W). However, seasonal variation in gestational weight gains (GWG) has not been previously explored. This is a retrospective cohort study of 48,074 primiparous women who had singleton births at 36 to 42 weeks of gestation, from January 1990 through December 2007. The cohort was 54% White, 28% teenage, and 22% < 12y education. Demographic characteristics did not differ by seasons. The mean GWG for each BMI category did not differ significantly by seasons (W 35.26+14.04 lb v spring (Sp) 35.46+13.67 v summer (Su) 35.15+13.71 v fall (F) 34.72 +13.70). However, women who delivered in winter were most likely (49.8% v Sp 48.8% v Su 48.7% v F 48.1%) to gain above and least likely to gain appropriately for their BMI. Contrary to expectations, there does not appear to be a significant seasonal influence on maternal GWG.

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VALIDATION AND PRELIMINARY USE OF THE MATERNAL SATISFACTION WITH CHILDBIRTH SCALE

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Maternal satisfaction with childbirth can significantly impact postpartum adjustment. However, extant literature has not clearly distinguished satisfaction from affective responses to birth and appropriate measurement tools are lacking. The current study sought to develop a global satisfaction instrument to assess cognitive evaluations of childbirth, and to examine biopsychosocial factors thought to predict satisfaction (e.g., labor pain, perceived pain coping, duration of labor, perceived control during childbirth). The 10-item Satisfaction with Childbirth Scale (SWCh) was adapted from the Satisfaction with Life Scale (SWLS). Participants were recruited online and included 87 women who had given birth to a healthy infant in the last six months (mean age 28.9; 95% White; 47% first delivery). A-priori power calculations indicated this was an adequate sample size to identify up to two factors. Exploratory factor analysis (EFA; Ordinary Least Squares) indicated that one factor explained 80% of the variance in SWCh responses (loadings >0.69). The SWCh was internally consistent (α=.97) and moderately correlated with negative affective reactions to childbirth (r= -.44, p<.01) and highly correlated with positive affective reactions to childbirth (r=.80, p <.01). In a subset of the sample (n=61; mean age 28.6; 95% Caucasian; 44% first delivery; 86.8% vaginal delivery; 43% un-medicated childbirth), regression analyses indicated that perceived pain coping (β=.23, p<.05) and perceived control during childbirth (β=.61, p<.01) were significant predictors of childbirth satisfaction. However, neither pain severity nor duration of labor predicted satisfaction. Results provide evidence of the reliability and validity of a global childbirth satisfaction scale, and suggest that maternal satisfaction and affective responses to birth are separate constructs. Results also imply that perceived pain coping and perceived control during childbirth may enhance satisfaction regardless of pain severity or duration of labor.

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GOAL ADJUSTMENT DURING INFERTILITY

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Individuals confronting chronic medical conditions often face profound challenges to cherished life goals. The primary aim of this study was to examine goal adjustment and psychological adjustment in the context of prolonged infertility. In a sample of 97 women actively seeking fertility treatment and assessed at study entry (T1) and six months later (T2), factor analysis was conducted on a measure of fertility-specific goal adjustment. Three factors emerged: goal disengagement ability, goal reengagement in direct response to infertility, and general goal engagement without reference to infertility. At T1, goal disengagement ability was associated with less rumination about infertility (β=-.27, p<.05), whereas general goal engagement was associated with fewer depressive symptoms (β=-.27, p<.05) and greater positive states of mind (β=.27, p<.05). Greater general goal engagement buffered against the negative effects of low goal disengagement for depressive symptoms, rumination, and positive states of mind. Women who initially had high depressive symptoms and rumination evidenced a significant decrease in both goal disengagement ability and general goal engagement over six months (β=-.33, p<.01 and β=-.29, p<.01 for goal disengagement; β=-.23, p<.05 and β=-.32, p<.01 for general goal engagement), and women with high initial positive states of mind had a significant increase in goal disengagement ability (β=.35, p<.01). Greater perceived and actual goal blockage (number of unsuccessful treatment attempts) were both uniquely associated with negative psychological adjustment. Perceived goal blockage predicted an increase in goal disengagement ability over time (β=.26, p<.05), whereas actual goal blockage predicted a decrease in goal disengagement ability (β=-.22, p<.05). Promoting letting go of the unattainable and investing in the possible may be a useful intervention to foster well-being among individuals experiencing profound goal blockage due to chronic medical conditions.

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THE IMPACT OF SEXUAL RISK AND INFORMATIONAL INTERVENTIONS ON WOMEN'S LIKELIHOOD OF ENGAGING IN HPV VACCINATION, STD TESTING, AND RISKY SEX BEHAVIORS

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Rates of the Human Papillomavirus (HPV) are highest among women ages 20 to 24 (Dunne et al., 2007). Most efforts to encourage women to get the HPV vaccine have focused on providing information linking HPV to cervical cancer. It is also necessary to provide distribute information on HPV-associated oral cancer, which is strongly linked to oral sex (D'Souza, Agrawal, Halpern, Bodison, & Gillison, 2009). This study examined the impact of both oral sex information and a combination of oral and vaginal sex information on women's likelihood of obtaining the HPV vaccine and receiving an STD test, as well as willingness to engage in future unprotected oral and vaginal sex. Female undergraduates (N = 180) were randomly assigned to read one of two information brochures about HPV risk (focused on either oral sex, or both oral and vaginal sex), or to a control group. Sexual risk, based on number of past partners, was assessed pre-manipulation. Likelihood of getting the HPV vaccine (among those who had not received it), intentions to get tested for STDs, and risky sex willingness were assessed post-manipulation. A series of 3 (Condition: Control vs. Oral-only vs. Oral and Vaginal) x 2 (Sexual Risk: Low vs. High) ANOVAs revealed significant interactions on the likelihood of receiving the HPV vaccine, F (2, 92)=4.22, p < .05, and getting an STD test, F=(2, 170)=3.32, p < .04. Low-risk women in the oral sex condition reported the highest likelihood to receive both the vaccine and an STD test, whereas high-risk women reported the highest likelihood for each after reading the combined oral and vaginal risk information. A similar interaction was found for willingness to engage in unprotected sex, F (2, 174)=3.61, p < .03, such that the high-risk women reported the lowest willingness after reading the combined information, while oral information was the most effective for low-risk women. The findings demonstrate the need to consider past sexual risk when designing interventions to promote HPV and STD prevention among college women.

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HOLD ME CLOSER: ROMANTIC ATTACHMENT STYLE AND SEXUAL FUNCTION IN LESBIANS AND GAY MEN

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Anxious or avoidant romantic attachment styles are associated with lower levels of sexual functioning including sexual responses and sexual satisfaction (Aarestad, S. 2000). Research however, has primarily examined heterosexuals and is sparse with regards to romantic attachment in the lesbian and gay communities.

The purpose of this study is to examine the relationship between attachment and sexual functioning in lesbians and gays. Attachment Theory defines 4 types of attachment styles: secure, anxious, avoidant, and fearful attachment (Bartholomew, 1990). Using the Attachment Theory as a model, we hypothesize that those with avoidant attachment styles will report lower levels of sexual functioning.

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EXAMINING THE RELATIONSHIP BETWEEN MOTIVATION FOR SEX AND CONDOM USE

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Previous research has shown that close to one half of all sexually active young adults and adolescents have unprotected sex. The decisions that adolescents make regarding safe sex during this time period can potentially develop into lifelong patterns of sexual behavior. Understanding the factors that influence sexual decision making is crucial in order to work towards preventing the high prevalence of STDS/HIV and unplanned pregnancies amongst this population. Motives underlying sexual decision making, may be one such factor that, when better understood, can lead to a better understanding of why and when un-protected and risky sex occur. In this study, we examined the relationship between condom use and motivation to have sex. We hypothesized that those who are more motivated to have sex are less-likely to use condoms. Participants were 149 (83 male and 66 female) undergraduate students at the University of New Mexico. In line with hypotheses, results indicated that those who were more motivated to have sex were less likely to use condoms (r=-.168, p < .05). Interestingly, those who were in a relationship were more motivated to have sex (r = .179, p < .05). We therefore tested whether or not relationship status influenced condom use. We found that those in committed relationships are less likely to use condoms than those who are not, t(148)=-2.2, p = .03. The correlation between motivation and condom use remained significant after controlling for relationship status (r=-.18, p=.033). These results provide more insight in defining what constitutes risky sexual behavior. It further implies, that just because someone is having sex without a condom does not necessarily make it risky, other factors such as relationship status should be considered in this definition. These findings have important implications for forming interventions and health programs to increase condom use and decrease STDS/HIV amongst college aged individuals.

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TITLE: SLEEPLESSNESS DURING PREGNANCY: ESTIMATING THE PREVALENCE OF INSOMNIA

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Background: Increased difficulty maintaining sleep during pregnancy is well documented but the prevalence of clinically significant insomnia is unknown.
Objectives: To estimate the frequency of clinically significant insomnia during pregnancy and to determine which demographic variables moderate the severity of insomnia.
Research Design: A cross-sectional sample was examined. All women with appointments at one of three obstetric clinics were offered study participation. Participation involved provision of demographic and obstetric information and one-time completion of the Insomnia Severity Index (ISI). ISI scores above 14 indicate clinically significant insomnia.
Results: 194 pregnant women participated and all data were analyzed. Overall, 26.6% of pregnant women reported clinically significant insomnia. Insomnia was greatest during the third trimester of pregnancy (F[7,140]=7.9, p<.001) with no differences in severity seen between the first and second trimesters. 31.4% of women in the third trimester were suffering from clinically significant insomnia in comparison to 12.2% in the first and 15.0% in the second trimesters ($\chi 2 = 7.8$, p<.05). Maternal age, lower education, and later gestational age independently predicted ISI scores.
Conclusions: Clinically significant insomnia is a prevalent yet oft ignored health concern during pregnancy. Older women with less education who are further into their pregnancies are at greatest risk for developing insomnia.
Future Plans: Given the evidence that insomnia during pregnancy increases the risk for obstetric complications and predicts perinatal depression, identification of clinically meaningful insomnia is important. Future research should test whether the treatment of insomnia during pregnancy reduces the risk of obstetric complications and perinatal depression.

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BEHAVIORAL SELF-MANAGEMENT FOR SECONDARY STROKE PREVENTION IN AFRICAN AMERICAN AND HISPANIC PATIENTS

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OBJECTIVE: The purpose of this pilot study was to explore the impact of (1) a brief self-management educational intervention and (2) depression on changes in physical activity, fruit and vegetable intake, and tobacco cessation at four weeks post discharge after treatment for stroke. DESIGN: quasi-experimental pre-test/post-test design with experimental vs. control groups. INTERVENTION: A 50 minute self-management education intervention was provided at bedside. The education content focused on improving stroke awareness, poor physical activity, diet, and smoking cessation. Smoking cessation consisted of education on the risk factor of stroke associated with cigarette smoking and general tobacco abstinence behavioral strategies. Two telephone booster sessions at two and four weeks post discharge were also provided. SETTING: A stroke acute care unit in a large county hospital in Houston, TX. PARTICIPANTS: A convenience sample of 38 patients (smokers and non-smokers) was recruited. MAIN OUTCOME MEASURES: A modified version of the UCLA Stroke PROTECT Program Questionnaire and the Brief Symptom Inventory were administered at baseline and at four weeks post discharge. RESULTS: There was a statistically significant difference between smokers in the intervention and control groups at four week follow-up (p<.05,[F(2, 49)=3.95, p=0.026]). Depression was a significant predictor of tobacco usage, (b =-6.02, SE=2.78), t(53)=-2.99, p<.035, β=-2.17. An increase in depressive symptoms at four-weeks was predictive of an increase in tobacco usage. CONCLUSION: Tobacco is the greatest modifiable risk factor for stroke. Consistent with previous research, brief self-management programs are more effective in changing tobacco usage rather than physical activity and dietary improvements. Underserved ethnic minorities primarily receive their medical care from urgent and emergent care settings. Providing brief self-management services in acute care can offer additional tobacco cessation and self-management strategies that patients may not otherwise receive.

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MINORITY STRESS AND HEALTH-RELATED BEHAVIORS AMONG SEXUAL MINORITY WOMEN

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Prior research has documented that minority stress, the individual's experience of stressors associated with stigmatized status, has negative implications for health and mental health. Lesbian and bisexual women are subject to a number of stressors associated with their sexual orientation, gender, and other minority statuses, including trauma, discrimination, and day-to-day hassles. Additionally, this population of women shows higher rates of problematic health-related behaviors or indicators such as smoking, alcohol use, and obesity relative to their heterosexual peers. However, very little research has examined the links between minority stressors and health-related behaviors in this population. Furthermore, while mental health problems such as depression and anxiety have been linked to minority stress, the extent to which such problems are associated with health-related behaviors and might mediate the relationship of minority stress with such behaviors has not received adequate empirical attention. Such within-group analyses of determinants of health are critical in order to develop culturally sensitive health promotion and prevention interventions this underserved group of women.
This presentation utilizes data from the Rainbow Women's Health Survey, a comprehensive survey of health and its determinants among 270 ethnically diverse lesbian and bisexual women in Washington State. Using structural equation modeling in MPLUS version 5.2, we will test two hypotheses: (1) Minority stressors including trauma, discriminatory events, and day-to-day hassles will be associated with more negative health-related behaviors including smoking, alcohol use, unhealthy eating and obesity, and (2) The relationship between minority stress and health-related behaviors will be partially mediated by symptoms of depression and anxiety. Results will be discussed in terms of implications for health promotion and prevention among lesbian and bisexual women.

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TOBACCO RELATED ILLNESS: PATIENT AWARENESS AND AGREEMENT WITH PHYSICIANS

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Overview: Knowledge of having a tobacco related illness (TRI) can be a powerful motivator to quit. We compared patients' opinions about their illnesses from the US Surgeon General's list of TRIs to the patients' treating emergency physicians' opinions. Methods: From June to August 2008, we conducted an observational study in an urban emergency department (ED). Adult patients who used tobacco within the past six months were enrolled. Exclusion criteria were severe illness, cognitive insufficiency, insurmountable language barrier, and unavailability of the patient's physician to complete the assessment. A computerized tobacco assessment examined each patient's awareness of his own TRI, as well as his treating physician's opinion. Frequency counts, chi squares, and t-tests were used to analyze the relationship between the following: patient's endorsement of a TRI from the US Surgeon General's list; belief that he has an illness caused or made worse by tobacco use; belief that the current ED visit was due to a TRI; and whether the patient's treating physician noted the patient had a TRI. Results: Of the 66 patients enrolled, 56 had complete data for analysis. All participants reported having at least one TRI from the US Surgeon General's list, but only 38% (21/56) believed that they had an illness caused or made worse by tobacco use. While 11 (44%) patients with a physician-identified TRI also self-reported that their ED visit was due to a TRI ($X^2 = 9.64$, df = 2, p<0.01), there remained a high degree of discordance in perceptions. For example, of the 25 (45%) patients whose physicians believed had a TRI, 12 (48%) patients did not agree with their treating physician ($X^2 = 4.051$, df =1, p < .05). Conclusions: There was a large gap between participants' perceptions and the reality of having a TRI. Educating patients about their TRIs may have potential for increasing motivation to quit. The study awaits validation with a larger sample.

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VALIDATION OF THE TAILORED INTERVENTION EXPECTANCIES QUESTIONNAIRE

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Individually tailored smoking cessation interventions have been found to be more effective than standard interventions. Generally, intervention expectations are a significant predictor of outcomes. With regard to smoking cessation interventions, Webb et al. (2005) found expectations for tailored versus standard messages predicted subsequent readiness to quit smoking. Expectancies are an individual-difference variable that may partially explain the efficacy of tailoring. This study describes the validation of the Tailoring Intervention Expectancies Questionnaire (TIE-Q).

This study sought to develop and validate a 15-item instrument to assess expectancies for tailored and standard intervention approaches. Items were developed using methods from an item response theory perspective. Participants indicated agreement with 15 items on a 5-point Likert scale, ranging from strongly disagree to strongly agree. For example: In order for a program to be effective, it should be developed based on my own characteristics and needs.

Adult smokers (N = 289) completed the questionnaire. Participants were mostly female (61%), Caucasian (90%), with an average age of 49 years (SD=9.94). The observed range of scores was 23–73, with a mean of 48.26 (SD = 9.26). Internal consistency of the measure was high (α= .85).

A factor analysis using maximum likelihood factor extraction and a promax rotation was conducted. Examination of eigenvalues and scree plot revealed three distinct factors: (1) high tailoring expectancies, (6 items; accounting for 32.1% of item variance), (2) low tailoring expectancies (5 items; accounting for 14.7% of variance), and (3) neutral intervention expectancies (4 items, accounting for 8.6% of variance). The factors explained 55% of total variance in the measure. Our findings support use of the TIE-Q for assessing intervention expectancies and for further understanding links between participant expectations and intervention outcomes. Future research will focus on testing the validity of the measure in different populations and examining clinical applications.

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INTERMITTENT EXERCISE IN RESPONSE TO NICOTINE CRAVINGS: A NOVEL SMOKING CESSATION PROGRAM

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Tobacco use and physical inactivity are the leading causes of preventable death in the United States, accounting for approximately one-third of annual deaths. They also tend to co-exist and apparently influence each other, as persistent smokers are more likely to remain inactive. Although 30–50% of smokers attempt to quit each year, most relapse within three months, suggesting that mainstream cessation assistance options do not work well for many smokers. Interventions using a sustained, aerobic exercise program as a smoking cessation technique have resulted in modest, short-term cessation success rates comparable to conventional cessation methods. No trial to date has prescribed a program consisting of intermittent bouts of exercise in response to nicotine cravings, despite evidence suggesting its potential effectiveness as a cessation tool.

The “Walk Away from the Habit: Overcoming Nicotine Dependence through Exercise” randomized clinical trial was designed in attempt to replace smoking with exercise among generally healthy, inactive adult smokers who desire to quit. Participants (N=60; 18–64 years old) are randomly assigned to a standard care Internet group or an Internet+exercise group. The intervention lasts three months, and follow-up is three months later. The study incorporates unique intervention strategies, including: an exercise protocol that capitalizes on the frequent nicotine cravings that smokers experience during quit attempts and the craving reductions that occur during and after exercise; a custom-made website with daily lessons/ handouts on smoking cessation; and daily, website-based self-monitoring of smoking, craving levels, mood, and exercise.

The primary goals of the study are to help sedentary smokers who desire to quit achieve long-term cessation and to examine the exercise intervention’s efficacy and effectiveness. Preliminary results reveal participant satisfaction and success. Because this intervention is primarily web-based, it could be easily disseminated to remote locations if it proves to be successful.

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EFFECTS OF SUBJECTIVE CRAVING REPORT ON NEURAL RESPONSE TO SMOKING CUES

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The existing neuroimaging literature on cue-elicited craving consists of paradigms with and without subjective ratings along with cue exposure. Given the possible effects of subjective reports on cue-elicited craving processes, it is important to ascertain what these effects are and how they may have contributed to inconsistencies in the literature. To that end, we recorded fMRI and subjective craving data on 52 regular smokers. Thirty subjects were asked to simultaneously rate their level of urge to use cigarettes (RATE) continuously on a scale on the bottom of the screen. The remaining 22 subjects were only presented the video cues (NO RATE). We regressed smoking video presentations to determine the neural response to smoking cues, and contrasted the RATE group with the NO RATE group. These contrasts showed that the NO RATE group had greater BOLD response in several areas of the reward system (medial and lateral orbitofrontal cortex, anterior cingulate gyrus, insula, and caudate) compared to the RATE group. There was also greater activation in other areas such as the posterior cingulate gyrus / precuneus areas and the hippocampus in the NO RATE compared to the RATE. Our findings showed that those who were not asked to rate their subjective craving had greater neural response in areas related to the incentive salience and anticipation of reward. While not directly ascertained, one possibility for the diminished effect in those who were asked to report their craving may be that the act of having to continuously rate may have inadvertently distracted them from the video cues, and, thus, taken away from the rewarding effects of the cues. These findings show that discrepancies in fMRI findings of cue-elicited craving could be attributed to processes related to the simultaneous subjective reporting of craving.

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FACTORS ASSOCIATED WITH SMOKING ABSTINENCE AMONG CANCER PATIENTS

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Studies are needed to identify methods to promote smoking cessation among cancer patients. Because lung and head and neck cancers are the most common smoking-related malignancies, these cancers were the focus for this study. The purposes of this study were to identify 7-day point prevalence (PP) abstinence rates at 3 and 6 months (mo) after entry to the study and identify factors (tobacco, psychosocial, behavioral and cognitive) related to 7-day PP abstinence at 3 and 6 mo after study entry among cancer patients. Standardized questionnaires were used to collect tobacco history, factors related to smoking, and abstinence measures. Biochemical verification was done with urinary cotinine. Data were collected from 163 smokers or recent quitters (quit<6 mo) at entry to the study, 132 and 121 had data collected at 3 and 6 mo. The median age of participants was 57 years, 64% were male, 93% were white, 56% had lung cancer, and 46% of lung cancer patients had stage IV disease. Descriptive statistics and logistic regression were used for analyses. Seven-day PP rates were 65% at 3 and 53% at 6 mo for lung cancer patients compared to 72% at 3 and 68% at 6 mo for head and neck cancer patients. Increased craving (p=0.02) and attributing respiratory symptoms to smoking behavior (p=0.02) were related with 7-day PP at 3 mo in lung cancer patients, whereas increased craving (p=0.03) and readiness to quit (p=0.04) were related with 7-day PP abstinence in head and neck cancer patients. Increased self efficacy (p=0.05) was related with 7-day PP abstinence at 6 mo in lung cancer patients, whereas nothing was significant in head and neck cancer patients. These findings highlight that smokers with lung and head and neck cancer have common as well as unique factors that affect abstinence. Management of craving and use of cognitive and behavioral strategies to address the relationship between smoking and respiratory symptoms, increased self-efficacy, and readiness to change are recommended in future smoking cessation interventions targeting this group of patients.

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THE INFLUENCE OF STRESS ON IMPULSIVITY IN ADOLESCENT CIGARETTE SMOKERS AND NONSMOKERS

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Past research has demonstrated significant differences in the perception of stress between males and females, with females typically reporting higher ratings of stress (e.g., Cohen & Williamson, 1988; Hewitt, Flett, Mosher, 1992). Additionally, a plethora of research in impulsivity has demonstrated that cigarette smokers are typically more impulsive than nonsmokers (e.g. Bickel, Odom, & Maddem, 2007; Mitchell, 1999). Recent research with adolescent smokers and nonsmokers has found a gender by smoking status interaction in an impulsive behavior known as behavioral disinhibition (Reynolds et al, 2007; Fields et al, 2009). Behavioral disinhibition is an individual's ability to inhibit prepotent motor responses to a given stimuli. In this case, male smokers actually perform less impulsively than do male nonsmokers (but not female nonsmokers), and female smokers respond most impulsively of all groups. This research examined ratings of stress and disinhibition in a sample of adolescent cigarette smokers (n=50) and nonsmokers (n = 25). We proposed to replicate past findings, as well to demonstrate that this interaction was moderated by gender differences in the perception of stress. The gender by smoking status interaction was replicated and found to be significant (F=4.25, p = .044). However, when ratings of stress were held constant across the groups, this relationship was strengthened (p = .028) in the opposite direction of what was initially hypothesized. That is, stress could actually function to mask the gender by smoking status interaction. Correlations between a biomarker of smoking status and behavioral disinhbition were significant for females (r = .484, p = .031), but not for males (r=-.023, p = .931). The current results, while replicating earlier findings (Reynolds et al., 2007; Fields, et al., 2009), demonstrate that there may be important gender differences in an individual's ability to inhibit his or her own behavior, and stress could possibly mediate this relationship.

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ASSESSING MASCULINE NORMS AND THEIR RELATIONS TO COLLEGE MEN'S SMOKING, DRINKING, AND PSYCHOLOGICAL WELL BEING

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Conceptions of societal gender roles are theorized to influence individuals' health-related values and behaviors (Courtenay, 2000; Good & Sherrod, 2000), yet research has been limited by the lack of an appropriate brief instrument. This study developed and assessed the model fit of a short version of the Conformity to Masculine Norms Inventory (CMNI; Mahalik et al., 2003). The CMNI-22 is a screening version of the longer 96-item CMNI, assessing 11 dimensions of masculinity (Winning, Emotional Control, Risk-Taking, Violence, Dominance, Playboy, Self-Reliance, Primacy of Work, Power over Women, Disdain for Homosexuals, and Pursuit of Status) that have been empirically linked to a variety of health behaviors and outcomes. Confirmatory factor analyses results indicated good model fit (CFI = .93; RMSEA = .04; SRMR = .07) for the brief instrument. Employing the CMNI-22 in a sample of 236 male college students who smoked, Bonferroni-corrected results indicated that use of disengagement beliefs about smoking correlated positively with overall endorsement of masculine norms (r = .26, p <.001), endorsement of the Violence norm (r = .23, p <.001), and endorsement of Risk Taking norm (r = .22, p <.001). Their motivation to quit smoking was negatively correlated with endorsement of the Violence norm (r=-25, p <.001). However, among this group of men who smoke, their level of smoking was not related to their endorsement of masculine norms. Past 30-day binge drinking correlated positively with endorsement of the Winning norm (r = .23, p <.001), while level of social anxiety correlated negatively with endorsement of the Risk Taking norm (r=-.30, p < .001). It appears that incorporating gender analysis into individuals' health behavior analysis and interventions warrants further investigation.

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A FIRST LOOK AT EATING DISORDERS AND BODY IMAGE IN AN ETHNICALLY DIVERSE SAMPLE OF HOMELESS ALCOHOLIC WOMEN

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Objective: To describe rates of eating disorders and levels of body image disturbance in an ethnically diverse sample of homeless alcoholic women.
Method: One hundred and three homeless alcoholic women completed structured diagnostic interviews assessing Axis I disorders and self-report measures of body image disturbance, depression, alcohol use, and general psychological symptomotology.
Results: Importantly, 15.5% of women reported the presence of a current eating disorder and 19.4% reported the presence of a past eating disorder. Chi Square analyses revealed that a current eating disorder diagnosis was significantly associated with a current diagnosis of depression but not of bipolar disorder or a drug abuse disorder. Body image disturbance scores were in the non-clinical range. Linear regressions indicated that body image disturbance scores significantly predicted depression scores, obsessive-compulsive symptoms, and interpersonal sensitivity (p<.05). Two body image disturbance scores significantly predicted a reduction in drinking and drinking-related problems across an 18 month period. There were no significant ethnic differences on eating disorder or body image measures.
Conclusion: The possibility of an eating disorder should not be overlooked in a homeless alcoholic population. While body image concerns are in the normal range, this does not mean they should be ignored as even "normal" levels of body dissatisfaction can be related to impaired functioning. Furthermore, heightened scores on body image measures are indicative of elevated scores on measures of depression and other psychiatric symptoms. These results provide the first known examination of eating disorder and body image symptoms in an ethnically diverse homeless population.

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GENDER DIFFERENCES IN VICTIMIZATION, DEPRESSION AND SUBSTANCE USE IN A NATIONAL SAMPLE OF U.S. ADOLESCENTS

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Although substantial literature indicates a link between victimization and depression among adolescents, the association between victimization and adolescent substance use is less well established. Moreover, gender differences in depression were documented in previous studies but it remains unclear whether depression would be associated with victimization and substance use more strongly among female adolescents. The purpose of this study was to examine the link between bullying victimization and substance use and to test the mediating role of depression in male and female adolescents. Cross-sectional data were collected from a national sample of 1495 tenth graders who participated in the 2005/06 Health Behaviors in School-aged Children U.S. Survey. Sample characteristics were 49.3% males, 46.0% Caucasians, 19.0% African-Americans, 23.9% Hispanics, and with a mean age of 16.1. Victimization, depression and substance use were all measured as latent variables. Traditional victimization was measured by seven items from the Olweus' revised bully/victim instrument (Olweus, 1996) and two additional items were added to assess adolescents' experience with cyber victimization. Depressive symptoms were measured by six items, which were included in the HBSC survey as a short version of the Center for Epidemiologic Studies Depression Scale (Radloff, 1977). Substance use was measured by drinking alcohol, being drunk, smoking cigarettes and using marijuana in the past 30 days. Multiple-group structural equation modeling showed that victimization was linked to substance use in both genders. Among females, depression was positively associated with both victimization and substance use and mediated the association between the two latter variables. Among males, depression was associated with victimization but not with substance use. Results highlight the elevated risk for victimization and substance use problems that depression poses, particularly among adolescent females.

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THE LEXICAL DECISION TASK PREDICTS ALCOHOL USE IN WOMEN

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Alcohol use disorder cause and contribute to a variety of health problems and are deleterious and deadly in their own right. Despite the importance of this field to behavioral medicine, the full range of factors contributing to the etiology and maintenance of alcohol use disorders are not fully understood. Research on the etiology of alcohol use disorders has focused increasingly on how the beliefs people have about alcohol influence their motivation to drink. Implicit alcohol expectancies, or beliefs about alcohol which exist outside of conscious awareness in the form of memory associations, are thought to uniquely affect drinking behavior. Research also has indicated that there may be a distinctive relationship between negative reinforcement and alcohol use in women. However, the most common measures used to examine implicit alcohol cognitions may be insufficient to examine associations involving negative reinforcement.

The current study utilized the Lexical Decision Task (LDT) to examine the relationship between implicit alcohol cognitions and reported drinking in a sample of college women. Seventy-eight female participants completed a LDT including alcohol- and emotion-words, measures of explicit alcohol expectancies, and a measure of drinking behavior at baseline and after two months. Strong associations between negative emotion-words and alcohol-words (as measured by the LDT) were found to predict drinking at follow up, and to account for unique variance in drinking beyond the contribution of explicit measures. In addition, women who reported heavier drinking in response to social conflict on an explicit measure showed stronger priming of alcohol words by negative emotion words, thus implying that the LDT may tap into implicit cognitions related to alcohol use as a method of coping. These findings suggest that the LDT is sensitive to negative-reinforcement associations in a way that other measures are not. As implicit cognitions are better understood, treatments may begin to incorporate these important factors.

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SUBSTANCE USE TRAJECTORIES OF POST-BARIATRIC SURGERY SUBSTANCE ABUSE TREATMENT PATIENTS

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High rates of substance abuse treatment admissions have been observed among post-bariatric surgery patients (see Ivezaj et al. SBM 2010 abstract submission). It is unknown whether substance use problems typically precede, co-occur, or arise subsequent to bariatric surgery. To better understand substance use trajectories among this population, we conducted chart reviews of 53 post-bariatric surgery substance abuse treatment admissions. Patients were predominantly White (83%) with a mean age of 44.5±9.1, mean BMI of 30.6±6.3 (obese), and mean post-surgical weight loss of 157.4±60.5 lbs. Many (28.8%) had no prior substance use treatment. The majority sought treatment primarily for alcohol (62.3%), an additional 9.4% for alcohol plus another drug, 13.2% opiates, 7.5% benzodiazepines, 7.6% other. Among alcohol users, 61.9% reported heavy use prior to bariatric surgery. Among opiate and benzodiazepine users, however, 66.7% and 89.5%, respectively, reported onset of heavy use at some time after the surgery. Substance use trajectory classification frequencies were: 35.8% of the sample reported heavy substance use prior to bariatric surgery; 43.4% reported that heavy use of all substances began after surgery; 20.8% engaged in heavy use of at least one substance prior to surgery, but developed heavy use of another substance post-surgery. Relative to those admitted for other addictions, those with alcohol dependence were more likely to have had heavy substance use prior to surgery (65% of alcohol dependent cases vs. 30.8% of non-alcohol dependent cases reported onset of heavy use of some type of drug/alcohol prior to the surgery, p<.05). Males were marginally more likely than females to report heavy use prior to surgery (75% vs 48.6%, p=.08). Greater pre-surgical substance use screening and educating patients about post-surgical risk of addiction is warranted to prevent development or exacerbation of substance use disorders among the bariatric population.

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PROGRESS ON DEVELOPMENT OF A SCALE TO MEASURE DRINKING SELF-IDENTITY AMONG COLLEGE STUDENTS: THE DRINKING IDENTITY AND PRIDE SCALE (DRIPS)

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Clinical observations of heavy drinking college students suggests that drinking behaviors frequently are a strong component of self-identity - even a source of pride - among these students. To the extent that this occurs, such strong identification as a heavy drinker could become a significant barrier to change and could moderate potential effects of interventions. We drafted an eight-item measure that included behaviors that would be consistent with such a self image (e.g. social comparisons) and inconsistent (e.g., hiding one's consumption). These initial items were included in an online survey of undergraduate students (n=433) at a large university. We randomly split the sample into exploratory (n=216) and confirmatory (n=217) samples. The data from the exploratory sample were examined using a principle components analysis with varimax rotation. A two component solution fit the data best, with components representing social comparison and deception. Two items did not load cleanly on either factor and were discarded. The two-factor model fit the data reasonably well in the confirmatory sample with CFA (NFI =.91, CFI=.93). The two subscales demonstrated acceptable internal consistency reliability for small scales (α's =.75 and .65) and were negatively correlated with each other (r=-.39, p <.001). Utilizing only that portion of the sample that consumes alcohol (n=270), the social comparison subscale was positively correlated with weekly alcohol consumption (r=.48, p <.001) and peak consumption (r=.47, p <.001), alcohol-related problems (BYAACQ r=.53, p < .001 and CAPS-R r=.34, p <.001), the contemplation subscale of the RCQ (r=.45, p <.001) and the Ambivalence subscale of the SOCRATES (r=.49, p <.001). The deception subscale correlated significantly with each of these same measures, although less strongly and in a negative direction. Implications and plans for further development of a drinking identity scale will be included.

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A-148

MINDFULNESS AND PREVENTION: ACTING WITH AWARENESS AND ALCOHOL USE

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Mindfulness has been used in treatments for both psychological and physical disorders. The present study examined the relations between overall mindfulness, mindfulness factors, and health behaviors linked to disease. Participants were 300 undergraduate students (M= 19.6 years; 76% female) who completed questions inquiring about positive (sleep, frequency and length of exercise) and negative (use of tobacco, alcohol, and caffeine) health behaviors. To assess mindfulness levels, we utilized the Mindful Attention Awareness Scale (MAAS) and the Five-Factor Mindfulness Questionnaire (FFMQ).

All health behaviors were entered into a linear regression, with overall mindfulness level as the outcome (MAAS). Results indicated a significant model, R2 = .07, F (6, 202) = 2.26, p < .05. Specifically, mindfulness was negatively related to alcohol intake [β=-.15, p < .05] and positively related to sleep [β= .16, p < .05]. Results showed that alcohol, but not sleep, remained a significant predictor of total mindfulness level as measured by the FFMQ [β=-.17, p < .05].

To further investigate these relations, mindfulness facets (FFMQ) were regressed on health behaviors. Results showed that alcohol use was negatively related to FFMQ Act with Awareness [β=-.19, p < .01] and Describe [β=-.17, p < .05]. Additionally, cigarette smoking was significantly related to FFMQ Describe in the positive direction [β= .16, p < .05].

Alcohol use was negatively associated with both measures of mindfulness. Further, alcohol use and cigarette smoking were significantly related to Act with Awareness and/or Describe subscales of the FFMQ. These findings suggest that individuals may engage in substance use as an avoidant coping mechanism, executed with the desire to reduce awareness of the present moment. This would also impede their ability to attend to and describe aspects of the present moment. These findings encourage the incorporation of mindfulness training in substance abuse treatments. Mindfulness may address functional coping strategies and systematic health-promoting practices,which are necessary components of such treatments.

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A-149

INDIVIDUAL/FACILITY CONGRUENCE AND TREATMENT OUTCOME: AN EXAMINATION

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The primary aim of this study was to examine whether admission differences in levels of spirituality predisposed alcohol-dependent individuals to favorable or unfavorable outcomes following admission to one of two inpatient facilities that differed in the degree to which spirituality was incorporated into the environment of care. It was hypothesized that individuals whose admission level of spirituality was congruent with the treatment program's orientation and who as such were considered optimally placed (i.e., "matched") for treatment would evince better post-treatment outcomes. Four-hundred and five participants completed the Addiction Severity Index, measures of spirituality (Daily Spiritual Experiences Scale) and psychosocial well-being at treatment intake. The average length of stay was 26.11 (SD=7.47) days. Two hundred thirty-two of these individuals completed follow-up telephone interviews three months post-discharge. A 2x4 ANCOVA, using admission ASI reports of days drinking as a covariate and self-reported days drinking in the month prior to follow-up as the criterion yielded a significant interaction term, F (3, 230) = 2.89, p = .04. Examination of the means indicated a paradoxical effect as subjects desirous of having spirituality incorporated into the environment of care and who by virtue of the treatment program they had entered were considered "matched" for treatment, reported more drinking days than those considered "mis-matched." Most interestingly, individuals reporting little interest in having spirituality incorporated into their treatment experience who entered the less spiritual program evinced the poorest outcomes (i.e., most follow-up days drinking). Similar effects were noted for self-reported days experiencing alcohol-related problems, p = .056. While previous findings from our group have posited an overall favorable effect of congruence on in-treatment measures (i.e., abstinence efficacy, days desiring alcohol), the current findings suggest that these effects may not be robust over time.

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A-151

PSYCHOSOCIAL PREDICTORS OF DEPRESSION FOLLOWING LUNG TRANSPLANTATION

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Depression following lung transplantation represents a significant clinical challenge and has been associated with poor health outcomes, including graft rejection and death. This study examined psychosocial predictors of depression in a series of lung transplant candidates who participated in a clinical trial known as the INSPIRE study. One hundred thirty-three patients underwent assessments prior to transplant and were followed for 6-months post-transplantation. At baseline, 31 patients (30%) were considered to have clinically significant depression (BDI-II>13). Elevated depressive symptoms were associated with higher levels of anxiety on the STAI (r=.68, p<.001), lower levels of trait optimism on the LOT-R (r=-.57, p<.001), poorer quality of life on the PQLS (r=-.46, p<.001), and poorer performance on the 6-minute walk test (r=-.19, p=.05). Following transplant, 6% of patients had depressive symptoms in the clinically elevated range at 6-month follow-up. Pre-transplant depression was a significant predictor of depression at 6-month follow-up: a 1-point increase on the BDI-II at baseline was associated with a .50-point increase on the BDI-II 6 months after transplant (p<.001). Moreover, when comparing patients who were depressed versus not depressed at baseline, the pre-transplant depressed group had significantly higher levels of depressive symptoms (BDI-II mean scores of 9.4±7.1 versus 4.5±3.9) at 6-month follow-up, t(125)=4.92, p<.001). Pre-transplant anxiety was the only other psychosocial predictor of depression at follow-up (b=.27, p=.02). Quality of life and optimism did not predict post-transplant depression.

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A-152

PREDICTORS OF QUALITY OF LIFE IN CAREGIVERS TO CARDIOTHORACIC TRANSPLANT RECIPIENTS

Larissa Myaskovsky, PhD,[1,2] Mary McNulty, MA,[2] Robert Kormos, MD[2] and Mary Amanda Dew, PhD[2]

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Current trends in medical treatment and healthcare economics have resulted in shortened hospital stays, and extended life expectancies for chronically ill adults, thus placing increased responsibility for their care on the family. As hospitals rely more heavily on family caregivers (CGs) to assist with patient recovery, it is imperative to determine the effects that such burden may have on CGs. Previous research has focused on the burden of caregiving to adults whose health deteriorates over time. However, little attention has been paid to CGs of patients who undergo procedures to improve their health. We therefore examined such a population, CGs of transplant (TX) recipients, in order to determine the nature of change in CG quality of life (QOL) and psychosocial factors that may predict their QOL post-TX.
Adult (aged 18+) caregivers of 218 cardiothoracic TX recipients (lung, n=120; heart, n=98) participated in semi-structured interviews that included measures of demographics, social support, self image (optimism and mastery), coping, caregiver burden, and QOL (SF-36) at 2, 7 and 12 months post-TX. Mixed-model hierarchical analysis of variance (ANOVA) showed that QOL in CGs was high and remained so across the first year post-TX in emotional and social functioning. However, CG physical functioning [F (2,305)=5.8, p<.01] and bodily pain [F(2,336)=3.1, p<.05] worsened over the year. Linear regression analysis indicated that optimism was the most consistently important predictor of CG QOL across all domains. Greater caregiver burden predicted poorer QOL in physical and psychological domains. Higher family support predicted better QOL in social and psychological domains (adjusted R2 range=0.12 to 0.28, all ps<.001). There were no differences by type of TX recipients received. TX teams should identify CGs who may be at risk for QOL declines in order to maximize positive outcomes for the entire family after transplant.

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Thursday
April 8, 2010

Symposium 01 9:00 AM–10:30 AM 2000

A NEW LOOK AT THE ROLE OF SOCIAL SUPPORT FOR LONG-TERM WEIGHT MANAGEMENT

Michaela Kiernan, PhD,[1] Paul Estabrooks, PhD,[3] Amy Gorin, PhD[2] and Audie Autienza, PhD[4]

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The role of social support has long been considered an essential component of standard behavioral weight-loss programs. In these programs, core modules typically focus on encouraging obese individuals to elicit positive social support and to manage sabotage from one's family and friends. Despite widespread and longstanding inclusion of such modules, surprisingly little research has systematically evaluated the role or success of social support strategies for weight management. To move the field forward, three issues need to be addressed: (1) the inclusion of psychometrically strong measures that could eventually be used to assess the role of social support as a mediator in future interventions; (2) the consideration of multi-level elements of social support—ranging from individual perceptions of social support to the influence of existing and changing social norms, social capital, and social cohesion within new or intact social groups—that may be fruitful avenues for future interventions; and (3) the design and implementation of randomized clinical trials to explicitly test the long-term efficacy of innovative social support interventions for weight management. This symposium will consider these three issues in a set of presentations designed to stimulate discussion: (1) to describe the psychometrics and initial existing levels of perceived support from family and friends for engaging in healthy eating habits and physical activity among obese individuals initiating a behavioral weight-loss trial; (2) to describe the existence of social norms, social capital, and social cohesion among weight-loss groups of obese individuals in a large worksite intervention; and (3) to report on results of a clinical trial that tested the feasibility and initial efficacy of recruiting support partners from the home environment to support their own and their partner's weight loss efforts.

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Symposium 01A 2001

LOW INITIAL LEVELS OF PERCEIVED SOCIAL SUPPORT FOR HEALTHY EATING AND ACTIVITY INDICATE ROOM FOR INTERVENTION

Michaela Kiernan, PhD,[1] S. Moore, PhD,[1] K. Lee, MS,[1] D. Schoffman, BA,[1] A. King, PhD,[1] B. Taylor, MD,[1] H. Kraemer, PhD[1] and M. Perri, PhD[2]

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Perceived social support is rarely assessed in randomized weight-loss trials, but could act as moderators or mediators of treatment interventions. Building on prior scale development (Sallis et al. 1987; Ball & Crawford 2006), we assessed the psychometrics and initial levels of perceived social support and sabotage for healthy eating and physical activity for family and friends (8 scales) among 267 obese women (initial BMI 32.1 ± 3.5) enrolled in a randomized trial. Support scales had 6 items (e.g., reminders, encouragement) and sabotage scales had 3 items (e.g., ate unhealthy foods in front of me). Responses from 1–4 labeled never, rarely, sometimes, or often were summed for each scale. To improve interpretation, and in contrast to prior work, we divided summary scores by the number of scale items so mean levels corresponded to response labels (preserving the mathematical relationship) and did not reverse sabotage items (so higher values would better reflect more sabotage). Internal consistency was excellent for support scales (.82-.85) but poor for sabotage (.61-.73). Removing 1 sabotage item (refused to eat healthy foods/be active with me) improved alphas for all but one scale (.78-.86). Support and sabotage scales were not correlated, indicating independence. Overall, perceived social support was low. Only 22% received support sometimes or often for either healthy eating or activity from family, only 10–12% received support from friends. Less support for eating and activity predicted higher BMI [rs=-.15(-)-.17, ps=.01]. Perceived sabotage was high, 48% experienced sabotage sometimes or often from family; 16–33% experienced it from friends. Women who were refused support for eating or activity were less likely to have been in a prior formal weight loss program than those who were not refused (ps<.003). Low perceived social support suggests room for improvement via innovative social support interventions, especially tailored interventions for vulnerable subgroups.

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Symposium 01B 2002

BEYOND SOCIAL SUPPORT: UNDERSTANDING SOCIAL FACTORS WITHIN THE CONTEXT OF WORKSITE WEIGHT LOSS INTERVENTIONS

Paul Estabrooks, PhD, Jennie Hill, PhD and Fabio Almeida, PhD

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Worksite health promotion initiatives have been predicated, at least in part, upon the assumption that social support within an employee group will facilitate behavior change. More recently, issues such as social capital and social cohesion have been suggested as potential influences on health in community and worksite contexts. However, conceptual and operational definitions of these social factors have limited the development of potential socially relevant intervention strategies. The purpose of this study is to examine the relationships between worksite cohesion, social capital, and coworker support and worksite policy for weight loss with the intent to inform multiple levels of social targets for weight loss interventions. Employees from 19 worksites (n=1293) completed validated measures of worksite social capital and a multidimensional conceptualization of worksite cohesion (i.e., individual attractions to the social (IAS) and task (IAT); group integration social (GIS) and task (GIT)). Seven items were used to assess coworker support and worksite policy that would support weight loss. All dimensions of worksite cohesion were related modestly related to worksite social capital (IAT r=.22, IAS r=.41, GIT r=.34 and GIS r=.45; p's<.001).Worksite cohesion (IAS β=.19; GIS β=.29; IAT β=.07; GIT β=.10) dimensions contributed significantly to the variance in social capital (R2=.26; F=110.69, p<.001). Social capital (β =.18), GIS (β =.09), and IAT (β=.28) significantly contributed to the variance in perceived policy support for weight loss (R2=.14; F=43.3, p<.001). However, only GIT (β=.29) significantly contributed to the variance in perceived support from coworkers for weight loss (R2=.10; F=31.8, p<.001). Worksite cohesion is related to social capital and provides different intervention targets for worksite weight loss programs. Further, task specific cohesion is related to coworker and policy support for weight loss.

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Symposium 01C 2003

BENEFITS OF ENROLLING A PARTNER IN WEIGHT LOSS TREATMENT

A. Gorin, PhD,[1] H. Raynor, PhD,[2] M. Crane, MA,[3] K. Maguire, MA,[4] E. Robichaud, MSW[4] and R. Wing, PhD[4]

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Background: Spouses and other socially connected individuals tend to gain weight at similar rates and may be positively influenced by each other's weight loss efforts; however, most adult behavioral weight loss programs target only individuals. This study examined the impact of enrolling dyads of overweight/obese adults from within the same home into a comprehensive, home environment focused weight loss program.
Methods: Overweight/obese adults (N=201; BMI 37.0±6.9; 78.1% women) were recruited with an overweight/obese adult partner from the same home (BMI 33.4±5.8; 46.8% women) and randomized to standard behavioral weight loss treatment (SBT) or to SBT plus changes to the physical and social home environment (SBT+Home). All participants received 6 months of weekly meetings and 12 months of bi-monthly meetings. SBT partners were provided one weight loss session and then seen only at assessments; SBT+Home partners were expected to attend all treatment meetings and set weight loss goals. Assessments occurred at 0, 6, 12, and 18 months; 6 month data is reported here.
Results: Most dyads (77.1%) were comprised of romantic pairs (married or cohabitating) with the remaining pairs comprised of extended family members or friends. Intent to treat analyses revealed greater weight losses in SBT+Home than SBT participants (8.8±5.9% vs 6.7±6.5%, $p=.007$). SBT+Home partners also lost more weight than SBT partners (10.2±5.4% vs 3.2±4.8%, $p<.001$). SBT+Home partners attended 18.9±4.8 of 24 sessions, with romantic partners attending more sessions than other partners ($p=.04$). Attendance between partners was highly correlated ($p<.001$) and there was a significant positive association between participant and partner weight loss ($p=.004$).
Conclusion: Our results suggest that it is feasible to enroll adult dyads from the same household into behavioral weight loss treatment. The comprehensive home environment program, which emphasized partner support, resulted in better weight losses for participants and their partners.

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Symposium 02 9:00 AM–10:30 AM 2004

CAN WE FIND HEALTH THROUGH FORGIVENESS?: RECENT EVIDENCE LINKING FORGIVENESS AND MULTIPLE HEALTH INDICES

Amanda Wheat, MS,[1] Kathleen Lawler-Row, PhD,[3] Loren Toussaint, PhD,[4] Alyssa Cheadle, BA,[5] Matthew Whited, PhD[6] and Kevin Masters, PhD[2]

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Forgiveness recently has emerged as an important area of interest in psychological research, having an impact on several areas, such as moral development, social and personality research, and clinical psychology. Forgiveness is a process entailing a decrease of negative and an increase of positive emotions, thoughts, and behaviors, related to a transgression. Such processes have been linked to physical and psychological health. Consequently, interest in forgiveness has widened to create a surge of multidisciplinary efforts, which aims to decompose the complex relations between forgiveness and health and identify key mediators and individual differences associated with these relations.<p>As we discover key areas in which forgiveness relates to health, we can improve interventions that promote health via behavior change (i.e., increasing forgiveness), as well as identify groups that would most benefit from such interventions. Therefore, the current symposium presents recent research that examines three areas of research examining the forgiveness—health relation, as follows. Our first presenter will address how higher forgiveness relates to better self-reported physical and psychological health, a relation that varies with both sex and emotion regulation. Our second presentation will include findings from a longitudinal investigation that supports a relation between dimensions of forgiveness, including spiritually-related forgiveness and mortality risk. Our third presenter will discuss findings that cardiovascular recovery differs following an interpersonal transgression depending upon levels of trait forgiveness, presence or absence of an apology, and sex. Finally, our discussant will address the role of individual and contextual factors that are integral to the forgiveness—health association.

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Symposium 02A 2005

CRITICAL PATHWAYS IN THE FORGIVENESS—HEALTH RELATIONSHIP

Laura Edwards-Hyatt, PhD and Kathleen A. Lawler-Row, PhD

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Forgiveness is defined as (a) a decrease in negative and (b) an increase in positive emotions, thoughts and actions toward one who has committed a moral offense, leading to psychological or physical harm or loss. Trait forgiveness is accompanied by benefits in physiological reactivity, health indices, and psychological well-being. In addition to decreases in negative affect, we propose the hypothesis that forgiveness is a form of emotional regulation, involving a decrease in emotion suppression and an increase in cognitive reappraisal. The current study sought to determine the mediating roles of anger, stress, empathy, cognitive reappraisal and emotion suppression in the forgiveness–health association. Adults ($n=655$), aged 18 to 73 years, completed questionnaires of trait forgiveness, health, and the mediating factors. Covarying for age and sex, both forgiveness and health were associated with decreases in anger, stress, and emotion suppression and with increases in empathy and cognitive reappraisal. Regression analysis indicated that the model was significant ($p < .0001$), accounting for 29.6% of the variance in the health variable. Using multiple mediation analysis via bootstrapping, we found that all factors fully mediated the relation between forgiveness and health (c' path did not differ from zero ($b=-.0751$, $se=.0423$, $t=-1.7751$)). While sex did not moderate this effect, there was a significant effect of sex ($b=-27$, $t=-3.16$, $p < .002$). For men, reductions in anger and stress completely mediated the forgiveness-health relation while for women, all five factors (anger, stress, empathy, suppression and reappraisal) were necessary. Therefore, for men, the decrease in negative affect is sufficient to explain the beneficial effect of forgiveness. For women, the beneficial effects of forgiveness depend on both decreases in anger, stress and emotion suppression as well as increases in empathy and reappraisal. Therefore, women may need to think about forgiveness differently from men, and include positive feelings and thoughts in their experience of forgiveness, in order to reap the same benefits.

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Symposium 02B 2006

FORGIVENESS AND MORTALITY: INITIAL EVIDENCE

Loren Toussaint, PhD[1] and Alyssa Cheadle, BA[2]

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Though the connection between forgiveness and health has been documented in several studies, little if any evidence exists to indicate if forgiveness is related to mortality. Nevertheless, there are many reasons to believe that forgiveness might be protective of mortality. To name only a few viable mechanisms of this effect, forgiveness has been linked to decreased autonomic arousal and overall stress, improved health and well-being, and a variety of other psychophysiological mechanisms such as cardiovascular reactivity and neuroendocrine functioning. Hence, the purpose of this study was to examine multiple dimensions of forgiveness and their connection to mortality.
Data are from a 3-year longitudinal study of 1500 nationally representative individuals age 66 and older. Multiple dimensions of forgiveness are assessed at time one and mortality data are reported three years following. Socio-demographic control variables are also assessed.
Univariate analyses revealed that, as compared to deceased individuals, those still living at time two showed higher levels of believing in God's unconditional forgiveness ($F(1,1070)=6.38$, $p < .05$) and believing in conditional forgiveness of others ($F(1,1168)=8.65$, $p < .01$). Logistic regression analyses showed that both aspects of forgiveness were associated with increased risk of mortality (OR = 1.34, 1.42), even after controlling for socio-demographic characteristics. Only believing in God's unconditional forgiveness remained a significant predictor of mortality (OR = 1.27) after further controlling for physical health and attendance at religious services. These are intriguing findings. High forgiveness of others is known to be related to better health and believing that conditions of apology/restitution must be met may interfere with the health-protective effects of forgiving others. Surprisingly, believing in God's unconditional forgiveness has similar effects, and the psychosocial mechanisms underlying this effect are sure to be complex.

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Symposium 02C 2007

FORGIVENESS AND APOLOGY INFLUENCE CARDIOVASCULAR RECOVERY FOLLOWING A LIVE TRANSGRESSION

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Prior studies demonstrate that forgiveness is related to physiological reactivity and recovery in response to recalling a past transgression. This study investigated this relation directly following a live transgression. The influence of apology as a forgiveness-enhancing intervention also was investigated. Men (n = 29) and women (n=50) were chosen for participation based on their scores on the Forgiving Personality Inventory. Participants were exposed to an interpersonal transgression (i.e., harassment by the experimenter) while performing a serial subtraction task. Directly following the task, approximately half of the participants (n=40) received an apology from the experimenter for the transgression.

During the recovery period, persons high in forgiveness displayed greater diastolic and mean arterial blood pressure recovery (DBP: $F(1, 70)=4.88$, $p < .05$; MAP: $F(1, 70)=3.96$, $p < .05$). This effect was most prominent directly following the apology; women high in forgiveness who received an apology displayed lower diastolic and mean arterial blood pressure (DBP: $F(1, 23)=8.75$, $p < .01$; MAP: $F(1, 23)=8.56$, $p < .01$) as compared to low-forgiveness females who were not influenced by an apology ($ps > .05$).

Regarding the overall effects of apology, women who received an apology recovered from the transgression more quickly than women who did not receive an apology (DBP: $F(1, 47)=8.71$, $p < .01$; MAP: $F(1, 47)=7.00$, $p < .01$). Surprisingly, the effect was reversed for men; men displayed higher diastolic and mean arterial blood pressure upon recovery from the transgression if they received an apology when compared to men not receiving an apology (DBP: $F(1, 26)= 5.13$, $p < .05$; MAP: $F(1, 26)=6.71$, $p < .05$).

These results indicate that that higher trait forgiveness is associated with a greater attenuation of the cardiovascular stress response following a transgression. Also, the potential benefits of an apology may be dependent upon gender, as men responded differently to the apology than women.

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Symposium 03 9:00 AM–10:30 AM 2008

SMART GROWTH PLANNING FOR OBESITY PREVENTION IN CHILDREN AND FAMILIES

Mary Ann Pentz, PhD,[1] Estela Almanza, BS,[1] Genevieve Dunton, PhD[1] and David Berrigan, PhD, MPH[2]

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Environments in which people live, work, and attend school are major contexts for physical activity. Smart growth communities, which may include living, working, and/or school environments, are intended to incorporate increased walkability, mixed land use, preservation of green space, have the potential to promote physical activity and prevent obesity. This symposium will provide an overview of the observed associations of smart growth principles with physical activity and obesity from the published research literature. Gaps and limitations to current knowledge will be highlighted. It will describe an ongoing longitudinal prevention trial to understand the impact of a smart growth community on family obesity risk in Southern California. The session will also explore innovative technological strategies to evaluating the influence of smart growth planning on recreational and transportation-related activity. It will describe how Global Positioning Systems (GPS) and accelerometry can be used to examine place-based physical activity and travel patterns/space-time pathways. Real-time data capture modes such as Ecological Momentary Assessment (EMA) through the administration of instantaneous surveys over mobile phones will also be discussed. These methods can capture people's perceptions of their immediate environments and contexts (e.g., neighborhoods, parks, streets) as they are experienced. Feelings of safety and stress, and subjective assessments of physical aesthetics can be gathered to inform us about how people use and interact with smart growth features. Overall, this symposium will stimulate discussion on the capacity of smart growth communities to prevent obesity, strategies to effectively evaluate these outcomes, and the use of contemporary tools to measure affect and physical activity behavior in the analysis of environmental influences on these and other elements of mood and activity.

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Symposium 03A 2009

DESIGN AND METHODS OF THE HEALTHY PLACES TRIAL: A STUDY OF THE EFFECTS OF SMART GROWTH PLANNING PRINCIPLES ON FAMILY OBESITY PREVENTION

Mary Ann Pentz, PhD, Genevieve Dunton, PhD, Jennifer Wolch, PhD, Donna Spruijt-Metz, PhD, ChihPing Chou, PhD, Kiros Berhane, PhD and Michael Jerrett, PhD

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The use of smart growth principles for planning new and existing communities represents 1 of 5 major building trends in the U.S. today. Consisting of 10 principles, including providing walkability, green spaces, and attractive sense of place, these characteristics have not been systematically evaluated in longitudinal research for their potential to prevent obesity, particularly through changing physical activity behavior. The objectives of this presentation are to summarize the current literature related to smart growth and describe the design and methods of a new trial to evaluate the health impact of these principles used in community planning. A review of 206 studies showed that none have evaluated the full set of smart growth principles, and the majority have used cross-sectional designs focusing on 3 individual principles: walkability, density, or mixed use. The Healthy PLACES Trial research design is a 3 group hybrid design, involving aspects of demographic matching, residential preference, and randomization to follow 600 families who are either randomly drawn to move into a smart growth community (intervention group), demographically matched and are interested in living in a smart growth community but are not drawn in a random lottery (random control), or demographically matched who live adjacent to the smart growth community (matched control). The sample is stratified, representing low to middle-income families (1 index parent, 1 index child between grades 4–8, 36% white, 44% Hispanic, 5% African-American, 11% Asian, 4% Other). Measurement is longitudinal, with 4 measures over 4 years including anthropomorphic, accelerometry, network, and survey data on physical activity, food frequency, and Body Mass Index (BMI); and Global Positioning Systems (GPS) and Geographical Information Systems (GIS) data on spatial movement and built environment characteristics. Preliminary analyses on baseline data will be presented.

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Symposium 03B 2010

TOWARD A TIME-GEOGRAPHY OF PHYSICAL ACTIVITY

Estela Almanza, MPH and Michael Jerrett, PhD

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The obesity epidemic in the US may be partly due to community designs that do not promote active living in residents. A smart growth community, however, contains features that may promote active living (walking spaces, street connectivity, compact design, mixed land use). Yet, the specific mechanisms by which community design leads to varied behavior are uncertain. Most studies to date have been cross sectional, drawing from self-report information about average behavior, limiting inferences drawn about specific locations of activity behaviors. In contrast, the Healthy PLACES study will collect real-time objective activity and mobility data with GPS and accelerometer units for linking community design to physical activity. This is the first large study to use these devices simultaneously in a randomized case-control design and in a free-living setting (~200 cases and 400 controls). However, real-time data creates new challenges about how best to make informative use of large, complex spatiotemporal data. Beyond the few studies that have used GPS and accelerometer data for physical activity classification, there are behavioral theories on how to analyze space-time-activity data from geographic and transportation research. This time-geography theory may improve and standardize methods for analyzing real-time personal monitoring data. In this context, the objectives for this presentation will be to first summarize methods for analyzing GPS and activity data drawn from the literature of built environment, physical activity, transportation and geography research. The second objective will be to present results from 3-dimensional geovisualization techniques, a method for detecting patterns hidden within complex continuous travel data. Specifically, we will create space-time-activity paths and activity ellipsoids in a GIS environment for more than 300 participants. By applying new methods for utilizing data from emerging technologies, there is a potential to lay the groundwork for a rich body of future research and to influence policy with respect to community design that places greater emphasis on public health.

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Symposium 03C 2011

USING ECOLOGICAL MOMENTARY ASSESSMENT TO INVESTIGATE THE IMPACT OF A SMART GROWTH COMMUNITY ON CHILDREN'S PHYSICAL ACTIVITY CONTEXTS

Genevieve F. Dunton, PhD, MPH,[1] Stephen Intille, PhD,[2] Jennifer Beaudin, SM,[2] Jennifer Wolch, PhD[3] and Mary Ann Pentz, PhD[1]

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Smart growth urban planning strategies may increase physical activity and prevent obesity in children. However, little is known about whether and how frequently children living in smart growth communities actually use the environmental features that are available. Lack of awareness of opportunities, lack of time, inclement weather, safety concerns, and other factors may serve as barriers to use. To address this question, research is needed on whether the frequency and types of settings used for physical activity differ between children living in smart growth as compared to traditionally designed communities. Such data present methodological challenges, which can be overcome through real-time data capture methods such as Ecological Momentary Assessment (EMA). This presentation will describe the methods and preliminary results of a study that used EMA with mobile phones to study where and with whom children living in a smart growth community are physically active. Participants include children (ages 9–14) from low-to-middle income, ethnically-diverse (44% Hispanic) households in Southern California. Children participate in four consecutive days (Fri. at 4 pm to Mon. at 8:30 pm) of EMA during discretionary time. Each EMA item sequence is prompted at a random time within one of 20 preprogrammed two hour intervals across the four days. Using an HTC Shadow mobile phone, children report their primary activity (e.g. active play/sports/exercise, watching TV/movies), social company (e.g., family, friends, alone), physical location (e.g., home, outdoors, school), and a number of other physical contextual features (e.g., perceived safety, traffic, vegetation, distance from home). Knowledge gained from this study about children's use of smart growth environments for physical activity could inform policy and planning decisions to prevent obesity in this age group.

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Symposium 04 9:00 AM–10:30 AM 2012

HEALTH DISPARITIES IN CHILDREN: THE EFFECT OF SOCIOECONOMIC STATUS, EDUCATION, RACE, PARENTING, AND NEIGHBORHOODS

Linda Drew, PhD[1] and Dawn Wilson-King, PhD[2]

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An estimated 6.5% of all children are affected by chronic conditions that disrupt their daily lives (Newacheck & Halfon, 1998). Socioeconomic status, parenting style, race, education, and neighborhood factors can significantly increase health disparities for children, often reaching beyond childhood to influence adult health. The influence of low SES on health has been observed it almost every disease category (Chen, Matthews, Boyce, 2002). The chronic conditions highlighted in this symposium, diabetes, cancer, and sickle cell pose significant challenges to children and their families given the significant burdens required for health maintenance across childhood and adolescence. The papers within this symposium focus on several complex factors that have been hypothesized to be markers of health disparities in children, such as low SES, minority status, neighborhoods, and level of community violence. These factors are often discussed in isolation and seldom integrated into a comprehensive discussion for understanding pediatric chronic illness. Findings from the collective papers demonstrate risks and protective factors for adolescents with chronic illness, including individual (i.e. goal setting and self-regulation) and social risks (i.e. parenting style). A variety of methods (questionnaire, medical records, daily diary, cohort and longitudinal) are utilized in the papers in the symposium that affectively capture the relationship between health disparities in adolescents coping with diabetes, sickle cell, and cancer.

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Symposium 04A 2013

THE MEDIATING ROLE OF MOTHERS AND FATHERS PARENTING STYLE ON THE RELATIONSHIPS BETWEEN INCOME AND METABOLIC CONTROL

Linda M. Drew, PhD,[1] Claudia Verdant, BA,[2] Cynthia Berg, PhD,[3] Jorie M. Butler, PhD,[3] Katrina Griffith, BA,[1] Pam King, PhD[3] and Deborah J. Wiebe, PhD[1]

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A general trend in health disparities research is that economically disadvantaged adolescents are at increased risk for health problems. One possible pathway between income and poorer health outcomes is that families with lower income often display poorer parenting practices compared to economically advantaged families (Conger & Donnellan, 2007). Children from low income families are more likely to experience harsh authoritarian parenting compared to middle-class families where parenting is warm and more democratic (Hamner & Turner, 1990; Hill & Adams, 2007). Warm and accepting parenting (Palmer, et al., in 2009) and fathers monitoring (Berg, et al, 2008) has a positive effect on diabetes management. A negative effect on diabetes management has been observed in low income adolescents who perceived their parents as critical and coercive (Duke, et al., 2008). The current study investigated whether: (1) lower levels of family income is associated with poor quality parenting by mothers' and fathers' and worse HbA1c; (2) whether mothers' and fathers parenting style (i.e. monitoring, communication, acceptance, and encouragement) mediates this relationship. Adolescents (n=252; 46% male and 54% female) aged 10–14 years with type 1 diabetes completed assessments of relationship with mothers and fathers. Mothers provided family income and demographics. HbA1c scores were indexed. Lower income was associated with worse glycemic control, less acceptance by mothers and lower overall quality parenting by fathers. Meditational analyses revealed the benefits of higher family income for HbA1c were through a warm and involved father; no significant effects were found for mothers. Results revealed a warm and interactive adolescent-father relationship appears to be important for decreasing the risks of lowered income and the associated risks for worse metabolic control.

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Symposium 04B 2014

RACE AND INCOME DIFFERENCES IN THE DEVELOPMENTAL TRAJECTORIES OF METABOLIC CONTROL AMONG ADOLESCENTS WITH TYPE 1 DIABETES

Jenny T. Wang, PhD[1] and Deborah J. Wiebe, PhD, MPH[2]

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This study addressed the current lack of literature characterizing changes in diabetes management across adolescence among racial minority youth. First, we examined whether widely cited age-related deteriorations in metabolic control found in Caucasian youth are present in a racially diverse sample. Second, we examined whether age- and sex-matched samples of African American, Hispanic, and Caucasian youth entered adolescence (age 10) with different levels of metabolic control, and/or showed different rates of change in metabolic control across adolescence (ages 10 to 18). Finally, race differences in developmental trajectories were considered in light of SES. Medical record reviews provided sociodemographic and health data of Caucasian, African American, and Hispanic youth (N=225; 50.2% female), and SES (i.e., median family income) was obtained through geocoded census databases. Hierarchical linear modeling was conducted while covarying sex, age at diagnosis, and insulin regimen. When income was not considered, African American youth had the highest (poorest) average HbA1c levels at age 10, then Hispanic youth, while Caucasian youth had the lowest (best) HbA1c at age 10. Age-related deterioration in HbA1c was observed in this diverse sample, with similar rates of change evidenced regardless of race. When income was considered, however, the difference between Caucasian and Hispanic youth on average HbA1c at age 10 was not significant, and race interacted with income to predict rate of HbA1c deterioration across age. Income was associated with smaller age-related deteriorations among Caucasian teens, but not among Hispanic or African American teens. Findings reveal adolescence is a difficult time for managing diabetes across African American, Hispanic, and Caucasian youth. However, minority youth enter adolescence already displaying poorer metabolic control and do not appear to benefit from higher income compared to Caucasian youth.

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Symposium 04C 2015

MINORITY STATUS, INCOME, AND HEALTH-RELATED HINDRANCE OF GOALS IN ADOLESCENTS WITH AND WITHOUT CANCER

Lisa A. Schwartz, PhD[1] and Lamia P. Barakat, PhD[1,2]

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Pursuit of personal goals is an important aspect of well-being, especially for adolescents who are developing autonomous identities and planning for the future. Impact of health on the pursuit of self-identified personal goals, a new construct referred to as health-related hindrance (HRH), is higher among individuals with chronic illness and a significant predictor of distress. Preliminary findings of adolescents with cancer and controls show significant differences on HRH, as expected given physical symptoms and hospitalizations endured by adolescents with cancer during this critical developmental period. How HRH relates to sociodemographics (ethnic minority status and SES) among those with and without cancer is unclear. We aimed to compare HRH between Caucasian and ethnic minority participants with and without cancer accounting for SES. Adolescents ages 13 to 19 participated in a questionnaire study on HRH of adolescents with cancer ($n=102$) and never ill controls ($n=99$) by completing a measure whereby they listed their own personal goals and rated impact of pain, fatigue, other physical symptoms, and behaviors to take care of their health on each self-identified goal using a 7-point scale. There were no differences between the groups on gender, age or ethnic minority status, and there were no differences among minority and Caucasian participants on total HRH among the cancer or control groups. When dividing the sample into four groups by disease status and minority status, Caucasian adolescents with cancer demonstrated an inverse relationship between SES and HRH ($r=-.30$, $p<.05$), whereas minority adolescents with cancer ($r=.56$) and without cancer demonstrated a significant, positive relationship between HRH and SES ($r=.52$). Content of goals and potential interactions among disease status, minority status, and SES will be explored. Results have important implications for targeting those most at-risk for impaired goal pursuit during adolescence in the context of a chronic illness.

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Symposium 04D 2016

MODERATION OF PAIN, FUNCTIONAL ABILITY AND QUALITY OF LIFE BY SES AMONG YOUTH WITH SICKLE CELL DISEASE

M Renee Robinson, PhD,[1] Lamia` P. Barakat, PhD[2] and Lauren Daniel, MA[3]

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Sickle cell disease (SCD), a group of inherited, chronic, hematological disorders, is most prevalent among the African-American population in the U.S. SCD complications include recurrent episodes of severe vaso-occlusive pain, pneumococcal infections, hemolytic anemia, retarded growth, splenic changes, and stroke (Barakat et al., 2001). As youth with SCD reach adolescence, they are at risk for nonadherence due to stress related to their ethnic minority status, burden of poverty which disproportionately affects African-Americans, and increased risk of internalizing behavior problems and academic problems (Baskin et al., 1998). It is important to understand, therefore, how sociodemographic factors interact with pain to reduce functional ability and quality of life among youth with SCD. In this study, over the course of 28-days, 58 patient/caregiver pairs completed a daily diary for SCD and non-SCD pain and weekly Activities of Daily Living Index, Functional Disability Inventory, and Pediatric Quality of Life Inventory questionnaires. Participants were 8 to18 years old ($M = 12.3$ years, $SD = 2.9$ years); 96% African American, 55% male; 60% HbSS. Most (86%) of caregiver respondents were biological mothers. We identified sociodemographics through zip code data: 26% are female headed households; 40% did not graduate from high school; and 24% live below the poverty level. Regression analyses testing moderation by sociodemographics found significant effects ($p < .01$) for pain with functional disability and functional disability with quality of life. At higher levels of poverty (female headed household and lower rates of high school graduation), pain was significant associated with functional disability and functional disability was significantly associated with lower quality of life. Thus, higher SES may be a protective factor reducing the relationship between pain and disability and disability and lower quality of life.

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Symposium 05 9:00 AM–10:30 AM 2017

SOCIAL NEUROSCIENCE IN HEALTH BEHAVIOR AND HEALTH COMMUNICATION

Peter Hall, PhD,[1] Hannah Faye Chua, PhD,[2] Joseph Cappella, PhD,[4] Lise Solberg Nes, PhD[3] and Paula Williams, PhD[5]

[1]University of Waterloo, Waterloo, ON, Canada; [2]University of Michigan, Ann Arbor, MI; [3]Mayo Clinic, Rochester, MN; [4]University of Pennsylvania, Philadelphia, MI and [5]University of Utah, Salt Lake City, UT.

Enhancing the effectiveness of health communications and health behavior change efforts is an important objective for public health. Though such endeavours have been traditionally approached from discipline-specific angles (or even sub-discipline-specific angles), new cross-disciplinary efforts between psychology, neuroscience and public health endeavour to change how we think about how best to achieve our health promotion objectives. This symposium brings together several investigators from each of these disciplines to discuss diverse research approaches to public health communication and intervention from a social neuroscience perspective. Two presentations will examine the role of self-related and attentional processes in health communication (H. Chua & J. Cappella); two others will examine the relevance of brain function for rehabilitation (L. Solberg Nes) and survival in the context of chronic illness (P. Hall). The content of these talks will span the neural substrates activated by health communications to biologically rooted self-regulatory processes in health behavior change and mortality.

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Symposium 05A 2018

THE ROLE OF SELF-RELATED PROCESSING IN PERSUASION AND BEHAVIOR CHANGE

Hannah Faye Chua, PhD

University of Michigan, Ann Arbor, MI.

How can we persuade people to change their health-related decisions? We examined how tailoring communication to a specific person’s needs and interests could increase one’s chances of influencing a person’s choices. We study such tailoring in the context of smokers who wanted to quit smoking. Smokers received various types of tailored messages while their brain activation patterns are recorded using functional magnetic resonance imaging. Message types included personalization/feedback (John, you are a 23 year old male smoker, neutral messages (about 90% of people on Earth live north of the equator) and targeted messages (some people want to quit for health reasons). They also completed a self-appraisal task and an emotional faces task while in the scanner. In addition, smokers completed a tailored smoking cessation program and were tracked at 4 months for smoking abstinence.Â We explored some potential mechanisms on how self-related processing influences choice and identified some potential biomarkers associated with successful behavior change. We found that self-related processing regions (e.g., medial prefrontal cortex and posterior cingulate) are activated during personalization/ feedback messages, and that participants remembered these messages better than targeted or neutral messages. In addition, quitters showed greater activation in MPFC in response to personalization/feedback messages, whereas nonquitters showed greater amygdala reactivity to fearful faces than quitters. We discuss the potential implications behind these findings.

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Symposium 05B 2019

COVERT EVIDENCE ON THE PROCESSING OF VIDEO-BASED ANTI-SMOKING PUBLIC SERVICE ANNOUNCEMENTS

Joseph N. Cappella, PhD

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Gaining the audience's attention to a message in the cluttered media environment has always been a challenge but is especially so now. Advertisers have employed a variety of techniques to maximize audience attention to their messages. Directing audience attention to the wrong features of messages is a form of ineffective attention called distraction. Studies of audience attention and distraction to components of anti-smoking messages will profit from using covert measures of message processing such as eye-tracking and fMRI. Published and unpublished research on (covert and overt measures of) distraction and attention to anti-smoking video messages will be presented.

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Symposium 05C 2020

SELF-REGULATION, EXECUTIVE FUNCTIONS, AND CHRONIC PAIN

Lise Solberg Nes, PhD,[1,2] Abbey R. Roach, MS,[2] Charles R. Carlson, PhD, ABPP,[2] Leslie J. Crofford, MD,[2] Shawna L. Ehlers, PhD, ABPP[1] and Suzanne C. Segerstrom, PhD[2]

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Chronic pain conditions are accompanied by intricate interactions within cognitive, emotional, behavioral, and physiological domains. Patient adaptation may depend on ability to self-regulate. Self-regulation involves capacity to exercise control and guide or alter reactions and behavior, abilities that likely rely on executive cognitive functions. Self-regulatory capacity appears to be a limited resource that can be depleted or fatigued though, and the many challenges involved in living with chronic pain conditions may tax self-regulatory resources. A relationship has been proposed among self-regulatory capacity, demands, and fatigue; executive functions; and pain. When exposed to a self-regulatory effort task, patients diagnosed with chronic pain conditions (i.e., fibromyalgia and/or temporomandibular disorders) exhibited significantly less capacity to persist on a subsequent mental effort task compared with pain free matched controls. Patients displayed diminished self-regulatory capacity regardless of experimental manipulation, whereas pain free controls only displayed diminished self-regulatory capacity during high self-regulation manipulation. This not only supports the idea of a link between self-regulation and executive functioning, but suggests that patients with chronic pain conditions are suffering from chronic self-regulatory fatigue. Notably, the impact of chronic pain conditions on self-regulatory effort in this research was mediated by pain severity, but not by other factors (i.e., mood, distress). In conclusion, patients with chronic pain conditions appear vulnerable to self-regulatory fatigue as a consequence of their condition, and likely also suffer from chronic self-regulatory fatigue. These findings underline the importance of taking self-regulatory capacity into account to advance understanding and treatment of chronic pain conditions.

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Symposium 05D 2021

INDIVIDUAL DIFFERENCES IN EXECUTIVE FUNCTION AS DETERMINANTS OF SURVIVAL TIME IN THE CONTEXT OF CHRONIC ILLNESS

Peter Hall, PhD, Sarah Chen, BSc and Zanna Mark, PhD

University of Waterloo, Waterloo, ON, Canada.

The objective of this investigation was to examine the association between executive function and survival among individuals suffering from chronic illness. A sample of 162 community-dwelling older adults who suffered from a chronic illness at baseline underwent a thorough medical and neurological examination to ensure freedom from actual or probable dementia. Participants completed cognitive testing and were subsequently followed for 10 years; survival was assessed as time to death over the follow-up interval. Results revealed that higher general cognitive function was associated with longer 10-year survival over the follow-up interval (p <.001), and this association remained significant after adjustment for demographic variables (p < .001) and education (p =. 016). Analyses of specific cognitive abilities revealed that the association between general cognitive function and 10-year survival was largely attributable to performance on a specific test tapping predominantly executive abilities. Executive abilities may be important determinants of survival in the context of chronic illness. Implications for theory, assessment and intervention will be discussed.

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Symposium 06 9:00 AM–10:30 AM 2022

RACIAL/ETHNIC DISPARITIES IN THE MANAGEMENT OF CANCER PAIN: IMPLICATIONS FOR PRACTICE, RESEARCH, AND POLICY

Kevin Stein, PhD,[1] Tenbroeck Smith, MA,[1] Katherine Sharpe, MTS,[1] Rebecca Kirch, JD[1] and Carmen Green, MD[2]

[1]American Cancer Society, Atlanta, GA and [2]University of Michigan, Ann Arbor, MI.

Racial/ethnic disparities in the experience of cancer pain and in the efficacy of pain management are well-documented. These disparities are attributable to patient, provider, and higher-level system factors. Patient-level factors hinge upon differences across racial groups in attitudes, cultural norms, and beliefs about the perception of cancer pain and how it should be treated. Provider-level barriers revolve around concerns over prescription legal liability, potential for misuse of pain medications, and inherent biases regarding certain patient populations. Higher-level system issues include unequal access to care, limitations on insurance coverage, and neighborhood inequalities in the availability of pain medications and pain management specialists. Indeed, research has demonstrated that pharmacies in Black neighborhoods are less likely to stock analgesic opioids while emergency rooms in these same neighborhoods are less likely to dispense them. Clearly, there is an unequal burden of cancer pain placed upon minority populations in this country. This symposium will take into account the multi-factorial barriers to effective pain management, and how they vary across racial groups. We will discuss recent advances in disparities research that consider area segregation and deprivation as contextual factors. The goal is to bring together cancer researchers, policy advocates, and clinicians to discuss racial differences in pain management, using data from a large population-based racially-diverse national study of cancer survivors. Multi-level analyses, considering individual and area level variables will show the explanatory power of neighborhood deprivation on pain disparities. We will identify future directions for research and clinical work as well as discuss policy and advocacy implications. Each presenter will address cancer pain management issues from a different perspective, providing a comprehensive, multi-disciplinary platform from which the unequal burden of cancer pain in minorities can be addressed.

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Symposium 06A 2023

PREVALENCE AND CORRELATES OF BARRIERS TO PAIN MANAGEMENT AMONG CANCER SURVIVORS

Kevin Stein, PhD, Tenbroeck Smith, MA, Katherine Sharpe, MTS and Luhua Zhao, MS

American Cancer Society, Atlanta, GA.

Pain associated with cancer is a well-documented problem that may negatively impact quality of life. Yet, cancer pain is often underreported, undiagnosed and poorly managed. Barriers to pain management include patient, provider, and system factors. Our study documented the prevalence and correlates of barriers to cancer pain management in a national sample of cancer survivors.

Analyses included 9,105 survivors of 6 cancers who participated in a national population-based quality of life study. Overall, 57% of the survivors experienced pain from their cancer or its treatment. Survivors reporting cancer pain then indicated if they had experienced 15 common barriers to pain management.

Of those reporting cancer pain, 75% endorsed one or more barriers. Patient barriers were most common: prefer not to treat pain with medications (41%), pain not considered bad enough to seek treatment (40%), and did not want to complain (36%). Provider barriers were less common: doctor didn't ask about my pain (19%). System barriers were the least endorsed: my insurance would not pay for medication (10%). A regression indicated that higher barrier count (total # endorsed) was associated with younger age, female gender, non-White ethnicity, less education, breast cancer diagnosis, receipt of cancer treatment, more co-morbidities, and poorer mental health (all $p<.01$). Although separate logistic regressions for each barrier revealed variability in predictors, race (non-White ethnicity) and poorer mental health were consistently associated.

These findings indicate that a majority of survivors experienced cancer pain and that barriers to pain management were highly prevalent, particularly among non-White survivors and those with poorer emotional functioning. Patient barriers were endorsed most frequently whereas provider and system barriers tended to be endorsed by fewer survivors. This portion of the symposium will highlight implications for tailoring pain interventions and address the need for additional research to understand the roles of race and mental health in the management of cancer pain.

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Symposium 06B 2024

NEIGHBORHOOD SEGREGATION, COMMUNITY POVERTY AND BLACK-WHITE DISPARITIES IN PAIN AMONG CANCER SURVIVORS: A MULTILEVEL APPROACH

Tenbroeck Smith, MA, Hope Landrine, PhD, Yongping Hao, PhD, Chiewkwei Kaw, MS and Kevin Stein, PhD

American Cancer Society, Atlanta, GA.

Pain is a common side-effect of cancer and cancer treatment. Black cancer patients report more pain than their White counterparts. They are also less likely to receive adequate analgesia, and disparities exist in survivorship. Area segregation and poverty are contextual factors known to contribute to racial disparities in health and treatment, but their role in cancer pain disparities has not been investigated. For the first time, we explored their possible role in cancer pain disparities.

A population-based sample of survivors of 10 cancers was drawn from 11 state cancer registries and surveyed 14 months after diagnosis resulting in a sample of 417 Black and 4,778 White survivors residing in 587 counties. County-level poverty and segregation obtained from Census 2000 data. Multilevel analyses explored the role of poverty and segregation in cancer survivors' SF-36 Bodily Pain (BP) after adjusting for covariates.

Bivariate analyses revealed significantly higher BP among Blacks than Whites ($p<0.001$). Multilevel regression predicting BP from individual (gender, age, marital status, education, cancer type, stage at diagnosis, cancer progression, comorbidities, race) and area-level (county poverty and segregation) variables found that race was no longer significant, whereas segregation, poverty and other individual-level predictors remained ($p<0.05$). BP was higher in Black-segregated and poor counties irrespective of survivor race.

Black survivors reported more pain than Whites in this population-based sample. The statistical models suggest Black-White disparities in pain among cancer survivors may be a function of area- and individual-level variables associated with race. The strong role of area-level variables has important social and clinical implications, and is consistent with other studies revealing residents of Black-segregated areas experience barriers to pain management due to decreased access to opioid analgesics in their local pharmacies as well as other neighborhood deprivations.

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Symposium 06C 2025

TAKING ACTION TO EASE CANCER PAIN: WHY PUBLIC POLICY MATTERS

Rebecca Kirch, JD,[1] Katherine Sharpe, MTS[1] and Aaron Gilson, MD[2]

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Many effective pain medicines and non-drug therapies are available to bring pain relief to cancer patients and survivors. Yet the prevalence of pain has remained high and largely unchanged for decades and significant pain assessment and management deficiencies are consistently reported in clinical settings. Furthermore, disparities persist in cancer pain control among the medically underserved and socio-economically disadvantaged. A major barrier is the content from policies that regulate professional practice, prescribing, and patient care. Many states have a combination of helpful policies that promote appropriate pain treatment and restrictive policies that deter adequate pain control by interfering with medical decision-making or even contradicting current medical opinion.

The prescription of pain medicines poses particular policy challenges for practitioners. Use of these medicines tends to trigger a dueling policy debate, where practitioners must consider the interface between providing pain relief and curbing abuse. Such problems are often reflected in poorer access to opioids in minority neighborhoods. Health care professionals are increasingly being expected to fight on both fronts, but are armed with little practical guidance from the DEA or state professional boards.

This portion of the symposium will highlight implications of federal and state policies on pain management and describe advocacy activities geared to address policy barriers. Although scientific evidence is critical to identify pain problems and their solutions, effective advocacy includes personalizing those statistics with real stories that get policymakers to take notice and take action. The American Cancer Society engages in a variety of advocacy activities to promote balanced pain policies that will ultimately help improve pain practice, with particular emphasis on addressing pain disparities in diverse populations. Working together advocates, researchers, and clinicians can create the policy and practice changes necessary to improve pain control and decrease pain disparities in the U.S.

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Symposium 07 9:00 AM–10:30 AM 2026

PATIENT-REPORTED OUTCOMES MEASUREMENT INFORMATION SYSTEM (PROMIS): USING NEW THEORY AND TECHNOLOGY TO IMPROVE MEASUREMENT OF PATIENT-REPORTED OUTCOMES IN CLINICAL RESEARCH

Susan M. Czajkowski, PhD,[1] David Cella, PhD,[2] Arthur A. Stone, PhD,[3] Dagmar Amtmann, PhD[4] and Francis Keefe, PhD[5]

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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 the PROMIS project and tools, and discuss several issues addressed by PROMIS researchers in developing these state-of-the-art self-report measures, including how instrument characteristics such as reporting period and mode of administration may affect responses, and how measures can be designed to improve assessment of pain and physical function in individuals with disabilities.

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Symposium 07A 2027

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. PROMIS aims to revolutionize the way patient-reported outcome tools are selected and employed in clinical research. It will also establish a national resource for accurate and efficient measurement of patient-reported symptoms and other health outcomes in clinical practice. Specific objectives include: (1) development and testing of a large bank of items 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 domains to be included, and qualitative item review. Item Response Theory (IRT) based statistical analyses were used to construct and calibrate 11 item banks measuring pain, fatigue, physical function, social function, emotional distress, and sleep/wake disturbance. 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) discuss future plans.

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Symposium 07B 2028

REPORTING PERIOD, MODE OF ADMINISTRATION, AND RESPONSE OPTIONS: CONSIDERATIONS IN DEVELOPMENT OF THE PROMIS SCALES

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Patient Reported Outcomes (PROs) have long been a part of medical research and practice, but in recent years have received increased critical scrutiny. For example, the FDA's recent guidance for PROs has focused attention on many important issues regarding their development and use. In this presentation we will focus on three topics about PROs that were of concern in developing the PROMIS scales. The first topic is the reporting period associated with a PRO and how it might introduce bias in the ratings. We will review the literature on the processes and cognitive heuristics that have been shown to affect recall-based assessments and which should be considered in evaluating PROs. We will then present the results of several PROMIS studies that have employed cognitive interview techniques and real-time data collection in an effort to evaluate the impact of heuristics processes in the measurement of weekly pain and fatigue. Second, there is the possibility that how PROs are administered affect responses, such that different modes of administration (e.g., paper-and-pencil, computer screen, PDA, Interactive Voice Response) yield different results. We will present preliminary data from a large-scale PROMIS study that investigated mode of administration in the PROMIS scales. Third, there are many options available for answering PROs (response options, such as Numeric Rating Scales and Visual Analog Scales), and we will discuss the decisions the PROMIS investigators made regarding these options.

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Symposium 07C 2029

PROMIS TOOLS FOR MEASURING PAIN AND PHYSICAL FUNCTION IN THE CONTEXT OF MOBILITY DEVICES

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Pain and physical function are two of the most commonly used domains in research assessing health related quality of life (HRQL) in patients with chronic disease. Measurement of pain can be especially challenging as it involves multiple features such as intensity, frequency, interference, and duration. In PROMIS, both qualitative and quantitative data were collected and analyzed to develop two item banks for measuring pain: pain interference and pain behaviors. The items for a third candidate bank — pain quality — were not sufficiently unidimensional for calibration using an item response theory (IRT) model. We will provide a succinct summary of what we learned about pain measurement and describe the properties of the currently available banks. We will also discuss our work aimed at making the PROMIS Physical Function (PF) bank appropriate for users of assistive technology (AT), defined as products, devices or equipment used to maintain, increase or improve the functional capabilities of individuals with disabilities. Most PF measures do not take into account respondents' use of mobility aids, such as wheelchairs, walkers or reachers. In adapting PF items for individuals using AT, items that could not be modified (e.g. items about stairs) have been flagged to prevent their use with persons for whom they would be inappropriate. New and modified items were administered to 600 users of mobility aids (200 each: individuals with multiple sclerosis, spinal cord injury and arthritis), along with a subset of the original PROMIS PF items so that new items could be calibrated to the original PROMIS metric. IRT analyses indicated that the added items substantially improved the precision of the bank, particularly in measuring persons with low PF, and are appropriate both for people who do and do not use AT. The modified PROMIS-PF bank allows users of mobility aids to be measured on the same PF continuum as respondents who do not use AT, making their scores directly comparable. We will summarize how the bank was modified and present the modified item bank properties.

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Symposium 08 9:00 AM–10:30 AM 2030

TESTING THEORETICAL MODELS OF FEAR OF RECURRENCE IN CANCER SURVIVORS

Crystal Park, PhD[1] and Keith M. Bellizzi, PhD[2]

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Fear of recurrence (FOR) is commonly reported by cancer survivors (e.g., Stein et al., 2008), and is related to higher levels of distress and PTSD symptoms (e.g., Bellizzi et al., 2008). In spite of its clinical importance, little research has examined the personal and contextual determinants of FOR, especially in combination. In this symposium, three studies will be presented, each of which has examined determinants of FOR from a different theoretical perspective. These studies highlight current conceptualizations and research approaches towards FOR. First, David Latini will present results of a study of 68 people with nonmuscle invasive bladder cancer that tested the Lee-Jones et al (1997) conceptual model of FOR, based on Leventhal's Common Sense Model. Study results partially supported hypotheses, in that FOR was significantly correlated with symptoms, somatization, amount of life interference, and social constraints. Second, Crystal Park will present a study that used a transactional stress and coping model (i.e., psychosocial resources, appraisals, and coping efforts) to predict cognitive (risk) and affective (worry) dimensions of FOR in a sample of 178 young/middle aged survivors of a variety of cancers. Results demonstrated that these 2 dimensions of FOR were only modestly correlated, and that the models of psychosocial resources, appraisals, and coping efforts differed somewhat for these two dimensions. Affective aspects of FOR correlated more strongly to adverse adjustment outcomes. Third, Stacey Hart will present a study of psychosocial predictors of trajectories of four domains of FOR in 65 colorectal cancer survivors. Findings indicated that all 4 FOR domains (i.e., fears that a recurrence would impact health status, role, and relationships, and fear about death) decreased from 6- to 18-months post-surgery; further, various combinations of coping and distress predicted each trajectory. Discussant Keith Bellizzi will draw together common themes from across these studies regarding theoretical determinants of FOR and discuss clinical implications and future research directions..

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Symposium 08A 2031

SOMATIZATION AND SOCIAL CONSTRAINT PREDICT FEAR OF RECURRENCE IN NONMUSCLE-INVASIVE BLADDER CANCER SURVIVORS

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Introduction: We tested Lee-Jones et al (1997)'s Fear of Recurrence (FOR) extension to Leventhal's Common Sense Model using data from patients with nonmuscle-invasive bladder cancer (NMIBC). Greater FOR was expected to be related to greater: experience with cancer, general and disease-specific symptoms, somatization, illness intrusiveness, and less partner emotional support. Methods: Participants (N=68) recruited from hospitals in the southeast U.S completed self-report measures. The EORTC QLQ-C30 v.3 measured general physical symptoms. The BLS-24 HRQOL measured urinary symptoms. The 5-item scale used in the CaPSURE study measured FOR. The Brief Symptom Index-18 (BSI-18) measured depression, anxiety, and somatization. Devin's Illness Intrusiveness Rating Scale (IIRS) measured cancer interference in participants' lives. Lepore's social constraint (SC) scale measured patients' perception of inhibiting cancer-related thoughts or feelings to their spouse/partner. Using the above constructs that were significantly correlated with FOR, we fit 2 multivariate regression models - 1 for all participants and 1 for partnered participants. Results: Fatigue, pain, dyspnea, appetite loss, and urinary symptoms were significantly correlated with FOR. Demographics and previous cancer experience were unrelated to FOR. For all participants, greater FOR was related to more illness intrusiveness and somatization (both $p < .01$, adjusted $R2=.26$). Among those in partnered relationships (N=53), greater FOR was related to higher SC ($p < .001$) and somatization ($p < .01$, adjusted $R2 =.41$). Conclusions: Our results partially supported our hypotheses. FOR is significantly correlated with symptoms but somatization and the amount of interference in life were stronger predictors of FOR. Among participants with a primary partner, feeling the need to inhibit cancer thoughts and fears was the best predictor of FOR. Psychosocial interventions should help NMIBC survivors manage physical symptoms and help survivors and partners improve emotional expression and support.

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Symposium 08B 2032

TESTING A STRESS AND COPING MODEL OF FEAR OF RECURRENCE IN YOUNG AND MIDDLE AGED ADULT CANCER SURVIVORS

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Fear of recurrence (FOR) is an important aspect of adjustment in cancer survivors with potential long-term impact, but little research has examined the determinants of these fears. The present study utilized a stress and coping framework to examine determinants of two aspects of FOR, cognitive and affective (Moser et al., 2003). 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 of hierarchical linear regression analyses indicated that cognitive (perceived risk) and affective (worry) dimensions of FOR (assessed with the measure developed by Mullens & McCaul, 2004) were only moderately correlated, and that they were somewhat differentially predicted by elements of the stress and coping model. Time 1 tangible and informational social support (ISEL; Cohen, 1988) and sense of control (Watson, 1983) were minimally related to subsequent FOR; appraisals of the cancer as violating beliefs and goals and identification as a victim rather than a survivor predicted both risk and worry, and, positive reinterpretation coping (Brief COPE; Carver, 1997), spirituality (Fetzer/NIA, 1999), appraisal social support, and religious coping were primarily predictive of subsequent lower perceived risk. FOR, particularly the worry aspect, was adversely related to multiple adjustment indices, including mental health (SF36 MCS; Ware, 1993), positive and negative affect (Cancer Control Scale; Watson, 1993), and intrusive thoughts (IES; Horowitz et al., 1979). These results suggest both useful directions for future research to distinguish cognitive and affective aspects of FOR and to the utility of applying a comprehensive stress and coping perspective to understand the potential influences of psychosocial resources and coping processes on FOR as well as the potential impact of FOR on multiple dimensions of adjustment.

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Symposium 08C 2033

INITIAL REACTIONS TO COLORECTAL CANCER DIAGNOSIS ARE ASSOCIATED WITH LATER DECREASED FEAR OF RECURRENCE

Stacey Hart, PhD,[1] David M. Latini, PhD,[3] Jenna Belanger, MA,[1] Joseph Donia, BA,[1] Karen Zhang, BA[1] and Madhulika Varma, MD[2]

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Background: This study examined whether fear of recurrence (FOR) changes across the trajectory of treatment for colorectal cancer (CRC) and to examine psychosocial predictors of FOR change. Method: Newly diagnosed CRC patients (N=65) completed validated questionnaires at baseline (pre-surgery), 6-,12- and 18-months post-surgery. The FOR Questionnaire measured fears that a recurrence would impact: health status, role, relationships, and fear about death; The Posttraumatic Distress Inventory (PDI) and Posttraumatic Dissociation Experiences Questionnaire (PDEQ) measured initial reactions to CRC diagnosis; the Brief Cope measured coping strategies of planning, denial, using emotional support, and acceptance; the SF-36 Physical Composite Scale (PCS) measured physical health quality of life. Repeated measures ANOVAs examined the change in each of the 4 FOR domains from 6- to 18-months post-surgery. Multiple regressions were conducted with change in each FOR domain as the outcome variable; predictors were baseline reactions to cancer diagnosis, baseline coping and physical health. Results: All 4 FOR domains significant decreased from 6-months to 18-months post-surgery (p's<.05). Decreased health status fears were significantly predicted by higher PDEQ (beta=.37, $p<.02$), lower PDI (beta=-.41, $p<.01$), greater planning coping (beta=-.26, $p<.04$) and better PCS (beta=.29, $p<.02$; R2adj=.30, $p<.001$). Decreased role worries were predicted only by lower PDI (beta=-.48, $p<.01$; R2adj=.17, $p<.02$). Decreased death worries were predicted by higher PDEQ (beta=.38, $p<.05$) and lower PDI (beta=-.54, $p<.01$; R2adj=17, $p<.02$). However, the model for decreased relationship worries was nonsignificant. Discussion: FOR appears to decrease after CRC patients complete treatment and enter the recovery phase. Interestingly, initial reactions to diagnosis were better predictors of change in FOR than baseline coping or physical health status. Impacting these early attitudes about CRC diagnosis could reduce FOR.

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Symposium 09 9:00 AM–10:30 AM 2034

A MULTIPLE-RISK-FACTOR MODIFICATION TRIAL FOR LATINAS WITH DIABETES: ¡VIVA BIEN!

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Latinos have nearly twice the prevalence of type 2 diabetes and higher obesity rates as non-Latino whites. There is a clear need for interventions that are effective in engaging Latinos who have diabetes and assisting them in making lifestyle changes that improve their health. This symposium describes the development and initial results of ¡Viva Bien!, a multiple-risk-factor intervention for Latinas with type 2 diabetes. ¡Viva Bien! was adapted from the comprehensive Mediterranean Lifestyle Program (MLP) that showed significant improvements for women with diabetes across behavioral (diet, physical activity, stress management, supportive resources, and smoking), psychosocial, quality of life, and biologic risk factors for its mostly white participants. Those encouraging results motivated efforts to adapt MLP for Latinas with diabetes, who are at especially high risk of heart disease.

The symposium will include presentations from four of the ¡Viva Bien! investigators. Dr. Diego Osuna will describe the epidemiology of risk for Latinas with diabetes, the cultural adaptation of the successful MLP for Latinas, and the theoretical underpinnings of the intervention, highlighting social-support and problem-solving aspects considered critical for maintenance. Dr. Diane King will describe program recruitment, engagement, and retention, using the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, and Maintenance) to assess the impact of ¡Viva Bien! on dimensions important for translation to practice. Dr. Deborah Toobert will present 6-month ¡Viva Bien! behavioral, process, and clinical outcomes. Dr. Russell Glasgow will lead an interactive discussion after the main presentations to discuss implications and identify recommendations for research and practice in the areas of multiple-risk-behavior change and cultural adaptation of evidence-based interventions..

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Symposium 09A 2035

RECRUITING AND RETAINING LATINAS AT HIGH RISK FOR CHD IN ¡VIVA BIEN!: A MULTIPLE-RISK-FACTOR DIABETES TRIAL

Diane K. King, PhD,[1] Deborah J. Toobert, PhD,[2] Lisa A. Strycker, MA,[2] Alyssa Doty, MA,[1] Fabio Almeida, PhD[3] and Russell E. Glasgow, PhD[1]

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Although Coronary Heart Disease (CHD) and diabetes are major causes of death and functional limitations in Latinas, their participation in clinical trials is low due to participation and retention barriers. Addressing lifestyle variables such as transportation, childcare, work and family conflicts, as well as other social and culturally relevant factors, may be key to recruiting, engaging and retaining Latinas in clinical trials. ¡Viva Bien! was a randomized controlled trial that adapted for Latinas an intensive two-year multiple-risk-factor diabetes self-management intervention, previously found to be effective for a sample of predominantly non-Hispanic white women. The overall goals were to assess the program's effectiveness for improving diet, physical activity, psychosocial and biological outcomes related to CHD risk. Components of the RE-AIM model (Reach, Implementation, and Maintenance) were used to evaluate whether language and cultural adaptations to the intervention helped to promote recruitment, continued engagement and retention of the women. The participation rate was 61% (N=280) among eligible Latinas. Out of 142 intervention participants 87% attended at least 1 weekly session at 6 months and 70% attended at least half the sessions. At 12 months attendance declined to 77% attending at least 1 and 42% attending at least half. Participants represented a range of acculturation and income levels. Nonparticipants were more likely to be smokers (16% versus 10%, p=.03) with lower body mass index (mean=32 vs. 34, p=.002). Language preference did not play a significant role in ¡Viva Bien! participation. Challenges to be discussed include: identifying Latinas, identifying and addressing barriers to participation, sustaining engagement in the study, and maintaining learned skills and behavior changes as the frequency of study sessions was reduced.

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Symposium 09B 2036

CULTURAL ADAPTATION OF A LIFESTYLE INTERVENTION FOR LATINAS WITH TYPE 2 DIABETES

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Type 2 diabetes is of particular concern for Latinos. Estimates are that Latino men and women have lifetime prevalence rates of 45.4% and 52.5%, respectively, compared to 26.7% and 31.2% in non-Latino white men and women. Among Latinos, there are notable subgroup differences with diabetes rates of 8.2% for Cubans, 11.9% for Mexican Americans, and 12.6% for Puerto Ricans. Interventions tailored to fit a person's cultural background have been proposed to address health-care disparities under the rubric of culturally competent care. This approach may be especially poignant in improving culturally mediated lifestyle behaviors such as physical activity and nutrition. Several reviews and intervention trials have shown that diabetes self-management interventions can improve glycemic control and body weight. ¡Viva Bien! was a randomized controlled trial of an intensive lifestyle modification program for Latina women with type 2 diabetes adapted from the Mediterranean Lifestyle Program (MLP). The MLP was a 24-month program shown to be effective in improving glycemic control, reducing body mass index, and improving dietary fat intake, physical activity, stress-management practices, supportive resources, and problem-solving skills for a predominantly European American sample of women in Oregon. Guiding principles in the cultural adaptation methods used to develop ¡Viva Bien! were that participants would be given opportunities to inform the adaptation and that unwarranted deep structural changes to the original intervention would be avoided. Adaptation stages included: (a) information gathering from literature and focus groups, (b) preliminary adaptation design, (c) preliminary adaptation test with a pilot study, and (d) adaptation refinement. A critical component of adaptation refinement included an emphasis on social support and problem-solving aspects of the intervention.

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Symposium 09C 2037

¡VIVA BIEN!: A MULTIPLE-RISK-FACTOR MODIFICATION TRIAL FOR LATINAS WITH DIABETES

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The goal of ¡Viva Bien! was to adapt and evaluate an evidence-based lifestyle change program for an under-served population at high risk for heart disease (HD): Latinas with type 2 diabetes. The research team has demonstrated the effectiveness of this program in Anglo women. ¡Viva Bien! tested a cultural adaptation of the program for Latinas at Kaiser Permanente in Denver, CO. Participants (N = 280) were randomized to usual care (UC) or to the ¡Viva Bien! intervention. The 2-year program included a 2½-day retreat followed by weekly meetings, and encouraged participants to (a) follow the Mediterranean diet adapted for the Latino culture, (b) practice stress-management techniques daily, (c) engage in 30 minutes of daily physical activity, (d) stop smoking, and (e) take part in problem-solving-based support groups. In complete cases and intent-to-treat multivariate analyses of covariance from baseline to 6-month follow-up we found that ¡Viva Bien! significantly improved dietary, stress-management, and physical activity behaviors; consistently improved psychosocial variables related to perceived support, self-efficacy, and problem solving; and improved hemoglobin A1c levels ($p < .001$), body mass index, and quality of life (mean effect size = .31), relative to UC.

This study showed that Latinas with type 2 diabetes were able to make lifestyle changes, and demonstrated the effectiveness of the ¡Viva Bien! program in improving quality of life, biologic, and psychosocial outcomes. Substantial public health impacts of this study include intervening with a high-risk, under-served population, and the focus on multiple lifestyle behaviors known to reduce risk for HD. Future plans include examination of (a) the mediators of program success; (b) longer-term maintenance of effects; (c) readiness for translation of ¡Viva Bien! into practice; and (d) the robustness, reach, and cost-effectiveness of the program.

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Thursday
April 8, 2010
2:30 PM-4:00 PM

Citation Paper

Paper Session 01 2:30 PM–2:48 PM 2042

PREVALENCE, PREDICTORS, AND TRAJECTORY OF CANCER-RELATED FATIGUE IN BREAST CANCER (BC) SURVIVORS

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Fatigue is a common, distressing symptom in BC patients. Fatigue can persist after cancer tx has ended. The prevalence, predictors and trajectory of such "off treatment" fatigue in cancer survivors is not well understood. 196 recurrence-free BC survivors (stage 0-II) completed a baseline assessment before starting adjuvant tx and 3 follow-up assessments: end of adjuvant tx, 6 mos after end of adjuvant tx (M=1.0 yrs post-dx), and 3.5 yrs after end of adjuvant tx (M=4.1 years post-dx). At each follow-up assessment, "cases" of cancer-related fatigue (CRF) were identified via interview using a specific set of criteria for identifying cases of CRF (Cella et al., 2000). The proportion of women meeting CRF criteria at end of adjuvant tx was 19% declining to 12% 6 months after end of tx. Notably, 14% of women evidenced CRF at the 3.5 yr post-tx assessment. 58 women (30% of sample) met criteria for CRF at 1 or more follow-up assessments. These 58 women evidenced various trajectories across the 3 follow-up assessments including persistent CRF (n=15), delayed onset CRF (n=13), and resolving CRF (n=30). Factors (clinical, demographic, psychosocial) linked to risk for CRF at end of tx and 3.5 yrs post-tx were identified by regression analysis. A set of 13 variables accounted for 33% of variance in CRF risk at end of tx (p<.001). CRF risk at end of tx was linked (p<.05)to more advanced stage at dx, no receipt of chemo, more depression, poorer physical functioning, and greater BMI at baseline, greater tendency to fatigue catastrophize and focus on symptoms, and younger age. The same 13 variables accounted for 20% of variance in CRF risk 3.5 years post-tx (p<.001). CRF risk now was significantly (p<.05) linked only to greater BMI at baseline and less tendency to accommodate to illness. In sum, about 1/3 of BC patients experience CRF within 3.5 years of ending adjuvant tx with some cases of CRF not emerging until well after tx end. Predictors of CRF suggest a significant role for cognition and behavior in the development and maintenance of CRF.

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Paper Session 01 2:48 PM–3:06 PM 2043

SEVERITY, COURSE AND PREDICTORS OF FATIGUE AND DEPRESSION IN BREAST CANCER SURVIVORS

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Fatigue and depression are commonly reported by women previously treated for breast cancer (BC). Little is known, however, about the magnitude, course, and predictors of these problems because prior research has typically relied on cross-sectional designs or longitudinal designs lacking noncancer controls. To address these limitations, this study assessed fatigue and depression over a 3-year period in BC patients and women with no history of cancer. In addition to testing the hypothesis that fatigue and depression would be worse in patients, the study examined if symptoms varied based on previous treatment and explored temporal relations between fatigue and depression. Participants were women with stage 0-II BC previously treated with radiotherapy only (RT n=103) or chemotherapy +/- radiotherapy (CT n=102) and age-matched women with no cancer history (Control n=192). Patients completed measures of fatigue (FSI) and depression (CES-D) 6 months after completing treatment (T1) and 3 years later (T2); controls also completed these measures 3 years apart. Analyses yielded group x time interaction effects (p<.05) showing that fatigue and depression worsened over time in CT patients (p<.048), but not RT patients or controls (p>.64). At T2 but not T1, CT patients were more fatigued and depressed than RT patients (p<.03) and more fatigued than controls (p=.02). Among CT patients, fatigue at T1 predicted changes in depression (p<.001) but depression at T1 did not predict changes in fatigue (p=.72). These findings suggest BC survivors experience a delayed reaction specific to chemotherapy 6 months or more after treatment completion characterized by increases in fatigue and depression. Among these patients, the presence of heightened fatigue appears to result in a worsening of depression over time. Additional studies are needed to identify the mechanisms by which chemotherapy may have a delayed impact on fatigue and depression and to determine the course of these symptoms beyond 3 years posttreatment.

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Paper Session 01 3:06 PM–3:24 PM 2044

NATURAL PROGRESSION OF SLEEP DISTURBANCE IN 667 BREAST CANCER (BC) AND PROSTATE CANCER (PC) SURVIVORS OVER A TWO YEAR FOLLOW-UP: A URCC CCOP

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Previous research has shown that cancer survivors are more likely to experience sleep disturbance than the general population. However, little is known about the natural progression and predictors of sleep disturbance associated with cancer. The purpose of this study was to characterize and compare the sleep disturbance reported by BC and PC between 6 and 24 months post treatment (T1) and again at 24-month follow-up (T2). BC (N=353; mean age=50) and PC (N=315; mean age=66) recruited for 2 RCTs provided information on sleep disturbance at T1 and T2. Participants completed the Profile of Mood States, the Mini Mental Adjustment to Cancer, the Impact of Events Scale and the Stanford Sleep Questionnaire. BC reported significantly higher levels of moderate to severe sleep disturbance (31.4%) compared to PC (11.4%) at T1 and the differences remained at T2 (all p<.0001). There were significant changes in reported symptoms for both groups from T1 to T2 (p=.004); both groups reported improvement in levels of sleep symptoms. There were no significant differences between the two groups in rates of persistence and remission in sleep disturbance. Moderate to severe levels of sleep disturbance persisted in 41.8% of survivors from T1 to T2, with 58.2% going into remission. At T2, 9.9% of those who slept well at T1 developed significant sleep disturbance. Mood disturbance and traumatic stress symptoms at baseline, but not coping with cancer, emerged as significant predictors of sleep disturbance at T2; these relationships were stronger in PC compared to BC (R2=.23 versus .11). These data show that BC have nearly 3 times more sleep disturbance compared to PC and that these sleep difficulties persist for a significant proportion of survivors. Further research is needed to understand the relationship between psychological sequelae of cancer-specific diagnoses and the development and progression of sleep disturbances.

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Citation Paper
Paper Session 01 3:24 PM–3:42 PM 2045

DEVELOPMENT AND TESTING OF AN INSTRUMENT FOR MEASURING PERCEIVED SELF-EFFICACY FOR FATIGUE SELF-MANAGEMENT

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Fatigue is a symptom commonly reported by persons with serious chronic illness. Measurement of perceived self-efficacy for fatigue self-management (PSEFSM) in persons with serious chronic illness is essential if fatigue is to be monitored and enhanced to improve physical functional status (PFS). The purpose of this study is to describe the development and testing of a PSEFSM Instrument. Development was guided by Bandura's Self-Efficacy Theory which explains the cognitive process of symptom self-management to show how increasing a patient's perceived self-efficacy (PSE) to manage symptoms enhances their ability to manage their symptoms to achieve optimal PFS. The PSEFSM Instrument was incorporated into two randomized control trials for secondary analysis of 298 participants, 63 persons with lung cancer (LC) and 235 persons with other cancer diagnoses (OC) undergoing a course of chemotherapy. Internal consistency reliability resulted in a Cronbach's alpha ranging from .91-.92 for persons with LC and OC diagnoses and the total sample. Evidence for construct validity and generalizability was supported through hypotheses testing of the mediation pathway from fatigue to PFS through PSEFSM in all three groups indicating support for partial mediation. In the total sample, the magnitude of the relationship between fatigue and PFS was reduced after PSEFSM was controlled, with mediation accounting for 12% of the variance ($t=-2.59$; $p=.009$). Using LISREL, the results from structural modeling provided further evidence of construct validity. The results of the hypothesized model indicated a good model fit with six observed variables predicting one latent variable, PSEFSM, and the latent variable PSEFSM indicated by itself explaining 80% of the outcome variable (RMSEA=0.00). The instrument provides a reliable and valid measure of PSEFSM that could be used to facilitate the development of interventions to increase PSE to achieve optimal symptom self-management.

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Paper Session 01 3:42 PM–4:00 PM 2046

SLEEP QUALITY IN URBAN AFRICAN AMERICAN ELDERS: A REPLICATION OF THE FACTOR STRUCTURE OF THE PSQI

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Older adults have significantly more sleep problems than do younger adults, and these have important health consequences (Ancoli-Israel, 2000). African Americans elders reported poorer sleep than Non-Hispanic Whites with greater latency in sleep onset and lower overall sleep quality (Foley, Monjan, Izmirlian, Hays, & Blazer, 1999). The psychometric properties of self report sleep measures in older African American adults are largely unknown. The present study investigated the factor structure of the Pittsburgh Sleep Quality Index (PSQI) in 70 African American elders. Participants in this dataset were an average of 72 years of age, a mean of 12 grades of completed education and were primarily females(82%). Three factors were forced with a three factor confirmatory analysis becasue previous research indicated that there are three latent factors underlying this measure (Cole, Motivala, Buysse, Oxman, Levin & Irwin, 2006). Two of the previously derived factors were well supported and one was not as well supported in this sample, highlighting the importance of examining the psychometric properties of measures in diverse samples. The sleep latency component loaded more highly on the daily disturbances factor indicating that this component may relate more closely with sleep disturbances and daytime dysfunction than perceived sleep quality. The daily disturbances factor also had lower factor loadings and its individual components had lower communalities than the other two factors suggesting that this factor is not as cohesive among the African American studied here than among the original sample.

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Paper Session 02 2:30 PM–2:48 PM 2047

AN OPEN PHASE PILOT OF BEHAVIORAL ACTIVATION THERAPY AND RISK REDUCTION COUNSELING FOR MSM WITH CRYSTAL METHAMPHETAMINE ABUSE AT RISK FOR HIV INFECTION

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Background: Men who have sex with men (MSM) represented 61% of new HIV infections diagnosed in the U.S. in 2007. The prevalence of crystal methamphetamine ("meth") use among MSM has been shown to be 20 times that of the general population. Meth abuse/dependence is a prevalent and treatment resistant-problem in MSM domestically, and is highly associated with HIV sexual risk behavior/HIV infection and loss of interest in previously enjoyed activities. **Methods:** The present study is of a novel treatment for meth addiction in MSM, incorporating 10 sessions of behavioral activation therapy (BAT) with HIV risk reduction counseling (RR). To date, 10 participants have completed the pilot (9 others are active in treatment), including a semi-structured qualitative exit interview. Primary outcomes are reductions in: sexual risk taking, meth use, and depression. **Results:** Participants had a mean age of 36 (SD=11.3), over 40% were non-white, and each reported engaging in unprotected anal sex with a non-monogamous male partner while using meth in the month prior to study enrollment. At the acute outcome assessment (3 months), participants evidenced significantly reduced HIV sexual acquisition risk behavior [unprotected anal sex: -8.43 (7.85); $p=0.001$] and reduced meth use [episodes: -3.00 (2.58); $p=0.0005$]—suggesting high effect size estimates. Participants also reported significant mean reductions in number of sex partners while using meth [-6.00 (3.38); $p=0.02$] and depressive symptoms [-7.00 (3.00); $p=0.05$]. Percent change for number of unprotected anal sex acts [0.76 (0.37)] and number of distinct meth episodes [0.80 (0.38)] were high. Exit interviews revealed overall treatment acceptability and reduced cravings for meth. **Conclusions:** BAT-RR appears to be an acceptable and feasible intervention for MSM with meth abuse/dependence who are at risk for HIV infection, worthy of testing in a randomized controlled trial.

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Paper Session 02 2:48 PM–3:06 PM 2048

IMPROVED QUALITY OF LIFE AMONG ADULTS AND YOUTH RECEIVING COMMUNITY SUBSTANCE ABUSE TREATMENT

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Substance abuse is one of the leading causes of morbidity and premature mortality in the U.S. While millions of Americans are treated each year for alcohol and drug abuse, few studies report the effects of treatment on quality of life for both adolescents and adults. The present study analyzed the impact of treatment on various life domains for over 24,000 adults and youth who received County inpatient or outpatient treatment between 2006 and 2008. Matched client records from the California Outcomes Measurement System for Orange County were analyzed between admission and discharge to compare drug use, criminal involvement, employment, education, family/social functioning, and physical and mental health.

Paired t-tests revealed significant reductions in substance use, criminal involvement, family conflict, medical problems, and psychiatric hospitalizations (all $p<.01$). For adults, the biggest improvements were reduced criminal involvement and health problems, while the biggest impacts for adolescents were reduced substance use and health problems, as well as improved social functioning. Specifically, 62% fewer adults were arrested and 70% fewer were incarcerated after receiving treatment. Half as many adults had health problems, 40% fewer had an emergency room or hospital visit, and 38% eliminated their substance use completely. Meanwhile, 73% of youth eliminated their substance use, 68% fewer had health problems, and 20% showed reductions in serious family conflicts. Youth also showed a 135% increase in use of social support services, and high proportions remained in school between admission (85%) and discharge (83%). Finally, more than 25% fewer adults and youth required a psychiatric hospitalization after receiving treatment.

Results indicate that substance use treatment can differentially improve quality of life for adults and youth, largely reducing criminal activity among adults, and eliminating substance use for most youth, while improving social functioning and maintaining school enrollment.

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Paper Session 02 3:06 PM–3:24 PM 2049

UNDERSTANDING OTC AND PRESCRIPTION DRUG ABUSE IN YOUNG PEOPLE TRANSITIONING FROM LATE ADOLESCENCE TO YOUNG ADULTHOOD

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Increased incidence and prevalence of over-the-counter (OTC) and prescription drug abuse among young people led to the Office of National Drug Control Policy's 2008 prescription drug abuse prevention campaign to target parents of teens. Variables contributing to increased OTC and prescription drug abuse among young people might be explained by ease of access and lower social stigma of OTC and prescription drugs, as well as users' perceptions that these drugs are safer than street drugs. This study sampled young people who were in transition from late adolescence to young adulthood to determine 1) if risk perception (RP) and perception of societal stigma of OTC and prescription drug abuse differed from that of street drugs, 2) the effect of accessibility on abuse and 3) the ability of RP, societal stigma and access to OTC and prescription drug to predict reported abuse. Participants aged 18 to 22 years (N=400) were recruited from a university psychology subject pool. They completed an online survey assessing RP, access to OTC and prescription drugs, and perceptions of parent and peer approval of health risk behaviors (HRB) in high school and in college, and reported HRB. Correlations were used to address purpose 1, and multiple regressions were used to address purpose 2 and 3. Participants' RP of OTC and prescription drugs were correlated with their RP of street drugs (r ranged from 0.17 to 0.49). Participants' perceptions of friends' approval of non-prescription pain medications was uncorrelated with their perceptions of friends' approval of street drugs. For accessibility, having locked medicine cabinets (β=0.15) and OTC and prescription drugs in the home (β ranged from -0.18 to -0.13), and friends bringing OTC and prescription drugs to school (β ranged from -0.29 - 0.27) were all predictive of use of a variety of OTC and prescription drugs while participants were in high school. RP, societal stigma, and access to OTC and prescription drugs were predictive of use (Adjusted R2 ranged from 0.003 to 0.16). Detailed results and discussion will be presented.

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Paper Session 02 3:24 PM–3:42 PM 2050

THE DISPARATE ROLES OF ETHNICITY AND SEXUAL ORIENTATION IN PREDICTING METHAMPHETAMINE USE AND RELATED BELIEFS AND BEHAVIORS AMONG MSM

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A mixed-method study of 72 men who have sex with men (MSM) who had unprotected anal sex while using methamphetamine (MA) was conducted in Los Angeles County. The study asked 26 qualitative questions about MA use focusing on four thematic areas: (1) psychological motivations for using MA, 2) interpersonal violence related to MA use, 3) issues of sexual orientation and MA use, and 4) effects of MA on perceived sexual desirability. A series of χ2 and other bivariate analyses (depending upon the nature of the variables) were used to test differences in these areas as a function of age, income, sexual orientation, HIV status, and ethnicity (the sample was comprised of 26 White, 25 Black, 19 Latino, and 2 "other non-White"). The Holm's procedure was used to correct for family-wise error rate. No differences were found as a function of income, age, and HIV status, and there were tremendous similarities across ethnic groups and between those of different sexual orientations in the areas addressed in the study. However, some interesting differences emerged from the data. We found that Whites were significantly more likely to cite depression as a reason for using MA than non-Whites (77% vs 39%, p=.002). This effect was particularly strong when comparing Whites and Blacks (77% vs 32%, p=.001). Whites were also much more likely than non-Whites to have experienced interpersonal violence related to MA use (54% vs 20%, p=.003). Those who did not identify as gay (e.g., bisexual or other) were more likely than gay identified men to site family intolerance (42% vs 5%, p=.002) and religious rejection (42% vs 8%, p=.009) as reasons for using MA. Finally, non-gay identified men were more likely to believe taking MA made them more popular insertive sexual partners (75% vs 25%, p=.002). Ethnicity and sexual orientation are discussed within the context of tailoring MA interventions and treatments for different subgroups of MSM.

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Paper Session 02 3:42 PM–4:00 PM 2051

BASELINE FINDINGS FROM PROJECT IMPACT: HIV-UNINFECTED MEN WHO HAVE SEX WITH MEN PRESENTING FOR TREATMENT OF CRYSTAL METHAMPHETAMINE ABUSE ARE AT HIGH-RISK FOR HIV INFECTION

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Background: Between 10%-20% of men who have sex with men (MSM) report crystal methamphetamine ("crystal meth") use during sex. Characterizing HIV risk behaviors of HIV-uninfected MSM who present for crystal meth treatment may be helpful to design more effective interventions.
Methods: Between June 2008-September 2009, 29 HIV-uninfected MSM with crystal meth abuse presented for treatment as part of an open phase pilot trial of 10 sessions of behavioral activation therapy and HIV risk reduction counseling.
Results: Participants had a mean age of 36 years (76% self-identified gay, 55% unstably housed, 48% unemployed, 34% non-white). 68% had a lifetime STD history. In the past 30 days, participants reported an average of 6 days using crystal meth, and 17 days experiencing problems related to drug use. In the 3 months prior: 86% reported unprotected insertive anal sex (UIA) with a mean number of 5 UIA acts while using crystal meth; 62% reported unprotected receptive anal sex (URA) with a mean number of 7 URA acts during crystal meth use; 55% traded sex for things they needed. Concurrent use of other substances was common (66% poppers, 45% GHB, 45% ED, 41% cocaine, 38% crack). High levels of psychological distress were observed: 76% screened positive for depression (CES-D mean=25.1, SD=12.5; MADRS mean=26.9, SD=9.6). Higher depression scores were positively associated with number of URA acts while using crystal meth (r=0.38; p=0.03) and number of days of polysubstance use (r=0.40, p=0.03).
Conclusion: HIV-uninfected MSM presenting for crystal meth abuse are at high-risk for HIV infection. Novel behavioral interventions are needed to reduce concomitant sexual risk behavior and crystal meth use.

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Citation Paper

Paper Session 03 2:30 PM–2:48 PM 2052

NEIGHBORHOOD FORECLOSURES AND HEALTH STATUS

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Despite escalating mortgage foreclosure rates, little is known about the relationship between neighborhood foreclosures and individual health status. This study determined 1) if women who lived in areas of high foreclosure risk reported worse health status, 2) the extent to which covariates (sociodemographics, census tract poverty rate, perceived neighborhood conditions, access to medical care, behaviors, social support, perceived stress, and depressive symptoms) accounted for any observed associations, and 3) if the health of breast cancer survivors was disproportionately affected by area foreclosure risk compared to noncancer controls. Women with breast cancer were recruited from the statewide Missouri Cancer Registry 1 year after diagnosis. Noncancer controls were age-race-geography frequency matched and identified by random digit dialing. Data from 2300 women were collected by telephone interview from 8/2007–6/2009. We used the federal Housing and Urban Development agency's estimated census tract foreclosure abandonment risk score, based on the decline in home values, high-cost loans, unemployment rates, and vacant addresses. This score, ranging from 0 to 10, predicts the risk for foreclosed and abandoned homes in the study's 1151 census tracts. Risk scores were categorized: 0–3 (low), 4–6 (moderate), and 7–10 (high). Self-reported health was grouped as fair/poor or good/very good/excellent. Overall, 16.4% reported fair/poor health (low risk area: 11.9%; high risk area: 23.1%). Using multilevel, multivariable logistic regression, women who lived in high risk foreclosure areas were 2.0 times more likely to report fair/poor health (95% CI: 1.2–3.3) as women who lived in low risk areas. Breast cancer survivors and noncancer controls were equally likely to be affected by area foreclosure risk (p=0.5496). While the impact of foreclosures on a neighborhood can be dramatic, the health of women living in these areas also may be affected.

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Citation Paper

Paper Session 03 2:48 PM–3:06 PM 2053

USING MIXED METHODS TO EXPLORE THE POTENTIAL RELATIONSHIPS BETWEEN SOCIAL CAPITAL, BUILT ENVIRONMENT AND PHYSICAL ACTIVITY

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Social capital has been linked to improved health and physical activity, yet findings are inconsistent. The overall aim of this study is to describe variability of neighborhood social capital and improve understanding of potential relationships between social capital, built environment and physical activity using a two-phase explanatory mixed methods design. Methods: Neighborhood and individual-level data were collected from 950 adults residing in 5 urban neighborhoods.Independent variables included perceived and objective indicators of social capital; dependent variables included self-reported physical activity, self-rated health, and BMI. We examined relationships using multilevel modeling with individuals nested within neighborhood block groups. For the qualitative component, we conducted nine focus groups with residents in the study neighborhoods to explore their views of social capital. Results: Participants who reported higher perceptions of social capital (i.e. social cohesion) and lower rated incivilities had 57% greater odds of meeting recommendations for physical activity. Similarly, social capital indicators, perceptions of safety and social cohesion, were associated with higher self-rated health and lower BMI. The focus group themes aligned with the general social capital constructs of trust, shared values and norms of reciprocity. It was more difficult for groups to relate to social capital when conceptualized as a resource, but the groups did provide various examples and ways of talking about social capital. Conclusions: There are relationships between multiple indicators of social capital and physical activity, BMI and self-rated health. However, the qualitative data suggest that the current definition of social capital may be incomplete and could contribute to inconsistent relationships between social capital and health.

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Paper Session 03 3:06 PM–3:24 PM 2054

UNSAFE NEIGHBORHOODS PROMOTE TV WATCHING IN YOUNG CHILDREN

Nefertiti H. Durant, MD MPH,[1] Jacqueline F. Kerr, PhD,[2] Dori Rosenberg, PhD Candidate,[2] Greg J. Norman, PhD,[3] Brian E. Saelens, PhD,[4] Sion K. Harris, PhD[5] and James F. Sallis, PhD[2]

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Background: Few studies have related neighborhood environment to TV watching in youth, yet unsafe environments may encourage parents to keep their children indoors.
Aims: This study examined associations among built environment neighborhood factors and reports of youth television watching by parents of children and adolescents and adolescents.
Methods: Parents of children (N = 116; ages 5–11), parents of adolescents (N = 171; ages 12–18), and adolescents (N= 171) in 3 US cities completed the Neighborhood Environment Walkability Scale for Youth (NEWS-Y) which assesses perceived neighborhood land use mix-diversity and -access, traffic safety, crime safety, aesthetics, walking/biking facilities, street connectivity, residential density, and recreation facility proximity. An overall environment score from NEWS-Y was also derived (average of the 9 subscale z-scores). Participants reported on youth's number of hour of TV viewing per week. Regression analyses examined associations adjusting for youth BMI z-score, gender, race, site and household income.
Results: Among parent reports for children, TV watching was significantly ($p<.05$) related to: crime safety ($r=-.236$), street connectivity ($r = -.198$), aesthetics ($r = -.309$), traffic safety ($r = -.334$), and the overall neighborhood environment score ($r = -.314$) Among parent reports for adolescents and adolescent self-report, there were no significant associations.
Conclusions: Results suggest that children's TV watching is affected by the neighborhood built environment, particularly safety issues, whereas this may not be the case among adolescents.

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Paper Session 03 3:24 PM–3:42 PM 2055

PERCEIVED STRANGER DANGER: DEMOGRAPHIC VARIATION AND ASSOCIATIONS WITH YOUTH PHYSICAL ACTIVITY

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Background: While child abduction by a stranger is rare, a few highly publicized cases kidnapping-murders have contributed to a sense of alarm in the US. Fear of strangers is often discussed as a barrier to youth physical activity (PA) but has not been studied. This paper examines whether concerns about "stranger danger" are related to youth's inactivity, particularly in their neighborhoods.
Methods: Three samples (adolescents n=171, parents of adolescents n=171, and parents of children n=116) were surveyed using a test-retest design in San Diego, Boston, and Cincinnati. A 4-item scale assessed perceived stranger danger (PSD) in different situations. Other variables (e.g. youth PA) used self- and parent reported scales. Reliability tests, t-tests, and partial correlations (adjusting for demographic characteristics) were used for analyses.
Results: The PSD scale had moderate to substantial test-retest reliability across samples (ICC=0.50 to 0.82) and excellent internal consistency ($\alpha=0.88$ to 0.94). The PSD score was higher among female adolescents than males, minorities than white, and lower-income than higher-income families. PSD was associated with perceived neighborhood crime ($r=0.32$ to 0.48), traffic safety ($r=0.22$ to 0.35), and parental rules for playing outside ($r=0.28$ to 0.33). However, the PSD score was not associated with youth PA or sedentary behaviors.
Conclusions: Disparities existed in PSD based on gender, family income, and race/ethnicity. PSD was related to other aspects of the neighborhood safety. Families with higher PSD had more rules restricting playing outside, but the associations of PSD with physical activity and sedentary behaviors require further investigation with objective measures.

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Paper Session 03 3:42 PM–4:00 PM 2056

CUMULATIVE EXPOSURE TO VIOLENCE DURING ADOLESCENCE AND RISK FOR OVERWEIGHT IN YOUNG ADULTHOOD

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Objectives: Mounting research evidence suggests that exposure to violence in childhood and adolescence is associated with increased risk for overweight/obesity. We tested the hypothesis that cumulative exposure to violence (CEV) during adolescence predicts risk of overweight/obesity in young adulthood.
Methods: Participants (n=4,834) were members of the National Longitudinal Survey of Youth, 1997 cohort(NLSY97), aged 12–14 years in 1996 and followed prospectively for 10 years (1996 - 2006). General growth mixture modeling was used to identify latent class variables for trajectories of risk for overweight over time. CEV was measured during adolescence (ages 12–18 years). Annual measures of weight and height were used to calculate profiles for BMI trajectories during young adulthood (ages 18–23 years).
Results: Our analyses identified 2 distinct populations of youth: (1) Persistent Healthy Weight group that maintained with a low prevalence of overweight, (mean BMI 21.8 at age 18 and 22.7 at age 23); and (2) High-Risk Overweight group where mean BMI increased from 25.8 to 28.4 between ages 18 and 23, respectively. General growth mixture modeling indicated that adolescents were 53% more likely to be in the High-Risk Overweight group for each unit increase in cumulative exposure to violence, controlling for relevant sociodemographics, including family income, parental health, race/ethnicity, gender and age, in comparison to those in the Persistent Healthy Weight group.
Conclusions: Cumulative exposure to violence during adolescence elevates risk for overweight in young adulthood. Identification of risk factors for different subgroup trajectories to overweight may influence tailored prevention strategies. Interventions to reduce obesity and cardiovascular risk among youth may benefit from addressing cumulative violence exposure.

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Meritorious Student Paper

Paper Session 04 2:30 PM–2:48 PM 2057

PERCEPTIONS OF TYPE 2 DIABETES PATIENTS' HONESTY IN THE PHYSICIAN-PATIENT RELATIONSHIP

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Physician-patient collaboration is necessary for successful patient care. Inherent to collaboration is physicians' and patients' ability to communicate honestly and effectively, develop a trusting relationship, and discuss treatment-related decisions. This ongoing study examines physicians' and type 2 diabetes patients' perceptions of honesty in their relationship.

40 patients (83% White, 40% female, 60±8 years old, 15±2 years of education, 14±10 years with diabetes, A1c=7.9±1.6%) and 15 endocrinologists (MDs) (73% White, 67% female, 49±14 years old, 22±14 years in medical practice) completed a questionnaire on honesty in physician-patient communication. Patients also had A1c measured and completed questionnaires on psychological functioning, diabetes self-care, coping styles, diabetes-related distress, and diabetes attitudes.

80% of MDs reported about 1/3 of their patients misrepresented or withheld information about their self-care and 33% of patients reported misrepresenting information. Physicians perceived following a healthy diet (73%) and exercising regularly (60%) as the areas most often misrepresented, and attributed this lack of honesty to: guilt (93%), competing priorities (80%), fear of being judged (80%), and shame (73%). Patients reported not honestly communicating about following a healthy diet (69%) and checking blood glucose levels (46%) and reported the following reasons: "shame," "sense of guilt," "embarrassment," "fear of disappointing physician," and "denial." Patient misrepresentation did not differ by poor (A1c≥7%) or good (A1c< 7%) glycemic control group (p=ns).

These findings indicate that MDs and patients perceived comparable misrepresentation in their relationships and had similar understandings of the reasons behind this lack of honesty. Helping MDs learn effective strategies to deal with patient misrepresentation can support the physician-patient relationship and improve diabetes self-care for patients.

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Paper Session 04 2:48 PM–3:06 PM 2058

PHYSICIANS' AND PATIENTS' PERCEPTIONS OF FACTORS PROMOTING OR IMPEDING TYPE 2 DIABETES MANAGEMENT

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The physician-patient interaction is important in promoting optimal diabetes management. Whether patients and physicians perceive similar characteristics and behaviors for successful diabetes management is not clear. This qualitative study explored physicians' and diabetes patients' concordance on 1)views of the 'ideal' patient and 2) reasons for not achieving treatment goals. A purposive sample of 33 type 2 diabetes patients and 19 physicians participated in semi-structured interviews. Interviews were transcribed and coded by 5 researchers. We used content analysis to assess, categorize and interpret the data. Patients were 85% white, 39% female, aged 60±7 years, and A1c=8.1±1.7%. Physicians were 80% white, 42% female, aged 48±9 years, and 21±10 years in practice. Qualitative analysis revealed: Patients perceived the 'ideal' patient as someone who "listens to and understands the doctor" and is "educated" about diabetes. Physicians perceived the 'ideal' patient as someone "who wants to learn," "understands diabetes," and comprehends treatment. Physicians and patients had diverse explanations for unsuccessful diabetes management. Patients attributed unsuccessful treatment to negative patient qualities including "laziness," "denial" and lack of "willpower/discipline," while physicians attributed socioeconomic (e.g., literacy) and psychosocial (e.g., psychiatric problems) reasons as well as lack of understanding between doctor and patient.

Physicians and patients concurred on the importance of learning and understanding in successful diabetes management, but physicians described 'ideal' patients as actively participating while patients described them as passive recipients of information and services. Physicians also offered broader and less judgmental perspectives on factors affecting achievement of treatment goals.

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Paper Session 04 3:06 PM–3:24 PM 2059

EFFECT OF PATIENT GENDER ON PHYSICIANS' WEIGHT LOSS GOALS FOR OBESE PATIENTS

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There is limited information regarding the weight loss expectations that physicians have for obese patients or whether these expectations differ based on patient gender. The purpose of this study was to compare physician weight loss goals for obese male and female patients. Physicians (N=108; mean age=48.8+8.5 years; 75.9% male; 79.6% primary care specialty) reviewed two hypothetical clinical scenarios that were identical with respect to health status and obesity (BMI=33 kg/m2) but differed in the gender of the patient. Physicians then completed a survey about the need for weight loss, intentions to provide weight loss counseling, and specific weight loss goals (i.e., "ideal", "successful", and "acceptable" goal weights) for each patient. Physicians strongly agreed that both patients should lose weight and physician counseling and/or treatment referrals would be appropriate. However, specific weight loss goals for male and female patients differed significantly. BMI values calculated from physician weight goals were significantly lower for female patients than male patients: 22.0 vs. 25.2 kg/m2 (ideal weight); 25.4 vs. 27.8 kg/m2 (successful weight); and 27.0 vs. 29.2 kg/m2 (acceptable weight), Ps < .001. Physician weight goals required significantly greater weight loss for female patients than male patients: 29.8% vs. 25.0% (ideal weight); and 19.2% vs. 17.3% (successful weight), Ps < .001. Compared with male physicians, female physicians endorsed more realistic ideal and successful goals for both genders, Ps < .03. Results offer novel information regarding more stringent weight loss expectations that physicians endorsed for obese female patients than obese male patients. Regardless of patient gender, physician goals exceeded the 5–10% losses currently recommended. Healthcare providers may hold particular gender-specific biases about ideal body sizes, although additional research is needed to better understand this gender discrepancy in physician expectations.

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Paper Session 04 3:24 PM–3:42 PM 2060

ARE PROVIDERS' SELF-EFFICACY AND OUTCOME EXPECTATIONS RELATED TO OBESITY COUNSELING FREQUENCY

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Prior research finds providers have low self-efficacy (SE) and do not frequently counsel on obesity. However, we know little about the role of outcome expectations (OE) in counseling frequency (CF). Providers' SE, OE, and CF for healthy eating, physical activity (PA), and achieving a healthy weight were assessed at baseline in a multi-clinic randomized intervention trial. CF was assessed on a 4-point scale (1=not at all, 4=all the time). A proportional odds model, accounting for clustering, was used to explore the association between SE, OE, and self-reported CF. Providers (N=110) in 21 clinics, included MDs (75%) and mid-level providers (25%). Comparisons among CF on healthy eating (58%), PA (45%), and achieving a healthy weight (34%) differed significantly at $p<0.05$. More providers reported being "very confident" in their obesity counseling skills (SE) than reported that their counseling would produce actual behavior changes (OE) at $p<0.05$, reported as SE;OE: achieving a healthy weight (40;4); screen time (32;6); outdoor activity (34;8); fruit and vegetable (F&V) intake (38;4); sugar-sweetened beverages (SSB) (45;16); juice (47;14); low-fat milk (47;20); and junk food (38;5). The odds ratio (OR) for providers' SE and OE for counseling about healthy eating and PA were as follows, all significant at $p<0.05$, (reported as ORs for SE, OE): F&V intake (1.8;2.2); SSB (2.2;2.3); juice (2.0;2.0); milk (2.5;1.7); and outdoor activity (2.6;1.7). Only SE was associated with counseling about junk food (1.7) and screen time (1.8). Neither SE nor OE was significantly associated with CF regarding achieving a healthy weight. Controlling for SE, OE was associated with counseling about F&V intake (1.9), SSB (2.0), and juice (1.7). Results suggest that providers are confident in their counseling skills but do not have high expectations for changes to result from their counseling. Both SE and OE were associated with CF for dietary and exercise behaviors; but not counseling about healthy weight. Future research could target provider outcome expectations for counseling about childhood obesity.

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Paper Session 04 3:42 PM–4:00 PM 2061

PATIENT PREFERENCE IN HEALTH BEHAVIOR CHANGE

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A core premise of evidence-based practice is the value of considering patient preferences when choosing an optimal intervention. Consideration of preferences is justified by self-determination theory as it is understood to support the basic human need for autonomy. Additionally, there is evidence that soliciting clients' preferences can facilitate treatment adherence. However, evidence is mixed about whether receiving preferred treatment enhances health outcomes. We analyzed data from the Make Better Choices trial which compared alternative prescriptions for improving diet and activity. Participants (n=200) had all of four health risk behaviors: low fruit and vegetable (FV), high saturated fat (Fat) intakes, low physical activity (PA), and high sedentary screen time (Sed). They were randomized to one of four prescriptions and used handheld technology and coaching to change one diet and one activity behavior simultaneously (FV+PA+, Fat- PA+, FV+Sed-, Fat- Sed-). At debriefing, participants were asked what treatment they would have preferred. Overall, the FV+Sed- prescription was markedly more effective than alternative prescriptions at maximizing healthy change across all four behaviors. However, only 34% of those assigned to the FV+Sed- condition ranked it as their first choice. The objectively most successful FV+Sed- condition was only the third most popular across all participants (preferred by 12%), behind FV+PA+(45%), and the objectively least successful condition, Fat-PA+(23%), $\chi^2(3,192)=38.66$, $p<.001$. Whether participants received their preferred condition also failed to predict success at changing their unhealthy behaviors during either initiation or maintenance. In sum, participants did not prefer the most effective intervention, and getting their preferred intervention did not facilitate success in changing behavior. Results suggest that the practitioner's role in optimal shared decision-making differs from "caving in" to client preferences. Respectful discussion of client preferences is recommended, while still communicating clearly about evidence-based best practices.

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Paper Session 05 2:30 PM–2:48 PM 2062

THE LATINA IMMIGRANT PERSPECTIVE: THE CULTURAL CONTEXT OF OBESITY

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Introduction: Obesity poses a great health risk to minority and low-income populations, including Latinos. Effective community-based interventions have focused on a global approach to weight management and increased physical activity but few have included Latinos, particularly those living in the Southeast. The purpose of this paper is to examine perceptions of obesity as related to weight management among Latina immigrant women. Methods: Focus groups were based on constructs from the Health Belief Model and a literature review. Four groups were conducted with obese/overweight Latina immigrant women (BMI >25) who were recruited from a community hospital. Each focus group was moderated by a bilingual-bicultural woman, lasted 90 minutes and began with a brief demographic survey. Discussion topics included: perceptions regarding health, overweight, obesity and weight management. Themes pertinent to perceptions regarding obesity and weight management were identified using 100% consensus coding with a combined deductive/inductive approach.

Results: There were 25 female participants. Mean age was 39 years; the majority of participants came from Mexico. Participants perceived weight gain as related to lifestyle changes since moving to the U.S. They noted a less active lifestyle in the U.S., linking reduced physical activity as well as deviation from traditional foods to weight gain. Participants did not report a clear distinction between overweight and obesity. They described obesity in terms of body image and physical symptoms. These elements were major factors in the decision of whether to engage in weight management efforts. Women also reported being prompted by their children to lose weight. Participants expressed interest in weight loss but emphasized a desire for programs that preserve culture by incorporating traditional customs. Conclusions: Weight-management programs designed for Latina immigrants should address their perceptions of obesity. This data also suggests that those interventions that preserve tradition and include family may increase community buy-in.

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Paper Session 05 2:48 PM–3:06 PM 2063

POST-MASTECTOMY BREAST RECONSTRUCTION EXPERIENCES OF SPANISH-PREFERRING LATINAS

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The Women's Health and Cancer Rights Act (WHCRA), which mandates that post-mastectomy breast reconstruction be covered by health insurance, was meant to narrow economic disparities in utilization. Thus, it was expected that the 1999 implementation of WHCRA policies would increase utilization rates among Latinas as compared to their White, non-Latina counterparts, who tend to be of a higher socioeconomic status; however, ethnic disparities in utilization have persisted. According to a quantitative study by Katz et al. (2005) of breast reconstruction utilization rates among women diagnosed in 2001–2002, Latina women who preferred to speak Spanish were still less likely than their White, non-Latina counterparts to obtain reconstruction post-mastectomy. Another recent study by Alderman et al. (in press) found that less acculturated Latinas were significantly less likely to obtain post-mastectomy reconstruction as compared to non-Latina White women, with a lack of information and financial issues arising as factors limiting access to reconstruction. Preliminary results of a qualitative study examining access to and decision-making regarding post-mastectomy breast reconstruction are presented, elucidating the aforementioned quantitative results from the perspective of the Spanish-preferring, Latina patient. Data consist of semi-structured interviews with 14 Spanish-preferring Latinas (n =7 with reconstruction), all of whom had mastectomies performed after the implementation of WHCRA policies. Participants were recruited from a private cancer treatment center (n=3, n=2 with reconstruction), a community-based cancer treatment and support center for underserved populations (n=5, n=2 with reconstruction), and a community-based support center serving Latinas (n=6, n= 3 with reconstruction). In preliminary qualitative analyses, financial issues did not arise as a main theme, while lack of adequate information and communication barriers arose as a significant themes among those who did not obtain reconstruction.

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Paper Session 05 3:06 PM–3:24 PM 2064

EVIDENCED BASED TELEPHONE DEPRESSION CARE TO RURAL LATINOS IN PRIMARY CARE: RESULTS FROM A RANDOMIZED BASED COGNITIVE BEHAVIORAL THERAPY INTERVENTION

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Few Latinos have access to evidence based practices (EBPs), especially in primary care where Latinos are most likely to seek depression care (Vega et al., 1999; Lewis-Fernandez et al., 2005). Public sector responses to the mental health service needs of Latinos residing in rural communities have been slow to come and not commensurate with the growth, needs, and cultural context of rural Latinos (Soto, 2000).

This presentation highlights the findings of a ground-breaking pilot study that tested a manualized telephone cognitive behavioral therapy (CBT) intervention for depression among rural Latino patients in primary care. One hundred one adult Latino men and women identified through systematic screening as having major depression participated in the study. Fifty patients were randomized to the CBT intervention vs 51 patients to usual care. Twenty-two men (21.8%) participated in the study, 11 in each randomized group. Ninety one percent of all participants were born in Mexico and 79.2% had received less than 11 years of formal education.

Depression outcomes were measured by standardized measures, Symptom Checklist (SCL) and the Patient Health Questionnaire 9 (PHQ 9) at baseline, as well as at 6 weeks and 3 months post-baseline. The mean baseline score as measured by the SCL was 1.8 (SD=0.8) for both groups. The mean baseline PHQ 9 score for both groups was 15.6 (SD=6.2). These scores indicated moderate depression. At week 6, scores for both measures were lower, indicating less depressive symptoms, but this difference was not statistically significant. At 3 months, depression scores as measured by the PHQ 9 were significantly lower for those receiving the intervention (7.3, SD=5.4) compared to participants in usual care (10.4, SD=7.0). Likewise, statistically significant lower SCL scores were found for those in the intervention group (0.9, SD=0.7) compared to usual care (1.3, SD=0.8).

Implications of findings in enhancing effective and culturally informed depression care will be discussed.

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Paper Session 05 3:24 PM–3:42 PM 2065

DEPRESSION, ANXIETY, AND STRESS AS HIERARCHICAL FACTORS OF GENERAL DISTRESS IN HISPANIC YOUNG ADULTS

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Hispanics living in the United States may experience a range of psycho-social experiences leading to psychological distress, which may predispose an individual a variety of negative health outcomes The present study explored psychological distress in Hispanics as a function of depression, anxiety, and stress. Hispanic young adult participants (N=425) completed the Depression, Anxiety, and Stress Scale (DASS), which evidenced adequate internal consistency in all 3 subscales: depression ($\alpha = .88$), anxiety ($\alpha = .94$), and stress ($\alpha = .92$). A Second Order Confirmatory Factor Analysis of the DASS examined the role of depression, anxiety, and stress as sub-factors of the general psychological distress factor (GDF). No disturbance correlations parameters were freed inter-factor wise; modification indices were used to guide the freeing of DASS intra-factor disturbance term correlations. The resulting model was of reasonable fit, suggesting that depression, anxiety, and stress adequately loaded on a broader GDF. All individual items and sub-factors significantly loaded (all p's < .001) on their putative factors both before and after disturbance correlations were freed. Of note is that anxiety loaded significantly more strongly than depression, Z=6.64, and stress, Z=4.58. The loading for stress was greater than for depression, Z = 2.71 as well. For Hispanic young adults, general distress may be most strongly a function of anxiety, followed by stress, and then mood symptoms. Community health and mental health services targeting Hispanics or young adults may thereby benefit from adequate anxiety screening as well as a strong focus on subjective stressors experienced by clients and, to a lesser extent, mood levels.

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Paper Session 05 3:42 PM–4:00 PM 2066

PERCEIVED RACISM AND COPING AMONG LATINO IMMIGRANT MEN

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Studies show that perceived racism is associated with poor mental and physical health among racial and ethnic minorities and that coping resources can moderate the impact of racism on health. Few studies have assessed these relationships among Latino immigrants. Therefore, our objective was to describe patterns of perceived racism and coping among Latino immigrant men in rural North Carolina. The study was a secondary data analysis of baseline data collected from 275 Latino immigrant men from the Men as Navigators for Health and HoMBReS lay health advisor intervention study in central North Carolina. Baseline surveys included measures of perceived racism, coping type, sense of mastery and demographic characteristics. Descriptive statistics were used to evaluate the patterns of perceived racism and coping among the men. Linear regression models estimated the associations between perceived racism and coping. The most common types of perceived discrimination reported by the men were due to language (57%), legal status (50%), and race or ethnicity (33%). Racial/ethnic discrimination was associated with increased sense of mastery (B=.15, SE=.06). Experiencing unfair racial treatment at work or in health care was associated with increased likelihood of using avoidant coping (B=1.87, SE=.71). Those more likely to think racism was a serious problem had an increased likelihood of using active cognitive (B=.32, SE=.10) and active behavioral coping (B=.23, SE=.14). Observing racism towards others was associated increased likelihood of using active cognitive coping (B=.33, SE=.01) and with decreased sense of mastery (B=-.05, SE .03). The results suggest that Latino immigrant men utilize different types of coping when experiencing perceived racism. More research is needed to understand how coping with perceived racism influences mental and physical health in this population.

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Paper Session 06 2:30 PM–2:48 PM 2067

PSYCHOEDUCATIONAL GROUP INTERVENTIONS ATTENUATE THE POSITIVE RELATION BETWEEN INADEQUATE SOCIAL RESOURCES AND DEPRESSIVE SYMPTOMS IN MEN TREATED FOR PROSTATE CANCER

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We investigated how the quantity and quality of social relationships interact with group interventions to influence depressive symptoms in prostate cancer patients. Social interventions are based on the theory that greater social integration and the availability of safe social outlets for sharing feelings will facilitate psychological adjustment. Therefore, we predicted that cancer patients with relatively low social integration and a high level of perceived social constraints would be at greatest risk for depressive symptoms and would benefit the most from an intervention that connects them with a supportive social network. After medical treatment, men (n=267) were randomized to a group education plus discussion intervention, group education intervention, or a usual care control condition. Social integration, social constraints on disclosure and depressive symptoms were measured with validated self-report scales. Data were collected pre-intervention (T1) and 2-weeks (T2) and 6-months (T3) post-intervention. There was a significant three-way interaction (p<.05) of social integration by social constraints by condition on depressive symptoms at T2, but not by T3, adjusting for covariates. Decomposition of the interaction revealed that in the absence of intervention, low social integration was a risk factor for depressive symptoms among men with high social constraints, but not among men with relatively low social constraints. There were no synergistic effects of social integration and constraints on depressive symptoms in the group intervention conditions. These findings suggest that the interventions buffered men psychologically from inadequate social resources. It may be that men who experience social constraints and have few social outlets find that they can receive emotional support in a group intervention. Since results were not sustained at six months, continued participation in a group may be necessary for those with limited social networks.

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Paper Session 06 2:48 PM–3:06 PM 2068

COPING SKILLS MEDIATE THE EFFECTS OF A TELEPHONE-BASED COGNITIVE BEHAVIORAL STRESS MANAGEMENT INTERVENTION ON URINARY FUNCTION AMONG PC SURVIVORS TREATED WITH HORMONE THERAPY

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Prostate cancer (PC) treatment often results in side effects (e.g., urinary dysfunction) that can compromise quality of life (QOL). Hormone therapy (HT) is associated with additional side-effects (e.g., urinating problems, pain) that can further deteriorate physical functioning and QOL. Despite these challenges, limited work has evaluated the efficacy of psychosocial interventions among men with PC. The current study evaluated the effects of a telephone-based Cognitive Behavioral Stress Management (CBSM) intervention on coping strategies and urinary function among PC survivors undergoing HT. Participants (N=83) were randomized to either CBSM or a health promotion (HP) control condition and were assessed at two time points (T1; baseline, and T2; post-intervention). The mean age was 70.0 years (SD=9.5) and the sample was ethnically diverse (66% White, 18% Black, 12% Hispanic, 4% Other). Participants had undergone an average of 19.1 months (SD=17.4) of HT. Measures included the COPE and the Expanded Prostate Cancer Index Composite (EPIC) for treatment-related symptoms. Two mediation models were tested in which acceptance and denial coping strategies were hypothesized to mediate the relationship between group condition and urinary function, controlling for relevant covariates. Results indicated that both acceptance (β=.24, p<.05) and denial (β=-.37, p<.01) coping were significant mediators of intervention-related improvements in urinary functioning. The final mediation models were significant; acceptance coping accounted for 33.5% of the variance of urinary function at T2, F(9, 71)=6.54, p<.01, and denial coping accounted for 37.1%, F(9, 71)=4.65, p<.01. These results indicate that coping skills may be a significant mechanism through which psychosocial interventions may improve disease-specific QOL.

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Paper Session 06 3:06 PM–3:24 PM 2069

MULTIDISCIPLINARY QUALITY OF LIFE INTERVENTION FOR MEN WITH BIOCHEMICAL RECURRENCE OF PROSTATE CANCER

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The objective of this investigation was to evaluate the feasibility, acceptability, and pilot test a multidisciplinary QOL intervention tailored for men with biochemical recurrence of prostate cancer. Treatment consisted of eight, one hour, structured, group sessions including; (1) overview and medical education regarding prostate cancer, (2) goal setting, problem solving, and relaxation training, (3) nutrition and prostate cancer, (4) physical activity and conditioning, (5–7) mood management, and (8) social support and maintenance of positive health behavior change.

Participants included 57 men with a history of localized prostate cancer with biochemical recurrence (Median=76 years, 89% White). Participants were randomized to wait list control (WLC; n=27) or to multidisciplinary QOL intervention (MQOL; n=30). Assessments were completed at baseline, end of treatment, and 6-months post-treatment. MQOL was feasible as indicated by favorable rate of participant recruitment, retention (100% retained), and treatment compliance (97% attended >5 treatment sessions). Participants also rated MQOL as highly acceptable (80% rated helpful >3 on 5-point scale).

Although this pilot study was not adequately powered to detect treatment differences, our results suggest that MQOL had a favorable impact on the mental health composite score of the SF-36 at end of treatment but not at 6-months (effect size=0.52 and -0.04, respectively); health-related QOL as measured by the Functional Assessment of Cancer Therapy-Prostate at both end of treatment and at 6-months (effect size=0.14 and 0.10, respectively); and prostate cancer specific anxiety as measured by the Memorial Anxiety Scale for Prostate Cancer at both end of treatment and 6-months (effect size=0.45 and 0.23, respectively). The results suggest that MQOL holds promise for improving QOL in this patient population. Based on these preliminary data, a large scale clinical trial is warranted.

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Paper Session 06 3:24 PM–3:42 PM 2070

BLADDER CANCER TREATMENT DECISIONS: RESULTS OF PATIENTS' INTERVIEWS

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Background: Surgery to remove the bladder followed by one of three urinary diversions (i.e., ileal conduit, continent reservoir, and neobladder) is the standard treatment of invasive bladder cancer. Although all urinary diversions offer similar recurrence-free survival rates (87% in 5 year) and cancer control, the three procedures can have significantly different effects on a patient's quality of life. The present study explored treatment decision making and difficulties in post-treatment health care in patients treated for invasive bladder cancer.

Materials and Methods: Tape-recorded semi-structured interviews were conducted with eight patients treated with invasive bladder cancer (50% women). Patients were on average 61.5 years of age and 2 years and 5 months post diagnosis and treatment. Three patients have illial conduit, one patient has continent reservoir, and 4 patients have neobladder. The interviews focused on: a) patients' understanding of invasive bladder cancer and treatment options; b) treatment decisions and patients' roles in decision making; and c) health care following treatment.

Results. All patients reported having very little knowledge about treatment options before making a treatment decision and did not know what to expect after surgery. Four patients (50%) followed their physicians' treatment recommendations. Three patients (37.5%) indicated that only one treatment option was discussed and recommended. After treatment, all patients with neobladder and continent reservoir did not know how to empty the pouch or use a catheter. The three patients with ileal conduit reported difficulty using stoma appliances following treatment. All patients had difficulty coping with stoma and pouch care.

Conclusions. Invasive bladder cancer patients lack full information of treatment options and side effects, are less likely to participate in decision making, and less likely to be prepared for stoma, pouch, and neobladder care. Results emphasize the need for educational interventions to help patients make informed treatment decisions and improve post-treatment health care.

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Paper Session 06 3:42 PM–4:00 PM 2071

SURVIVORSHIP AND THE NEED FOR CANCER NAVIGATION IN NONMUSCLE-INVASIVE BLADDER CANCER

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Bladder cancer is the 4th leading cause of cancer mortality in the U.S., yet little is known about psychosocial aspects of bladder cancer survivorship. 75–80% of new cases manifest as nonmuscle-invasive bladder cancer (NMIBC), requiring an invasive/intensive post-treatment monitoring and yielding lower adherence rates (40%). The present qualitative study explores aspects of NMIBC survivorship including health-related quality of life (HRQOL), symptom management, and the need for psychosocial interventions such as cancer navigation.

To date, 10 semi-structured interviews have been conducted with a convenience sample of NMIBC patients. Participants were males, ages 52–85 years. Additionally, participants were Caucasian (70%), African American (30%), high school graduates (90%), and married/long-term relationships (90%). Interviews were audiotaped, transcribed verbatim, and analyzed using holistic-content and constant comparative analyses.

Emerging themes focused on the impact of NMIBC diagnosis on a range of domains. Overall, treatment was perceived as negatively impacting marital/romantic and other relationships, functional status, and ability to work. Post-treatment side effects (e.g., urinary urgency) were transient. Sexual dysfunction or negative impacts on sexual relationships were the most common long-term effects. Most participants reported persistent psychological concerns about the surveillance regimen and likelihood of recurrence. Paradoxically, these concerns facilitated adherence. Barriers to adherence included financial concerns, commuting, complexity of the surveillance process, and need for additional information (e.g., recurrence rates).

Current findings support cancer patient navigation services as a means for reducing the psychological/relational burden of NMIBC; increasing ancillary service access; and improving surveillance rates. Further work is needed to understand specific navigation components needed by NMIBC survivors prior to designing and evaluating such a program.

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Paper Session 07 2:30 PM–2:48 PM 2072

AN INTERNET INTERVENTION TO IMPROVE SELF-MANAGEMENT IN ADOLESCENTS WITH TYPE 1 DIABETES: INITIAL RESULTS OF A RANDOMIZED TRIAL

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Background: Adolescents with type 1 diabetes show suboptimal adherence and have few resources for support. Diabetes clinicians face challenges to teaching important self-management skills, such as coping and problem solving. This study provides pilot results of an new Internet-based intervention, YourWay, designed to teach those skills in a feasible and engaging manner.

Design and Methods: A pilot randomized controlled trial was conducted to test the feasibility and impact of the intervention on problem-solving and self-management. Seventy-two adolescents 13–17 years were recruited from an academic medical center and randomized to either a 12 week "usual care plus website intervention" or a "usual care control" condition. The intervention components included multi-media stories to model problem-solving, a peer forum, expert advice, independent problem-solving cycles, social networking, and social comparison of responses. Online activities, self-report of outcome variables, and medical records were analyzed.

Results: The content and online experiences were rated highly by adolescents. Technical reliability was high. Most adolescents completed the maximum number of activities possible. Participation on the website was high for the early phase, and steadily declined over time. Adolescents were able to successfully complete independent problem-solving and select appropriate barriers and solutions. Using effect sizes, the intervention group showed improvements over time compared to control on problem solving (Cohen's d .30, p<.229), and self-management intervention (Cohen's d 0.77, p<.007) and modification (Cohen's d 0.60, p<.059).

Conclusion: In a small trial, it was shown that a website intervention, without clinician interactions, is a feasible means to improve adolescents' self-management. Further testing is warranted to explore means to maintain engagement, and in order to better estimate efficacy and subgroup differences.

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Paper Session 07 2:48 PM–3:06 PM 2073

BEHAVIORAL ONLINE ENHANCEMENTS IMPROVE SHAPE UP RI WEIGHT LOSS OUTCOMES

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Community weight loss campaigns show promise for attracting large numbers of individuals and engaging them in weight loss efforts. We sought to improve the weight losses achieved in these programs by adding proven behavioral weight loss components. Two studies were conducted within the context of Shape Up RI (SURI), a state-wide, team-based competition delivered via the Internet focused on increasing physical activity and reducing weight. In Study 1, 179 participants in SURI 2008 were randomized to Standard SURI or SURI Plus Lessons, in which the standard SURI program was supplemented with 12 video weight loss lessons delivered via the internet. In Study 2, 128 SURI participants were randomized to Standard SURI or Enhanced SURI, which included the 12 video lessons, internet-based self-monitoring of daily weight, food intake, physical activity, and automated weekly feedback on these self-monitoring records. Participants were weighed at the start and end of the 12-week SURI campaigns. Study 1 found no significant differences in weight loss in SURI Plus Lessons compared to Standard SURI (2.0±2.8 kg vs 1.4±2.9 kg, p=.15). In Study 2 the Enhanced SURI resulted in significantly greater weight losses compared to Standard SURI (3.5±3.8 kg vs 1.4±2.7 kg, p<.01) and a greater proportion of participants achieved a weight loss of at least 5% of starting weight (40.5% vs 13.2%, p<.01). Adherence to daily monitoring of weight and eating and exercise behaviors and use of prescribed behavioral strategies was excellent in the Enhanced SURI condition and were related to weight loss outcomes. The results of community weight loss campaigns can be greatly improved by adding lessons on proven behavioral strategies, self-monitoring of weight and behaviors, and automated feedback to these programs. These components can be added and delivered to large numbers of participants at little or no additional cost.

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Paper Session 07 3:06 PM–3:24 PM 2074

INTEGRATING AN INTERNET-MEDIATED WALKING PROGRAM INTO FAMILY MEDICINE CLINICAL PRACTICE

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Moderate-intensity physical activity such as walking can reduce morbidity and mortality, and improve patients' quality of life. However, few physical activity interventions have proven to be effective and feasible in clinical practice. Previously, we developed an Internet-mediated walking program, Stepping Up to Health (SUH) that uses objective monitoring, motivational messaging, automated feedback, and goal setting for individuals with chronic disease. In this 2-phased cohort study, we sought to develop and test an online interface allowing providers to refer patients to SUH and to monitor patient progress. In Phase I, we recruited 6 pairs of physicians and medical assistants (n=12) from 2 family practice clinics to participate in an iterative design and usability testing process. In Phase II, providers used the interface they had helped to design to refer patients to SUH with at least one of the following conditions: overweight, heart disease, or type 2 diabetes. Providers referred 139 patients and 37 enrolled in the 6-week intervention. Analysis of usage logs revealed that providers rarely monitored patients using the provider interface. Providers indicated that integrating SUH into clinic work flow was difficult as other tasks took priority. Lack of time, patient disinterest, and physician unease with exercise referrals were also barriers. The 34 patients who completed SUH increased their daily walking by approximately 3/4 of a mile per day (+1,493 steps/day, p<.001) and increased minutes of aerobic walking per week (+44.7 min /week, p<.001). Future studies need to test the use of provider prompts and integration with clinical information systems to increase utilization of automated programs helping patients manage chronic illnesses.

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Meritorious Student Paper

Paper Session 07 3:24 PM–3:42 PM 2075

PILOT STUDY EXAMINING DANCE-BASED VIDEO GAMES TO PROMOTE PHYSICAL ACTIVITY AMONG CHILDREN IN A RURAL SCHOOL-BASED SETTING

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While preliminary research indicates that dance-based video games are associated with significant increases in children's energy expenditure, most of this work has been conducted in lab-based settings. Furthermore, there is a paucity of research targeting children in underserved demographics, such as rural and minority communities. The purpose of this small pilot study was to examine energy expenditure and children's enjoyment of a dance-based video game implemented in a rural school-based program. Participants (N=21; 85.7% female; 95.2% African American) included fifth through eighth grade students enrolled in a school-based summer enrichment program in a rural community. Children engaged in 15 minutes of a dance-based video game (Dance Dance Revolution) and 15 minutes of recess activities (e.g., kickball, basketball). Accelerometers measured participants' energy expenditure during each activity. After completing both activities, participants rated their enjoyment of each activity. Children expended significantly more energy while playing the dance video game (4.9 kcal/minute) as compared with traditional recess activities (1.5 kcal/minute),t(20)=3.6, P<0.01. Also, children rated the dance video game as significantly more enjoyable than the recess activities, P < 0.02. These preliminary results suggest that dance-based video games may offer an enjoyable and effective alternative to traditional, school-based programs in increasing children's physical activity in a rural community. This intervention may be particularly effective for minority children and adolescents, a demographic at higher risk for poor health outcomes related to inactivity. Future research is needed to explore the utilization, enjoyment, and clinical effects of interactive video games over an extended period of time.

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Citation Paper

Paper Session 07 3:42 PM–4:00 PM 2076

COACHING DOES NOT CONFER ADDITIONAL BENEFIT FOR WEIGHT LOSS AMONG LOWER INCOME WOMEN USING HANDHELD COMPUTERS FOR SELF-MONITORING

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Accumulating evidence demonstrates that eHealth intervention strategies are effective in promoting weight loss. However, the magnitude of weight losses is generally greater in studies including interpersonal coaching support. Further, evaluations of eHealth weight loss interventions have infrequently included lower income and ethnic minority populations. The purpose of the present study was to examine the benefit of adding coaching to a handheld computer-based weight loss intervention for lower income, multi-ethnic women. Participants included women, aged 43±10 yrs (range: 24–64) among whom 85% were employed, 51% had a combined family income<$40,000; 61% were married/cohabitating, 41% were African-American, 30% White, 28% Hispanic, and 1% American Indian who were randomized to either: a) self-paced use of handheld system (eSolutions, n=26); or b) use of the handheld system plus weekly interpersonal coaching sessions (eSolutions-Plus, n=28). All participants were asked to track diet and physical activity (PA) daily for 24 weeks and to visit the YMCA at least 3 times per week. After 12 weeks, half of the participants in both conditions were randomly assigned to receive monthly telephone calls to remind them to utilize eSolutions and troubleshoot system difficulties. Height, weight, and waist circumference were assessed at baseline, 12, and 24 weeks. At baseline, no group differences were found. At 12 weeks, reductions in weight were significantly greater in the eSolutions compared to the eSolutions-Plus condition (1.6 kg, SD: 2.6 kg vs. 0.3 kg, SD: 1.9 kg, respectively, p<.05) and these differences were maintained, although not statistically significant, at 24 months. To conclude, the use of handheld computers for self-monitoring resulted in weight loss in both groups. Coaching; however, did not confer additional benefit to diet and PA self-monitoring regarding weight loss in lower income, multi-ethnic women.

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Paper Session 08 2:30 PM–2:48 PM 2077

RECRUITMENT FOR AN INTERNET DIABETES SELF-MANAGEMENT PROGRAM: SCIENTIFIC AND ETHICAL IMPLICATIONS

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Although diverse claims have been made, few studies have provided comprehensive data on the reach of Internet self-management interventions or the impact of recruitment methods on representativeness of participants. These issues have methodological and ethical implications for translation of research to practice. Data are presented on recruitment results and characteristics of 2,603 HMO members having type 2 diabetes invited to participate in an Internet self-management program. We demonstrate the impact of different definitions of participation rate, and compare demographic and clinical characteristics among subgroups of participants and nonparticipants using de-identified electronic medical records data. The project had a 46% eligibility rate and a 37% participation rate among all members attempted to contact and presumed eligible. We found significant differences between participants and nonparticipants on six variables ($p<.05$) generally related to SES, and among subgroups of participants (e.g., proactive volunteers vs. telephone respondents) and nonparticipants on key factors including age, income, ethnicity, smoking rate, education, blood pressure, LDL, and HbA1c, but not BMI. In particular, proactive volunteers differed markedly from other participants: e.g., 16% Latino vs. 24% and 52% for other subgroups, $p<.001$; mean LDL of 86 mg/dl vs. 96 and 101 for other groups, $p<.003$. These results illustrate the effects of differing definitions of participation rate, and of different recruitment approaches on number and characteristics of participants. They also have important implications for the impact of different recruitment methods on health disparities and generalizability of results to larger populations. Based on this study and the existing literature, we provide specific recommendations for reporting of eligibility rate, participation rate, and representativeness analyses in future research.

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Paper Session 08 2:48 PM–3:06 PM 2078

IMPLEMENTATION OF A VA WEIGHT MANAGEMENT PROGRAM: WHO ENROLLS AND IS THERE A BENEFIT?

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In 2006, the Department of Veterans Affairs (VA) launched a national weight management program ("MOVE!") to promote weight loss and physical activity in VA patients. OBJECTIVES: To examine the extent to which the program has been implemented, the barriers to implementation, the characteristics of program enrollees (compared to eligible non-enrollees), and the estimated clinical benefits in terms of change in weight and cardiovascular risk factors in 8 VA medical centers in the Western US. METHODS: We conducted a mixed method study. Qualitative interviews were conducted with staff involved in the implementation of the program (n=28). We analyzed data from VA clinical and administrative databases to: 1) compare demographic, risk-factor, and clinical characteristics of program enrollees to eligible non-enrollees and 2) assess the extent of clinical benefit in terms of 1-year changes in weight and blood pressure among enrollees relative to non-enrollees. RESULTS: Of the approximately 100,129 individuals who were eligible for the MOVE! program, 4508 (4.5%) enrolled. Compared to eligible non-enrollees, a greater proportion of enrollees were 60–69 years old (vs. 50–59), female, African American, had a $\text{BMI}>30$ kg/m2 (vs. <30), and a chronic illness (e.g., diabetes, coronary artery disease, hypertension, osteoarthritis) and a smaller proportion were <40 or >70 (vs. 50–59 years), OIF/OEF veterans, and current smokers. Overall, 15.5% of enrollees experienced $>5\%$ weight loss vs. 12.2% of eligible non-enrollees ($p<0.0001$). After adjustment for confounders, only among those with a BMI 30–34.9 were 1-year reductions in weight and systolic blood pressure (BP) greater among enrollees compared to non-enrollees (% weight change difference: -0.40%, 95% CI -0.71, -0.10; systolic BP difference: -1.1 mm Hg, 95% CI -2.0, -0.2). CONCLUSIONS: This study identified important barriers to wide-scale implementation of a weight management program using limited resources and also suggested clinically important public health benefits among enrollees.

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Paper Session 08 3:06 PM–3:24 PM 2079

MONETARY INCENTIVES FOR COMMUNITY-BASED WEIGHT MANAGEMENT PROGRAMS: THE EFFECT ON RECRUITMENT AND RETENTION

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Identifying effective approaches for the prevention and treatment of obesity is a clinical challenge. Increasing rates of obesity also correspond with a host of related co-morbidities and significant economic cost. Financial incentives have been used to enhance behavior change, both as a reward for weight loss outcomes and for program adherence. A paucity of research has investigated financial incentives in community based weight management programs and few have investigated the use of financial incentives for weight maintenance. Six matched, representative health regions (3 intervention, 3 control) from Alberta, Canada participated in this 2-year community trial. The study consisted of two phases; active participation (AP) in which the intervention group was entitled to receive 70% of program fees to a maximum of $600 if participants attended 75% of sessions in a pre-approved community based program over 36 weeks. In the weight maintenance (WM) phase, participants could receive further incentives for continued 5 lb weight loss every 3 months or the maintenance of a healthy BMI. Attrition, health and behavior-related change as well as rate of weight loss between groups were assessed.

Nine hundred eighty seven participants completed a screening survey (615 intervention, 372 control; $p<0.0001$) of which 474 (aged 20–65, BMI 25.0–34.9 kg/m2, 92.6% female) were screened eligible (316 intervention, 158 control; $p=0.007$) and 357 participants (247 intervention, 103 control: $p=0.002$) completed both baseline and joined an approved program. At 9 months, attrition was significantly higher in control participants (64.1% vs 38.1%; $p<0.0001$).

Financial incentives enhance recruitment to community-based weight management programs and significantly improve retention. The effect these incentives have on rate of weight loss, change in health behaviors and weight maintenance will be determined.

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Meritorious Student Paper

Paper Session 08 3:24 PM–3:42 PM 2080

REACH, IMPLEMENTATION AND EFFECTIVENESS OF A PILOT TO TREAT CHILDHOOD OBESITY IN LOW-INCOME FAMILIES

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The aim of this study was to assess the reach, implementation, and effectiveness of a pilot to reduce the BMI of low income obese children. Smart Choices was developed through a research-practice partnership that included a healthcare provider, Virginia Cooperative Extension (VCE), and the Virginia Tech Translational Obesity Research Program. The partnership identified the need to provide consistent follow-up and to teach families methods to improve the physical activity and food home environment. The resultant intervention included brief physician counseling and referral, six-biweekly group sessions taught by VCE program assistants, and six automated telephone counseling (ATC) calls on alternate weeks. Twenty-six participants (50% boys; mean age=10.5 years) were recruited and completed baseline and 3-month assessments. Thirty-five percent of eligible patients agreed to participate and were similar to those who declined in terms of socio-demographic variables. The average attendance at face-to-face sessions was 65% and of those who attended a preceding class 89% completed the subsequent ATC call. Effectiveness data was collected using a DEXA scan to determine body composition, height, weight, and a health related quality of life (HRQL) measure. Results revealed a significant reduction in children's BMI ($p<0.05$), an increase in lean muscle mass ($p<0.001$) and weight ($p<0.05$), and an increase in HRQL ($p<0.0001$). Class attendance was significantly and positively correlated to the change in lean muscle mass from baseline to post-pilot ($r=0.50$, $p<0.05$), but not to other study outcomes. Smart Choices reached a sample that was representative of the larger target population and was effective in reducing BMI, increasing lean muscle mass, and improving HRQL of low-income obese children. This research-practice partnership represents a model that could translate into other communities to increase the efficiency of the treatment of childhood obesity.

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Citation Paper

Paper Session 08 3:42 PM–4:00 PM 2081

EFFECTIVE STRATEGIES FOR DISSEMINATING A WORKPLACE SUN SAFETY PROGRAM

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Dissemination of worksite health programs requires convincing managers to use them. Industry-based strategies for disseminating Go Sun Smart (GSS), a successful worksite sun safety program, were evaluated in a randomized trial. Over 3 years, 69 U.S. and Canadian ski areas who were members of the National Ski Areas Association (NSAA) enrolled in the trial. The Basic Dissemination Strategy (BDS) had presentations at NSAA conferences and two mailings yearly of free program materials. The Enhanced Dissemination Strategy (EDS), based on diffusion of innovations theory and established persuasion principles (i.e., uncertainty reduction, credibility and trust, public commitment, planning, internal champions, and social support), employed personal visits with managers by program staff to plan for program use and follow-up contacts to maintain commitment and overcome barriers in addition to the BDS. Research staff observed GSS materials in use with a validated on-site measurement protocol and senior managers completed pretests (n=469; 72% response rate) and posttests (n=334; 71% follow-up rate). All but 4 ski areas implemented GSS (range=0–26 materials) so comparisons were performed on mean number of materials in use. Ski areas receiving the EDS (n=33) used more GSS materials (M=7.36; sd=5.58) than ski areas receiving the BDS (n=35; M=5.17; sd=4.67; p=.04 [1-tailed]). A larger proportion of managers at EDS ski areas used GSS materials to train employees (0.77, sd=0.20, p<.01 [1-tailed]) and linked the GSS website to the resort website (0.11, sd=0.19; p=.02 [1-tailed]) than at BDS ski areas (training=0.62, sd=0.28; website=0.04, sd=0.10). Distribution of a worksite sun safety program by an industry professional association achieved some program use, but the theory-based EDS using personal contact and on-going support created greater commitment to using more of the GSS program.

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Paper Session 09 2:30 PM–2:48 PM 2082

DISCONTINUITIES IN SMOKING TRAJECTORIES BETWEEN ADOLESCENCE AND YOUNG ADULTHOOD

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The transition from adolescence to adulthood is a complex developmental period involving pervasive contextual and social role changes. This period is likely to present discontinuities or turning points in personal trajectories including trajectories of smoking established through adolescence. This study examined changes in smoking trajectories among a cohort of high-risk adolescents, followed for 24 months, and then again post high school. Participants were 1263 adolescents (mean age 15.6, 56.5% female, 69% white) oversampled at baseline for ever smoking. We used Growth Mixture Models, implemented in Mplus, to identify the form and number of latent trajectory classes based on smoking rate data across time. We allowed for nonlinear trends across time by incorporating both linear and quadratic trends and further allowed the subjects intercept to be a random effect. We arrived at a five group solution: one group of nonsmoking adolescents; two groups of nonescalating, infrequent smokers (c1 and c2); and two groups of escalating smokers (c3 and c4). To validate the solution, we compared the groups on a number of variables including smoking, drinking, academic performance, and tobacco expectancies. Along a variety of smoking related dimensions, the two escalating trajectory groups showed both higher levels and escalating slopes over time. The groups differed significantly from each other on these dimensions. By 33 months, the majority of the sample were over 18. We examined how smoking at 33 months varied by trajectory. There were significant changes in smoking rate for all classes, and most significantly for the lowest trajectory groups, including nonsmokers. Among the nonsmoking group, a group who had no smoked at all through 24 months, 8.6% became smokers at 33 months. Both the c1 and c2 groups had nonescalating trajectories up to 24 months, but these shifted dramatically at 33 months, at the post high school shift. These data point to the importance of examining changes in smoking during this critical developmental time.

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Paper Session 09 2:48 PM–3:06 PM 2083

REACH AND EFFECTIVENESS OF SMOKING CESSATION INTERVENTIONS FOR UNMOTIVATED-TO-QUIT AND LESS-THAN-DAILY TEEN SMOKERS

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Less-than-daily smokers and smokers not thinking about quitting represent a large proportion of teen smokers, but are often excluded from smoking cessation trials despite their high risk for smoking escalation. A recent large trial among proactively identified and recruited at-least-monthly teen smokers provides the opportunity to examine intervention reach and effectiveness in these two smoker populations. Among teen smokers (n=2151, age = 16 (30.5%) and 17 (62%), 47% female, 25% nonwhite) in the Hutchinson Study of High School Smoking (HS), a randomized controlled trial evaluating for smoking cessation a proactive, personalized telephone counseling intervention combining motivational interviewing and cognitive behavioral skills training, at baseline 63% of smokers smoked less-than-daily and 62% were not planning to quit in the next 6 months. Overall, the trial produced excellent reach: in the intervention arm 89.6% were eligible by age or parental consent for counseling, and 65.3% participated in the counseling. Also, intervention completion rates were higher among less-than-daily smokers (p<.0001), and higher among smokers at higher stages of change (p=.008). Smokers in both arms of the trial were followed to endpoint 12 months post-intervention with 88.9% participation. The intervention produced significant positive treatment effects for multiple endpoints, including 6-month prolonged abstinence (21.8% experimental vs. 17.7% control, difference=4.0%, 95% CI=-0.2 to 8.1, p = .06). Overall, these and other data suggest that less-than-daily teen smokers, and unmotivated-to-quit teen smokers, will participate in and may benefit from proactive smoking cessation counseling using MI and CBST.

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Paper Session 09 3:06 PM–3:24 PM 2084

SOCIAL COGNITIVE MEDIATION OF ADOLESCENT SMOKING CESSATION: RESULTS FROM A LARGE RANDOMIZED INTERVENTION TRIAL

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Background: There is a dearth of evidence on why adolescent smoking cessation interventions are effective. We recently reported that a large (N = 2151) randomized adolescent smoking cessation trial increased 6-month prolonged abstinence among all baseline smokers (21.8% vs. 17.7%, p = .06). Objective: Determine extent to which this smoking cessation intervention's trial outcomes were mediated by Social Cognitive Theory (SCT)-based processes. Because gender and smoking frequency define subgroups of smokers of high public health importance, we examined mediation both overall and by gender and smoking frequency. Design: 2151 smokers from 50 high schools in a randomized trial. Counselors proactively delivered a SCT-based telephone intervention to senior year high school smokers. Mediators were self-reported at baseline and again at 12 months post-intervention-eligibility (88.8% retention). Outcome measure: At-least-6-months abstinence at 12 months post-intervention-eligibility. Results: (1) Among baseline smokers overall, increased self-efficacy to resist smoking in (a) social & (b) stressful situations together statistically mediated 55.6% of the intervention’s effect on smoking cessation (p <.0001); (2) Among baseline male daily smokers, increased commitment to quit and self-efficacy to resist smoking in stressful situations together statistically mediated 50.1% of the intervention’s effect (p < .001); (3) Among baseline female less-than-daily smokers, increased importance of and commitment to quit together statistically mediated 20.4% of the intervention’s effect (p < .0001); (4) Among female daily and male less-than-daily smokers, the intervention did not effect any SCT-based processes (all p > .05). Conclusion: A number of SCT-based processes substantially mediated the intervention's effect on smoking cessation, and this mediation may differ by gender and smoking frequency. Targeting theory-based mediating processes of smoking cessation is important for effecting quit rates.

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Paper Session 09 3:24 PM–3:42 PM 2085

THE EFFECT OF PASSIVE SMOKE EXPOSURE ON ADIPOSITY, GLUCOSE, AND INSULIN MEASURES IN OVERWEIGHT CHILDREN

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Background: Tobacco use is the leading cause of preventable death in the United States (US). Obesity rates in US children are of epidemic proportions with numerous adverse health outcomes. There is a paucity of research examining the effect of passive smoke exposure (PSE) on obesity-related measures of adiposity, glucose, and insulin in overweight children.
Methods: 222 overweight (≥85th percentile BMI-for-age) but otherwise healthy 7–11 yr olds (mean±SD age=9.4 ± 1.1, 58% Black; 58% female) provided plasma cotinine (ng/ml), anthropometrics, dual-energy x-ray absorptiometry (% body fat), a fasting blood sample (fasting insulin; impaired fasting glucose, IFG), and oral glucose tolerance test (impaired glucose tolerance, IGT). Statistical methods to examine the effect of PSE included ANCOVA models on continuous outcomes and logistic regression on dichotomous outcomes. Race, sex, and age were covaried. Mother's education was also tested as a covariate.
Results: 40% of the sample had cotinine values indicative of PSE (≥ .05). Controlling for race, sex, and age, children with cotinine levels consistent with PSE had significantly greater waist girth (79 ± 1.0 vs. 75±0.8 cm, p = .005); BMI z-scores (2.17±0.04 vs. 1.97 ± 0.04, p < .001); and body fat (42 ± 0.6 vs. 39±0.5%, p = .002) than those with lower cotinine levels. There were no significant associations between PSE and IFT, IGT, or insulin values. Mother's education was not significant in any model.
Conclusion: Overweight children with PSE had greater overall and central adiposity than their non-exposed peers, independent of socioeconomic status. These preliminary results suggest that PSE might worsen obesity. Comprehensive interventions that target multiple health risk factors are needed to prevent adverse health outcomes related to tobacco and obesity.
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Meritorious Student Paper
Paper Session 09 3:42 PM–4:00 PM 2086

ETHNIC DIFFERENCES IN THE IMPACT OF PHYSICIAN BEHAVIORS ON ADOLESCENT SMOKING

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The overall health consequences of smoking are more severe for African Americans. Fortunately, African Americans recognize these health consequences and make more frequent quit attempts than Caucasians; however, they are less likely than Caucasians to quit successfully (USHHS, 1998). The Clinical Practice Guidelines instruct physicians to ask their patients about their smoking status and advise them not to smoke. Physicians are also urged to pay particular attention to both ethnic minorities and teens due to these groups' increased susceptibility to smoking (Fiore et al., 2008). However, to our knowledge no studies have examined the impact of the spectrum of physician behaviors (e.g., neither screening nor advising, only screening for smoking status, only advising not to smoke, or both screening and advising) on relative quit rates for African American and Caucasian teens.
The purpose of the study was to examine the differential impact of physician behaviors among African American and Caucasian teens on several measures of smoking behavior (e.g., intentions to quit, quit attempts, successful quitting) within a diverse sample of teens (82.9% African American, 17.1% Caucasian). The participants were 11th graders (N=5,154) from the Memphis Health Project, a 10-year longitudinal study of smoking among adolescents.
Our results indicated that physicians' behaviors had a significantly more robust impact on African American teens than on Caucasians for several outcome variables. For example, African American teens who were both screened about their smoking status and advised by their doctor not to smoke were 2.34 times more likely to have successfully quit smoking (rather than relapsed) than Caucasian teens who were both screened and advised (p < .05). These results show that physicians are in a key position to have a meaningful impact on smoking in this high risk population and to reduce the burden of smoking on a public health level.

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Thursday
April 8, 2010
4:15 PM–5:45 PM

Meritorious Student Paper
Paper Session 10 4:15 PM–4:33 PM 2087

VALIDITY OF THE GLOBAL PHYSICAL ACTIVITY QUESTIONNAIRE(GPAQ) IN ADULT LATINAS

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Valid and reliable self-report measures of physical activity are needed to evaluate the impact of interventions aimed to increase the levels of physical activity. However, few valid measures for assessing physical activity in Latino populations exist. The purpose of this study was to determine whether the GPAQ is a valid measure of physical activity among Latinas and to examine its sensitivity to intervention change. Baseline and post-intervention data were collected from 71 Latinas (mean age=43.01; SD=9.05) who participated in Caminando con Fe/Walking with Faith, a multilevel intervention promoting physical activity among church-going Latinas. Participants completed the GPAQ and were asked to wear the accelerometer for 7 consecutive days at baseline and at six months. At baseline, there were significant correlations between self reported and accelerometer-measured minutes per week of light chores (r=.33, p<.004), vigorous Leisure Time Physical Activity (LTPA; r=.52, p<.001), total vigorous PA (R=.423, p<.001), and total LTPA, (R=.376, p<.002). Post intervention there was a significant correlation between self report and accelerometer minutes per week of vigorous LTPA (r=.404, p<.001). The GPAQ was only sensitive to changes in vigorous PA (r=.383, p<.003) and total vigorous PA (R=.363, p<.003). The findings from this study suggest that the GPAQ may be useful for evaluating the effectiveness of programs aimed at increasing vigorous levels of physical activity among Latinas. The current study augments previous research as there have been few self-report measures of physical activity validated in Latino communities.

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Meritorious Student Paper
Citation Paper
Paper Session 10 4:33 PM–4:51 PM 2088

VALIDATION OF THE TTM DECISIONAL BALANCE AND SELF-EFFICACY MEASURES FOR EXERCISE IN AN ADULT AFRICAN AMERICAN SAMPLE

Cerissa Blaney, MA,[1,2] Mark Robbins, PhD,[1,2] Andrea Paiva, PhD,[1,2] Colleen Redding, PhD,[1,2] Joseph S. Rossi, PhD,[1,2] Bryan Blissmer, PhD,[1,2] Caitlin Burditt, MA[1,2] and Karin Oatley, MA[1,2]

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Due to higher rates of chronic disease and lower rates of physical activity, African Americans could benefit greatly from improved physical activity interventions. Tailored interventions show great promise, however they necessitate using valid and reliable measures. TTM measures for exercise have been developed using primarily white populations, but they have not yet been validated for adult African Americans. This study validated the TTM measures Decisional Balance (Pros and Cons) and Self Efficacy for exercise behavior in a sample (N=521) of adult African Americans in North Carolina. The stage distribution was: Precontemplation 6.1% (N=32), Contemplation 8.3% (N=43), Preparation 38.2% (N=199), Action 13.4% (N=70), and Maintenance 32.4% (N=169). Confirmatory analyses replicated the theoretically expected structure of the scales. For Decisional Balance, the two-factor uncorrelated model was the most parsimonious good fitting model, $\chi 2(35)=158.76$, CFI=.92, GFI=.94, AASR=.04, RMSEA=.08. The one-factor model for self-efficacy revealed an excellent fit, $\chi 2(9)=45.51$, CFI=.96, GFI =.97, AASR=.03, RMSEA=.09. Expected theoretical patterns by stage of change were also confirmed for the Pros and Self-Efficacy measures. However, the relationship between the Cons and Stage of Change did not replicate in this study. Future research should investigate if the Cons scale items need revision and/or cultural tailoring. Results from this comparison and evaluation of alternative structural models for each construct suggest that the underlying structures of these measures were confirmed in this sample. In addition, the measures showed good internal validity and adequate external validity. This study demonstrated initial validation for the existing TTM measures of Decisional Balance and Self-Efficacy for exercise among adult African Americans. Establishment of these measures provides the foundation for the use of TTM-tailored interventions for this group.

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Paper Session 10 4:51 PM–5:09 PM 2089

VALIDATION OF THE TTM PROCESSES OF CHANGE MEASURE FOR EXERCISE IN AN ADULT AFRICAN AMERICAN SAMPLE

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Given the disproportionate rates of physical inactivity-related chronic disease in African Americans, effective interventions to increase exercise are necessary. The validation of reliable measures for assessment is an essential step to creating effective interventions. Despite the abundance of research focused on the TTM applied to regular exercise, fewer validation studies have included the Processes of Change (POC) measure and none of these studies were conducted with adult African Americans. While differences in the structure or relationship of the measures in African Americans are not predicted, current TTM exercise measures may be miss-serving African Americans. If these measures are not valid within this population, the effectiveness of related exercise interventions may be significantly reduced. Therefore it is essential to validate the TTM exercise measures in African American samples. This study validated the TTM Processes of Change measure for exercise behavior in a sample (N=255) of adult African Americans in North Carolina. The stage distribution was Precontemplation 7.8%, Contemplation 9.0%, Preparation 37.6%, Action 15.7%, and Maintenance 29.8%. Confirmatory structural analyses supported a ten-factor model for the POC measure. Similar to other studies, a ten-factor fully correlated model provided the best fit to the data: $\chi 2 (360)=786.75$, CFI=.91, AASR=.04, RMSEA=.07. Factor loadings ranged from .45 to .91 and coefficient alphas ranged from .62 to .91. Expected theoretical patterns by stage of change were also confirmed. MANOVA results demonstrated that the POC varied across stage of change, Wilk's $\Lambda=.57$, $p<.001$, $F(40, 885.36)=6.08$, multivariate $\eta 2=.13$. Post hoc follow up tests indicated significant differences for each of the ten POC, with univariate $\eta 2$'s ranging from .06 to .26. This study demonstrates support for the use of the POC measure within interventions designed to increase exercise among African Americans.

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Paper Session 10 5:09 PM–5:27 PM 2090

HOW ACCURATE ARE SELF-REPORT MEASURES OF PHYSICAL ACTIVITY IN RURAL OBESE ADULTS?

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Debate regarding use of self-report physical activity measures involves their ability to accurately assess vigorous and moderate-intensity physical activity. Researchers have suggested that self-reported vigorous-intensity data may be accurate because individuals can perceive when they are engaging in higher-intensity activity. In contrast, accurately reporting moderate-intensity activities, which often occur intermittently throughout the day, may represent a more difficult endeavor. We addressed this issue by comparing self-reports of physical activity to data collected from the latest generation of multisensory activity monitors, which estimate energy expenditure by combining data from a 3-axis accelerometer with galvanic skin response, skin temperature, and heat flux. A sample of 185 rural obese adults (mean age=52.1; mean BMI=36.2; 71.9% female) provided both activity monitor data (using the SenseWear WMS Armbands) and self-report data (using the International Physical Activity Questionnaire) upon enrollment in a lifestyle weight management program. Data from the activity monitors suggested that participants significantly over reported their minutes of vigorous-intensity physical activity, $p < .001$, with participants self-reporting an average (mean±SD) of 49.6 ± 101.5 min/day versus an average of 0.76 ± 2.4 min/day as measured by the monitors. Self-report moderate-intensity physical activity was not significantly different from data collected using the activity monitors, however, with participants reporting an average of 52.8±97.7 min/day versus a measured 52.7±41.3 min/day, $p = .257$. These results highlight the low levels of vigorous-intensity physical activity evident in this population and underscore the importance of including objective measures of physical activity rather than relying solely on self-report.

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Paper Session 10 5:27 PM–5:45 PM 2091

VALIDITY AND RELIABILITY OF A MEASURE OF FAVORABILITY TO ACTIVE LIVING FRIENDLY POLICIES

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Local policies have the potential to increase levels of physical activity by creating built environments favorable to active living. Since policy makers act in part as a function of public opinion, measures of favorability to active living policies allows better understanding of the decision making process related to physical activity. To capture public opinion, the purpose of the study was to develop and examine the validity and reliability of a measure of favorability to active living friendly policies (ALFP). Participants were 2001 adults aged 18–94 years (55% female) living on the Island of Montreal, Canada and recruited via random digit dialing (32.6% response rate). Participants were asked to indicate their degree of favorability to 17 ALFP. Responses were made on a 4 point scale of 1) completely agree, 2) somewhat agree, 3) somewhat disagree, and 4) completely disagree. Initial item development was conducted by identifying ALFP based on policy recommendations (e.g., implementing traffic calming measures). To ensure face validity, a group of 3 experts independently reviewed the items. To ensure content validity, policies related to walking, cycling, public, and automobile transportation were included. Based on a method which integrates item-response theory and generalizability theory into a multilevel modeling framework, internal consistency was estimated at 0.727. The summed value of responses was normally distributed (M=2.71, SD=0.64). Univariate regression demonstrated no relationship with smoking status ($p>0.05$) and significant relationships with total number of minutes spent walking ($p<0.05$) and cycling ($p<0.01$) in the past 7 days. The measure of ALFP had good concurrent validity and acceptable internal consistency. Measuring public opinion via favorability to AFLP can help the understanding of policy makers decision making process.

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Paper Session 11 4:15 PM–4:33 PM 2092

DEPRESSION AND ANXIETY PREDICT THE DECLINE OF PHYSICAL FUNCTIONING OVER SIX MONTHS IN PATIENTS WITH HEART FAILURE

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This study examined depression and anxiety in patients with heart failure (HF). We investigated whether depression and anxiety were concurrently associated with physical functioning and predicted the decline of physical functioning over 6 months, as well as whether social support buffered their detrimental impact. Participants were 222 HF patients (33% women; mean age=54, SD=11), and 164 provided follow-up data. Physical functioning was assessed by a specific scale from the Minnesota Living with Heart Failure Questionnaire. To avoid confounding, the somatic items of depression in the CES-D scale were removed, and anxiety was assessed by the HADS anxiety subscale. Hierarchical multiple regressions were conducted to test the hypotheses while controlling for the covariates including age, gender, education, marital status, NYHA class, use of mental health services, and baseline physical functioning. The following findings emerged from the analyses: (1) Among the HF patients, 14% reported mild, 12% moderate, and 29% severe depressive symptoms. For anxiety, 26% exhibited borderline and 20% endorsed severe symptoms. (2) After controlling for standard covariates, depression (β=.41, p<.001) and anxiety (β=.42, p<.001) each were associated with concurrent physical functioning at baseline in separate models. (3) After controlling for baseline physical functioning and standard covariates, baseline depression (β=.15, p=.022) and anxiety (β=.21, p=.001) significantly predicted lower physical functioning at 6 months in separate models. (4) Depression and anxiety symptoms were highly correlated (r=.74, p<.001) and likely to account for approximately the same portion of variance in physical functioning. (5) Social support did not buffer the effect of psychological distress on physical functioning. In conclusion, depression and anxiety appear to present a significant risk for the deterioration in physical functioning among individuals with HF.

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Paper Session 11 4:33 PM–4:51 PM 2093

SELF-RATED VERSUS OBJECTIVE HEALTH INDICATORS AS PREDICTORS OF CARDIOVASCULAR-RELATED DEATH AND EVENTS: THE NHLBI-SPONSORED WOMEN'S ISCHEMIA SYNDROME EVALUATION (WISE) STUDY

Thomas Rutledge, PhD,[1] Sarah E. Linke, MS,[2] B. Delia Johnson, PhD,[3] Vera Bittner, MD,[4] David S. Krantz, PhD,[5] Wafia Eteiba, MD,[3] Jo-Ann Eastwood, PhD,[6] Diane Vido, PhD[3] and C. Noel Bairey Merz, MD[7]

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Objective: To determine the independent association between self-rated health and cardiovascular disease (CVD) events and mortality in sample of women with suspected myocardial ischemia. We also queried the relationships between self-rated health and CVD outcomes in subgroups with known disease, such as obstructive CAD and CVD risk factors

Method: 900 women rated their health on a 5-point scale ranging from poor to excellent, as part of a comprehensive protocol including coronary angiogram, CVD risk factor assessment. Participants were followed for a median 5.9 years to track the incidence of CVD events (stroke, myocardial infarction, heart failure, and CVD-related mortality).

Results: After adjustment, self-rated health was strongly associated with the incidence of CVD events and mortality (F[4,860]=4.5, p=.001). In Cox regression analysis, women rating their health as poor (HR=3.8 [2.1–7.1]) or fair (HR=2.8 [1.6–4.8]) experienced substantially shorter times to CVD events compared to women rating their health as excellent or very good. This pattern remained even when specifically tested among women with angiographically-defined obstructive CAD, wherein poor (HR=3.7 [1.5–9.4] and fair (HR=2.7 [1.2–6.4]) self-rated health ratings demonstrated relative associations with CVD outcomes.

Conclusions: Among women evaluated for suspected myocardial ischemia, self-rated health ratings were associated with CVD events and mortality, and this association could not be accounted for by objective disease status factors.

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Paper Session 11 4:51 PM–5:09 PM 2094

PSYCHOSOCIAL PREDICTORS OF DEPRESSION AMONG HEART FAILURE PATIENTS

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Depression is prevalent among heart failure (HF) patients and has been linked to adverse health outcomes such as functional decline and mortality. Previous studies have indicated that stress predicts depression among chronically ill patients, but the mechanisms that underlie this association in HF patients remain unclear. The current study aimed to examine (1) the relationship between perceived stress and depression, (2) whether adaptive and maladaptive coping mediate or moderate this association, and (3) whether social support moderates the relationship between stress and depression. Participants included 264 HF patients (69% men) with a mean age of 54 years. Twenty-eight percent of participants reported moderate to severe depression. The study aims were explored using hierarchical multiple regression analyses, adjusting for demographics, depression treatment, HF risk factors, and disease severity. Results demonstrated perceived stress (β=.688, p<.001) was significantly and concurrently associated with depression. The Sobel test indicated that maladaptive coping (β=.175, p=<.001) partially mediated the relationship between stress (β decreasing from .688[p<.001] to .621 [p<.001]) and depression (p=.0012). Adaptive coping did not mediate the relationship between stress and depression. Additional analyses, however, illustrated that adaptive coping was directly related to lower levels of depression (β=-.091, p=.024), adjusting for stress, maladaptive coping and the previously mentioned covariates. Neither social support (β=.008, p=.839), adaptive coping (β=-.032, p=.432), nor maladaptive coping strategies (β=.014, p=.757) were significant moderators of the relationship between stress and depression. Thus, stress demonstrates a substantial influence on depressive symptomatology among HF patients. Maladaptive coping is one important mechanism that may help to explain this relationship and therefore could be an important target of depression treatment for HF patients.

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Paper Session 11 5:09 PM–5:27 PM 2095

CAN A SOCIAL SUPPORT INTERVENTION FOR PARTNERS IMPROVE CARDIAC PATIENTS' OUTCOMES?

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Partners of cardiac patients are often the main source of support for recovering patients yet often lack the skills to provide effective support. This study examined the effects of a social support intervention for partners on patients' and partners' social support and patients' functioning after a cardiac event. Partners were randomly assigned to either a control group (CG; n=23) or an intervention group (IG; n=32) where they viewed "Portrait of the Heartmate Videoseries" one week after hospital discharge. Data were measured at baseline (hospital discharge), and 2 and 4 months post-intervention. Patients rated the amount of emotional, informational, tangible, and problematic support they received from their partners and partners rated the amount they provided. Patients' physical and psychological functioning were measured using SF-36 subscales. Data were analyzed using analysis of covariance and Pearson's correlation coefficients. No group differences were found in partners' perceptions of the social support they provided to patients. Both groups were providing high levels of emotional and tangible aid and low levels of informational and problematic support. Patients of partners in the IG reported receiving significantly less problematic support than patients of partners in the CG (F=4.135, p<.05). Worse physical functioning was associated with higher levels of informational support (r=-.39, p< .05) and tangible aid (r=-.40, p<.05) for patients of partners in the CG. Worse psychological functioning was associated with higher levels of problematic support for patients in both groups with higher correlations in the CG (rs= -.47 to -.66, p<.05) than the IG (rs=-.34 to -.62, p<.05). These findings suggest that although partners in the IG did not report providing support any differently after the intervention, patients perceived that they were. Patients in the CG may have experienced lower physical functioning because their partners provided too much informational and tangible aid. This preliminary study indicates that a social support intervention for partners can improve patients' outcomes after a cardiac event.

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Paper Session 11 5:27 PM–5:45 PM 2096

MOTIVATIONAL INTERVIEWING TO IMPROVE EXERCISE ATTITUDES AND BEHAVIOR: IMPLICATIONS FOR ANTIHYPERTENSIVE THERAPY

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Nearly 75% of patients diagnosed with hypertension have poorly controlled blood pressure, with non-adherence cited as a common reason for treatment failure. Among all antihypertensive therapies, physical exercise has the lowest levels of adherence despite many cardiovascular benefits. The current study assessed whether a single, brief Motivational Interviewing session could impact patients' exercise-related behavior and attitudes. Hypertension patients from a primary care clinic (n=59) were randomized to receive either a brief Motivational Interviewing session (MI group) or a Standard Treatment recommendation (ST group). Patients were administered the LTEQ to assess group differences in exercise behavior from pre to post intervention. Measures of intrinsic motivation (IMI), self-efficacy (BARSE), and Stage of Change attitudes (URICA-E2) were also administered to compare the two groups at a 30 day follow-up. A MANCOVA revealed significant group differences in pre to post LTEQ scores (p<.001), suggesting that the MI group had more patients who increased exercise behaviors than the ST group. Furthermore, significant group differences emerged for patients' ratings on the IMI (p<.001) and the BARSE (p<.001), indicating that Motivational Interviewing positively influenced intrinsic motivation and self-efficacy. An analysis of URICA-E2 ratings also revealed that the patients in the intervention group had higher mean increases in the number of stages changed (p<.001). The study's findings suggest that even one brief Motivational Interviewing session can improve patients' physical activity behaviors as well as their attitudes toward exercise. Additionally, this same intervention can have a positive impact on patients' intrinsic motivation and self-efficacy, two factors believed to be influenced by Motivational Interviewing but understudied in the literature. These results provide a better understanding of the theoretical underpinnings of Motivational Interviewing and offer valuable insight into how it works to influence behavior change.

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Citation Paper

Paper Session 12 4:15 PM–4:33 PM 2097

USE OF HEALTH BEHAVIOR THEORY IN NCI-FUNDED CANCER SCREENING INTERVENTION PROPOSALS

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Application and testing of theory in health behavior research may enhance the effectiveness of interventions, identify potent intervention elements, and advance theory - and therefore should be described in grant proposals. We examined the use of theory in successful R01 applications to NCI (2000–2008) proposing interventions for five screening tests (colonoscopy, sigmoidoscopy, FOBT, mammogram, and Pap); all had individual-level screening behavior as outcome. Examples of coded variables included: established/emerging theories (e.g., Health Belief Model); constructs (e.g., perceived barriers); presence/absence of conceptual framework, meditational model, and theory-based specific aim; and extent to which theory influenced the specification of intervention elements, measures, and analyses. Location (e.g., abstract, aims) of each variable was coded. Thirty-seven grants qualified for inclusion; 34 (92%) proposals mentioned theories. Most frequently cited theories were the Transtheoretical (57%) and Health Belief Models (49%). Theory was most likely to be mentioned in the Background (76%) and Methods (76%) sections; few (22%) mentioned theory in all sections of the proposal. However, 62% mentioned the same theory in three or more sections. A theory-related aim was included in 65% of proposals; of these, 59% aimed to test whether the intervention affected the outcome but only 32% included full mediational analysis. We will discuss patterns of use across the years of funding, relationships between theories and their component constructs, and the influence of disciplinary training and type of intervention on the use of theory. Results of this portfolio analysis provide insight into how investigators use theory to design and test behavioral cancer screening interventions. Such analyses help clarify the current state of the science and point to key areas for improving the interplay between theory and practice.

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Citation Paper

Paper Session 12 4:33 PM–4:51 PM 2098

RACIAL/ETHNIC MINORITIES PERCEIVE THEMSELVES AT LOWER RISK FOR BREAST AND COLON CANCER THAN WHITES

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Background: Perceived risk for cancer motivates preventive action, including cancer screening. Low perceived cancer risk among non-Whites could contribute to racial disparities in cancer prevention, incidence, and mortality. **Method:** Data from HINTS 2003, a nationally representative probability sample of adults living in the U.S. (N=6369) were used to identify racial/ethnic differences in perceived risk for breast and colon cancer. Regression analyses were conducted with STATA 10 using weighted data. All analyses included age, marital status, education, medical coverage status, income, and gender as covariates. **Results:** A highly consistent pattern of results revealed that Blacks perceived their breast and colon cancer risk to be lower relative to Whites. They perceived their absolute breast cancer (B=-0.21, p=.007), comparative breast cancer (RRR=1.58, p=.004) and comparative colon cancer risk (RRR=1.61, p<.001) to be lower relative to Whites and were more likely to have said they did not know their risk for breast or colon cancer than Whites (ORs=4.01–1.89, ps<.01). The pattern for Hispanics was less consistent; they perceived their absolute breast cancer risk to be lower relative to Whites (B=-0.17, p=.02) but their comparative risk for colon cancer to be higher (RRR=1.51, p=.03). There were no Hispanic-White differences in perceived comparative breast cancer risk or absolute colon cancer risk. Hispanics were more likely than Whites to have said that they did not know their breast or colon cancer risk (ORs=1.64–2.48, ps<.03). **Conclusions:** Results support investment in breast and colon cancer risk communication targeted at non-White populations. The greatest need appears to be among Blacks who have higher mortality from breast cancer and higher incidence of and mortality from colon cancer than other racial/ethnic groups, yet are less likely to perceive themselves at risk.

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Paper Session 12 4:51 PM–5:09 PM 2099

UNREALISTIC OPTIMISM AND UNREALISTIC PESSIMISM OF DEVELOPING BREAST CANCER: A NOVEL METHODOLOGICAL APPROACH TO A BASIC PSYCHOLOGICAL PRINCIPLE

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Unrealistic optimism (UO) is the inaccurate belief that one is better off on a given outcome than the average person. However, many UO studies have methodological limitations that raise doubt about the validity and generalizability of their findings (eg, unknown actual risk status, restricted sample sizes/age ranges). The current study addresses these limitations and explores sociodemographic, health-related and behavioral correlates of UO of developing breast cancer. It also explores unrealistic pessimism (UP), the perception that one is worse off than average.

This study used data from the 2005 National Health Interview Survey, a population-based nationally-representative survey. The sample included 13,812 women over age 18. We used Gail model criteria to calculate women's 5-year relative risk (RR) of breast cancer. We used this calculation and their responses to the question, "Compared to the average woman your age, would you say that you are more likely to get breast cancer, less likely or about as likely" to determine whether they were unrealistically optimistic, unrealistically pessimistic or accurate. Overall, 44.9% of women were unrealistically optimistic, 40.6% were accurate and 14.5% were unrealistically pessimistic. Multinomial regression indicated that UO was more likely among women who had more education, p<.001, were never or former smokers, p<.001 and were aged 18–34 and 70+, p<.001. UP was more likely among women who: were Black, non-Hispanic, p<.01, had less education, p<.001, had 2+ comorbidities, p<.001, were overweight/obese, p<.001, and had no health insurance, p<.001. Alcohol use, physical activity and having a usual source of care were not related to UO or UP.

This is the first study to examine population-based UO and UP among women of all ages. UO and UP are associated with differential standing on sociodemographic, health-related and behavioral variables. This study identifies subgroups that should be examined longitudinally to determine causal relationships between UO/UP and future screening behavior.

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Paper Session 12 5:09 PM–5:27 PM 2100

IMPLEMENTING A WEB-BASED RANDOMIZED CONTROLLED TRIAL FOR CANCER SURVIVORS

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Web-based programs can reach widely dispersed cancer survivors whose local health care providers may have little expertise specific to survivor needs. Still few models exist for online registration, consent, assessment and website intervention for survivors. We developed a secure portal and website for long-term hematologic malignancies survivors who received hematopoietic cell transplantation (HCT), with goals of improving health behaviors, fatigue and emotional adjustment. Here we focus on utilization and reach of this web-based study. We approached by mail all adult, 5–10 year survivors of HCT treated at our transplant center, for participation in a randomized controlled trial of a risk-adapted, targeted, web-based study. Of 556 potentially eligible survivors approached (age M=50.4, SD=13.4, age range 18–81, 56% male, 83% Caucasian and non-Hispanic), 241(43%) enrolled. Of those not enrolled, 32(6%) did not use a computer, 62(11%) declined to participate and 5(1%) withdrew before completing baseline assessment, 85(15%) agreed to participate but have not yet registered, 131(24%) have not responded. Once started, 98% completed baseline assessment online, 2% required a phone interview to complete assessment. Based on zip code, 21% lived in rural areas vs. urban; participants represented 36 states. Relevant to the difficulty in reaching older, male and geographically underserved survivors, age did not differ between those enrolled and not enrolled ($t= -1.2$, $P=.22$), a somewhat smaller proportion of eligible males (39%) enrolled as females (49%) ($X^2=5.2$, $P=.02$), though 51% of the enrolled cohort was male, and rural dwellers enrolled as often as urban ($X^2=2.5$, $P=.29$). Once randomized to website access, mean number of web pages visited was 12.7 (range 0–76) and mean number of logons was 1.5 (range 0–9). In this web-based study, online registration, consent, assessment and intervention was effective in reaching rural, male and older cancer survivors, groups commonly underrepresented in educational and behavioral cancer clinical trials.

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Paper Session 12 5:27 PM–5:45 PM 2101

TELEPHONE BARRIERS COUNSELING FOR COLORECTAL CANCER SCREENING IN PRIMARY CARE: A FEASIBILITY STUDY FOR RURAL APPALACHIA

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This prospective clinic-based study tested acceptability and feasibility of two evidence-based strategies, provider recommendation and telephone barriers counseling (TBC), on uptake of colorectal cancer (CRC) screening among primary care patients in rural Appalachian Pennsylvania (PA). The study was based on the Cognitive-Social Health Information Processing (C-SHIP) theoretical framework and a research-tested telephone-based intervention, enhanced by a problem-solving approach. Study materials and TBC scripts were developed with input from a community advisory committee and focus group. Patients age 50+, at average CRC risk and due for screening were asked to complete and mail a fecal immunochemical test (FIT) within 5 days; those who did not received TBC and a booster call. All subjects were mailed a 3-month follow-up questionnaire. Main outcomes were completed FIT screening with and without TBC, patient knowledge, and perceived barriers to screening. Process measures assessed fidelity of implementation and cultural acceptability. At 93.8% of recruitment achieved, 180 patients were enrolled. Similar to the Appalachian population, the sample was largely White. Most were female (71.1%); mean age 61 (range, 50–88 yrs); married (65.2%); high school educated (49.4%) or greater (39.7%); with health insurance (90%). Overall, 106 (58.9%) completed the FIT screening and 56 (31.1%) were referred to TBC, of whom 24 (42.9%) completed screening after TBC. Lack of CRC-related knowledge and perceived risk were the most frequently reported barriers to screening. Provider-recommended FIT screening with follow-up TBC is a promising approach to increase CRC screening in Appalachian PA. Future research is needed to determine efficacy of the intervention for increasing CRC screening in Appalachia.

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Paper Session 13 4:15 PM–4:33 PM 2102

HETEROSOCIAL BEHAVIORS AND ADOLESCENT SEXUAL BEHAVIOR

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Heterosocial behaviors engaged in by early teen girls (e.g., calling boys on the phone) may impact heterosocial competence described as a teen's ability to effectively respond to social situations with the opposite sex (Grover et al., 2005; 2007), with failure to acquire competence possibly linked to an inability to negotiate with a partner about sexual behavior. With African American middle school girls using the Theory of Reasoned Action (Ajzen & Fishbein, 1980), the aims of this study were to: 1) describe the heterosocial behaviors endorsed; 2) assess attitudes and intentions related to engaging in sexual behavior ; and 3) examine the relationship between heterosocial behaviors and attitudes and intention to engage. A cross-sectional design was employed, and 157 girls participated in this baseline analysis of a randomized clinical trial (5RO1HD039757-05). Girls were drawn from five schools located in Western Pennsylvania and completed three surveys. The Heterosocial Behavior Questionnaire (Westney, Jenkins, & Benjamin, 1983; modified by Doswell, 1999) assessed the social contexts in which interactions occurred and heterosocial behaviors; Premarital Attitude Scale (Treboux & Busch-Rossnagel, 1995; modified by Doswell, Braxter, Taylor, & Ren, 2008) assessed views related to engaging in sexual behavior), and the Intention to Perform Sexual Behavior Scale (Doswell, Braxter, Taylor, & Ren, 2008) assessed intentions to engage. Descriptive statistics and linear regression models were generated. Girls had spent time alone with a mixed group of boys -girls; calling boys was the most prevalent heterosocial behavior. Girls were unsure about their attitudes and intentions to engage in sexual behaviors. However, social contexts and heterosocial behaviors were respectively significant predictors of attitudes ($p<.001$), and intentions ($p =.002$; $p<.001$). Interventions designed to prevent engagement in sexual behaviors among early teen African American girls should assess heterosocial behaviors.

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Paper Session 13 4:33 PM–4:51 PM 2103

CULTURE, ALCOHOL USE AND SEXUAL RISK IN KOREAN- AND CHINESE-AMERICANS

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Asian Americans are the only ethnic minority group that had an increased rate of AIDS diagnoses between 2003 and 2007, and high risk sexual behaviors account for 80–90% of HIV infections in this group (CDC, 2009). Although research has shown Asian Americans to increasingly engage in high-risk sexual behaviors, including alcohol use before sex, few studies have investigated cultural factors that may influence sexual behaviors in ethnic subgroups. The current analyses examined associations of cultural variables (ethnicity, acculturation and loss of face) with sexual risk behaviors in Korean- and Chinese-American college students ($N = 182$).

Participants completed online surveys assessing cultural variables and sexual risk behaviors as part of a prospective study. Sexual risk variables were estimated with 90-day frequency counts. Hierarchical regression analyses evaluated gender, ethnicity, acculturation and loss of face as predictors of six outcomes (number of sexual partners, frequency of sexual intercourse, condom use, alcohol use before sex, condom use while intoxicated, and sex-related alcohol expectancies). The interaction between ethnicity and loss of face was significant for condom use ($R2=.07$, $p = .04$) and marginally significant for condom use while intoxicated ($R2 = .11$, $p = .06$), such that higher loss of face predicted more consistent condom use for Chinese Americans but less consistent condom use for Korean Americans. Additionally, greater acculturation predicted higher sex-related alcohol expectancies ($R2 = .06$, $p = .004$) and this association was moderated by ethnicity ($R2 = .03$, $p = .01$), such that the effect of acculturation on expectancies was stronger for Korean- than for Chinese-Americans.

Cultural influences on sexual risk behaviors appear important and can differ by ethnic group. Understanding these influences will aid in the development of effective prevention and intervention programs for at-risk and underserved populations.

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Paper Session 13 4:51 PM–5:09 PM 2104

FAMILY AND PARENTAL INFLUENCE ON NUMBER OF SEXUAL PARTNERS AMONG MEXICAN AMERICAN, CHINESE AMERICAN AND WHITE YOUTH

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Preventing risky sexual behavior is key to reducing HIV/STIs among youth, and the family is critical in preventing adolescents from engaging in that behavior. Using data from the National Longitudinal Study of Adolescent Health, we tested family and parental influence on number of sexual partners (NSP) among two ethnic minority groups and Whites.

The sample included Mexican American (12.6%), Chinese American (2.9%), and Whites (84.5%). The mean age of males was 15.7 years (n=4734; SD=1.73); of females, 15.5 years (n=5193; SD=1.75) at Wave I. The outcome measure was NSP at Wave III; a higher number indicated a higher risk of acquiring HIV. Family/parent factors chosen from Wave I included parent-child communication about sex, parent-child relationship, parental control, family functioning and parental disapproval of premarital sex. Controlling for age, parental education, family structure, marital status, and Wave I NSP, multi-group structural equation modeling was used to test the model.

The model demonstrated a good fit to the data [(χ2(163) = 20934.53; CFI = .96; RMSEA = .04]. For males, lower levels of parental control, better family functioning, less parent-child communication about sex, and higher levels of parental disapproval of premarital sex predicted fewer sexual partners. The results for females were similar, except for the insignificant effect of parental disapproval of premarital sex. Chinese American males had the lowest NSP compared to Mexican American and White males. Chinese American and Mexican American females reported fewer sexual partners than White females.

The findings suggested that family functioning was critical for reducing NSP among the target groups. Parental disapproval of premarital sex was associated with NSP only for males, perhaps due to parents' different communication styles about their expectations toward premarital sex with their adolescent boys and girls. The unexpected effect of communication and parental control on NSP suggests that the variables operate through more complex mechanisms than we have yet identified.

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Meritorious Student Paper
Citation Paper
Paper Session 13 5:09 PM–5:27 PM 2105

DISCLOSURE OF GENITAL HPV INFECTION TO FEMALE SEX PARTNERS BY YOUNG MEN

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Background. Infection with genital high-risk human papilloma virus (HR HPV) causes cervical cancer. Recent data suggest that men are undergoing HPV testing in the clinical setting, but little is known about how men who are diagnosed with HPV infection are communicating this knowledge to their female sex partners. Methods. We developed an online survey to assess the extent of HR HPV disclosure by men to their female partners, the factors associated with disclosure, and the consequences of disclosure. Between January 2008 and August 2009 the survey was administered to 68 male undergraduate students participating in a longitudinal HPV study in Seattle, USA. Men who tested positive for HR HPV were notified and asked to participate in the survey at the following visit 4 months later. Logistic regression with generalized estimating equations was used to assess the correlates and outcomes of disclosure. Results. 68 subjects completed the survey contributing 218 partner-specific observations. Disclosure occurred more often in main partnerships [49/78 (62.8%) in main partnerships vs. 13/139 (9.4%) in casual partnerships; odds ratio (OR)=9.2, 95% confidence interval (CI)=4.5–19.0]. The most common reasons for disclosing were: "wanted to be honest with her", "felt it was the right thing to do", and "cared about her". The most common reasons for not disclosing were: "felt that using a condom was protective enough", "didn't know what to say", and "not in a serious relationship with her". Discussion of Pap smears or the HPV vaccine occurred in 52/63 (82.5%) partnerships with disclosure and in 12/154 (7.8%) without disclosure (OR=35.3, 95%CI=12.4–100.3). Men who disclosed reported a worsening relationship in 12/63 (19.0%) partnerships while those that did not reported a worsening relationship in 65/155 partnerships (41.9%) (OR=0.4, 95%CI=0.2–0.9). Conclusion. Disclosure of HR HPV infection to female partners by young men was common among main partnerships. Disclosure was associated with discussion of Pap smears or the HPV vaccine and was not associated with negative relationship outcomes.

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Paper Session 13 5:27 PM–5:45 PM 2106

POSITIVE AND NEGATIVE SELF-AWARENESS ENHANCE SEXUAL AROUSAL AMONG WOMEN WITH SEXUAL DYSFUNCTION

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It has long been speculated that self-awareness impairs sexual response (e.g., Masters & Johnson, 1970). This is thought to occur through distraction, with a focus on oneself taking away from the ability to process erotic stimulation (e.g., Barlow, 1986). This conceptualization has received substantial support from research in men. However, findings from research on the impact of self-awareness on sexual arousal in women have been mixed, with some studies showing that self-awareness enhances sexual arousal and others indicating that it impairs arousal. It has been suggested that the valence of self-awareness determines whether self-awareness facilitates or impairs sexual responding. The present study aimed to further our understanding of the influence of self-awareness on sexual arousal among women with female sexual arousal disorder (FSAD), subjective or combined subtype. Forty-eight clinically diagnosed women were assigned to either a Positive Body-Awareness (PBA) or Negative Body-Awareness (NBA) condition. Both conditions included two counterbalanced sessions, Experimental (PBA or NBA) and Control, during which subjective mental sexual arousal and perceptions of physical sexual arousal were measured in response to erotic videos. Self-awareness was induced by having women attend to either their positive or negative body parts, and having a full-length mirror positioned in front of them during the experimental conditions. Results showed that induction of both PBA and NBA significantly increased mental arousal and perceptions of physical sexual arousal. Findings suggest that the valence of the self awareness (i.e., positive or negative focus) may not be of importance. Rather, it may be that increased self-awareness in general is related to enhanced arousal. It is speculated that this may be due to a re-direction of attention away from extraneous distracting thoughts that often occur during sexual activity (i.e., stress-related thoughts), and towards the present moment - as is the foundation of mindfulness training.

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Meritorious Student Paper
Paper Session 14 4:15 PM–4:33 PM 2107

AFFECTIVE RESPONSE TO EXPERIMENTAL PAIN DURING MASSAGE INTERVENTION

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Complementary therapies such as massage and relaxation training have been shown to have potent effects in reducing physical pain and emotional distress; however, the mechanisms of action remain poorly understood. Specifically, it is unclear whether the benefits of massage are due to counterpressure or general relaxation. The present study seeks to elucidate the precise mechanisms of massage by contrasting the effects of massage verses guided imagery relaxation during experimentally induced electrical stimulation pain. Participants were 69 healthy female undergraduate students [mean age = 19.00 years; 84.1 % Caucasian; mean Beck Anxiety Inventory (BAI)=5.01; mean Beck Depression Inventory (BDI)=4.13]. Participants were randomly assigned to either a massage plus guided imagery, massage alone, guided imagery alone, or no-treatment group. Affect was assessed using a modified version of the Profile of Mood States (POMS) before and after each pain trial (baseline, intervention, recovery). Multilevel Modeling and Repeated Measures Analysis of Variance were used to evaluate the independent contribution of group assignment on affective state during experimental tasks. No associations with outcome variables were found for age, ethnicity, BMI, BAI, and BDI. No group differences in pain intensity or unpleasantness of pain were reported (p>.05). However, significant differences in unpleasant affect were reported between groups during the experimental period, z=-1.94, p=.05. Specifically, unpleasant affect decreased during intervention for the massage alone group (M change=.61 to .30; F=26.89, p<.01) and massage plus guided imagery group (M change=.60 to .34; F=8.42, p=.01), while no significant changes were observed for the guided imagery alone group or control group. Massage alone also showed the greatest relaxation levels (F=5.19, p=.03). These results indicate that massage has a greater propensity toward decreasing unpleasant affect and inducing relaxation, as compared to guided imagery, during experimental pain. Data collection for this project is ongoing.

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Paper Session 14 4:33 PM–4:51 PM 2108

MINDFULNESS, MENSES, AND BODY AWARENESS

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This study examines the relationships between premenstrual symptoms reports (PMSR), somatic body awareness (BA), and mindfulness processes. A general population sample of women (n=84) including clinic attenders and women who self-identified as premenstrual symptom sufferers completed the Five Facet Mindfulness Questionnaire (FFMQ), the Body Awareness Questionnaire, the Premenstrual Symptom Screening Tool, and a Health and Demographic Questionnaire. The FFMQ assesses five mindfulness traits: observing; describing; acting with awareness; nonjudging of inner experiences; and nonreacting to inner experience. In the present study correlational analyses revealed several statistically significant relationships including a positive relationship between body awareness (BA) and premenstrual symptom severity reports (PMSR) (p = .003). The mindfulness trait observing was positively related to PMSR (p = .003) and observing, describing, and nonreacting were positively related to BA (p < .001, p < .01, and p < .05, respectively). The mindfulness trait acting with awareness and nonjudging had a negative relationship with PMSR (p < .001 and p < .01, respectively). To investigate the moderating effects of mindfulness traits on the relationships among BA and PMSR, interaction analyses were performed in accordance with the methods of Aiken and West (1991) revealing no statistically significant interaction effects. These results suggest that mindfulness and BA act independently in their relationships with premenstrual symptomatology. Moreover, these results suggest that a mindfulness-based program for premenstrual symptom management will need to involve multiple approaches aimed at addressing the multiple mindfulness traits related to PMSR.

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Paper Session 14 4:51 PM–5:09 PM 2109

CALLIGRAPHY TREATMENT OF PTSD CHILDREN IN 2008 CHINA EARTHQUAKES

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Background: Chinese calligraphy therapy (Kao, 2006)facilitates cognitive functioning, calms down emotions and improves some clinical and conditions of children with ADHD (Kao, Hu & Cheung, 2006)and autism (Kao, Hu & Wang, 2006). Extending these findings, we applied calligraphy treatment in PTSD children from the 2008 Sichuan earthquakes in China.

Method: A total of 210 PTSD Primary 4 children, 105 boys and 105 girls, from the disaster areas participated. The treatment group consisting of 129 pupils with a mean age of 10.51 ±1.14 years were given calligraphy training one hour per day for consecutive 30 days. The Children's Revised Impact of Event Scale (CRIES-13) was adopted to assess the treatment effects before and after the training course. The control group had 81 children and were similarly assessed before and after the same period without calligraphy training.

Results: A significant main effect was found for the treatment group in CRIES-13 Total Score (F=8.356, p=.000), which is qualified by a significant test×group interaction (F=3.783, p=.024). In comparison with pre-test, there was a significant decrease of Total Scores in post-test (F=21.022, p=.000) in the treatment group but not in the control group (F=.291, p=.591).

In Positive Scores (Intrusion+Avoidance), the main effect reached a significant level (F=7.523, p=.001). Compared to pre-test, there was a significant decrease of Positive Scores in post-test (F=15.350, p=.000) in the experimental group but not in the control group (F=.470, p=.495).

Conclusions: These findings are highly encouraging, showing the effectiveness of calligraphy treatment of symptoms of PTSD children from the major 2008 earthquakes in China.

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Paper Session 14 5:09 PM–5:27 PM 2110

CONCENTRATED AND RELAXED STATE EVOKED BY CALLIGRAPHY: EVIDENCE FROM AN EEG STUDY AND ITS THERAPEUTIC IMPLICATIONS

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Theta wave in the frontal midline area of human brain reflects mental concentration as well as state of relief from anxiety; greater levels of alpha activity were found to be correlated with lower levels of anxiety and feelings of calm and positive affect. This longitudinal study investigated the effects of Chinese calligraphic training on EEG activity of frontal midline area. We compared two protocols of calligraphy training, i.e., calligraphy without neurofeedback (calligraphy-only) and calligraphy with neurofeedback (calli-neurofeedback), the changes of theta (4–8 Hz) and alpha (8–12 Hz) wave generated in frontal midline area using a pretest posttest repeated measures design.

A total of 24 college students participated in this study. Compared with the controls, participants in the two training groups showed significant increases in theta (calligraphy-only group: F=12.829, p=0.009; calli-neurofeedback group: F=8.309, p=0.024) and alpha (calligraphy-only group: F=9.631, p=0.017; calli-neurofeedback group: F=14.996, p=0.006) mean amplitudes during writing after a ten-day calligraphy training. Calligraphy-only group also increased significantly in theta wave during pre-writing close-eye stage (F=15.647, p=0.005), and increased alpha wave during pre-writing open-eye (F=10.175, p=0.015) and post-writing close-eye stages (F=9.568, p=0.017). These findings reflected a relaxed and concentrated state in calligraphic practitioners and provided us with fundamental evidence for the therapeutic effects of calligraphy training. They also have implications towards the development of this innovative, effective technique for emotion stability, stress reduction and general health improvement.

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Paper Session 14 5:27 PM–5:45 PM 2111

USE OF COMPLEMENTARY AND ALTERNATIVE MEDICINE IN PEOPLE WITH DIABETES

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Diabetes mellitus (DM) is a chronic condition that affects over 23,000,000 Americans. Conventional allopathic approaches to DM care are often ineffective and although a large number of adults with DM use complementary and alternative medicine (CAM) little is known about the level of use and how people with DM who choose to use CAM may differ from those who do not. We surveyed a random sample of 2,000 adults with diabetes in a large Midwest medical group regarding their use of CAM, health activities, and perceptions of their medical care. Preliminary data analysis indicates that over 56% used some type of CAM in the prior year including alternative medical systems, mind/body therapies, biologically based therapies, manipulative and body-based therapies, and energy therapies. Mind/body therapies (including meditation and deep breathing exercises) were used by 30% and were the most frequently reported type of CAM used; 35% of CAM users (or 20% of all respondents) reported using CAM specifically for their diabetes. Compared to non-users, CAM users were younger, female, more educated, and younger at DM diagnosis. They had significantly lower levels of self-reported physical and mental health and engaged in higher levels of some diabetes self-care activities. There were no differences in glycated hemoglobin (A1C) levels between groups and both reported very high levels of having a regular primary care doctor (93%), trust in their doctor, and satisfaction with their health care. Only 25% of CAM users reported discussing CAM use with their doctor and CAM users were significantly less likely to follow their doctor's advice. CAM users also reported significantly higher beliefs in the concept of holistic health and scientific validity of CAM. Preliminary results indicate that high proportions of people with DM are using CAM in addition to their regular diabetes care.

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Paper Session 15 4:15 PM–4:33 PM 2112

OBSERVED COMMUNICATION IN ADOLESCENTS WITH TYPE 1 DIABETES AND THEIR MOTHERS

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In adolescents with type 1 diabetes (T1D), higher levels of supportive parental involvement and lower levels of parent-child conflict have been related to positive health outcomes, but few researchers have examined specific parent/adolescent communication styles. The purpose of the current study was to examine observed communication behaviors in adolescents and their mothers during a stressful interaction.

This cross-sectional study of adolescents age 10–16 with T1D (n=30, mean age = 12.6, 55% female) included questionnaire (family conflict and adolescent behavior) and clinical data (HbA1c). Adolescents and their mothers participated in a 15-minute discussion about a stressful diabetes situation. Interactions were coded for specific communication behaviors (e.g., prosocial behavior, listener responsiveness, effective communication) using the Iowa Family Interaction Rating Scales, a global coding system that uses verbal and nonverbal behaviors to rate individuals on each scale.

Overall, mothers exhibited positive communication behaviors during the stressful interaction; 97% scored higher for positive communication than negative communication. Adolescents exhibited high levels of anxious and avoidant behaviors, but they also demonstrated effective communication skills (e.g., reasoning, explanations, and clarifications), and active listener responsiveness.

Bivariate correlations indicated that higher levels of observed positive communication in mothers were related to lower levels of diabetes-related family conflict (r=-.42, p = .026) and fewer symptoms of aggression in adolescents (r=-.48, p = .008). In addition, higher levels of observed maternal positive communication were related to better metabolic control in adolescents (r=-.50, p = .005).

These findings highlight the importance of specific maternal communication styles that may decrease family conflict and adolescent aggression and improve metabolic control. Results begin to identify the specific parent/adolescent communication behaviors that warrant further investigation.

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Paper Session 15 4:33 PM–4:51 PM 2113

PSYCHOLOGICAL DISTRESS IN ADOLESCENTS WITH TYPE 1 DIABETES: EXPLAINING THE FAMILY CONFLICT-GLYCEMIC CONTROL LINK

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Diabetes-specific family conflict is linked with suboptimal glycemic control in adolescents with type 1 diabetes, however, the mechanisms underlying this relationship are poorly understood. Study aims were 1) to document rates of anxiety symptoms, diabetes-specific worry, and depressive symptoms in adolescents with type 1 diabetes, and 2) examine whether these psychological variables mediate the family conflict-glycemic control relationship. Participants included 147 adolescents with type 1 diabetes. During three study visits spanning 9 months, adolescents completed questionnaires measuring diabetes-specific family conflict, anxiety and depressive symptoms, and diabetes-specific worry. Glycemic control was also obtained. Approximately 13% of adolescents experience elevated levels of anxiety, 16% elevated levels of diabetes-specific worry, and 21% elevated levels of depression. In the first mediator analysis (family conflict–>anxiety–>glycemic control), family conflict at visit 1 predicted anxiety at visit 2 (B=0.36, p<0.001) and A1c values at visit 3 (B=0.07, p=0.06); and with both family conflict and anxiety, the effect of family conflict on A1c became less significant (B=0.04, p=0.32; Sobel=2.07, p=0.04). Anxiety mediated and accounted for 41% of the family conflict-glycemic control link; neither worry nor depression was a significant mediator of the family conflict-glycemic control link. Worry accounted for 18% of the family conflict-glycemic control link, and depression 17% of this relationship. Anxiety symptoms, diabetes-specific worry, and depressive symptoms appear equally prevalent in adolescents with type 1 diabetes. Yet compared to worry and depression, anxiety symptoms may be promoted in a family environment characterized by conflict and negatively impact glycemic control. In the presence of family conflict, anxiety appears particularly salient for self-care and subsequent glycemic outcomes. Monitoring of family functioning and adolescents' anxiety symptoms, as well as refinement of interventions, is needed to promote positive health outcomes.

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Paper Session 15 4:51 PM–5:09 PM 2114

DAILY DIARY RATINGS OF AFFECT, ADOLESCENT DIABETES MANAGEMENT COMPETENCE, AND BLOOD GLUCOSE BY ADOLESCENTS, MOTHERS, AND FATHERS

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Management of Type 1 diabetes in adolescence is associated with difficulties in psychological adjustment for patients and parents alike. Patient negative affect (NA) may derail diabetes management and is associated with poorer daily blood glucose (BG) control in adolescent samples. Parental daily affect (PA and NA) may function in a similar fashion, influencing parents own perceptions of adolescent daily task competence (DTC) and potentially undermining or bolstering adolescents' perceptions of DTC. Adolescents (N=161; M age =12.97) and their mothers and fathers reported daily affect in relation to diabetes management and perceptions of adolescent competence at managing 10 specific diabetes tasks. BG was measured with a researcher-issued BG meter. Results analyzed with hierarchical linear modeling indicated that daily adolescent NA related to higher BG (B=12.09; p<.05) and poorer DTC(B=-.23; p<.01). Adolescent positive affect (PA) was unrelated to BG but was associated with better DTC (B=.10; p<.01). Mothers daily NA was not associated with daily BG but was associated with her ratings of adolescent DTC (B =-.73; p<.01) whereas mothers' daily PA was associated with lower BG (-9.52; p<.01) and with higher perceptions of DTC (B=.42; p<.01). Fathers' daily NA and PA were unrelated to BG but were related to his ratings of adolescent DTC (PA B=.37; p<.01; NA B= -.58; p<.01). Mothers' and fathers' NA (but not PA) was associated with adolescents' own lower ratings of DTC (M: B=-.15; D: B=-.17, p's<.01). All family members ratings of DTC were associated with better (lower) daily BG. Results suggest that adolescent NA and maternal PA relates to daily BG though the direction is unclear. The relation of daily NA and PA reports by the family members relate to ratings of adolescent competence for daily diabetes tasks has implications for a family centered approach to adolescent diabetes management. Additional analyses including potential meditational processes will be discussed.

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Paper Session 15 5:09 PM–5:27 PM 2115

DIABETES CONTROL PERCEPTIONS, DAILY NEGATIVE AFFECT, AND DAILY DIABETES PROBLEMS AMONG ADOLESCENTS WITH TYPE 1 DIABETES

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Co-regulation of affect and cognitions is central in effective illness management, particularly in illnesses requiring ongoing daily management such as diabetes. During adolescence, when negative affect increases and metabolic control and self-management decrease, understanding potential buffering influences of cognitions becomes particularly important. Perceptions of control, namely belief in the diabetes regimen's capability (treatment control) and the individual's capability (personal control) to successfully manage symptoms, may potentially buffer detrimental associations of negative affect. In a daily diary study including 214 adolescents (mean age 12.4, range 10–15) with Type 1 diabetes (illness duration > 1 year; M=4.6 years), we examined how daily negative affect related to changes in reported occurrence of daily diabetes problems, and whether perceptions of treatment or personal control moderated these associations (mean daily number of problems = 1.26, range 1–9). Using hierarchical linear modeling, experience of daily negative affect was associated with higher number of daily diabetes problems (t=3.39, p = .001). Perceptions of treatment control moderated associations between negative affect and number of problems; negative affect was more strongly associated with number of problems among teens who perceived lower versus higher treatment control (t=-2.06, p = .04). For personal control, the same pattern of association was borderline significant (t=-.04, p = .08). Results suggest that perceived control may help to buffer detrimental associations between negative affect and adolescents' ability to successfully manage their diabetes. Treatment control, which has received less attention in the literature, may be a key cognition related to illness management. Helping adolescents to develop optimal cognitions and better manage emotions regarding their diabetes may have important implications for current interventions, as well as lifelong diabetes control.

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Paper Session 15 5:27 PM–5:45 PM 2116

BEHAVIORAL AND PSYCHOSOCIAL FUNCTIONING OF MINORITY YOUTH WITH TYPE 2 DIABETES

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This study examined behavioral and psychosocial functioning in minority youth with type 2 diabetes (T2D). Twenty-one youth (M age=14 yrs; 67% female) from low income minority (African American, Caribbean black, and Hispanic) families were recruited to the study to date. Ninety-five percent of youth were overweight. Half had high (> 90th %ile) SBP, 38% had high LDL, 24% had high triglycerides, and 48% had low HDL. Most (93%) mothers of these teens were overweight, and family history was positive for T2D (68%), heart disease (43%), hypertension (57%), and high cholesterol (53%). Self-reported and parent-reported regimen adherence showed inadequate levels (50% adherent or less) for glucose monitoring (youth report, 71%; parent report, 62%), taking medications (48%; 27%), following meal plans (52%; 62%), and being physically active every day (33%; 62%). On average patients cancelled one clinic appointment and no-showed for two over the preceding year. Thirty-five percent reported depressive symptoms and 47% did not talk with their friends about their diabetes. Analyses indicated that zBMI (M = 2.2) and HbA1c (M=7.7%) were unrelated to clinic attendance or psychosocial variables. Youth with higher depression attended clinic less often (r=-.47, p<.03). Higher levels of youth-reported regimen adherence were associated with positive family support (r = .50, p<.02), youth self efficacy (r = .49, p<.03), and better quality of life (QOL) (r = .48, p<.03). Parent report revealed that better adherence was related to stronger overall youth adaptive skills (r = .57, p<.01). These findings indicate that teens with T2D already have significant health complications. Adherence is inadequate for glucose monitoring, taking medications, following dietary plans, and being physically active. Better adherence is related to supportive family behaviors, youth's diabetes self efficacy, improved QOL, and stronger adaptive skills. Family-based interventions to increase youth self efficacy and family support would likely be beneficial for this patient population.

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Citation Paper

Paper Session 16 4:15 PM–4:33 PM 2117

SMOKING CONCORDANCE IN CANCER PATIENT-CAREGIVER DYADS AND QUALITY OF LIFE

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Cancer diagnosis may be a teachable moment for smoking cessation among cancer patients and their family caregivers. However, distress may be heightened among patient-caregiver dyads who are mismatched on smoking status, negatively affecting quality of life (QoL). We examined whether patient-caregiver smoking concordance is associated with the physical and mental QoL of each dyad member (measured using the Short Form-12).

Lung and colorectal patient-caregiver dyads (N=1217) came from the multi-site Cancer Care Outcomes Research and Surveillance (CanCORS) and the CanCORS Caregiver studies. The majority of the cancer patients were male (61.1 %), over 65 years of age (51.9%), with local (49.5 %) or regional (12.7 %) disease. The majority of the caregivers were female (75.8%), under 65 years of age (68.7%), and spouses (60.9%) of the patients. Current dyad smoking status was as follows: 75.8% neither smoked, 12.2% caregiver only smoked, 7.1% patient only smoked, & 4.5% both smoked. Multivariate regression models adjusted for gender, age, race/ethnicity, education, timing of assessment, cancer site, and relationship (spouse, child, or other) revealed that caregivers who smoked when their patient did not reported porer mental QoL [X2(3)= 2937.6, p <.001]. Similarly, patients who smoked when their caregiver did not reported poorer mental QOL [X2(3)= 1150.3, p <.001]. Members of dyads where neither smoked reported the best mental QOL of all groups. Concerning physical well-being, smoking caregivers (with or without smoking patients) reported significantly worse physical QoL than caregivers in dyads where neither or only the patient smoked [X2(3)= 243.9, p <.001]. Patients in non-smoking dyads reported the best physical QOL [X2(3)=590.4, p <.001], while patients in dyads mismatched on smoking status reported the worst physical QoL. Patients in dyads where both were smoking reported intermediate levels of physical QoL. Results highlight the importance of assessing smoking in both cancer patients and their informal caregivers and referring to appropriate smoking cessation and psychosocial services as needed.

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Paper Session 16 4:33 PM–4:51 PM 2118

STANDARD COGNITIVE BEHAVIORAL THERAPY AMONG AFRICAN AMERICAN SMOKERS: A RANDOMIZED CONTROLLED TRIAL

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The health consequences of tobacco smoking disproportionately affect African Americans; yet research on whether efficacious interventions can be generalized to this population is limited. This study examined the efficacy of group cognitive-behavioral therapy (CBT) for smoking cessation among African Americans. Participants (N = 154; 65% female; M=44 years old; M cigarettes/day = 13) were randomly assigned to either (a) group CBT or (b) group general health education (GHE). Participants in both conditions received six sessions of counseling and 8-weeks of transdermal nicotine patches. The primary outcome variable was 7-day point prevalence abstinence (ppa), assessed at the end-of-counseling (2 weeks), and at 3- and 6-month follow-ups. Intent-to-treat analyses demonstrated the hypothesized effects, such that 7-day ppa was significantly greater in the CBT condition compared to GHE at the end of counseling (51% vs. 27%), and at the 3-month (34% vs. 20%), and 6-month (31% vs. 14%) follow-ups. Results of a generalized linear mixed model demonstrated a significant effect of CBT versus GHE on 7-day ppa (OR = 2.57, 95% CI = 1.40 - 4.71) and also an effect of time (p < .002). The condition-by-time interaction was not significant. Among participants who completed the study per protocol (60% of those randomized), 7-day ppa was significantly greater in the CBT condition compared to GHE at the end of counseling (74% vs. 33%), and at the 3-month (52% vs. 29%), and 6-month (46% vs. 21%) follow-ups. Results of a per protocol generalized linear mixed model demonstrated a significant effect of CBT versus GHE on 7-day ppa (OR=5.69, 95% CI = 2.31 - 14.01) and also an effect of time (p < .01). The condition-by-time interaction was not significant. These results demonstrate that intensive, group cognitive-behavioral smoking cessation interventions are efficacious among African American smokers.

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Paper Session 16 4:51 PM–5:09 PM 2119

CHANGES IN SMOKING, DIET AND WALKING FOR EXERCISE IN AFRICAN AMERICANS

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Positive changes in one health behavior may be accompanied by positive changes in other health behaviors. Thus, the current study investigated the association of smoking reduction and cessation to changes in fruit and vegetable (FV) intake and engaging in walking for exercise over the course of a 26-week smoking cessation intervention trial. This study examined 539 African American light smokers (≤10 cpd) enrolled in a 2 x 2 factorial study (placebo vs. nicotine gum; health education vs. motivational interviewing). At week 26, 17.1% (n=92) of the sample had cotinine-verified abstinence, 58.3% (n=314) had reduced their smoking by at least one cigarette per day, and 24.7% (n=133) did not reduce their level of smoking. The average number of FV consumed per day was 2.04 (SD=1.67) at baseline, with an average FV intake of 2.25 (SD=1.90) per day at 26-week follow-up. At baseline, 44.4% (n=193) reported walking for exercise, and 50.0% (n=230) reported walking for exercise at follow-up. In the ordinary least squares regression model controlling for baseline FV intake, both reducers (Coefficient=0.47, CI= 0.11, 0.82, p=.02) and quitters (Coefficient=0.73, CI=0.27, 1.20, p=.003) had greater increases in FV intake compared to those that did not reduce their smoking. In the binary logistic regression model controlling for baseline walking status, reducing cigarette consumption (OR=1.82, CI=1.08, 3.07, p<.001) and quitting smoking (OR=3.76, CI=1.86, 7.60, p<.001) were also associated with a greater likelihood of walking for exercise at follow-up. Thus, addressing one health risk behavior may prompt other positive health behaviors, which supports the argument for developing interventions targeting multiple health risk behaviors.

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Paper Session 16 5:09 PM–5:27 PM 2120

SATISFACTION AND UTILIZATION OF SERVICES IN THE COMPASS SMOKING CESSATION TRIAL

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Treatment satisfaction influences utilization which, in turn, impacts cessation outcomes. Thus, it is important to evaluate satisfaction and utilization as process variables when examining new cessation programs. These variables can also point to areas for program enhancement. We report on satisfaction and treatment utilization in the COMPASS trial, the first head-to-head comparison of 3 behavioral treatment programs: web-based counseling (W), phone-based counseling (P), and an integrated Phone/Web program (P/W). Smokers (n = 1202) were randomized to one of the 3 behavioral programs and all received varenicline. Data were analyzed from self-report and automated service delivery records. At 6-month follow-up, both P and P/W users were highly satisfied with the phone counseling (86.5% and 82.4%, p=.17). Satisfaction with the web program was also similar for W and P/W-users (p = .58). 68.1% of P and 66% P/W users rated the phone counseling as helpful; 91.4% of P and 88.9% of P/W callers would recommend the program. 58.6% of W and 69% of P/W users rated the web program as helpful and 92% P and P/W would recommend it. A significant difference was observed for utilization of the web program; mean logins differed significantly (3.4 - P/W; 2.3 - W, p < .001). Overall, however, 25.2% P/W and 21.6% W users logged in once or never. Three main reasons for not visiting more than once were: not helpful (26.1%), no time (26%) and not interested (24.6%). Among the various aspects of the web program, the online discussion forum was visited most often (mean=8.7). The findings suggest the W and P/W program compared favorably to standard phone counseling in terms of satisfaction. And while some differences were observed for utilization, these did not translate to differential abstinence rates at 6-month follow-up. Future research should focus on ways to increase engagement and use of the web program, as this could increase the effectiveness of W and P/W treatment.

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Paper Session 16 5:27 PM–5:45 PM 2121

INFLUENCE OF PSYCHIATRIC HISTORY ON TREATMENT UTILIZATION, SIDE-EFFECTS AND SMOKING CESSATION OUTCOMES IN THE COMPASS TRIAL

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Smoking rates are disproportionately higher among persons with psychiatric disorders compared to those without a psychiatric history. Persons with psychiatric history may also have a harder time quitting and be at increased risk for neuropsychiatric side-effects when taking varenicline, but data supporting these conclusions are either mixed or limited. We compared treatment outcomes and process variables across smokers with (PH+) and without (PH-) a prior psychiatric history based on medical record evidence of psychotic disorder, bipolar disorder, anxiety or depression. Participants (n=235 PH+& n=235 PH-) were sampled as part of the COMPASS smoking cessation trial. All participants were members of a large regional health care system, received behavioral counseling plus varenicline, and were followed for 6 months post-quit date. PH+smokers were more likely to be female (P < .0001), less likely to be married (P = .045), and had higher baseline depression scores (P < .0001), but were otherwise similar on baseline demographics, including nicotine dependence and motivation to quit. PH+ smokers took varenicline for fewer days on average (59.38 vs. 68.46, P = .004), but did not differ in their utilization of behavioral treatment services. PH+smokers also reported more nausea, retching, tension/agitation, anxiety, depression, difficulty concentrating, and confusion at 21 day follow-up - symptoms associated with varenicline use and/or nicotine withdrawal, but groups had similar 30 day abstinence rates at 6 months (31.5% PH+vs. 35.4% PH-, P = .35). In sum, despite experiencing more treatment side-effects and using less medication, smokers with a psychiatric history had similar cessation outcomes as other smokers. The results add to the evidence based regarding varenicline use with PH+smokers, and suggests that having a psychiatric diagnosis does not necessarily portend worse treatment outcomes for smokers.

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Paper Session 17 4:15 PM–4:33 PM 2122

WHAT DO WOMEN KNOW ABOUT CERVICAL CANCER NOW?

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Problem:Since FDA approval of the human papillomavirus (HPV) vaccine in 2006, there has been heightened media attention around HPV and cervical cancer.We hypothesized that HPV knowledge and awareness would increase from 2005 to 2007.However, little is known about how these increases may differ across subpopulations most likely to benefit from the vaccine.
Purpose:Assess trends in knowledge and awareness of HPV and cervical cancer before and after FDA approval and direct to consumer (DTC) advertising of the HPV vaccine.
Methods:Data from US women aged 18–75 with no history of cervical cancer from HINTS 2005 (n=3,072) and HINTS 2008 telephone administrations (n=1,903) were analyzed. Chi-square tests examined overall differences in awareness and knowledge of HPV between 2005 and 2008 and within sociodemographic, healthcare access, communication, cancer history, and screening status population segments.Variables with p-values <.10 were included in multivariate logistic regression models.
Results:Between 2005 and 2008, there were significant increases in the proportion of women aged 18–75 who heard of HPV (82.01%,+41.96% increase,p<.001) and knew that it caused cervical cancer (68.90%,+21.23,p<.001). Controlling for sociodemographic characteristics and healthcare access, older and minority women continued to be less aware than younger and non-Hispanic White women).In addition, the odds of hearing of HPV were lower for less educated women and those who had not had a recent Pap test than for more educated women and those with a recent Pap (OR=0.20,95% CI:0.14–0.28;OR=0.54,95% CI:0.42 l-0.69;respectively).Less educated women were also less likely to know of the HPV-cervical cancer link (OR=0.48, 95% CI:0.26–0.88).
Conclusion:Though there have been substantial gains in HPV knowledge and awareness overall, gains have not been equivalent; traditionally underserved groups lag behind. Health communication campaigns should target these population segments to prevent widening cervical cancer disparities.

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Paper Session 17 4:33 PM–4:51 PM 2123

UNDERSTANDING MOTHERS' INFORMATION SEEKING ABOUT THE HPV VACCINE: ASSOCIATIONS BETWEEN RISK PERCEPTIONS AND INFORMATION SEEKING BEHAVIOR

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Vaccination for human papillomavirus (HPV) could prevent most cervical cancers and thus have widespread health benefits. Yet, empirical evidence is lacking for what influences parents to seek information about the HPV vaccine - an important step in the decision to get their daughters vaccinated. One plausible determinant of information seeking is perceptions that HPV infection and cervical cancer are personally relevant risks. Using data from mothers of adolescent girls (ages 8–22), we tested whether their perceptions of their daughters' risk for HPV infection and cervical cancer were associated with seeking information about the HPV vaccine and intentions to vaccinate. Mothers (N=138; 42% African American, 34% Hispanic, 67% less than a college degree) whose daughters had not yet received the HPV vaccine completed a survey measuring perceived risk for HPV infection and cervical cancer (5-point scales), whether they had ever talked with other people, including a doctor, about the HPV vaccine (yes/no), and their intention to have their daughters vaccinated (yes/no). Logistic regression models tested whether risk perceptions were associated with talking with others and vaccination intention. The more mothers perceived their daughter to be at risk for HPV infection, the more likely they were to have talked with other people (OR=2.03, 95% CI=1.18, 3.51) and their doctor (OR=1.57, 95% CI=1.02, 2.41) about the vaccine. Similar findings emerged for risk of cervical cancer. Risk perceptions were also associated with agreeing that the benefits of the vaccine outweigh the risks (rs=.19) and with vaccination intention (OR=1.45, 95% CI=.95, 2.22), although not quite statistically significant. Consistent with various health behavior theories, our findings demonstrate that personal relevance of HPV risk is associated with seeking relevant information and perceiving vaccination as an effective way to address the health threat. Implications for HPV-relevant communication and decision-making will be discussed.

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Paper Session 17 4:51 PM–5:09 PM 2124

THE HPV VACCINE: A PROMISING INTERVENTION APPROACH TO INCREASE DISSEMINATION

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High risk types of HPV are necessary though not sufficient causes of the vast majority of cervical cancers. With the approval by FDA of the HPV vaccine among women age 9–26, targeting those age 11–12, dissemination is critical. Physician recommendation is key to vaccination. The study aims to: describe the effectiveness of HPV uptake an age-eligible female patient sample from 235 primary care physicians (PCP's) who are enrolled in a 3-arm RCT of a multi-component educational intervention for cervical cancer screening (academic detailing, AD vs. office-based intervention vs. service-as-usual control). Vaccination rates were assessed at followup using medical audit. Baseline findings from the trial revealed low awareness of the HPV as a risk factor for cervical cancer among PCP's, but strong PCP intention to vaccinate per the final protocol (data were collected prior to FDA approval of the HPV vaccine). Repeated measures ANOVA of vaccination rates at followup revealed a statistically significant intervention effect for AD, with the pretest score as a covariate (F=6.87, p=.01). In early 2009, overall, 10% of age-eligible girls and young women had been vaccinated. Major barriers were awareness, cost, and availability of the vaccine. Conclusions: These findings suggest promise for AD in disseminating the HPV vaccine among urban physicians working in under-resourced communities. Additional systematic study of the intervention is warranted.

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Paper Session 17 5:09 PM–5:27 PM 2125

GAIN VERSUS LOSS FRAMING AND VACCINATION INTENTIONS ACROSS CULTURES

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Prospect Theory posits that individuals become risk seeking when the outcomes of choices are stated in terms of potential losses. Conversely, individuals are more conservative (risk averse) when outcomes are stated in terms of gains. Prospect Theory is a useful theory to predict the adoption of behaviors in the health realm which almost always entail risk. Predictions of the theory suggest that a gain frame should be more persuasive in promoting a health protective behavior (entails less risk) and a loss frame should be more effective in promoting a behavior to detect an illness (entails more risk). We submitted this prediction to the test. Intentions to vaccinate daughters against the Human Papillomavirus (HPV) (a health protective behavior) were assessed as a function of message framing (gain versus loss) across three cultural groups: Hispanics, non-Hispanic White, and African-American mothers in a repeated-measures experiment. Contrary to theoretical postulates, results indicated that a loss frame message was more effective in promoting intentions to vaccinate. The pattern of results was different for the Hispanic group. Implications for interventions are discussed.

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Paper Session 17 5:27 PM–5:45 PM 2126

HPV VACCINE ACCEPTABILITY IN MEN: INFLUENCE OF DISEASE OUTCOME FRAMING

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BACKGROUND: Human papillomavirus (HPV) vaccine may soon be approved for use by males in the United States. This experiment explored whether framing the benefits of HPV vaccination, with respect to the disease outcome being prevented, affects men's willingness to get HPV vaccine. We also sought to identify potential mediators of the relationship.
METHODS: Participants were a national sample of men aged 18–59 years who self-identified as either gay/bisexual (n=312) or heterosexual (n=296) during January 2009. The within-subjects experiment presented 4 vignettes in a random order. Vignettes described hypothetical vaccines that prevented genital warts alone; genital warts and anal cancer, genital warts and oral cancer, or genital warts and penile cancer. We analyzed data using repeated-measures analysis of variance and tested mediation with generalized estimating equations.
RESULTS: Overall, 56% of men (338/608) said they were "probably" or "definitely" willing to be vaccinated against HPV. Men were more willing to receive HPV vaccine if it was framed as preventing HPV-related cancer in addition to genital warts, as compared to preventing genital warts alone [F(1, 607)=234, p<.001], but there were no differences among the cancers. Effects of message framing did not differ. Men viewed genital warts as less severe than cancer outcomes [F(1, 607)=359, p<.001]. Perceived severity of HPV-related disease partially mediated the relationship between disease type and men's HPV vaccination willingness (Sobel=3.88, p<.001), but perceived likelihood did not.
CONCLUSION: Men may be more accepting of HPV vaccine when it is framed as preventing cancer, regardless of the type of cancer discussed. Study findings may be useful in developing health communication messages that maximize HPV vaccine acceptability among young men.
SOURCES OF SUPPORT: This research was supported in part by research grants from the Merck IISP program and the ACS.
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Paper Session 18 4:15 PM–4:33 PM 2127

FORMATIVE PROCESS EVALUATION OF THE PATH TRIAL FOR INCREASING PA IN UNDERSERVED AFRICAN AMERICANS

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African Americans have the highest rates of obesity and comorbid chronic disease in the U.S. Positive Action for Today's Health (PATH) is an RCT evaluating the efficacy of a two-year environmental police-patrolled walking plus social marketing (SM) program (vs. patrolled walking only or no intervention) on increasing physical activity (PA) in underserved communities (low income, minority). In three communities matched demographically, 439 African American adults (63% women; mean age=51.2) were enrolled. The SM campaign includes branded deliverable and mass media messages, incentives, and grassroots campaigning to promote walking on the path. Messages highlight perceptions of safety, physical and mental health benefits of walking, self-efficacy for walking, and community connectedness. The SM campaign includes scheduled walks 5 times per week and Pride Strides, community led walks. Formative process evaluation was developed to track participation, dose and fidelity of implementation over time. Variables evaluated weekly include number of walkers, characteristics of the path, and walkers' social interaction. From intervention baseline to 4 months, number of walkers per month increased from 57 to 272 in the walking+SM and decreased from 64 to 31 in the walking only community. Percentage of enrolled participants walking per month differed significantly between the communities, increasing from 1% to 16% in the walking + SM but remaining at 1% in the walking only community, t(52) = 2.48, p < .01. Ratings of litter, vandalism and stray dogs were similar in both communities and did not significantly differ. There was an increase in positive social interaction in the walking+SM community and off-duty police officers supported over 99% of scheduled walks. These patterns in walking participation, characteristics of the path, and social interaction provide preliminary evidence that formative process evaluation can be used to track and guide implementation of a walking program for increasing PA in underserved communities.

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Paper Session 18 4:33 PM–4:51 PM 2128

IMPROVING SCHOOL FOOD ENVIRONMENTS: OUTCOME OF AN AFTERSCHOOL SNACK PROGRAM

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Despite several policy initiatives to improve the school food environment, studies consistently show that unhealthy foods are widely available in secondary schools. Objectives: 1) To identify affordable, healthy snacks and 2) evaluate the acceptability of the snacks by middle school students participating in an afterschool homework program. First, food vendors and brokers were contacted to identify availability of foods and drinks that met the Institute of Medicine (IOM) nutrition and serving size recommendations for afterschool snacks and district budget of .45 for a 2-pattern snack (e.g. milk and cereal). Second, a cross-sectional, pre/post test design was used to assess student perception of the school food environment (1=not at all healthy to 4=very healthy). Students were also asked to participate in weekly taste testing of snacks during the spring semester. Snack voting cards were used to assess preferences (1=horrible to 4=favorite). Chi-square test was used to examine students' preference and perception of healthfulness of snacks within student subgroups. Cochran-Mantel-Haenszel statistics was computed to examine the association after adjusting for gender and grade. A 19-week healthy snack menu was developed. On average, 90 students particiated in weekly taste testings identifying whole grain poptarts and graham crackers (mean score=3.6) as favorite snacks. 157 and 113 students participated in the pre and post survey respectively. The proportion of students who felt that school snacks were either very healthy or mostly healthy increased from 50% to 77% post test ($p=0.0001$) after adjusting for gender and grade ($p=0.0001$ and 0.01). Similarly, results showed a significant decrease in the proportion of students who expressed a dislike for healthy school snacks from 68% at pretest to 23% post-test ($p=0.03$) after adjusting for gender ($p=0.05$) while a significant difference was seen only with students in grade 8 ($p=0.01$). Serving affordable healthful school snack is feasible and acceptable to students.

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Paper Session 18 4:51 PM–5:09 PM 2129

JUNTOS EN LA SALUD: UPDATE ON FRUIT AND VEGETABLE INCREASE AND MAINTENANCE IN A CPBR-BASED CANCER PREVENTION INTERVENTION AMONG LOW-INCOME LATINAS

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Consumption of fruits and vegetables (F&V) is an important cancer prevention strategy. In Arizona, over 80% of Latinos do not meet the goal of 5 or more servings/day. A group-randomized trial of a CBPR-based intervention among low-income Latinas in Arizona tested effects on cancer prevention behaviors. Promotoras de salud taught a 7-week course on cancer prevention and screening topics, emphasizing dietary change. Group classes encouraged social support among participants; one-on-one teaching built upon individual attention. Of 1,035 in the study, 467 completed post-intervention questionnaires (T2), and 314 were reached 15 months later (T3). Mean age: 38.5 years. 57% reported HH incomes< $15 K; 83%<$25 K. One-third (33.9%) reported education level of 6th grade or less, 71.3% not completing high school; 64.7% no health insurance; 67.0% speak only Spanish. Both study arms combined showed a significant increase in F&V from T1 to T2 (5.25 mean servings at baseline; 8.05 post-intervention; $p = .000$). At T3, mean servings were still significantly higher than at T1, (7.14, $p = .000$). The group intervention had slightly higher increases in F&V than one-on-one. Logistic regression analyses examined effects of knowledge and psychosocial variables on F&V increases. Of 5 measured social support factors, an overall regression model revealed that only Practical and Informational Support were positively associated ($p = .004$; .014); Instrumental and Emotional Support were negatively associated ($p = .003$; .007) with increases in F&V. New exploratory scales assessing "Reciprocal Support" were significantly associated with F&V change in a model indicating that caring and role modeling promote change, while pressure and obligation do not. Funded by American Cancer Society #TURSG-03-080-01-PBP.

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Paper Session 18 5:09 PM–5:27 PM 2130

THE RURAL RESTAURANT HEALTHY OPTIONS PROGRAM: A LOW-COST, SIMPLE PROGRAM TO ENCOURAGE BEHAVIOR CHANGE

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The obesity epidemic has led to efforts to modify elements of the physical and social environment that might contribute to unhealthy eating. Because many people eat in restaurants on a regular basis, interventions designed for this setting are of interest. Previous studies, primarily in chain restaurants, have focused on menu labeling and/or price adjustments with mixed success, while often incurring high implementation costs. To be widely adopted, interventions must be simple, low-cost, and acceptable to both customers and restaurant owners. Such an intervention was tested in four owner-operated restaurants in rural Iowa. The intervention consisted of a window sign mentioning the program as well as table signs that listed small changes customers might consider when ordering to improve the healthfulness of their meal, e.g., ask for smaller portion sizes, meat broiled instead of fried. Customer surveys and owner interviews were conducted at baseline and three follow-up points over one year. The response rate to customer surveys was 83% ($n=62$ to 113 per restaurant each time), and slightly over half of respondents were women. The average age of customers was 52 years and less than one percent were non-white. Overall, owners were satisfied with the program and kept materials in place. Window signs were noticed by 40, 48 and 45% of customers at each follow-up point respectively, while table signs were noticed by 67, 71, and 69%. Of those who noticed a sign, 34% at each time point stated that the signs influenced their order. Customers indicated that the signs were a welcomed reminder to make healthy choices. Examples of how their ordering behavior was affected were elicited. Servers and owners were also satisfied with the program. This small-changes approach resulted in positive change, and because of its simplicity and acceptability by owners and customers, has great potential for dissemination to similar restaurants.

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Paper Session 18 5:27 PM–5:45 PM 2131

VALIDITY OF WALK SCORE™ FOR ESTIMATING NEIGHBORHOOD WALKABILITY

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Proximity to walkable destinations is among several variables of the built environment that make up neighborhood walkability and influence physical activity behavior. Previous estimators of neighborhood walkability have relied on self-report measures or time- and cost-intensive objective measures such as environmental audits and geographic information systems (GIS) data analysis. Walk Score™ is a publicly available website that identifies walkable amenities near an entered address and calculates a score of neighborhood walkability. The algorithm awards points based on proximity to 13 amenity categories (e.g., restaurants, parks, fitness facilities, retail stores, etc.) and yields a score of 0–100. To our knowledge, the validity of Walk Score™ has not been evaluated. The purpose of this study is to test the validity of Walk Score™ by estimating the correlations with GIS-measured amenity categories for 379 addresses in Rhode Island. Walk Scores were retrieved by entering residential addresses into Walk Score™. Addresses were then geocoded and a 1-mile buffer was created around each address, consistent with the Walk Score™ algorithm. Amenity categories were then matched to the addresses and the sum of amenities within the 1 mile buffer was calculated. Pearson correlations were calculated between the sum of amenities within the buffer and address Walk Scores™. A subsample of 100 addresses were entered into Walk Score™ twice for test-retest reliability. All GIS data was aggregated from the Rhode Island Geographic Information System (RIGIS) and Reference USA™. Significant correlations were found between Walk Score™ and the sum of restaurants, coffee shops and bars, grocery stores, number of parks, movie theaters, schools, libraries, fitness facilities, drug stores, and retail stores such as clothing, music, book stores and hardware stores. A test-retest reliability correlation coefficient of 1.0 ("high") was also found. These results support the use of Walk Score™ as a valid, convenient and free measure of estimating the number of nearby walkable destinations.

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Thursday
April 8, 2010
7:00 PM–8:30 PM

Poster B B-001

HOW MUCH TIME WILL IT TAKE? SCREENING MAMMOGRAPHY APPOINTMENTS

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Screening mammography rates are declining. Several factors contribute to women's mammography service satisfaction and their decision about obtaining routine mammograms. One of these is the time an appointment requires and time spent waiting after arriving at the facility. Lengthy appointments may cause women to procrastinate or forego routine screening. A mammography services survey was mailed to FDA certified mammography facilities in KS, MO, IA and NE (N=491). Surveys were completed by mammography directors, managers or supervisors. The survey assessed facility characteristics including facility comfort and convenience, organizational culture, and the amount of time screening mammography patients spend at the facility. Facilities were asked to report the amount of time, in minutes, a typical patient spends at each step of their routine screening mammography appointment using a flow diagram.

Of the 359 surveys, 74% represent hospital-based facilities with the remaining evenly split between imaging centers and physicians offices. Nearly 43% were from urban facilities, 27% were semi-urban and 30% were rural. The mean total appointment time was 45 min (max=86 min). No significant variation was found in total appointment times across facility type or urban/rural classification. The mean time women spent in their exams was 12.4 min (max=30 min). Total appointment times did not vary significantly across facility type or urban/rural classification. However, variation was detected in the proportion of total appointment time spent in the exam across facility types (p=0.05) and urban/rural classification (p=0.01). Rural facilities generally spent the most amount of time in the exam as did physician office and hospital-based facilities.

Time spent in the exam comprises a relatively small portion of the screening mammography appointment. Shorter overall appointment times and shorter wait-times, particularly in urban areas, may increase patient satisfaction and the likelihood that women will maintain a routine mammography schedule.

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B-002

MARITAL SATISFACTION, SOCIAL SUPPORT AND DISTRESS AMONG PATIENTS WITH ACUTE LEUKEMIA AND THEIR CAREGIVERS: A LONGITUDINAL STUDY

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Background: Distress is common among cancer patients and their caregivers. Adjustment among patients and families of newly diagnosed acute leukemia patients may be especially difficult due to the sudden onset and brief time between diagnosis and initiation of treatment. This study investigates relationships among marital satisfaction, social support and distress over time in a cohort of leukemia patients and their caregivers.

Method: Twenty four patients and their caregivers participated in the present study. To date, follow-up data are available for 10 participants. Patients were enrolled within 72 hours of diagnosis or admission for treatment (time 1). Participants completed the Dyadic Adjustment Scale and ESSI social support instrument at time 1, and BSI-18 at time 1, and at 2 week (time 2) and 6 week (time 3) follow-up.

Results: Forty two percent of caregivers and 27% of patients met criteria for clinically significant distress at time 1, compared with 13% of caregivers and 25% of patients at time 3. Marital satisfaction was not significantly correlated with distress at time 1(r=-.06, p=0.82) or 2(r=-0.19, p=0.53), but was at time 3 (r=-0.67, p=0.03). Social support was negatively but not significantly correlated with distress at time 1 (r=-0.34, p=0.11), and this association lessened over time.

Conclusion: The present study indicates high levels of distress among newly diagnosed leukemia patients and caregivers. Marital satisfaction was significantly negatively related to distress at 6 week follow-up. The above findings suggest that once the crisis of diagnosis subsides, the quality of the marital relationship emerges as a strong predictor of distress. This finding highlights the importance of psychosocial intervention with distressed couples when providing care for leukemia patients and caregivers.

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B-003

EXPLORATORY FACTOR ANALYSIS OF SYMPTOM CLUSTERS IN METASTATIC AND RECURRENT BREAST CANCER

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A symptom cluster is the grouping of two or more concurrent symptoms whose interrelationships are relatively stable and independent of other symptom clusters. The present study is the first to use exploratory factor analysis (EFA) to examine symptom clusters in women with metastatic and recurrent breast cancer, a population which experiences multiple, pervasive symptoms. Method: 146 breast cancer patients were accrued shortly after diagnosis (n=122 (84%) recurrent; n=24 (16%) Stage IV metastatic). Participants were primarily Caucasian (91.5%), middle aged (mean=54 years), and post-menopausal (76%); most had received treatment by time of accrual (surgery = 29%, chemotherapy=44%, radiation = 21%). Assessment occurred at baseline and 4 months post-diagnosis. Informed by existing research, measures assessed cognitive, affective, and physical symptoms. EFA using quartimin oblique rotation was conducted. Results: Baseline results supported a five factor solution (RMSEA=0.002; 90% C.I.: 0.000, 0.040): 1) depressive and cognitive symptoms, and non-restorative sleep; 2) pain; 3) fatigue and diarrhea; 4) nausea, vomiting, and alopecia; and 5) insomnia and physical functioning. Results at 4 months also supported a five-factor solution (RMSEA=0.070; 90% C.I. 0.053, 0.087): 1) depression and cognitive symptoms; 2) pain; 3) fatigue, insomnia, and non-restorative sleep; 4) diarrhea, nausea, vomiting, and sweating; and 5) physical functioning. Conclusion: Depressive and cognitive symptoms clustered together at both time points. Gastrointestinal, physical functioning and sleep-related symptoms did not consistently cluster. Contrary to existing theory, there was no pain, depression, and fatigue cluster. These results may be due to treatment effects, as women were in active treatment at the time of analysis. Identification of symptom clusters informs interventions targeting multiple symptoms, as those focused on treating individual symptoms may not be as effective in reducing the burden of concurrent symptoms.

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B-004

CANCER AND MEMORY PROBLEMS IN THE UNITED STATES: A POPULATION-BASED NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES) STUDY

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Background: Cancer can adversely affect memory. This study quantifies the difference in prevalence of memory problems between cancer patients and healthy controls.
Methods: We assessed the effect of having cancer on reported experience of memory impairment using a stratified multi-stage probability sample of the civilian non-institutionalized U.S. population. Cancer, memory problems, and limitation of daily functioning were assessed using patient self-report. We analyzed data from NHANES using SAS-callable SUDAAN 10.0 and SAS 9.2. Odds ratios (OR) were calculated to describe the strength of the association between cancer and memory problems. We adjusted our model for age, gender, race/ethnicity, education, poverty, and general health condition.
Results: The sample included 15, 412 participants (7,332 males, 8,080 females) age 20 years and older with varied educational achievement and racial/ethnic backgrounds: Blacks (n=3,126), White (n=8,034), Hispanic/Latino (n=3,638), and other race/multi-racial (n=614). Individuals with brain tumors were not included. Individuals with cancer, older age, lower education, greater poverty, and poor general health experienced more memory problems (p<0.01). The demographic-adjusted OR for experiencing memory problems that limit daily functioning for individuals with cancer compared to those without cancer was OR = 1.450 (95% CI = 1.121 to 1.875). People with cancer were 45% more likely to experience memory problems than those without cancer.
Conclusions: Memory problem is a prevalent adverse effect of cancer. Our adjusted model showed that cancer diagnosis was an independent predictor of poorer cognitive functioning that can exacerbate the cancer burden and diminish quality of life, especially for individuals from less affluent populations. Strategies to reliably assess and control this side effect for patients and survivors are needed.

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B-005

A PROSPECTIVE STUDY OF POSTTRAUMATIC GROWTH IN PATIENTS DIAGNOSED WITH HEPATOBILIARY CARCINOMA AS ASSESSED BY SELF REPORT AND BY FAMILY CAREGIVERS

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OBJECTIVE: The study of posttraumatic growth (PTG) has burgeoned over the last decade, particularly in the area of oncology. The aims of the study were to: (1) describe PTG in patients with hepatobiliary carcinoma, (2) examine agreement between the patient and caregiver on measures of patient PTG, and (3) test the associations between PTG and psychological outcomes.
METHODS: A total of 202 patients diagnosed with hepatobiliary carcinoma completed a battery of questionnaires that measured posttraumatic growth, depressive symptoms, optimism, expressed emotion, and quality of life. A subsample of family caregivers also completed ratings of patient PTG as well as their own PTG as a result of their loved one's diagnosis.
RESULTS: No significant increase in patient PTG was observed between diagnosis and 6-months follow-up with the exception of the Relating to Others subscale. PTG was not found to be associated with quality of life or depressive symptoms. At diagnosis, the agreement between the patients' PTG and family caregivers' rating of patient PTG was found to be high (ICC= 0.34–0.74, p=0.001–0.05). Posttraumatic growth was found to be significantly associated with optimism [r=0.20 p=0.02] and traumatic life events reported in the past three years including recent losses [F(1,52)=6.0, p=0.02] and severe physical injury [F(1,52)=5.5, p=0.02].
CONCLUSION: Preliminary results suggest that PTG is relatively stable over time and results in emotional and/or behavioral changes that are observable by others. Future research is warranted to understand the development and process of PTG over time.

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B-006

THE COMBINED ROLE OF LOW NUMERACY AND HEALTH LITERACY ON CLIENT LEARNING IN BRCA 1/2 GENETIC COUNSELING

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Objectives: To assess the impact of numeracy and health literacy on client's ability to learn information orally communicated during a BRCA 1/2 genetic counseling session.
Methods: Fifty-nine videotaped genetic counseling sessions, with real genetic counselors and simulated clients, were shown to 246 analogue clients (AC) recruited to imagine themselves as the client in the genetic counseling session. AC numeracy, health literacy related to genetics, state and trait anxiety, and decisional conflict were assessed. The primary outcome was AC learning about BRCA1/2.
Results: Health literacy and numeracy were moderately correlated, and each independently predicted learning. However, numeracy and literacy interacted such that higher numeracy was associated with higher knowledge scores only among ACs with adequate literacy. Decisional conflict was not related to literacy, numeracy, or knowledge acquisition. It was, however, inversely related to state anxiety such that the higher post-session state anxiety, the lower the AC's decisional conflict.
Conclusions: Numeracy and health literacy are associated with learning of orally communicated information during genetic counseling. It appears that numeracy can facilitate learning for literate subjects; it does not, however, make any difference in learning potential of clients with significant literacy deficits. Numeracy plays an important role in client's ability to learn information orally communicated during medical sessions, especially among clients who are otherwise regarded as literate. As such, health literacy interventions may need to be supplemented with numeracy instruction. In addition, the format through which information is presented in medical encounters may need to be reevaluated to ensure that those who are most likely to be marginalized in medical informed decision making, such as those with low health literacy and/or numeracy, are able to fully participate in screening and treatment decisions.

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B-007

EMOTIONAL AND PHYSICAL RESPONSES TO BREAST CANCER FOLLOW-UP CARE

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Follow-up medical visits during cancer survivorship are known to be stressful. Empirical data links stressful events and temporary alterations in immunity. This study is one of the first to assess emotional distress and immunity before and after a routine follow-up medical visit for breast cancer survivors [N=27, *M* age=60 yrs), *M* education=16 yrs]. Attitudes about follow-up care, trait anxiety, and concerns of cancer recurrence were obtained before the visit. Measures of uncertainty, state anxiety, and blood (lymphocyte counts, serum cytokine levels) were obtained just before, and the morning after the follow-up visit. Women endorsed on average 5 symptoms related to previous cancer treatment and 4 co-morbid illnesses. Survivors reported decreased uncertainty (68%) and state anxiety (48%) post visit; 30% were unable to achieve their desired decision-making role with providers; NK cells increased in 70% of women (t=-2.11, df 24, p=.045). Links were found between changes in pre/post state anxiety and three pro-inflammatory cytokines: CD40L (r_s=-.475; p=.046), TNFa (r_s=-.506; p=.032), and IL2r (which can be both pro and anti-inflammatory; r_s=-.609; p=.007). Changes in uncertainty were associated with changes in CD40L (r_s=-.501; p=.021). Concerns about cancer recurrence were linked with changes in CD19 cell counts (that activate B cells eliciting antibody production; r_s=-.390; p=.024;) and pro-inflammatory IL1b (r_s=-.443; p=.050). Findings support the emotionally distressing nature of breast cancer follow-up visits. Increases in pro-inflammatory markers post visit suggest that follow-up visits trigger cognitive processes that may cause women to reflect on their cancer experience longer than previously thought (prolonging immune alterations), despite receiving good news. This study supports the need for longitudinal research to evaluate associations and moderators (e.g. trait anxiety; the patient-provider relationship) of emotional distress and immunity during follow-up care for breast cancer survivors.

Funding: University of Utah Foundation Seed Grant

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B-008

CULTURE, PERCEPTIONS OF HEALTHCARE MISTREATMENT, AND CANCER SCREENING

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Despite improvements in breast and cervical cancer screening, disparities between Latin American (Latino) and non-Latino White (Anglo) women in the U.S. have actually increased over the last decade. Research also points to ethnic variations in patients' perceptions regarding the quality of their healthcare and its impact on future interactions with health professionals. The purpose of this research is to examine potential underlying factors such as cultural beliefs and related psychological processes that may account for disparities in cancer screening continuity of care between Latino and Anglo women. Guided by Betancourt's model for the study of culture and health behavior, this research examined the influence of negative cultural beliefs about healthcare professionals on cancer screening continuity of care, both directly and indirectly through perceptions of healthcare mistreatment and mistreatment-related anger. Structural equation modeling revealed an excellent fit for Anglo and Latino women, respectively [CFI=1.00, $\chi^2(22)= 17.12$, $p=.758$, RMSEA<.001; CFI=.975, $\chi^2(22)=32.73$, $p=.066$, RMSEA=.060]. In both ethnic groups, greater negative cultural beliefs predicted greater perceptions of mistreatment, which in turn, predicted greater anger. Multigroup structural equation modeling however indicated noninvariance of two structural paths. For Anglo women, perceptions of mistreatment directly predicted cancer screening ($\beta=-.51$, $p=.011$; Latino: $p=\text{ns}$) whereas for Latino women, mistreatment related anger mediated the effect of perceived mistreatment ($\beta_{\text{indirect}}=-.14$, $p=.01$; Anglo:$p=\text{ns}$). Sequential release of these noninvariant paths significantly improved model fit [final model: CFI=.995, $\chi^2(51)=54.68$, $p=.337$, RMSEA=.017]. This research moves beyond the comparative analysis of group differences in health behavior and explains disparities in screening based on cultural and psychological factors that can be targeted through intervention efforts. Findings will be discussed in terms of their implications for culturally appropriate healthcare.

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B-009

QUALITY OF LIFE IN HISPANIC BREAST CANCER SURVIVORS: LESSONS LEARNED FROM IMPLEMENTING A COLLABORATIVE APPROACH

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Few studies have investigated quality of life (QOL) in Spanish speaking Hispanic breast cancer survivors, with language barriers and cultural differences presenting challenges for researchers. This pilot study was modeled after a previously successful study with African American and Caucasian breast cancer survivors. The objectives were two-fold: to collect preliminary data for Hispanic breast cancer survivors and to tailor the data collection procedure to the unique characteristics of this population. The present study included 25 Hispanic women aged 24–61 years, who primarily were stage 2 and 3 breast cancer survivors, with mean time since diagnosis of 5 years. Participants' country of origin were 44% Mexico, 44% other Latin American countries, 8% United States, and 4% Other. All participants were recruited from a Spanish-speaking Hispanic support group. The leader of the group collaborated with the research team, encouraging group member participation. Participants completed questionnaires in Spanish that included measures for: QOL, spirituality, social support, and coping. 40% of participants reported acculturative stress. While most women reported high functional and physical health related QOL, only 60% reported a high emotional well-being. 88% of the women strongly endorsed drawing a sense of purpose from their spirituality, along with a preference for religious, emotion-focused, and active coping strategies. Although there were moderate endorsements of tangible, self-esteem, and appraisal social support, 92% of the women endorsed belonging to groups as their primary source of social support. Researchers returned to the group and presented the findings in a focus-group format, discussing how findings applied to the women's lives and participants were encouraged to openly reflect on the implications and value of the results. Based on these pilot results, a follow up study is planned that will include an age-matched control who have not had breast cancer to determine the unique impact of breast cancer on QOL in Hispanic women.

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B-010

THE FUTURE OF SURVEY METHODS: USING AN AUDIENCE RESPONSE TECHNOLOGY SYSTEM TO COLLECT RESEARCH DATA AMONG AFRICAN AMERICAN ELDERS

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Older, low-income African Americans (AA) are least likely to participate in research. Individually reading surveys to participants within familiar settings addresses barriers and yields greater levels of trust and completion rates. However, this process is often labor intensive and time consuming. Innovative uses of technology may be a strategy to expedite data collection among AA elders within community settings. The purpose of this study is to evaluate the effectiveness of an Audience Response Technology System (ARTS) in collecting survey data from AA elders.Participants were recruited from senior centers and were surveyed in groups of 15–30. Each participant was given a handheld wireless remote and a brief tutorial. Survey questions and answer choices were projected one question at a time on a screen while the PI read the question aloud. Participants pushed the button on their remote corresponding to their answer choice. Responses were electronically recorded. The final sample contained 83 participants. The majority were female (79%), AA (80%), and between the ages 50 and 75 (60%). The survey consisted of 85 questions, including response sets of true/ false (36%), yes/no (19%), five-point Likert scale (27%), and multiple choice (18%). True/false questions had the highest rate of missing data (20%) and time spent per question (39secs). Yes/no questions had the lowest (10%) and least time per question (26secs). The majority were comfortable using the device (72%). ARTS offers a reliable, less time consuming alternative for data collection among AA elders. Additional research is needed to test ARTS with different populations.

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B-011

LUNG CANCER CONVERSATIONS: ANALYZING THE CONTENT OF NCI'S LIVEHELP SERVICE

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Background: NCI's Cancer Information Service (CIS) disseminates evidence-based cancer information to the public via phone and email. In 2003, CIS added LiveHelp (LH), an instant messaging chat service. To date, there has been no systematic assessment of the purpose, discussion topics, and resources utilized in LH sessions focused on lung cancer, the most common non-sex specific malignancy discussed via LH. Methods: 25 LH transcripts were randomly selected from 100 lung cancer-specific chats between April 1 and June 30, 2009. Results: The average chat lasted 23 minutes, contained 695 words and averaged 10 conversation entries for the contact and Information Specialist (IS). Over 75% of chats were initiated by a family member of a lung cancer patient, usually the patients' children. The top chat topics included diagnosis, treatment and prognosis; very few chats addressed tobacco use. While most contacts reported a loved ones' lung cancer diagnosis, there was notable ambiguity related to pathology (non-small vs. small cell), disease stage, and primary diagnosis vs. secondary metastasis. ISs often clarified these important clinical variables before addressing the contact's concerns. Quantitative data was frequently provided by the IS related to lung cancer survival and treatment efficacy; yet, there was little discussion of clinical trials or palliative care. Over 90% of chats included referrals to NCI web resources, over two-thirds included specific behavioral recommendations, and nearly one-third referenced the contacts' intention to take action. Ratings showed that ISs demonstrated empathy, answered most queries fully, and assessed understanding consistently. Conclusions: Lung cancer LH discussions are generally initiated by family members and address key clinical issues such as diagnosis, treatment, and prognosis which can be clarified through improved communication with health providers. Analyzing the manifest content of information exchanged in chat sessions provides a unique opportunity to optimize cancer communication via LiveHelp.

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B-012

A TEXT ANALYSIS OF CAREGIVER SUPPORT IN ONLINE SUPPORT GROUPS

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Most of the 12 million cancer survivors in the US were assisted by a family caregiver. Caring for someone with advanced cancer is a stressful responsibility, frequently leaving little time for caregivers to get the support they need. Caregivers are increasingly turning to the Internet for support. While social support is usually focused on the patient; little is known about the actual experiences and support needs of caregivers. The Wellness Community (TWC)has developed professionally led online support groups (OSGs) for cancer patients and caregivers. Little is understood about how support is exchanged among cancer caregivers online, especially among those dealing with loved ones with advanced cancer. Guided by the Social Support Behavioral framework, the study aims to describe types of social support exchanged among caregivers participating in an OSG.

Methods: Guided by the SSB model, weekly TWC OSG caregiver transcripts were analyzed and coded (N=47 OSG sessions) with respect to 5 distinct support themes: information, esteem, network, emotional, tangible. Sessions lasted 1.5 hours.

Results: Preliminary data suggests that emotional support is the most predominant type of support exchange in the caregiver OSG.Out of 674 coded support messages, 52% were providing emotional support to others (e.g., I am sitting here so sad for each of you. My eyes are full of tears."). 18% were providing esteem by communicating confidence in their peers' abilities to fulfill caregiving roles. Caregivers were more likely to provide information support (14.7%) than to request it from others.

Discussion: The present study suggests that cancer caregivers may have unique opportunities for social support through an OSG. Exchanging emotional and information support is a key avenue of support in OSGs among caregivers. This method provides researchers with an opportunity to better understand the experience of caregivers and their unmet needs through their lived experience.

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B-013

GROUP-BASED TRAJECTORY ANALYSIS AND PATTERNS OF CHANGE IN CAREGIVERS' PSYCHOLOGICAL DISTRESS

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Group-based trajectory analysis is an innovative statistical method to identify distinct populations over time. We used this approach to characterize patterns of change in distress using shortened scales (depressive symptoms (CESD), anxiety (POMS), and caregiver burden (CRA)) in caregivers (CG) of persons with primary malignant brain tumors. In an ongoing longitudinal study, 98 CGs were interviewed within a month of their care recipients' diagnosis and at 4, 8, and 12- months afterwards. We used SAS Proc Traj to select models based on clinical criteria and statistical judgment. We identified 2 trajectories for depressive symptoms, 2 for anxiety, and 3 for caregiver burden. An estimated 61.2% of CGs had low CESD (range:0–30) scores at baseline (mean (M)=5.3) and remained low (M=2.7) at 12-months (p=0.06 for trajectory slope); the remaining CGs (38.8%) had high scores at baseline (M=14.4) that significantly decreased by 12-months (M=9.1; p=0.01). An estimated 20.4% of CGs had low POMS (range: 3–18) scores at baseline (M=6.0) that decreased significantly (M=4.0) at 12-months (p=0.002); the remaining CGs (79.6%) had high scores at baseline (M=10.2) that decreased significantly by 12-months (M=7.8; p=0.001). An estimated 20.4% of CGs had low CRA (range:5–25) scores at baseline (M=10.5) that decreased significantly (M=6.4) at 12-months (p<0.001); the intermediate trajectory included 26.5% of CGs with consistent scores at baseline (M=14.2) and 12 months (M=11.0; p=0.51); the majority of CGs (53.1%) had consistently high scores at baseline (M=19.7) and at 12 months(M=20.0; p=0.85). This approach identifies trajectories over time and estimates the size of each trajectory group. Using this approach, CGs at higher risk for psychological distress, such as the 53.1% of CGs with relatively high burden could be identified at baseline, and interventions could be targeted appropriately.

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B-014

PRELIMINARY VALIDATION OF AN ENGLISH VERSION OF THE FEAR OF CANCER RECURRENCE INVENTORY IN A SAMPLE OF BREAST CANCER SURVIVORS

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The Fear of Cancer Recurrence Inventory (FCRI), a multidimensional 42-item questionnaire evaluating seven components of the fear of recurrence (FoR), was initially developed and validated with French-speaking Canadian cancer survivors. An English language version of the FCRI was created by the measure developers using forward-backward translation procedures. This study characterizes the psychometric proprieties of the English version. A sample of 147 U.S. early-stage breast cancer survivors who underwent surgery, chemotherapy, and/or radiotherapy between 6–24 months previously (mean = 11 mo.) completed measures of FoR (FCRI and modified Cancer Worry Scale), depression (Center for Epidemiologic Studies Depression Scale), and perceived risk and severity of a cancer recurrence. Basic demographic and clinical information was also collected. The internal consistency of the FCRI English version was excellent (α=0.95) and similar to the original version. As expected, a strong correlation was observed between the FCRI and the modified Cancer Worry Scale (r = .83, p < .001), supporting convergent validity. The FCRI was moderately associated with depression symptoms (r = .66, p < .001), perceived risk (r = .52, p < .001), and perceived severity of a cancer recurrence (r = .51, p < .001), demonstrating concurrent validity with constructs related to, yet distinct from FoR. Finally, higher scores on the FCRI were related to younger age (r=-.18, p < .05) as reported in previous FoR studies. There were no significant associations of the FCRI with disease stage, time since diagnosis, treatment type, treatment duration, time since treatment completed, or other demographic variables such as education or income. These findings provide preliminary evidence for the validity of the FCRI English version. Further research is needed to fully validate the FCRI English version and confirm the seven-factor structure of the original French version.

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B-015

ANATOMIC INCIDENCE OF PRIMARY BRAIN TUMORS IN THE UNITED STATES

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Background: In U.S. CNS tumors account for 2.5% of all cancer deaths. Among blacks, brain tumor death rates vary by geographic region, with the South and the Midwest having higher death rates than other regions of the U. S. The objective of this study is to examine underlying patterns of primary brain tumor incidence, with respect to demographic & clinical factors, to help understand observed differences in mortality.

Methods: A total of 63,722 malignant primary brain tumors Dx from 1999 to 2004 among those > 20 years were analyzed. Data were from population-based cancer registries, & represent 92.1% of the U.S. population. Cases were analyzed by race and U.S. census region. Cases were stratified into two clinically-relevant, anatomic categories: 1) eloquent (cerebrum and parietal lobe; n=17,328); 2) non-eloquent (frontal pole, temporal and occipital lobes, ventricles, cerebellum, brain stem, pineal, pituitary glands; (n=46,394).

Results: For all races, non-eloquent brain tumors were more frequently diagnosed than eloquent brain tumors. White men and women had the highest rates of both eloquent (1.64 per 100,000) and non-eloquent tumors (4.44) (p< 0.0001), and rates among whites did not vary significantly across regions of the U.S. Significant regional differences in tumor incidence did occur among blacks, who had the second highest brain tumor rates (0.93 and 2.11 for eloquent and non-eloquent, respectively). Non-eloquent brain tumors were significantly higher among blacks in the Northeast (2.37, p<0.05) compared to other U.S. census regions, whereas eloquent brain tumors were significantly higher in the South (1.03, p<0.05).

Conclusions: The higher incidence rates of eloquent brain tumors among blacks in the South may be related to differences in behavior or lifestyle, or exposure to environmental risk factors. The higher eloquent tumor incidence rate in the South may contribute to the higher death rates in this region, as eloquent brain tumors are generally treated less aggressively in order to preserve speech and quality of life; however, more studies are needed to verify

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B-016

BINATIONAL COMPARISON OF BREAST CANCER KNOWLEDGE AND EARLY DETECTION PRACTICES AMONG LATINA WOMEN RESIDING ALONG THE U.S.-MEXICO BORDER

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Background: Breast cancer (BC) is the most commonly diagnosed cancer and leading cause of cancer related deaths among women worldwide. Evidence suggests Latinas residing along the US-Mexico border have disproportionately higher BC mortality rates than Latinas in the interior of either country. Due to similarities in these populations, risk factors associated with BC may be unique to Latinas in this area.

Purpose: The purpose of this study was to assess levels of BC knowledge, attitudes, and preventive screening practices between Mexican and US Latina women residing along the US-Mexico border.

Methods: For this binational cross-sectional study, 265 participants completed an interviewer-administered questionnaire that obtained information on sociodemographic characteristics, knowledge, family history, and preventive screening practices. Differences between Mexican (n=128) and U.S. Latina (n=137) participants were assessed by Pearson's $\chi 2$, Fischer's Exact test, t-tests, and multivariate analyses.

Results: Mexican women had significantly higher levels of BC knowledge (Knowledge Score=0.84) compared to U.S. Latinas (Knowledge Score = 0.77), although Mexican participants were more likely to believe that they did not need to worry about BC at their age ($p<0.05$). U.S. Latinas had significantly higher odds of ever receiving a mammogram/breast ultrasound (adjusted OR=3.69, 95% CI: 1.61, 8.48) and clinical breast exam (adjusted OR = 3.41, 95% CI: 1.44, 8.12) compared to their Mexican counterparts. Age, educational attainment, insurance status, and knowledge were found to be significantly associated with early detection practices among the study population.

Conclusion: U.S. Latinas were more likely to have ever performed breast cancer screening procedures, even though Mexican women had greater levels of BC knowledge. Further research is needed to examine other factors of BC screening utilization, and ultimately poorer survival rates, among US-Mexico border Latinas.

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B-017

PREDICTING OLDER ADOLESCENT GIRLS' INTENTIONS TO HAVE THE HPV VACCINE

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Background: Human papillomavirus (HPV) vaccination to prevent cervical cancer is now widely available for 9–26 year old women. Much research has examined why parents will accept this vaccine for their children. In the UK girls over the age of 16 can consent to vaccination themselves but less research has considered why they may or may not choose to have the vaccine.

Methods: N=606 older adolescent girls eligible for free HPV vaccination in the UK completed a questionnaire. Two items assessed their strength of intention to have the HPV vaccine (e.g. I intend to have the HPV vaccine; responses 0= strongly disagree to 4=strongly agree) that were averaged to create an intention score; vaccination beliefs, social cognition variables and demographic characteristics were also measured. Predictors of intention were analysed.

Results: Intentions to have the vaccine were strong (mean=3). 59% of the variance in vaccination intentions could be explained by the variables under investigation ($p<.01$). Intentions to have the HPV vaccine were lower in girls who believed their parents would not let them have the vaccine, felt less vulnerable to HPV, held negative attitudes to vaccines generally, did not believe the HPV vaccine to be safe or effective at preventing HPV, were not interested in having more information or were scared of needles. Subjective norm, age and socioeconomic status did not predict vaccination intentions.

Conclusions: Acceptability of the vaccine was high. Even though older adolescent girls can consent to HPV vaccination themselves they are unlikely to have it if they believe their parents will not let them. Perceptions of risk played an influential role in vaccination decisions. Vaccination coordinators must cautiously address risk in vaccine information materials given the rarity of cervical cancer in countries with cervical screening programs. Concern about this vaccine and vaccines generally may influence vaccination decisions. In a country whose government is providing the vaccine for free at the point of receipt socioeconomic factors appear not to influence vaccination intentions.

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B-018

USING RISK LEVEL TO GUIDE BREAST CANCER RISK REDUCTION AND SCREENING RECOMMENDATIONS

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Modifiable and non-modifiable risk factors play a role in breast cancer (BC) development. Risk assessment tools are available for predicting BC risk; however, most rely heavily on family history. Genetic mutations only account for up to 10% of BC cases. PURPOSE: To determine the impact of using a comprehensive surveillance-modeling network assessment tool, The Rose Form, to identify BC risk, leading to risk factor reduction and screening recommendations based on risk level. METHODS: The Rose Form was developed to obtain information on modifiable and non-modifiable risk factors with responses used to identify risk for BC in females. Participants (N=3039) completed The Rose Form and were categorized by risk level (low, moderate, high) based on age, personal and family history of BC, menstrual history, parity, breast feeding history, use of hormone replacement therapy and oral contraceptives, benign breast disease, diet, body composition, alcohol consumption, smoke exposure, physical activity, and stress level. Lifestyle modification and surveillance recommendations specific to risk level were provided to participants. Ten years after completing The Rose Form, a follow-up survey was used to determine the impact of risk reduction and screening recommendations on lifestyle choices and BC surveillance. The follow up survey was completed by 473 participants. RESULTS: Chi-square tests revealed a difference in concern for BC between low and high risk participants, with 44% of low and 58% of high risk participants being more concerned as a result of participation ($p<.05$). Screening for BC changed in 50%, 59% and 61% of participants in the low, moderate, and high risk groups, respectively. CONCLUSION: The use of The Rose Form to identify BC risk followed by risk level specific lifestyle modification and screening recommendations may be an efficacious means to enhance BC awareness and screening habits without causing undue concern in women at lower risk.

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Meritorious Student Poster
B-019

STRESS AND MOTHER-CHILD INTERACTION IN FAMILIES OF CHILDREN WITH CANCER

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Cancer is the second leading cause of death in children (NCI, 2007). Children with cancer and their parents face numerous stressors that may increase the risk of poor adjustment. Although mothers may be an important source of support for their children, few studies have examined the relations between stress and mothers' interactions with their children close to diagnosis.

Mothers (N=24) of children ages 5–17 being treated for cancer completed the Responses to Stress Questionnaire (Campbell et al., 2009) about their children's stressors (e.g., painful procedures) and their own stressors (e.g., concerns about their child's prognosis). Item scores were summed to create total stress scores. Mothers and children also participated in a videotaped interaction in which they discussed the child's cancer. Interactions were coded for mothers' positive (child-centered) and negative (intrusive) parenting as well as children's behaviors using the Iowa Family Interaction Ratings Scale.

Correlational analyses indicated that mother and child stress were positively correlated ($r = .43$, $p = .04$). Mothers' observed child-centered and intrusive behaviors were negatively correlated ($r=-.76$, $p < .01$), and mothers' intrusiveness was positively correlated with children's avoidance ($r = .45$, $p = .03$). Mothers' stress was also positively correlated with their intrusiveness ($r = .41$, $p = .05$) and their children's avoidance ($r = .37$, $p = .07$). Regression analyses indicated that the relationship between mother stress and child avoidance was no longer significant after accounting for mother intrusiveness ($\beta = .23$, $p = .29$).

The findings suggest that cancer-related stress is related to interaction behaviors in families of children with cancer. Furthermore, mothers' stress may negatively impact their parenting and their children's avoidance when communicating about cancer. Future studies should examine the relations between stress, mother-child interaction, and later adjustment outcomes in these families.

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B-020

PARENT-CHILD COMMUNICATION ABOUT CHILDHOOD CANCER: ROLE OF MOTHERS' ANXIETY AND PERCEPTIONS OF PROGNOSIS

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The diagnosis and treatment of cancer in a child presents parents with significant stress. Parents of children with cancer are at increased risk for psychological distress, including anxiety (Pai et al., 2007), which can constrain their ability to communicate with their children. The current study examined parents' communication in relation to their self-reported anxiety and perception of their child's prognosis near the time of the child's diagnosis. Participants were children on active treatment for cancer (age 5–17) and their mothers who participated in a videotaped interaction (N = 23 dyads) in which they talked about the child's cancer. Interactions were coded for mothers' effective communication using the Iowa Family Interaction Rating Scales. Mothers' current emotional distress was assessed with the Beck Anxiety Inventory, a self-report measure with good psychometric properties (Beck et al., 1990). Mothers' perception of their child's prognosis was the mother's belief on a scale of 0 to 100% that their child would be cancer-free 5 years from the time of the assessment. Mothers' ratings of their child's prognosis were inversely related to self-reported anxiety ($r=-.55$, $p < .01$) and to observed quality of their communication ($r = .60$, $p < .01$). Mothers' anxiety symptoms were also inversely related to communication ($r=-.52$, $p < .01$). In linear regression analysis, mothers' ratings of prognosis significantly predicted their communication ($\beta = .60$, $p < .01$); when anxiety symptoms were entered into the equation prognosis remained a marginally significant predictor of communication ($\beta = .42$, $p = .06$) and anxiety was not significant ($\beta=-.33$, $p = .13$). These findings suggest that mothers who perceive their child as less likely to survive may communicate less effectively; this is not fully accounted for by their anxiety. Future interventions teaching parents how to communicate with their child about cancer may target parents who perceive their child as less likely to survive.

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B-021

RELATIONSHIP OF SMOKING AND PAIN IN CANCER PATIENTS

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There is growing interest in possible associations between smoking and pain; however, few studies have examined this relationship among cancer patients. Such a relationship in this population might impact planning for pain management and smoking cessation interventions. We hypothesized that current smokers would report more severe pain, more interference from pain, and greater distress from pain than former smokers and never smokers. Patients about to start chemotherapy completed questionnaires assessing smoking history (never smokers n=80, former smokers n = 108, current smokers n=36), bodily pain severity and its interference with normal work (MOS SF-36), and pain-related distress (MSAS-SF). Participants (N = 224, mean age=56 years) were predominantly female (63%), Caucasian (88%), and college-educated (59%). Results indicated a main effect for smoking status on pain severity ($p = .02$) and interference from pain ($p < .01$), but not pain-related distress ($p = .21$). Additional comparisons showed that current smokers reported greater pain severity than never smokers ($p < .01$) but not former smokers ($p = .09$). There was no difference in pain severity between former and never smokers ($p = .12$). Current smokers also reported greater interference from pain than former smokers and never smokers ($ps < .01$). There was no difference in interference from pain between former and never smokers ($p = .78$). These findings suggest that among cancer patients, current smokers may experience more bodily pain and pain-related interference with daily work than never smokers. Thus, when addressing smoking cessation among cancer patients, pain management should be adequately considered. Also, these findings may lead to interventions aimed at motivating non-smokers to remain abstinent and current smokers to quit.

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B-022

PREDICTORS OF SATISFACTION WITH CARE FOR GAY MEN WITH PROSTATE CANCER

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The existing literature on prostate cancer (PCa) treatment satisfaction with care has focused on the impact of demographic and medical variables (Noh et al., 2008) while underemphasizing physical and psychosocial predictors. The few studies that have examined these factors suggested that abating physical symptoms (Hoffman et al., 2003) and the presence of good social interactions (Wright & Frey, 2008) predicted greater treatment satisfaction reported by cancer patients. Further, the unique experience of gay men (GM) with PCa has scarcely been investigated in the empirical literature (Blank, 2005). The present study examined the association of psychosocial and disease-related factors on patient-reported treatment satisfaction in GM with PCa. Sixty-six self-identified gay and/or bisexual men diagnosed with PCa completed an online survey that assessed their sexual function, satisfaction with healthcare, and ejaculatory, urinary and bowel bother (Expanded Prostate Cancer Index; Wei et al., 2000), as well as, sexual orientation outness level, illness intrusiveness (Devins et al., 1984), and amount of partner communication (Porter et al., 2005). A stepwise multiple regression was performed with patient satisfaction as the outcome variable, and aforementioned variables as predictors. Data revealed that greater frequency of patient-partner communication ($\beta = .52$, $p < .001$), and lower bowel bother ($\beta = .30$, $p < .01$) significantly predicted higher patient satisfaction with PCa care (Total R2 Adj = .38). No other significant predictors were found after including partner communication and bowel bother. While previous literature emphasized the importance of medical factors (Jayadevappa et al., 2009), the present study demonstrated that within a sample of gay men, communication was the most significant predictor of patient satisfaction. The current study highlights the potential benefit of interventions addressing relationship factors, specifically communication, for gay men undergoing prostate cancer treatment.

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B-023

MOOD, PERCEIVED BLAME, AND COPING ARE INFLUENCED BY ATTRIBUTIONS OF CANCER CAUSATION IN LUNG CANCER SURVIVORS

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BACKGROUND: Attributions of cancer causation may influence psychological functioning and coping behaviors in lung cancer survivors. Previous research on lung cancer-related attributions has suggested that those with lung cancer often do not attribute their cancer to smoking-related behaviors (Salander, 2007), although they may experience significant blaming and stigmatization (Chapple et al., 2004) from others in their lives, including caregivers (Lobchuk et al., 2008).
METHODS: 154 lung cancer survivors with a history of smoking were recruited from 2 large cancer centers in Southern California. Participants completed self-report measures on attributions of cancer causation, perceived blame/stigmatization, coping (brief COPE), and psychological functioning (CES-D).
RESULTS: The most commonly endorsed attributions of lung cancer causation included smoking (88.7%), air pollution (71.1%), others' smoking (67.2%), stress (58.6%), and family history (52.9%). Greater attributions of cancer to one's own smoking behavior were associated with more avoidance coping ($\beta = .27$, $p = .001$), greater depression ($\beta = .20$, $p = .015$), and higher levels of perceived blame ($\beta = .61$, $p < .001$), guilt ($\beta = .32$, $p < .001$), and social stigmatization ($\beta = .42$, $p < .001$). Greater attributions of cancer to external agents were associated with more problem-focused coping ($\beta = .21$, $p = .016$) but were not associated with depression or perceived blame/stigmatization. Greater attributions to chance were associated with significantly less perceived blame ($\beta=-.29$, $p = .001$). These associations remained significant after controlling for pack-years of smoking.
CONCLUSIONS: Despite having similar smoking-related histories, attributions of cancer causation differ across lung cancer survivors and appear to be associated with different outcomes of coping behavior, psychological functioning, and perceived blame/stigmatization.

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B-024

EXPRESSING EMOTION ABOUT TRAUMATIC EXPERIENCES: THE COMPARISON OF SELF-REPORT AND BEHAVIORAL MARKERS

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Emotional expression has been identified as a potential mechanism of action in psychosocial interventions for cancer survivors, but previous studies have relied on self-report, rather than behavioral, measures. In our work with Internet-based interventions, emotional expression has been measured using both self-report and behavioral (i.e., linguistic) methods. Understanding the interplay between self-report and behavioral markers of emotional expression will be increasingly important as methods for capturing behavioral data are more readily available in text format. In this study, we sought to evaluate the convergent validity of these methods using the Emotion-Generative Model developed by Gross and John (1997). 240 healthy adults completed the Berkeley Expressivity Scale and other self-report measures prior to engaging in 3 consecutive days of standardized expressive writing tasks. Behavioral markers of emotional expression were identified using a perl-based implementation of Linguistic Inquiry and Word Count (LIWC). Strength of emotional response tendencies (impulse strength) was associated with behaviorally-identified positive emotional expression over time $F(1, 175)=5.6$, $p = .02$, but self-reported positive emotion expressivity was not. For negative emotions, neither impulse strength nor emotion expressivity were associated with behavioral markers of negative emotional expression. Other self-report indicators of emotional response tendencies (difficulty identifying and describing feelings, self-efficacy for emotional expression) were not associated with behavior markers of either positive or negative emotional expression. These findings suggest that behavioral markers of emotional expression are largely independent from self-reported impulses and emotional response tendencies. Potential modifications of the Emotion-Generative Model could enhance its applicability for understanding mechanisms in intervention studies.

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B-025

QUALITY OF LIFE OF CANCER CAREGIVERS EIGHT YEARS AFTER THE RELATIVE'S DIAGNOSIS

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Evidence has accumulated about the long-term impact of cancer on the survivors' quality of life (QOL), whereas the equivalent information about the family caregivers of cancer survivors remains sparse. In this study, we (1) document variations in the caregiver role at 8 years since the relative's initial cancer diagnosis, (2) test for differences in QOL based on the caregivers' role status, and (3) investigate the demographic and psychological predictors of better QOL. Participants were a cohort of cancer caregivers who initially completed the caregiver survey approximately 2-year post-diagnosis (T1: $n=1635$) and now again at 8 years post-diagnosis (T2: $n=465$). Among T2 caregivers, approximately 55% had care recipients (CR) who were in remission, 7% were actively providing care to the CR, and 38% were bereaved. QOL was measured using the MOS SF-12. Both levels of mental and physical QOL were comparable across these three groups of caregivers ($Fs<.93$, $ps>.40$). While the levels of mental QOL of our samples were comparable to the U.S. population norm, levels of physical QOL were at the 75th percentile of those norms. Finally, generalized linear modeling revealed that age, gender, and caregiving stress at T1 were significant predictors of long-term QOL. Poorer caregiver mental QOL at 8-year follow-up was related to younger age and higher levels of caregiving stress at T1 ($ps>.02$). Poorer caregiver physical QOL was associated with older age, female gender, and higher levels of caregiving stress at T1 ($ps>.02$). The caregiver's self-esteem at T1 and the nature of the caregiver role at 8-year follow-up were not significant predictors of QOL. The adverse effects of T1 caregiving stress on long-term QOL appeared regardless of the current nature of the caregiver role. Findings suggest that caregivers who experience high levels of stress when initially involved in cancer caregiving should be targeted in stress management programs, from which they will get long-term benefit regardless of their CR's prognostic status years later.

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B-026

A LONGITUDINAL EXAMINATION: CANCER-RELATED SEXUAL CHANGES PREDICT POST-TREATMENT QUALITY OF LIFE IN BREAST CANCER PATIENTS

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Objectives: Sexuality is an integral aspect of quality of life (QoL). Disturbances in sexuality can be distressing and persistent for breast cancer patients and are rarely addressed in cancer care. Few studies have explored the relationship between sexuality and broader QoL during treatment and recovery.
Methods: Participants were partnered, newly-diagnosed Stage II-III breast cancer patients ($N=133$). Hierarchical multiple regression (HMR) tested post-surgery (baseline) measures of sexuality as predictors of psychological QoL (SF-36 MCS) at the end of adjuvant therapies (12-months post-diagnosis). Sexuality was conceptualized as having three distinct components: 1) Functional (Desire, Arousal, Orgasm/Resolution, Overall Sexual Responsiveness); 2) Behavioral (Intercourse Frequency, Avoidance, Approach Behaviors); and 3) Affective (Sexual Satisfaction, Depression Related to Sexuality, Satisfaction with Breast Appearance). Separate models tested each component. Variables were entered in the following steps: 1) relevant sociodemographic, disease, and treatment controls; 2) baseline QoL; 3) baseline sexuality. The final step tests the predictive value of sexuality beyond the contribution of control variables and pre-existing individual differences in QoL.
Results: Baseline Sexual Functioning predicted 12 month QoL (R2 change=.144, $p=.020$)., with Orgasm/resolution ($\beta=.533$, $p=.01$), and Arousal ($\beta=-.278$, $p=.05$) as unique predictors. Sexual behavior and Sexual affect were non-significant predictors.
Conclusions: Baseline Sexual Functioning predicted QoL at 12 months, while the Behavioral and Affective components of sexuality did not predict QoL. The current research provides insight into an important clinical problem, since assessment and treatment of sexual problems are uncommon in women's cancers. If sexuality in breast cancer is indeed related to QoL, as these findings suggest, then prevention and treatment of sexual problems may have important secondary benefits for survivors.

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B-027

SYMPTOM EXPERIENCE AND QUALITY OF LIFE IN CANCER PATIENTS

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The IOM report on cancer survivorship noted the short- and long-term impacts of cancer treatment on quality of life (QOL), calling this "the price of survival". We examined the symptom burden of patients finishing treatment for cancer by having patients complete the Memorial Symptom Assessment Scale. We also assessed QOL, using the Functional Assessment of Chronic Illness Therapy, and examined the associations between symptom experience and QOL. We surveyed 600 patients with the five most common cancer diagnoses in our cancer center. The distribution across cancer types was: prostate=234, breast=172, gynecologic=104, lung=47, and colorectal=43. There were slightly more females ($n=319$) than males in our sample. Most had stage 1 ($n=172$) or 2 ($n=295$) disease. Patients reported an average of 6.3 symptoms (range=0–32), with the specific symptoms varying by cancer type. The most troublesome symptoms (most frequent and most severe) varied somewhat by cancer type, but lack of energy was among the top three for all - ranging from 41% (prostate patients) to 74% (colorectal patients). Problems with sexual interest or activity had the highest severity score (range=0–4) across all cancer types ($X=2.6$) and the highest frequency score (range=0–4) across all cancer types ($X=2.9$), and was the most troublesome symptom for prostate patients (69%). The average overall QOL score (range=0–108) for the entire sample was 79.8, with prostate patients reporting the highest overall QOL ($X=85.1$) and gynecologic patients reporting the lowest overall QOL ($X=73.1$). There was a significant difference among the cancer groups on overall QOL score ($F=9.6$, $p<0.001$). Overall QOL was significantly correlated with number of symptoms ($r=.24$, $p<.01$), as well as severity of symptoms ($r=-.60$, $p<.01$). These results indicate that the cancer experience varies depending on the specific cancer diagnosis, but that symptom burden is significantly related to patients' QOL. These findings suggest that attention to patients' symptom experience is important as one avenue for facilitating good quality of life.

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B-028

PREDICTORS OF EARLY-STAGE BREAST CANCER SURVIVORS' CONCERN ABOUT RECURRENCE TWO YEARS AFTER DEFINITIVE SURGICAL TREATMENT

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Little is known about factors predicting early-stage breast cancer patients' concern about recurrence. In a prospective study of 506 first primary breast cancer patients (173 ductal carcinoma in situ, 258 stage I, 75 stage IIA; mean age at diagnosis 58 years, range 40–89; 81% white), we collected demographic and psychosocial measures at 6 weeks, 6 months, and 1 year after definitive surgical treatment and measured patients' concern about recurrence using the Concern About Recurrence Scale during the 2-year follow-up interview. Clinical data were obtained from medical records. We used three multivariable linear regression models to identify independent predictors of greater concern, each with time-independent variables and time-varying variables that were measured at each one of the first three time points. The mean concern about recurrence score was 2.0 on a 1–6 scale; however, 29% reported moderate-to-high levels of concern (scores$\geq$3.0). Younger age, higher perceived risk of recurrence, and higher levels of anxiety consistently predicted greater concern about recurrence (each $p<.05$). Lower levels of social support measured at the first interview ($p=.0060$) and more severe surgical side effects ($p=.0196$) and depressive symptoms ($p=.0193$) measured at one-year follow-up also predicted greater concern. More advanced cancer stage, which was significantly associated with greater concern in the univariate test, was not a predictor of concern about recurrence in the multivariable models. In conclusion, almost one-third of early-stage breast cancer patients reported moderate-to-severe concern about recurrence at 2-year follow-up. Greater concern was correlated with younger age, higher perceived risk of recurrence and other psychosocial variables but not cancer stage, which was expected to be independently predictive of concern. Early-stage patients with high levels of concern might benefit from knowing their actual risk of recurrence, especially if their risk of recurrence is quite low.

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B-029

LONGITUDINAL ASSESSMENT OF CHANGES IN QUALITY OF LIFE (QOL) AMONG PROSTATE CANCER (PC) PATIENTS

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Given the high expected survival rates following a PC diagnosis, understanding the trajectory of changes in multiple domains of QOL during the years after diagnosis and treatment is needed. While many studies focus on specific aspects of QOL, few studies present a comprehensive assessment. We looked at a variety of QOL indicators among 46 PC patients through questionnaires mailed prior to treatment, and at 1-month, 6-months, 1-year, 2-years, and 3–5 years after treatment. Three measures of physical QOL assessed physical well-being (FACT), sexual functioning (Prostate Cancer Index) and PC-related symptoms. Domains of emotional QOL measured included depression (CESD), stress (IESR), and affect (PANAS). Feelings of vulnerability, positive meaning making, and fears of recurrence also were measured. Data were analyzed using a repeated measures ANOVA design. Results pertaining to physical QOL indicated that symptoms and physical well-being significantly worsened immediately following treatment and gradually improved, returning to pre-treatment levels by 1 and 2 years post treatment, respectively ($ps<.01$). In contrast, sexual functioning showed no significant improvement during the 1st year post treatment but improved during the 2nd year ($p=.01$). With regard to emotional QOL, depression and positive affect remained stable across time, while significant improvements in negative affect and stress from pre-treatment levels were observed at 1-month and 1-year ($ps<.01$) following treatment, respectively. Positive meaning making, vulnerability, and fear of recurrence did not change over time. For the patient, his family, and his physician, understanding the varied and dynamic trajectories of multiple domains of QOL is important for facilitating accurate expectations over the course of diagnosis, treatment, and recovery.

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B-030

DOES EXPRESSIVE WRITING BENEFIT DISTRESSED WOMEN WITH METASTATIC BREAST CANCER?

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Although expressive writing has produced health benefits for women with early-stage breast cancer (Stanton et al., 2002), little research has examined the utility of this intervention for people with advanced cancer despite their increased likelihood of greater physical and psychological symptoms. In this ongoing study, metastatic breast cancer (MBC) patients with significant psychological distress are being randomly assigned to engage in an expressive writing or a control writing task. Women in the expressive writing condition write about their deepest thoughts and feelings regarding their cancer experience, whereas women in the control writing condition write about their daily activities without expressing emotions. Participants are instructed via telephone to engage in four, 20-minute writing sessions over four weeks.

To date, 61 of 87 women have completed standardized assessments at baseline and 8-weeks post-intervention, and 8 (9%) have discontinued participation. The majority of study completers were Caucasian (80%) and college educated (62%), and their average age was 58 years (SD = 13). The average time since MBC diagnosis was 4 years (SD=3), and 79% received chemotherapy during the study.

Three multivariate analyses of covariance were conducted on conceptually related groups of variables with baseline values as covariates: (1) meaning/peace and demoralization, (2) anxiety, depression, and general distress, and (3) global sleep quality and fatigue. At follow-up, the expressive writing and control groups did not differ on any outcome variables (Wilks = .94–.97, all $ps > .10$).

Findings suggest that expressive writing does not enhance the well-being of distressed women with MBC. Although expressive writing is effective for non-cancer populations (Frattaroli, 2006), research has not found significant effects of this intervention on cancer patients' mental health (e.g., de Moor et al., 2008; Gellaitry et al., 2009). Further research is needed to identify subgroups of patients that may benefit from expressive writing.

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B-031

HEALTH BEHAVIORS AMONG LONG-TERM SURVIVORS OF PEDIATRIC STEM CELL TRANSPLANTATION

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Pediatric bone marrow and stem cell transplantation (SCT) have been used increasingly in recent years to treat a range of hematological diseases. However, the literature remains quite limited regarding long-term behavioral and psychosocial sequelae as these children survive and grow to adulthood. In particular, important questions have been raised about survivors' health practices (e.g., due to fatalism, perceived invulnerability, lack of long-term follow-up, etc.). Given the enormous difficulties of obtaining sufficient accrual in any single institution, this novel, multi-center collaborative group pilot study was implemented by the Pediatric Blood and Marrow Transplant Consortium. We examined a range of health behaviors and screening practices (e.g., physical exams and screening visits, smoking, substance use, diet, exercise, vaccinations, insurance coverage, driving safety, volunteer involvement, etc) among survivors at least 5 years post-transplant. Survivors were a median of 11.0 years post SCT; mean age was 23.4 years, and 55.6% were male.

We found few indications of poor health practices in survivors, relative to healthy age- and gender-matched controls. Survivors were less likely to have obtained a routine eye exam ($p< .05$), which may be of concern in view of the incidence of ophthalmologic late effects. On the other hand, survivors were less likely to ride with a driver who had been using alcohol ($p< .05$). Fear of recurrence was tied to greater likelihood of speeding ($p< .001$). Overall, there were few hints of compromised screening or self-care. If substantiated, these findings would offer a measure of reassurance regarding health practices among long-term survivors of pediatric SCT.

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B-032

THE ROLE OF SPIRITUALITY IN FINDING BENEFITS FROM STRESSFUL LIFE EVENTS IN BREAST CANCER SURVIVORS AND THEIR PEERS

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The current study compared breast cancer survivors (BCSs) with cancer free controls (CFCs) on levels of benefit finding, spirituality, and perceived stress due to breast cancer or another stressful life event (e.g., divorce, job loss, relationship problems). Research has indicated that having breast cancer is a stressful life event that is associated with a myriad of negative outcomes (Morrill, Brewer, O'Neill, Lillie, Dees, Carey, et al., 2008). Similar negative outcomes have also been found following experiencing stressful life events other than illness (e.g., Boelen & Reijntjes, 2009). Luckily, negative life events can also lead to positive outcomes such as benefit finding: personal growth due to finding meaning in the event (Krumrei, Mahoney, & Pargament, 2009). Although benefit finding has been studied in relation to cancer, little is known about benefit finding following other stressors. Furthermore, little is known about how benefit finding occurs or what role spirituality might play in this process. To answer these questions, a community based, diverse sample of BCSs (N=144) and age and ethnically matched CFCs (N=144) completed a questionnaire packet that included FACIT-SP and the PTGI. It was hypothesized that: (1) experiencing breast cancer would be viewed as more stressful than experiencing other negative life events, (2) BCSs would report greater benefit finding following breast cancer than CFCs following other stressors, and (3) spirituality would mediate the relation between event type (cancer vs. other stressful event) and benefit finding. A mediation model supported the second (F(1,284)=32.44, p<.0001) and third hypothesis (F(1,283)=4.77, p<.05). Surprisingly however, experiencing breast cancer was rated as less stressful (M=3.82) than experiencing other negative events (M=4.50; t(199)=5.51, p<.0001). Results suggest that although greater stress may not be the main catalyst for benefit finding, greater spirituality may help in initiating or continuing the benefit finding process.

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B-034

TESTING THE EFFECTIVENESS OF MOTIVATIONAL INTERVIEWING AS A PRIMARY WEIGHT REDUCTION STRATEGY IN OBESE CARDIAC PATIENTS

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In the last two decades, obesity among adults ages 20–74 has risen from 15.0% to 32.9% (USDHHS, CDC, 2007). The prevalence of obesity in the U. S. is a concern because obese individuals are at increased risk for chronic health problems, including heart disease, high blood pressure, Type 2 diabetes, arthritis-related disabilities, and some types of cancer. The goal of the current study was to examine the efficacy of Motivational Interviewing (MI) for weight loss in 57 obese cardiac patients. MI is a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence (Rollnick, Miller, & Butler, 2007). Participants were assigned to an MI or nutrition control group and followed over three to six months. Participants had monthly meetings with the motivational interviewers. Results indicated significant reduction in body mass index (BMI) in women in the MI group over three months, but not in men or those in the nutrition control condition. At six months, the MI group continued to have significantly lower BMI than at baseline. Limitations of the study include a small sample size and attrition over time. Findings could inform health care providers attempting to assist cardiac patients with healthy behavior change. Further, the results raise questions about the relative responsiveness of men and women to motivational interviewing for weight loss.

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Meritorious Student Poster
Citation Poster
B-035

COMPARATIVE PHYSIOLOGICAL EFFECTS OF TWO POPULAR RELAXATION TRAINING TECHNIQUES

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Relaxation training has been shown to be an effective supplementary treatment for many physical and mental disorders amongst many patient populations and is thought to operate physiologically by inducing a hypometabolic state. However, the relative effectiveness of differing relaxation components remains unknown. Thus, the present study is comparing the physiological effects of two such components, diaphragmatic breathing (DB) and mantra recitation (MR) specifically, to a control condition (CC) after a stressful math task. Healthy participants were derived from a medical school sample (N=40; 65% women; age 21–34 (M=25); 63% Caucasian) and were randomly assigned to the treatment (TX) groups. Electrocardiogram and respiration were measured during a 10-min baseline, 6-min Math task, and 10-min recovery period. Spectral heart rate variability (HRV) components of high frequency (HF) and low frequency (LF) power and LF/HF ratio were analyzed. Repeated measures ANCOVAs [TX group (3)-x-Baseline to Recovery (2)] on HRV were conducted. Controlling for BMI, DB and MR produced significantly>HF power (p <.001 and p < .01 respectively), < LF power (p <.001 and .01) and<LF/HF ratios (p <.001 and .01) than controls. Our findings provide preliminary evidence that DB and MR both generate beneficial physiologic benefits with DB showing the greatest benefits.

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B-036

SLEEP DURATION, OBESITY, AND BLOOD PRESSURE IN ADOLESCENTS

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Disruption of circadian rhythms may be a risk factor for the development of cardiovascular disease and other health problems. Recent studies in youth have shown that short sleep duration is associated with obesity and elevated blood pressure (BP). The purpose of this study was to examine whether short sleep duration is related to cardiovascular risk variables, including body mass index (BMI), waist circumference, skinfold measures, and systolic (S) and diastolic (D) BP, in adolescents.

Adolescent boys (n = 109) and girls (n=39), ages 15–17, with SBP and/or DBP at or above the 90th percentile adjusted for gender, age, and height (n= 57), as well as normotensive controls (n=91), participated in a screening of cardiovascular risk variables, and a 7-day activity recall that included sleep duration. Individuals were categorized into short (<7 hrs) (n=37) and non-short ($\geq$7 hrs) (n = 111) sleepers based on the average sleep time reported over 7 days.

Analysis of baseline data indicated mean sleep duration of 7.6 hours (SD = 1), commensurate with epidemiological findings in adolescents. Short and non-short sleepers did not differ on BP status, χ^2 (1)=3.4, p=0.1. In separate independent samples t-tests, short sleep duration was associated with higher BMI (M=31.1, SD=9.2), waist circumference (M=38, SD=8), subscapular (M = 26.6, SD = 14.5) and suprailiac (M = 26.9, SD = 14.1) skinfolds, and SBP (M = 122.3, SD = 12.8) (*ps*<0.05).

These findings suggest that shorter sleep duration may interact with traditional risk factors and contribute to obesity and BP across time. This underscores the need to consider sleep duration (and quality) when evaluating adolescents at risk for cardiovascular disease.

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B-037

STRESS BURDEN IN WORKING MOTHERS: A CONCEPTUAL MODEL OF HEART DISEASE RISK

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Coronary heart disease (CHD) is the leading cause of mortality for adult women. Despite improved survival rates among men, risk for women, particularly working mothers, has worsened during the last decade. The absence of a biological explanation to account for this discrepancy has led some to look to psychosocial factors. The common experience of women in multiple roles that often are more diffusely distributed between childcare, housework, and job than for men, may increase stress burden and contribute to elevated CHD risk via more intense and prolonged cardiovascular reactivity. We seek to develop and support a conceptual model that focuses on the interplay among psychophysiological mechanisms and environmental/contextual factors that may increase risk for CHD in women. Unique to this model is the incorporation of background stress that may more accurately capture the stress burden underlying the multiple roles women assume. Methods: Participants (n=488) completed the Background Stress Inventory (BSI), a 50-item measure comprised of 5 domains: financial, occupational, environmental, health, and social. The average age was 25.97 (*SD*=7.71); approximately 35% of the female respondents had children. Results: Women reported greater levels of overall background stress compared to men ($p<.01$). Further, working mothers reported a greater stress burden than working women without children on the financial, occupational, and health subscales of the BSI ($p<.05$). Preliminary analyses indicated associations between resting blood pressure (BP) and background stress for a subset of the sample. Conclusions: Women reported more background stress compared to men, a difference that increased with children. The reported BP data are preliminary in nature but support our perspective that working mothers contend with an under-recognized stress burden that conceptually may contribute to changes in CHD risk in this population. This model would provide a basis for considering policy change to better assist working mothers and serve as a blueprint for psychosocial preventative strategies.

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B-038

DEPRESSIVE SYMPTOMS AND TREATMENT EFFECTS: HISPANIC AND CAUCASIAN PATIENTS WITH MYOCARDIAL INFARCTION FROM ENRICHD

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Depression (Dep) is prevalent among patients with an acute Myocardial Infarction. Hispanic is currently the largest ethnic group, which reported more Dep symptoms (Sx) than Caucasians (Mendelson, et al., 2008). Differential treatment effects for Dep were observed across ethnic groups (Schneiderman, et al., 2004). However, research is mixed about ethnic differences in subtypes of Dep. Thus, it is necessary to further examine Dep Sx across groups and to indicate the importance of developing effective interventions targeting specific Dep Sx. A total of 1878 MI patients (256 Hispanics, 1622 Caucasians) were included, a subgroup from the Enhancing Recovery in Coronary Heart Disease (ENRICHD) project with a multicenter clinical trial of cognitive behavior therapy (CBT) to treat Dep and low social support from October 1996–1999. All participants were randomly assigned to a CBT or usual care group. The CBT group had 125 Hispanics and 819 Caucasians. The Beck Depression Inventory (BDI) was administered at baseline and 6 months post-treatment. A confirmatory factor analysis was conducted using Mplus to evaluate the fit of the BDI model initially derived by the literature. The two factor (Cognitive-16 items & Somatic-12 items) model was tested separately for each group and further for multiple group comparisons; 8 items cross loaded onto both factors. At baseline, all Cog and Som items significantly loaded onto the two factors for Caucasians, but 7 cross-loading items did not load significantly onto the Cognitive factor for Hispanics (chi-square diff (6, N=1878)=15.11, p=.02; CFI/TLI=.92/.95; RMSEA=.05). Baseline Cog and Som Dep means were significantly different between groups, indicating Hispanics exhibited significantly more somatic symptoms than Caucasians (b=.30 & .23, respectively, $p < .01$). Measurement invariance by ethnicity was supported at 6 months (chi-square diff(6, N=1413)=3.23, p=.78; CFI/TLI=.97/.99; RMSEA=.05). The implication of the findings suggests that future interventions for depression should target somatic Sx for Hispanics to maximize treatment effects.

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B-040

ASSESSING DIABETIC PATIENTS' PERCEPTIONS OF THE MARGINAL VALUE OF A1C REDUCTIONS

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Purpose: Current standards suggest a target of HgbA1c<7% for most adult patients with diabetes, and clinical trials show that decreasing HgbA1c from poor to moderate levels (e.g. 10% to 9%) confers greater health benefits than reductions from moderate to target levels (e.g., 8% to 7%). Psychology research suggests, however, that a patient who makes incremental reductions but remains far from a target may not see such reductions as valuable or themselves as successful. This study aimed to assess perceived health risk reductions and motivation states associated with varying degrees of A1c reductions among both diabetic patients and non-patients.

Methods: 354 patients and family members drawn from a combined endocrinology / podiatry clinic waiting room completed an anonymous survey assessing the perceived health outcomes and motivations of a hypothetical patient who reduced his A1c from 10% to 9%, as compared to a similar patient who reduced A1c from 8% to 7%.

Results: Our sample included 100 Type II diabetics, 65 Type I diabetics, and 189 non-diabetics. Overall, only 15% correctly identified the larger health benefit of decreasing A1c from 10% to 9% versus from 8% to goal, and 42% gave the clearly incorrect response that going from 8% to 7% had the largest risk reduction. We observed some differences between groups: only 9% of Type II diabetics answered the question correctly, versus 14% of non-diabetics and 27% of Type I diabetics ($p<0.01$). Respondents also believed patients would feel more successful when reducing A1C from 8% to target than when going from 10% to 9% ($p<0.01$).

Conclusions: Most people do not understand that the marginal benefit of A1c reduction is largest for extreme values and gets smaller as A1c nears target levels, a fact that directly impacts patients' motivation to adhere to treatment or behavior change efforts. This work suggests that most patients have not been educated about the importance of poor-to-moderate improvements in A1c and that the attention paid to A1c targets may undermine adherence by diverting attention from the true goal: improved health outcomes.

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B-041

PARENTAL INVOLVEMENT IN HISPANIC AND CAUCASIAN FAMILIES OF ADOLESCENTS WITH TYPE 1 DIABETES: A PILOT STUDY

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Research about the influence of parental involvement on adolescents with type 1 diabetes in the Caucasian population is well documented, however little is known about parental involvement in Hispanic populations. The current pilot study examined adolescent perceptions of parental involvement among Hispanic and Caucasian parents. Participants thus far included 26 adolescents with type 1 diabetes (ages 10 to 15 yrs, illness duration > 1 year; 35% female; 27% on insulin pump) and their mothers. The current findings are based on teen reports of daily stressful events (Multicultural Events Scale-Adolescent), and individual interviews regarding diabetes related stressful events and parental involvement. Hispanic participants reported significantly higher scores on the family conflict scale of the MESA (t=2.472, p=.021). Preliminary qualitative analysis explored how perceived family conflict was associated with parental involvement in diabetes management. Hispanic adolescents reported that their mothers responded emotionally (i.e. became angry) when diabetes management was going poorly (50%); where as none of the Caucasian adolescents reported their mothers responded similarly. Additionally, Caucasian adolescents were more likely to report that their mothers responded with behavioral discipline (i.e. revoking privileges; 31% Caucasian versus 13% Hispanic). Hispanic adolescents rated their fathers significantly lower in diabetes monitoring than Caucasian adolescents (t=-2.543, p=.042), and were more likely to report that their diabetes stressors do not affect their fathers (t=-2.262, p=-.035). Qualitatively, Hispanic participants stated that their fathers were not informed about diabetes management and therefore could not participate (38%). These findings demonstrate that parental involvement functions differently in Caucasian and Hispanic families of adolescents with type 1 diabetes.

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B-042

DEVELOPMENT OF A COMMUNITY-BASED PARTICIPATORY BEHAVIORAL INTERVENTION TO REDUCE THE IMPACT OF TYPE 2 DIABETES ON AN INNER CITY NEIGHBORHOOD

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In the US today, Latino and African American communities are at excess risk from the growing epidemic of type 2 diabetes. A recent survey documented rates of diabetes of 21% among Puerto Rican adults in one Chicago neighborhood,three times the national prevalence. This finding prompted formation of a collaboration between community members and an academic health center to develop interventions to improve diabetes self-management. The Block-by-Block trial is based on the principle that community and environmental factors have profound impact on the ability to engage in self-management behaviors crucial to the prevention and management of diabetes. To date, "top-down" public health campaigns have had only a modest impact on these behaviors. In contrast, multi-level community development approaches that emphasize how individuals interact within their environment have been successful at reducing disease risk at a community level. Developed in collaboration with the affected population, the Block-by-Block intervention builds on community assets including robust community based organizations and neighbors trained as community health workers. The study will test the efficacy of this multi-level approach to reduce the impact of type 2 diabetes mellitus on the health of residents of a low income, multi-ethnic 72-block area of Chicago. Over 13,000 residents will be contacted by "Diabetes Block Captains" and screened. Those found to have diabetes will receive individualized self-management training and will be encouraged to participate in community-wide activities that promote healthy eating, physical activity, and effective use of the health care system. Markets, pharmacies, churches, community centers,and other social infrastructure will also support behavior change. Primary outcomes include reduction in Hemoglobin A1c among persons with type 2 diabetes mellitus, and improvements in use of self-management behaviors.

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B-043

OBJECTIVELY MEASURED LIGHT-INTENSITY PHYSICAL ACTIVITY IS INDEPENDENTLY ASSOCIATED WITH TYPE 2 DIABETES IN AFRICAN AMERICANS

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Type 2 diabetes prevalence is high among African American (AA) adults in the U.S and is increasing dramatically. Light-intensity physical activities (LPA), such as light housework, are common forms of activity among U.S. adults. This study examined the association of objectively measured LPA and type 2 diabetes among AAs. Participants were 263 adults (53.4±11.9 yrs, 78% women, BMI 32.7±7.3) recruited from 48 AA churches. LPA was measured by Actigraph accelerometers. Data from actigraphs worn for at least 10 hours/day on 3 days were included. Cutpoints were 0–99 counts/minute for sedentary activity, 100–759 for LPA, and≥ 760 for moderate-to-vigorous physical activity (MVPA). Mean mins/day of each PA intensity was calculated. Type 2 diabetes was indicated by self-report. Multiple regression models accounted for the dependency among participants from the same church. Covariates were age, gender, education, self-rated health, BMI, fruit and vegetable intake, and fat intake. Mean mins/day of sedentary, LPA, and MVPA were 554±99 (65% of wear time), 216±55 (25%), and 84±48 (10%). Of the total sample, 21% (N=55) were diabetic. After adjustment for potential confounders, higher levels of LPA was significantly associated with lower risk of type 2 diabetes (OR=0.992, CI=0.985–1.000, p=.0435). This significant association remained after adjusting for MVPA (OR= .99, CI= .981-.998, p=.0182), and MVPA and sedentary activity (OR= .989, CI= .981-.997, p=.006). MVPA and sedentary activity were not associated with diabetes. Based on our findings, a 10 min/day increase in LPA is associated with an 11% reduction in risk for type 2 diabetes among AAs. These findings provide objective evidence that LPA is independently associated with type 2 diabetes in AAs. In conclusion, study participants spent a considerable amount of time engaged in sedentary activity during the day. Replacement of sedentary activity with even LPA among AAs warrants further investigation.

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B-044

ASSOCIATIONS BETWEEN SHARED DECISION MAKING WITH PHYSICIANS AND ILLNESS PERCEPTIONS IN ADOLESCENTS WITH TYPE 1 DIABETES

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Adolescents with chronic illness desire a collaborative relationship with their physician where communication is directed towards them and they are involved in shared decision making (SDM; Beresford & Sloper, 2003, Britto et al., 2004). Adolescents with type 1 diabetes who report higher levels of SDM with their physician report more positive affect and perceive themselves as more competent to handle diabetes management (Croom et al., 2009). It is unknown, however, how SDM is related to illness perceptions, which are important to on-going illness self-management. The current research examined if teen reports of SDM were associated with adolescent perceptions of their illness. Self-reports of variables were obtained from 190 early adolescents with type 1 diabetes (ages 10 to 15 yrs, illness duration > 1 year; 53% female; 55% on insulin pump) immediately following a clinic visit, and again six months later. Metabolic control (Hba1c) was extracted from medical records. Perceived SDM with physicians was associated with adolescent's initial reports of more personal control over diabetes treatment (r=.357, p=.000), more parental control over diabetes treatment (r=.229, p=.003), and a higher belief that the treatment itself would be effective in controlling diabetes (r=.277, p=.000). Adolescents who reported higher levels of SDM also reported more benefits to diabetes (e.g., diabetes has helped me become a stronger person; r=.334, p=.000) and that diabetes is better integrated into their daily life (r=.334, p=.000). The majority of these variables remained correlated with SDM six months after the clinic visit. All correlations remained significant when Hba1c at baseline was covaried, indicating SDM associations are independent of this salient index of the quality of illness management. Findings suggest that SDM between physicians and adolescents is associated with adolescents feeling that their diabetes is more manageable and less disruptive to their daily life.

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B-045

DIABETES EDUCATORS' PHYSICAL ACTIVITY AND EXERCISE-RELATED PERCEPTIONS AND PRACTICES 12 MONTHS AFTER RECEIVING THE PHYSICAL ACTIVITY AND EXERCISE TOOLKIT

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Diabetes educators (DEs) are a key resource for those living with diabetes and are in a position to promote physical activity and exercise (PAE); however, DEs often feel inadequately trained to effectively counsel patients on PAE and report low levels of self-efficacy regarding PAE counseling. The present study evaluated the long-term effectiveness of the 'Physical Activity and Exercise Toolkit' to improve DEs' perceptions, practices and reported barriers concerning PAE counselling. DEs were assigned to either a 'Toolkit' intervention (TI) or standard care condition (SC). Cross-sectional sampling was done at baseline and 12-months with DEs completing measures of efficacy, attitudes, perceived difficulty, barriers to counselling and PAE counselling practices. MANOVAs and chi-square tests revealed no significant differences on DE perceptions or practices between groups at baseline; however, the TI group reported lack of knowledge and lack of time as barriers to PAE counselling more frequently than did those in SC (ps<.05). Analyses at 12-months indicated that the TI group had significantly higher counselling efficacy (58.0 vs 50.4), and knowledge (3.44 vs 3.07) yet reported higher perceived difficulty (2.98 vs 2.37) compared to those in SC (ps<.04). Further, at 12-months more DEs receiving the TI reported lack of interest by clients (p =.007), and lack of time (p=.001) as barriers to PAE counselling. Managing patient co-morbidities was cited as a barrier by more DEs in SC (p=.05). These results support previous work demonstrating the effectiveness of the 'Toolkit' to improve knowledge and counseling efficacy; however, challenges of perceived difficulty and specific barriers, remain. Further, there is a need to translate changes in perceptions into changes in practice to improve overall efficacy of PAE counseling in diabetes practice.

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B-046

CORRELATES OF METABOLIC SYNDROME AMONG US ADULTS

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Metabolic syndrome (MetSyn), a clustering of risk factors that include obesity, dyslipidemia, abnormal blood glucose, and raised blood pressure (BP), has been shown to be a risk factor for type 2 diabetes and cardiovascular disease. The purpose of this study is to describe factors associated with MetSyn among US adults using the 2005–2006 National Health and Nutritional Examination Survey (NHANES) data. Adults aged 20 and older (N=4979) were included in the analysis and those who had at least four valid days (i.e., at least 10-hr wear time of the ActiGraph) including one weekend day were selected for physical activity level (step counts and intensity counts) analysis. MetSyn was defined according to the National Cholesterol Education Program definition in terms of waist circumstance, BP, and blood biochemistry and diabetes was defined based on fasting glucose level and 2-hr oral glucose tolerance test. To estimate sampling errors based on the complex sampling design of the NHANES, data analyses were conducted with SAS 9.1. Weighted data showed the mean age of participants (51.9% female; 71.8% Non-Hispanic White) to be 46.6 years (95% CI for mean: 46.0 - 47.1). The mean body mass index (BMI) was 28.6 kg/m^2 (95% CI: 28.3 - 28.8). Among participants, 81% reported having any type of health insurance, 46.3% rated their health as excellent or very good, and 42.2% were everyday smokers. Approximately 73% reported their diet was healthy, 49% reported reducing fat/calories in diet, and 44.2% had ≥ 10000 steps per day (mean: 9797.7, 95% CI: 9625.3 - 9969.9). About 31% of adults with MetSyn had diabetes and 52% had a family history of diabetes. Older age, everyday smokers, race (Mexican American or other Hispanic), and high BMI were significant predictors to having MetSyn. Those with MetSyn reported significantly less step counts (8496 vs. 10105) and intensity counts (846 vs. 866) than those without MetSyn. These findings will be used to further develop interventions for reduction of these metabolic risk factors for type 2 diabetes and cardiovascular disease.

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B-048

EFFECTS OF A MINDFULNESS-BASED PARENTING INTERVENTION ON PARENTAL EMOTIONAL DISTRESS

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Novel strategies are needed to foster effective parenting skills. Our university-based mindfulness program has partnered with the local health department to offer Mindfulness Based Parenting (MBP) classes. From 2004–09, 86 participants (95% female; mean age 39±10yrs) enrolled in MBP training and completed the Profile of Moods Short Form (POMS-SF), which assesses overall mood and 6 mood subscales, at baseline and at the conclusion of the course. Originally an 8wk course, in 2007 the MBP intervention was abbreviated to 4wks. The purpose of this analysis is to determine: 1) if there are differential effects on parental emotional distress following completion of the 4wk vs. 8wk MBP training; and 2) if there are racial differences in mood changes following MBP training. Using repeated measures ANOVA, statistically significant improvements ($p<0.001$) were observed for total mood score (η^2=0.29), anger (η^2=0.20), anxiety (η^2=0.20), confusion (η^2=0.12), fatigue (η^2=0.28) and vigor (η^2=0.21) with no difference based upon course length (partial η^2 reported). Depression significantly improved in the 8wk course but not the 4wk course. There was no racial variation in POMS-SF values at the conclusion of the intervention. In a post-hoc, subgroup analysis of those with complete demographic information (n=52; 38% Caucasian/62% non-Caucasian), Caucasians had significant improvement ($p< 0.001$) in total mood score, anxiety, vigor and fatigue following MBP training compared to non-Caucasians who did not demonstrate significant change in these outcomes. Change in anger, confusion and depression did not differ by race following the intervention. These findings suggest that mindfulness training may have beneficial effects on emotional distress in parents attending MBP training, however significant racial differences exist. Since few mindfulness interventions to date have included racially diverse populations, future study is necessary to determine if these findings are specific to the MBP intervention or to mindfulness interventions in general.

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B-049

THE MEDIATING ROLE OF ACCULTURATION IN HEALTH-RELATED INTERNET USE AMONG LATINAS

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The Internet is the third most employed source for obtaining health information. Little is known, however, about its use by Latinas. To address this gap, we examined demographic and psychosocial predictors of health-related Internet use among Latinas, including the effects of acculturation. We predicted that acculturation would serve as a mediator between health locus of control and health-related Internet use, age and health-related Internet use, income and health-related Internet use, and education and health-related Internet use. Data were collected via a 25-minute self-report questionnaire. The sample consisted of 932 young (mean age = 21.27 years, SD = 2.47), low-income Latinas recruited at five publicly funded reproductive health clinics. Using structural equation modeling, we observed that acculturation did partially mediate the relation between health locus of control, age, education, and health-related Internet use and fully mediated the relation between income and Internet use (χ2 (44) = 130.02, p-value=0.000; CFI= 0.956; RMSEA=0.000; WRMR=0.738; R2 = 0.295). An internal locus of control, younger age, higher income, and more education were associated with higher levels of acculturation. Higher levels of acculturation, younger age, and more education predicted health-related Internet use. The Internet is a powerful tool that can be employed to effectively disseminate information to Latinas with limited access to health care professionals. These findings can aid in the design of health information dissemination studies, delivered via the Internet, that target Latinas.

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B-050

COLLEGE STUDENTS' COVERAGE AND PERCEPTIONS OF HEALTH INSURANCE

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Objectives: Most research on perceptions of health insurance has examined cross sections of the adult population. This is one of the first studies to examine undergraduate college students' coverage and perceptions of health insurance.
Methods: The participants were undergraduates at 12 of the 13 public universities in Ohio during fall 2008 and spring 2009. Valid and reliable 40 item questionnaires (n=1800) were equally distributed to faculty at 12 public universities.
Results: A total of 1367 (75.9%) surveys were completed. Most students (59.9%) believed that the federal government should have the primary responsibility to ensure that Americans have health insurance and 53.3% felt that the best way was through universal health insurance from the federal government. Perceptions varied by race, political affiliation, and health insurance status.
Conclusions: Undergraduate students appear to have formed opinions about health insurance similar to general adult consumers of health services. These perceptions may have been obtained by transfer of perceptions from family and friends. A more formalized undergraduate education approach to educating future leaders of society regarding health insurance should be considered. Policy changes to reduce disparities in health status among groups of college students should be explored.
Keywords: Health insurance, Health care costs, Health disparities, Health policy, College students

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B-052

A SIMPLE SINGLE ITEM RATING SCALE TO MEASURE MEDICATION ADHERENCE: FURTHER EVIDENCE FOR CONVERGENT VALIDITY

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Background: Self-report measures of adherence are inexpensive and minimally intrusive. However, the validity of self-reported adherence is compromised by recall errors for missed doses and socially desirable responding. The Visual Analogue Scale (VAS) for adherence asks individuals to consider a specified time period, such as the previous month, and estimate along a continuum the percentage of medication doses (0% to 100%) that they had taken as prescribed. The VAS may be particularly useful in clinical settings given that it is a simple single item. Purpose: We examined the convergent validity of two self-report adherence measures; structured recall of missed doses and the single item VAS. Methods: recall of missed medication doses used a standard day-by-day interview. The VAS asks respondents to estimate the percentage of medications taken in the previous month. Both measures were administered by computerized interview. Adherence was also monitored using unannounced phone-based pill counts which served as an objective assessment of adherence to compare with self-report adherences. Results: VAS adherence estimates paralleled unannounced pill counts. In contrast, self-reported recall of missed doses consistently over-estimated adherence. Correlations among the three measures were moderate, r's ranging from .34 to .58. Similar results were obtained for concordance using categorical cut-offs to define adherence. The association with viral load was significant for all three adherence measures. Correlations with participant characteristics also suggested that the VAS was less influenced by response biases than self-reported recall of missed medication doses. Conclusion: The single item VAS offers an inexpensive and valid method of assessing medication adherence in clinical as well as research settings.

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B-053

ATTITUDES REGARDING CIRCUMCISION AMONG HEALTHCARE PROVIDERS IN STD AND PRENATAL CLINICS

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Hispanics in the US have lower rates of male circumcision (MC) and higher rates of HIV. Though MC has been demonstrated to reduce HIV, HPV and HSV-2 transmission, MC is only medically reimbursable by insurance for adults or children following recurrent infection, injury or malformation of the penis. We conducted two studies of attitudes regarding MC among healthcare providers to Hispanic clients at Miami, Florida STD and Prenatal Clinics. This study presents qualitative data drawn from intensive interviews with 12 providers, including a "Mohel" (a provider certified to provide circumcision for neonates in accordance with Jewish tradition). Qualitative data was analyzed for dominant themes and collapsed into overarching themes. Thirteen themes emerged; acceptability, appearance, circumcision and children, circumcision and HIV, cost, cultural differences, health benefits, knowledge and personal experiences, pain and injury to the penis, perceived HIV risk, religion, sexual performance and sexual pleasure. Attitudes regarding MC differed between national/cultural group and gender. Excepting the Mohel, Hispanic male providers related MC acceptability to Amer. Pediatric guidelines, personal circumcision status and were skeptical regarding health benefits for STD/HIV risk reduction. Female providers focused on the financial burden to parents of neonates, lack of information and low acceptability among Hispanic men. This study illustrates the differing attitudes on circumcision held by providers, and suggests that gender, culture, cost and providers themselves may limit MC acceptability among Hispanic clients. Results suggest that promotion of MC as an HIV risk reduction strategy must begin with the support of medical practitioners to promote the endorsement of MC as a prevention strategy. Promotion of MC as a reimbursable medical procedure for adults, children and neonates as a long range HIV risk reduction strategy is discussed. Study supported by NIH grants P30AI073961 & P60MD002266.

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B-054

IS HIV-RELATED STIGMA A VULNERABILITY FOR MENTAL HEALTH, SUBSTANCE ABUSE, AND SEXUAL TRANSMISSION RISK BEHAVIOR AMONG HIV-INFECTED MSM?

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Background: Previous HIV secondary prevention research has identified cognitive and affective processes that are associated with increased risk of sexual transmission behavior among people living with HIV. Comparatively less attention has been paid to social and contextual determinants (e.g., HIV-related stigma) that may confer increased risk for sexual risk behavior. The current study examined the relationships between HIV-related stigma and symptoms of anxiety and depression, substance abuse, and HIV sexual risk behavior.

Methods: These relationships were examined in a patient sample of HIV-infected MSM (n=503) who were screened for inclusion in a secondary HIV-prevention intervention (mean age=41.9; 75.1% Caucasian; 48.3% had less than a college education). Participants completed ACASI assessments at baseline. We used self-report measures with strong psychometric properties to assess psychological symptoms, as well as substance abuse and sexual behavior. Participants also completed a 4-item measure of HIV-related stigma (e.g., "I feel ashamed that I have HIV").

Results: HIV-related stigma was associated with numerous mental health burdens, including symptoms of PTSD (r=.18, p<.001), depression (r=.19, p<.001), panic (r=.17, p<.001), and generalized anxiety (r=.15, p=.001). In addition, HIV-related stigma was associated with HIV transmission-risk behaviors, including unprotected receptive anal intercourse with unknown or negative partners (r=.21, p<.001). No significant relationships emerged with substance abuse (r=.03, p=.48).

Conclusions: These results suggest that HIV-related stigma is associated with multiple adverse mental and behavioral health consequences. Given these associations, further studies to understand the causal pathways and to develop interventions that decrease perceived stigma may enhance the efficacy of HIV prevention interventions.

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B-055

EFFECTS OF DEATH THOUGHTS ON HIV TESTING BEHAVIOR

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HIV tests can help reduce the spread of HIV (Leaity et al., 2000). However, being tested is threatening because it may reveal that one is already infected. The current research explored psychological factors that affect young adults' willingness to get tested for HIV.

This research was based on the terror management health model (Goldenberg & Arndt, 2008), which proposes that death-related cognitions stemming from health information affect health behaviors. People attempt to remove mortality concerns from consciousness either by suppressing thoughts of death or by behaving in ways that reduce the risk of death. Thus, thoughts of mortality can motivate either preventative or avoidant behaviors.

College students (N = 154) read an article that indicated that students are very likely or not too likely to contract HIV. Following this vulnerability manipulation, students wrote about death or about an aversive control topic before choosing to take either an HIV test or an HIV knowledge assessment. A logistic regression analysis revealed that the interaction between the death salience and vulnerability conditions significantly predicted participants' testing behavior, $\chi 2$ (1, 117)=7.32, p = .05. In the low vulnerability condition, students who wrote about death were 57% less likely to get tested for HIV than those who wrote about dental pain (OR=0.43). In the high vulnerability condition, students who wrote about death were 135% more likely to get tested than those who wrote about dental pain (OR = 2.35). These data suggest that among people who feel vulnerable to HIV infection, mortality salience enhances HIV testing behavior, and among people who do not feel vulnerable to HIV, mortality salience decreases testing behavior.

This research is important because despite the fact that the public health community no longer considers HIV a death sentence, people continue to associate the disease with death (Weibust et al., under review). Therefore, when people think about HIV they may experience death-related cognitions that affect their own health behaviors in different ways depending on how vulnerable they feel to the disease.

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B-056

HIV ALTRUISM AND SEXUAL BEHAVIOR IN HIV-POSITIVE WOMEN AND HETEROSEXUAL MEN

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Positive psychology seeks to identify and develop the human strengths that enable people to thrive. Relatively little research in health psychology has examined relationships between the constructs of positive psychology and health-relevant behaviors. One exception to this is “HIV altruism,” the propensity to protect one’s sexual partners from HIV. In previous work, higher scores in HIV altruism predicted lower rates of sexual risk behavior in HIV-positive gay and bisexual men (O’Dell et al., 2007). HIV-positive gay and bisexual men may be particularly likely to engage in protective behavior given the effect that HIV has had on the gay community. The present study sought to broaden this research by examining relationships between HIV altruism and sexual risk behavior in a sample of HIV-positive women and heterosexual men (N=110). Participants completed measures of demographic information, HIV altruism, and sexual risk behavior. HIV altruism was not simply a function of demographics: it was not associated with education, income, or age, and did not differ by gender, race, or employment status. It was also unrelated to health status indicators (CD4 count, viral load, medication status). However, HIV altruism did predict sexual risk behaviors. HIV altruism was negatively associated with all unprotected vaginal and anal sex (rho=-0.28, p<.01) and was negatively associated with unprotected vaginal and anal sex with partners who were HIV-negative or whose HIV status was unknown (rho=-.0.23, p<.05). Future research should examine the antecedents of HIV altruism. Interventions designed to reduce HIV transmission may benefit from efforts to promote HIV altruism, empathy for sexual partners, and other human strengths.

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B-057

SOCIAL CONSCIOUSNESS, SUBSTANCE USE, AND SEXUAL RISK BEHAVIOR IN GAY AND BISEXUAL MEN

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Positive psychology seeks to understand the human strengths and virtues that enable people to succeed and to thrive. Relatively little research in health psychology and behavioral medicine has examined relationships between the constructs of positive psychology and health-relevant behaviors. The present study assessed associations between social consciousness, substance use and sexual risk behavior in gay and bisexual men. Participants attending a gay pride celebration (N=350) completed measures of social consciousness, demographics, substance use and sexual risk behavior. Social consciousness was associated with years of formal education (r=0.23, p <.01), but was unrelated to age, employment status, income, or HIV status. Men who self-identified as gay had higher social consciousness scores (M = 19.25, SD= 3.61) than men who self-identified as bisexual (M = 17.67, SD=4.47), t (333) = 2.98, p <.01). Social consciousness scores were negatively correlated with the use of ecstasy (rho=-0.12), cocaine (rho = -0.15), ketamine (rho = -0.14), rophynol (rho = -0.21), GHB (rho = -0.16), and heroin (rho = -0.11; all ps <.05). Social consciousness scores were unrelated to the use of alcohol and marijuana. Importantly, social consciousness was also negatively correlated with the number of partners with whom participants had unprotected receptive anal sex (rho=-0.16, p < .01), the highest risk behavior for HIV. Interventions designed to reduce HIV risk behavior in gay and bisexual men may benefit from efforts to promote social consciousness and other human strengths.

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B-058

ACROSS ETHNICITIES, CONDOM NEGOTIATION MAY BE EASIER ON-LINE THAN OFF

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HIV/AIDS continues to pose a severe health threat to men who have sex with men (MSM), especially men of color. In the present study, we sought to assess the relationship between ethnicity, unprotected anal intercourse (UAI) and condom negotiation self-efficacy on a granular level. We first developed a context-specific measure of self-efficacy. One subscale measured the degree to which MSM were confident in their ability to negotiate condom use with casual sex partners they might meet in a bar while a second subscale addressed partners the respondents might meet over the Internet. A total of 773 MSM self-identifying as Black, White, or Latino reported rates of UAI (during the prior 3 months) and subsequently responded to the self-efficacy measure. For all 3 ethnicities, higher rates of prior sexual risk-taking were associated with lower levels of both bar self-efficacy and online self-efficacy (all p-values < .05). We conducted a one-way repeated measures ANOVA with bar and online self-efficacy as the within-subjects dependent variables. Ethnicity was the between subjects factor. The results revealed a significant within-subjects effect such that MSM felt more efficacious negotiating condom use with partners they might meet online than with partners they might meet in-person at a bar, F(1, 770) = 29.8, p < .001. There was also a significant between-subjects effect, F(2, 770)=4.15, p < .016. Specifically, Black MSM reported higher levels of self-efficacy than White MSM (p = .008) and Latino MSM (p = .009). Discussed are the links between pick up location (bar, online), condom negotiation self-efficacy, and sexual risk-taking within and across ethnic groups.

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B-059

EXPERIENCES OF SPANISH-SPEAKING PERSONS LIVING WITH HIV ON THE US-MEXICO BORDER

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The unique cultural and linguistic needs of people living with HIV on the U.S./Mexico border, along with the fluidity and risk behavior on both sides of the border in this population have been understudied and present important challenges in health care. We conducted three Spanish-language focus groups at an HIV clinic in El Paso, Texas to explore issues related to adaptation of evidenced-based CBT for non-adherence and depression in HIV-positive Spanish-speaking Latinos. Groups were comprised of 1) treatment-experienced men, 2) gay-identified men, and 3) women; all participants were of Mexican descent. Facilitators explored broad topic areas including understanding of depression, relationships, border crossing patterns, and health beliefs and practices. Transcripts were analyzed using ATLAS.ti qualitative software to reveal recurrent themes. Themes included favorable response toward the CBT intervention, interest in the use of an electronic pill-box reminder, a need for treating depression among those newly diagnosed with HIV, and having a secondary support system (family being primary) buffering against depression. Themes relating to barriers to treatment involved transportation to appointments, transporting medications across the border, and concerns about developing dependence on psychotherapists and psychoactive medications. An overarching theme across groups was a concern with stigma and disclosure of HIV serostatus. Results were consistent with literature suggesting that traditional Latino values (i.e. familismo, respeto) emphasize privacy and harmonious family dynamics, and tend to discourage open discussion of homosexuality, sexual risky behavior, and issues related to HIV, even though disclosure may be necessary to benefit fully from strong social networks. These findings have important implications for adapting treatment strategies to Spanish-speaking people living with HIV on the U.S.-Mexico border.

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B-060

RELATIONSHIP INTERDEPENDENCY: PREDICTING PROTECTION FOR MSM IN PRIMARY RELATIONSHIPS

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HIV in the US is increasing most among young men who have sex with men (MSM), especially for men of color. For MSM in primary relationships, the number of non-primary partners (NPP) with whom one has unprotected anal intercourse (UAI), whether insertive (NPUAI-I) or receptive (NPUAI-R) can impact both their own and their partner's HIV risk. To examine if interpersonal support and feelings of belonging might predict NPUAI-I or NPUAI-R, 327 HIV-negative MSM ages 18–30 in primary relationships reported their sexual behavior in the past 90 days with NPP and responded to (a) The Relationship Interdependency Scale (RIS), (b) the Multidimensional Scale of Perceived Social Support (MSPSS), and (c) The Multigroup Ethnic Identity Measure (MEIM). We hypothesized that the RIS, MSPSS, and MEIM would be negatively associated with UAI with NPP. We conducted two negative binomial regressions in which number of NPUAI-I and NPUAI-R partners were the dependent measures. In both we simultaneously entered the RIS, MSPSS, and MEIM as independent variables. Both regressions showed the same pattern. The MSPSS and MEIM were not significantly associated with NPP risk behavior. For the first regression higher scores in RIS (Exp(B) =.790, CI .666, .936, p=.007) predicted fewer NPUAI-I partners and the omnibus test of the model was significant (χ2=15.6, p=.001). For the second regression, higher scores in RIS (Exp(B) =.751, CI .629, .897, p=.002) predicted fewer NPUAI-R partners, and the omnibus test of the model was significant (χ2=17.6, p=.001). Apparently more general forms of support (i.e., MSPSS and MEIM) are not as predictive as support and closeness from a primary partner. This suggests that encouraging closeness and support in primary relationships between MSM may be an important way to reduce risky sexual behavior with NPP. Future research should examine if institutional changes in structural supports (e.g., legalized gay marriage) help MSM to maintain close primary relationships, thereby reducing the spread of HIV.

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B-062

THE IMPACT OF ETHNIC IDENTITY ON BODY IMAGE IN MIDDLE-AGED AFRICAN AMERICAN AND CAUCASIAN WOMEN

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Over the past few decades, women's exposure to idealized female body images has risen. According to some theorists (Frederickson & Roberts, 1997), internalization of these images may lead to body dissatisfaction. Consequently, women have also reported increasing levels of body discontentment (Cash et al., 2004). Since negative evaluation of one's own appearance may lead to emotional distress (Cash & Deagle, 1997; Greenleaf & McGreer, 2006; Szymanski & Henning, 2007; Slater & Tiggemann, 2002; Powell & Hendricks, 1999), identifying factors that could protect women from experiencing body dissatisfaction may have important clinical implications. Evidence from previous studies suggests that African American women are more likely to report body contentment (Stevens et al., 1994; Gluck & Geliebter, 2002). Therefore, ethnic identity may serve to protect some women from body image disturbance. Research in this area has focused on adolescent and young adult populations, and has ignored body image in middle age. In the current study, middle-class women aged 40–65 completed self-report questionnaires regarding body image concerns as part of a larger study. Of those 289 women who participated, 84 were African American, 169 Caucasian, and 36 fell into the other category. Contrary to our hypotheses, African American women in our sample reported higher levels of appearance control beliefs, t(251)= 2.124, p =0.035 than Caucasian women. Those high in appearance control beliefs are more likely to resort to disordered eating habits such as restricting (McKinley & Hyde, 1996). No other significant ethnic group differences were found in appearance control beliefs, body shame, or appearance anxiety. Findings suggest that Caucasian identity may protect women from developing distorted appearance control beliefs in middle age. Future research should focus on how the relationship between ethnic identity and body image may change across the lifespan, and what other factors protect against body image dissatisfaction.

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B-063

FEASIBILITY OF AN AUTOMATED TELEPHONE SYSTEM FOR BEHAVIOR CHANGE

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Introduction: Poor diet is a known risk factor for heart disease, cancer, and diabetes. Yet, just 11% of adults meet the recommended daily servings of fruits and vegetables (f/v), making diet a deserving target for intervention. The most efficacious interventions are time-consuming and expensive, thus difficult to disseminate. An automated phone system provides one potentially effective method for delivering individually tailored support to a large number of people at a lower-cost. The purpose of this study is to evaluate the acceptability and feasibility of an automated intervention-delivery system, telephone-linked care (TLC), designed to increase f/v intake.
Methods: Adults (18–60) willing to record diet and attend 2 sessions were recruited from Northwestern Univ. Those eligible completed a f/v liking questionnaire and were trained to record intake on a smartphone. Following 2 days of recording, participants uploaded data generating a personalized automated call. The call algorithms were based on 1) number of f/v consumed and 2) f/v liking questionnaire. The call provided feedback about their intake, a goal for consumption, and 5 f/v suggestions. Participants then completed an interview to evaluate the acceptability of the TLC.
Results: Qualitative data (n=13) suggests that the majority found the TLC system helpful or enjoyable and easy to use but over half thought the food database could be improved. Most reported the voice as robotic. Some wanted an alternative method of contact (text or email). Only 1 participant had difficulty accessing TLC. Few reported interest in use of TLC for a 6-month period unless it was improved.
Conclusions: This formative work demonstrates the feasibility of a TLC system designed to facilitate behavior change. The findings suggest that individually-tailored, automated systems may be a convenient and cost-effective population-based approach to promote behavior change. Acceptability of the system would be improved by using a realistic voice and offering participants a choice in the method of delivery.

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Meritorious Student Poster

B-064

SELF-MONITORING BEHAVIORS AND EATING HABITS ASSOCIATED WITH 12-MONTH WEIGHT CHANGE IN OVERWEIGHT/OBESE WOMEN IN A LIFESTYLE BEHAVIOR CHANGE TRIAL

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Background While recent research supports the use of self-monitoring behaviors for weight loss, the role of eating habits in weight management is less clear.
Purpose The aim of this study was to test self-monitoring behaviors and eating habits associated with weight change at 12 months among postmenopausal overweight or obese sedentary women randomized to be in a diet intervention for weight loss.
Methods Participants were prescribed a calorie intake goal intended to achieve a 10% weight loss and attended weekly sessions with content adapted from the Diabetes Prevention Program Lifestyle Balance curriculum and social cognitive theory. Data from participants (n=124) with complete anthropometric measurements and self-reported behaviors at 12 months were analyzed. Generalized linear models tested which self-monitoring and eating behaviors were associated with 12-month weight change and adjusted for baseline body mass index, group, education, race, marital status, dieting history, and age.
Results Participants were a mean age of 57.9±5.0 years and mainly non-Hispanic White (84%). The mean % weight loss at 12 months was 10.6%±7%. There were a number of eating habits positively and negatively associated with 12-month weight change. Negative behaviors included: skipping meals (β=-4.20 p=.008), cutting out snacking (β=-3.07 p=.01), and eating out at: breakfast (β=-3.07 p=.03), lunch (β=-3.43 p=.004), or dinner (β=-2.85 p=.03). Positive behaviors included: eating snacks (β=2.50 p=.04) and consuming home-prepared meals: breakfast (β=3.85 p=.02) or lunch (β=4.53 p=<.0001). The only self-monitoring behavior associated with 12-month weight loss was counting calories (B=2.97 p=.02).
Conclusion Findings from this study suggest that counting calories, eating snacks at regular intervals, and consuming home-prepared meals improved weight loss for women enrolled in a 1-year behavior change trial.

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B-065

PARENT MEALTIME ACTIONS THAT MEDIATE ASSOCIATIONS BETWEEN CHILDREN'S FUSSY EATING AND THEIR WEIGHT AND DIET STATUS

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The present study evaluated parent mealtime actions that mediate associations between children's fussy eating and their weight and diet status. Participants included 236 children with three diagnostic groups: 50 with autism, 84 with other special needs, 102 with no special needs. Weight status was measured as body mass index percentile (BMI%), with 26.4% of clinic children underweight. Parents reported children's diet variety as the number of 139 common foods accepted, children's fussy eating with the Child Eating Behavior Questionnaire, and their use of four actions from the Parent Mealtime Action Scale: POSITIVE PERSUASION, INSISTENCE ON EATING, SNACK MODELING, SPECIAL MEALS. Multiple regression revealed that only SPECIAL MEALS explained variance in children's BMI% and diet variety. For children without special needs, mediation analysis revealed that the more FUSSINESS children displayed, the more their BMI% scores were within normal weight, but only when parents often used SPECIAL MEALS. For all diagnostic groups, mediation analyses revealed that the more FUSSINESS children displayed, the fewer foods they accepted, especially when parents often used SPECIAL MEALS. Although the parent's use of SPECIAL MEALS may improve weight status in fussy-eating children, it may also perpetuate their limited diet variety.

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B-067

MANAGING OVERWEIGHT/OBESITY IN VETERANS EVERYWHERE - II (MOVE-II): A PILOT PROGRAM

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Overweight and obesity have reached epidemic status in the United States, with approximately two-thirds of the population currently falling into one of these categories. Weight statistics for veterans who receive health care through the Veterans Health Administration (VHA) are even more alarming, with approximately 72.2% classified as overweight or obese, including especially high prevalence rates of obesity and morbid obesity. Excess weight is a risk factor for many acute and chronic diseases, including diabetes, hypertension, sleep apnea, stroke, cardiovascular disease, and certain cancers. One of the greatest challenges facing healthcare professionals is finding ways to help overweight/obese individuals successfully lose weight and, even more difficultly, maintain that weight loss. Countless approaches have been designed and implemented, but few are successful in the long-term.

Managing Overweight and Obesity in Veterans Everywhere (MOVE!) is a program designed specifically for veterans that has been implemented in Veterans Affairs (VA) hospitals throughout the country. Although MOVE! has produced moderately successful weight-loss results, patients frequently regain most (or more of) the weight they lost after their participation in the program ends. With that limitation in mind, we designed and implemented a pilot study entitled MOVE-II at the VA hospital in San Diego. Patients who had completed the MOVE! program within the past year were invited to participate. The intervention was designed to help patients apply the knowledge they gained from MOVE!, with particular foci on exercise, healthful cooking, and overcoming barriers to weight-loss/maintenance. Participants (N=19) rated their experience in MOVE-II as extremely positive and helpful. They also reported engaging in greater amounts of exercise and eating more healthfully post-intervention than at baseline. Mean weight loss was 8 (SD=8.5) pounds, with a mean 1.1 (SD=1.3) point decrease in BMI at the end of the 12-week intervention period.

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B-068

POST TREATMENT RESTING METABOLIC RATE IS MORE INFLUENCED BY WEIGHT THAN A DIAGNOSIS OF ANOREXIA NERVOSA OR OBESITY

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People with anorexia nervosa (AN) or obesity often believe their resting metabolic rate (RMR) is below average. People with AN are therefore afraid to eat more for fear of rapid weight gain, while people who are obese may blame their perception of their metabolism for their weight. Separate treatment studies were conducted to treat women with AN (N=10) and obesity (N=36) with the goal of weight gain for the former and weight loss for the latter. The goal of this study is to examine how RMR differs between the two groups at post-treatment and to identify variables that may be associated with RMR.

Initial analyses revealed that both groups had an observed post-treatment RMR somewhat below the average predicted by the Harris-Benedict equation, 77 cal and 168 cal below for the obese sample and AN sample, respectively. Follow-up analyses revealed that the observed RMRs could be lower than expected due to the caloric restriction in the behavioral weight loss program and the sub-optimal BMI in the AN group post-treatment (M = 19.3).

A regression analysis was conducted to determine whether or not diagnosis and weight, generally considered the strongest correlate of RMR, predicted RMR at post-treatment. While weight was associated with post-treatment RMR, $\beta = .53$, $t(43)=3.56$, $p < .01$, diagnosis (AN or obesity) was not. Therefore, much of what is associated with lowered RMR in these two different groups are the symptoms themselves (i.e., caloric restriction, sub-optimal weight) rather than anything inherent about the individuals. Future studies could investigate the impact of providing people with AN or obesity information about their RMR as part of treatment.

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B-069

IS THERE AN ASSOCIATION BETWEEN WORKSITE SOCIAL SUPPORT, DIET AND BODY MASS INDEX?

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BACKGROUND: Growing research suggests that positive social support derived through friends, family or co-workers is associated with an improvement in healthy behavior adoption and maintenance, such as the intake of fruits and vegetables, a key dietary determinant of overweight and obesity outcomes. An increasing number of health promotion interventions have targeted worksites, where employees spend one third of their waking hours. Thus, worksites may prove to be important venues to affect social support.

PURPOSE: To address the relationship between worksite social support on diet and obesity, this study will examine the association of social support with dietary behaviors associated with energy intake, and BMI.

METHODS: Baseline data were obtained on 2,878 employees from 34 worksites through Promoting Activity and Changes in Eating, a group randomized obesity prevention intervention trial. Social support (index), diet, and BMI measures were assessed via a self-reported questionnaire. Principal components analysis was applied to worksite social support questions. To adjust for design effects, linear mixed models were employed using STATA version 10.

RESULTS: Higher social support was associated with higher fruit and vegetable intake ($P<0.01$). Higher worksite social norms were associated with lower BMI ($P < 0.05$). Although, the model suggested that the relationship between social support, dietary behaviors, and BMI was in the direction hypothesized, we found no significant relationships between social support and other dietary behaviors.

CONCLUSION: While previous research has shown an association between social support and healthy diets, this relationship is unobserved among most measures included in this study. Still, employees spend a considerable part of their day in the worksite, where they may be faced with the temptation of making poor dietary choices. Consequently, the success of weight gain prevention interventions may still hinge upon worksite social support.

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B-070

FIT FRESHMEN: A MIXED METHODS APPROACH TO DEVELOPING WEIGHT CONTROL STRATEGIES FOR 1ST YEAR COLLEGE STUDENTS

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American adults gain weight at a rate of ~0.9 kilograms per year. However, college-age adults gain weight more rapidly than the general population, with a mean weight gain of ~1.8 to 4 kilograms during their first year at college. The purpose of this pilot RCT was to test the efficacy of a semester long social cognitive internet weight-loss program for overweight and obese college freshmen. We also completed 3 focus groups to gather feedback on content, graphics, language, and navigational tools over the course of the study. Participants (n=27; m*age*=18.5±.6; m*bmi*=31 kg/m2; 74% female) were randomly assigned to the active intervention (Fit Freshmen; FF) or a health information control group. Baseline and 4 month follow-up measures were completed by research assistants blinded to participant assignment. When compared to controls FF participants experienced higher improvement in self-regulatory skills across nutrition and activity behaviors (all p's<.05). Consumption of dietary fat and added sugar also decreased to a greater extent for FF subjects when compared to controls (p's<.05) while total caloric intake differences were marginally significant (p=.08) and trends in increased physical activity were present. Finally, FF lost significantly more weight than control participants (m*difference*=2.2kg; p=0.05) and more fat mass (m*difference*=1kg; p=0.08). Themes for content improvement from focus group data included providing a more detailed meal plan, specifically buffet style eating, changing tracking tools to be more specific and easy to use, reducing email contact, and increasing social activity opportunities. Themes for program characteristics that were positively evaluated were the flexible exercise program, incentives for weight loss, and use of an onsite weigh station. This study provides promising outcomes for a scalable internet-based weight loss program for college freshmen and highlights a number of features that could be improved to be more attractive to this population.

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B-071

RACIAL DISPARITIES IN OVERWEIGHT/OBESE YOUTH PERCEPTIONS OF PHYSICIAN WEIGHT COUNSELING, PERCEIVED HEALTH RISK, AND WEIGHT LOSS BEHAVIORS

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Background: Minority youth are at greater risk of becoming overweight/obese and are less likely to receive preventive health care than non-Hispanic Whites. Aims: We examined racial disparities among persistently overweight/obese youth. We hypothesized that White youth would report receiving more physician counseling and greater physician concern regarding weight, have more knowledge of and higher perceived risk for weight-related comorbid conditions, and engage in more weight loss behaviors than Black youth. Methods: Participants were 55 adolescents (28 boys, 29 White, 26 Black; M_{age}=16.1±1.5 years) in a follow-up study (M_{years}=4.2±0.8) of a previous research cohort of obese youth (BMI>95th percentile) who had sought weight management treatment (84.6% retention). Height/weight was measured and youth completed a self-report measure of physician weight counseling, their weight loss behaviors, and their knowledge of/perceived risks for weight-related comorbidities. Results : All participants remained overweight(5% 85th-94th BMI percentile) or obese(95% >95th BMI percentile). Relative to Whites, Blacks perceived greater frequency of physician counseling and concern about weight [$p_{counsel}<.01$, $p_{concern}<.01$], eating habits [$p_{counsel}<.01$, $p_{concern}<.01$] and physical activity [$p_{counsel}<.01$, $p_{concern}<.01$]. Whites reported more weight loss methods (p<.05). Although Whites reported greater knowledge of weight-related comorbidities (p<.01), there were no group differences in perceptions of risk for the development or negativity of these comorbidities, being told they were at-risk, or self-efficacy for disease prevention. Conclusions: White youth reported engaging in more weight loss behaviors and greater knowledge of weight-related comorbidities. These data suggest that physicians may be appropriately focusing efforts on educating Black youth, but a knowledge and behavior gap persists.

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B-072

DO OBESE INDIVIDUALS GET LESS PREVENTIVE CARE?

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Obese Americans may be less likely to be screened for cancer and other chronic and acute illnesses, despite being at greater risk for their acquisition. Possible reasons for lower receipt include competing demands due to managing chronic conditions and facility-related barriers to conducting procedures. Conversely, receipt may be greater due to more frequent contact with health care providers for obesity-related chronic conditions, presenting more opportunities to receive care. The primary aim of this study was to investigate the extent to which receipt of preventive care services varied in relation to body mass index (BMI, kg/m2) after stratifying on gender. METHODS: We used data from the 2003 and 2004 Behavioral Risk Factor Surveillance System surveys. We created four BMI categories: normal weight (18.5–24.9), overweight ("Ov", 25–29.9), class I obese ("Ob-C-1", 30–34.9), and class II+obese ("Ob-C-2+", >35). We controlled for differences in age, education, race, having a regular doctor and disability across BMI categories using model-based direct rate adjustment. RESULTS: Only for mammography in the previous 2 years among Ob-C-2 women was receipt lower compared to normal weight women (prevalence difference: -1.9%, 95% CI -3.7, -0.1). Relative to normal weight individuals, receipt of the following services was statistically significantly greater in the BMI categories indicated: influenza and pneumococcal vaccines (men (M): Ob-C-2+; women (W): all), HIV test (M: Ov; W: all), cholesterol screening (all), sigmoidoscopy/colonoscopy (M: Ov, Ob-C-1; W: Ov), fecal occult blood test (M and W: Ov), PSA (Ov, Ob-C-1), digital rectal exam (Ov, Ob-C-1), and Pap test (Ov). CONCLUSIONS: Receipt of preventive care was generally similar to or greater in overweight and obese individuals, possibly because of more frequent contact with the health care system. Future research is needed to track these trends over time and understand the likely reasons for the lower or greater receipt by BMI.

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B-073

A CULTURALLY FRIENDLY WEB-BASED HYBRID INTERVENTION TO PREVENT OBESITY: THE SALSA STUDY

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Poor dietary habits, physical inactivity and obesity are vexing problems among minorities in industrialized nations, resulting from innovations in industrialization and societal trends away from typical cultural practices that improve health outcomes. Interventions are needed that are culturally relevant and appealing to diverse audiences. SAving Lives, Staying Active (SALSA) was an 8-week randomized controlled cross-over design, pilot study to promote fruit and vegetable (FV) consumption and regular physical activity (PA) as a means to preventing obesity among women of color in Houston, TX. Participants completed measures of dietary habits, physical activity, social support, self efficacy, and demographics at 4 time points. Women (N=50; M=42 years) who participated were overweight (M BMI=29.7 kg/m2; M body fat=38.5%) and reported low levels of FV consumption (M=4.2 servings) and PA (M=10.4 MET-min/wk). All were randomized to a 4-week web-based dietary education or bi-weekly Latin dance group. After 4 weeks of intervention, women switched groups to ensure that everyone received both treatments, consistent with community requests. FV consumption (p=0.02) and social support for PA from peers (p<.01) increased significantly over time by group after controlling for age. PA significantly increased at all time points (p<0.05). No other variables changed over time. Data suggest that web-based interventions to improve dietary habits and salsa dance interventions to improve PA can be culturally relevant and engaging to women of color. Web-based interventions may help to raise interest not only among participants, but also among friends of participants, adding value to health promotion efforts. Findings suggest cross-over study designs can accommodate community desires while maintaining scientific integrity, important for community participatory research.

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B-074

SLEEPINESS ASSOCIATED WITH INCREASED STRESS AND LOWER HEALTH-RELATED QUALITY OF LIFE (HRQOL) IN PARTICIPANTS IN A WEIGHT LOSS PROGRAM

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Success in a weight loss program requires persons to be committed to making lifestyle changes, something which may be problematic in persons with excessive sleepiness. This analysis evaluated the relationships between subjective sleepiness, perceived stress, and HRQoL among participants enrolled in SMART, a clinical trial of behavioral weight treatment.

Methods: This secondary analysis included the Epworth Sleepiness Scale ([ESS] at baseline and 12 months), Perceived Stress Scale ([PSS] baseline), SF-36 HRQoL (baseline), BMI (baseline), and weight change and percent of weight loss at 12 months compared with baseline. Descriptive statistics, Spearman's rank correlation coefficients, and hierarchal multiple linear regression were performed on a subsample of subjects from the 2nd and 3rd cohorts in the parent study.

Results: Participants (N=133) were mostly female (84.2%), white (75.2%), obese (mean BMI=33.8 kg/m2), with a mean age of 47.7 years. At baseline, 23% of the sample was subjectively sleepy (ESS> 10). There was no significant difference in baseline BMI between sleepy and non-sleepy participants. ESS scores were positively correlated with higher scores on the baseline PSS scores (p<.005). Regression models revealed that baseline BMI and ESS were jointly associated (p<.001) with the SF-36 HRQoL Physical Component while only ESS was associated (p<.01) with the SF-36 HRQoL Mental Health Component, after controlling for age, years of education, gender, and BMI (p<.001). At 12 months, there was no significant correlation between 12-month ESS scores and weight change or percentage weight loss relative to baseline levels.

Conclusions: Sleepiness at baseline was associated with increased stress and decreased HRQoL. Although there was no difference in actual weight loss between sleepy and non-sleepy subjects, further examination of the role of sleep disturbance is warranted because of the negative effect of sleepiness on factors important for weight loss and weight loss maintenance.

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B-075

THE HIGHER THE CALORIES, THE GREATER THE MESOCORTICOLIMBIC RESPONSE

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While the construct of cue-elicited craving for natural rewards is widely accepted, the underlying neural mechanisms for this construct are less understood with only a handful of imaging studies published so far. Using fMRI, we sought to examine the underlying brain processes associated with cue-elicited craving for food using gustatory cues. To that end, we recruited 11 high BMI participants (mean BMI=35.3, 4 males) and presented them with 2 runs of a cue-elicited craving paradigm consisting of pseudorandom gustatory deliveries of either their favorite (i.e., most frequently consumed) high-caloric beverage or a control taste, such as water. The results showed that delivery of high-caloric tastes compared to baseline elicited greater activation in several areas that underlie reward processes such as the ventral tegmental area, insula, caudate, putamen and thalamus. Additionally, greater neural response was also found in areas underlying emotional processes such as the amygdala and hippocampal areas (cluster-corrected p<.05, z=2.3). More interestingly, compared to the delivery of water, high-calorie tastes elicited greater activation in additional important reward areas such as the orbitofrontal cortex, inferior frontal gyrus, and nucleus accumbens, which are involved in the incentive salience for rewards (cluster-corrected p<.05, z=1.9). These early findings are in accord with behavior studies of greater subjective craving in response to food cues, and suggest that the underlying mechanism for craving for high-caloric tastes is enhancement of mesocortical and mesolimbic systems. These findings lay the foundation for future studies of cue-elicited craving for highly palatable stimuli and may have direct implications for the prevention and treatment of disordered eating.

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B-076

USE OF BEHAVIORAL STRATEGIES FOR WEIGHT MAINTENANCE AFTER A BEHAVIORAL WEIGHT LOSS TRIAL

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Long-term adherence to the behavioral lifestyle changes that support weight loss maintenance remains a considerable challenge. The extent to which behavioral strategies learned during weight loss treatment continue to be used is unknown. This ancillary study examined the use of behavioral strategies for weight maintenance at 18 months after the completion of a behavioral intervention study for weight loss, PREFER. We investigated whether differences in strategy use existed between Blacks and Whites and between successful and unsuccessful weight maintainers. Participants self-identified their race as Black or White. We measured weight and surveyed participants about the percentage of time in the previous 18 months they used 16 strategies taught during PREFER. Successful weight maintenance was defined as≤5% weight gain. The sample (N=107) was primarily White (76%), female (86%), on average 46 yrs. old, and successful at weight maintenance (57%). Only 25% of the 16 behavioral strategies were used for>50% of the time in the 18-month period. Reading food labels while shopping was the most commonly used strategy. Recipe modification was the only strategy that significantly differed between racial groups, t(105)=2.01, p=.04. Black persons used this strategy less frequently (M=45.0%, SD=31.0% of the time) than white persons (M =56.8%, SD=24.3% of the time). There were no differences in strategy use between successful and unsuccessful weight maintainers, ps>.17. Although a majority was successful at maintaining weight loss, reasons for their success may extend beyond behavioral strategies learned and require further investigation. Most of the weight-control strategies taught during weight loss treatment were not used for the majority of time. These findings suggest that including culturally-tailored strategies for recipe modification in weight loss programs might support the weight maintenance efforts of black persons, and greater emphasis is needed on the continued use of behavioral strategies for weight maintenance.

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B-077

WEIGHT BIAS AND ITS IDEOLOGICAL CORRELATES AMONG WEIGHT LOSS TREATMENT SEEKING ADULTS

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Introduction: Anti-fat attitudes in American society are pervasive. Unlike other stigmatized groups, researchers have been surprised to observe strong anti-fat attitudes among overweight/obese individuals. While the etiology of weight stigma is complex, research suggests that it is often greater among individuals who embrace certain etiological views of obesity or ideological views of the world. This investigation examined 1) the level of implicit and explicit weight bias among overweight/obese treatment seeking adults and 2) the association between weight bias and etiological beliefs of perceived weight controllability and ideological beliefs, such as 'just world beliefs' and Protestant work ethic.

Methods: Forty-six overweight or obese adults (BMI: M=35.6, SD=6.5) participating in an 18-week stepped-care, behavioral weight loss program completed implicit (Implicit Associations Test) and explicit (Obese Person's Trait Survey) measures of weight stigma. Participants also completed two measures of ideological beliefs about the world (Just World Beliefs, Protestant Ethic Scale) and one measure of beliefs about weight controllability (Beliefs about Obese Persons).

Results: Significant implicit anti-fat attitudes were observed among the weight loss participants (p <.01). Significant explicit weight bias was also observed, but only emerged when ratings of obese individuals were examined relative to ratings of normal weight individuals (p < .01). Greater endorsement of just world beliefs, Protestant work ethic beliefs, and beliefs about weight controllability were consistently and significantly associated with greater implicit and explicit weight bias (ps < .05).

Conclusions: Obese treatment seeking adults have internalized the negative weight-based social stigma that exists in American society. Internalized weight bias may be greater among those holding specific etiological beliefs that weight is controllable and ideological beliefs that the world is just and that hard work and determination lead to good things.

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B-078

PRIMARY MOTIVES FOR WEIGHT LOSS IN OLDER, OBESE WOMEN FROM RURAL COMMUNITIES

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Obese individuals more often cite improvements in appearance rather than health as their primary motivation for weight loss. However, some studies have suggested that those motivated by health concerns may demonstrate better long-term success in weight management. Most of the research in this area has been conducted with samples of women, particularly younger and middle-aged women drawn from urban and suburban communities. Few studies have examined motivations for weight loss among older women, particularly those residing in rural, medically-underserved areas. Therefore, we examined this question in a sample of 264 obese, older women (mean± SD, age=59.4±6.1 years, BMI=36.9±5.0 kg/m2) from six medically-underserved rural counties in northern Florida who volunteered for a behavioral weight-loss program. Given the older ages (range=50 to 75 years) and rural residence of the participants, we hypothesized that the majority of women would cite improvements in physical health rather appearance as their primary motivation for weight loss. Contrary to our expectations, most of the women (58.3%) reported that they were primarily motivated to lose weight as a means of improving their appearance. An additional 36.6% indicated that they were primarily motivated to lose weight in order to increase their self-confidence, and only 3.0% cited improvements in physical health as their primary motive. These results indicate that older age and rural residence have minimal impact on women's primary motivations for weight loss. The findings also suggest the importance of addressing appearance-related expectations in the treatment of obesity.
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B-079

SELF-OBJECTIFICATION AND WEIGHT LOSS TREATMENT-SEEKING ADULTS

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Objectification theory (Fredrickson & Roberts, 1997) is a framework for understanding a variety of psychological and physical consequences women face as a result of living in a culture that sexually objectifies their bodies. Self-objectification is theorized to be associated with body surveillance and an array of emotional and physical consequences including symptoms of eating disorders. While empirical support for objectification theory continues to grow, this research has traditionally utilized young, female college students as their primary samples, which has greatly limited the ability to generalize the results to other groups of women. Thirty-six overweight/obese women (BMI > 27 kg/m2) participating in an 18-week, stepped-care, behavioral weight loss program completed a series of questionnaires including the Trait Self-Objectification Questionnaire (Noll & Frederickson, 1998), the Appearance Orientation subscale of the Multidimensional Body-Self Relations Questionnaire (Cash, 2000), the Weight Bias Internalization Scale (Durso & Latner, 2008), and the Binge Eating Scale (Gormally, Black, Daston, & Rardin, 1982). Multiple regression analyses indicated that self objectification scores predicted both appearance orientation, F(1, 35)=5.939, p < .05, and internalized weight bias, F(1, 35)=4.746, p < .05. In turn, these constructs mediated the relationship between self-objectification and disorderd eating, such that self-objectification scores alone did not predict binge eating, F (1, 35) = 2.447, p > .05. Specifically, appearance orientation predicted binge eating, F(1, 35)=7.280, p < .05, as did internalized weight bias, F(1, 35)= 8.525, p < .05. Additionally, there were also significant differences between program dropouts and people who completed the program with regard to self-objectification at the start of the study, such that dropouts self objectified more than those who completed the program , F(1, 35)=6.804, p < .05.

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B-080

HEALTHY LIFESTYLE BEHAVIOR CHANGE INTERVENTIONS FOR YOUNG ADULTS WITH INTELLECTUAL DISABILITIES: PARTICIPANT PERSPECTIVES AND PREFERENCES

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Like all U.S. adults, young adults with intellectual disabilities (ID) experience overweight and obesity at increasing rates, primarily as a result of unhealthy lifestyle choices.

This study's purpose was to identify perspectives and preferences of young adults with ID, their parents, and professionals regarding benefits and barriers to achieving healthy lifestyle behavior change. An ultimate goal was to specify an appropriate intervention at the local level using a community-based participatory approach. Three collaborating agencies–a specialty clinic, parent center, and state disability agency–assisted in recruiting participants for this qualitative study.

In a survey of 56 family members, 58% judged obesity/overweight to be "extremely" or "very" widespread among people with ID, and an "urgent" (76%) priority. Family members (96%) were willing to join in healthy lifestyle programming.

Thirty young adults with ID, family members, and professionals participated in focus groups to identify benefits and barriers to weight loss, and desired program structure. Parents and professionals focused on young adults' daily unhealthy choices. Young adults expressed concern about the immediate consequences of unhealthy lifestyles. Barriers to weight loss across the three groups included medication, unstructured environments, multiple cues/rewards to eat, and lack of motivation. Only young adults mentioned stress as a barrier. Desires for intervention across all groups emphasized social and educational content, a mixed-sex group of participants, and attention to skill-building, measurable goals, and coordinated community efforts to support behavior change.

Study results underscored the need to incorporate preferences into research interventions adapted to the local community and then translated into sustainable programs for this vulnerable population.

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B-082

THE RELATIONSHIP BETWEEN SOCIAL INTELLIGENCE AND MENTAL HEALTH OF WORKING PEOPLE

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Social Intelligence (SI) is "the ability to understand and manage men and women, boys and girls, to act wisely in human relations" which was posed by Thorndike(1920). In nearly 90 years of development, the industry recognized the existence of Social Intelligence, the core intelligence affecting people's success. There're few researches on SI in China. And most of them were focused relatively on children and students. In the intense competition, working people especially need this ability of getting along with others. This research investigated working people's characteristics of social intelligence and its correlation with their conditions of mental health in the Chinese society.

A valid sample of 288 working adults in south China was measured by Social Skills Inventory (SSI) and Symptom Checklist 90 (SCL-90). Results showed that the males' Social Intelligence were generally higher than the females', especially in Emotional Control (t=3.307,p<.01) and Social Expressivity (t=2.879,p<.01). Secondly, the supervisors' Social Intelligence were generally higher than the ordinary staff's. And the directors' Social Control (t=2.462,p<.01) and Social Sensitivity (t=2.040,p<.05) were much higher than that of the ordinary staff. Thirdly, it showed a positive correlation between Social Intelligence and Mental Health of working employees. Besides, Social Sensitivity positively predicted Psychological Symptoms (β=.311,p<.01) and Social Control negatively predicted Psychological Symptoms (β=-.306,p<.01) .

The study suggested that employers may develop training programs on Social Intelligence for their employees to improve their social skills, reduce the pesence of their psychological symptoms , and help them to maintain a good state of mind at work , thereby enhancing their work efficiency and job satisfaction.

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B-083

EATING DISORDERS (AN/BN): SHORT- AND LONG-TERM OUTCOME EFFECTS OF INPATIENT COGNITIVE BEHAVIOR THERAPY

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Short- and long-term effects of inpatient cognitive behavior therapy treatment with anorexia or bulimia nervosa patients are analyzed.

Short-term effects were investigated with 1226 inpatients with anorexia nervosa (AN) or bulimia nervosa (BN) of the AHG Psychosomatic Hospital Bad Pyrmont/Germany. Almost all patients were female (97%). The mean age was 27.7 years old. The mean duration of the eating disorder was 8.7 years. Our patients received cognitive behavior therapy treatment lasting 56 days on average. At the end of treatment patients filled out a therapy-outcome questionnaire. Additionally, our therapists rated therapy-outcome from their own view.

Long-term effects were analyzed in a 2-year follow-up study with 23 inpatients. At the beginning (T1), end of treatment (T2) and two years after discharge (T3) patients were personally interviewed. The effectiveness of therapy was measured by several questionnaires: Psychosomatic Symptom Check-List (PSCL), Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI) as well as questionnaires for satisfaction in life, coping with stress and quality of sleep.

Short-term effects: 91% of our patients are more or less satisfied with their treatment results. 87% of the therapists state that their patients did more or less improve overall. A reduction of symptoms is rated by 95% of our patients and 91% of the therapists. The ratings of therapy-outcome by therapists and patients are significantly correlated: r=.44 and .42 (p<.001). Therapists seem to be a bit more critical in their ratings.

Long-term effects: T-tests show that in almost all measures patients improved significantly (p<.05 to p<.001) from T1 to T2. After T2 patients nearly maintained their progress or even continued to improve slightly. So in all measures the differences from T1 to T3 are significant (p<.05 to p<.001).

Our results show that cognitive behavior therapy has substantial therapeutic effects which are relatively stable up to two years.

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B-084

MINDFULNESS AND SELF-EFFICACY: ASSOCIATIONS WITH PHYSICAL AND MENTAL HEALTH IN A RURAL COMMUNITY SAMPLE

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Many theoretical models of health behavior change emphasize self-efficacy as a key component. Given the increase in meditation-based studies, an evaluation of self-efficacy as a mechanism of action may be warranted. This study examined self-efficacy as a mediator between mindfulness and physical/mental health outcomes as measured by the MOS SF-36 and CES-D. Hypotheses were: (a) self-efficacy would mediate mindfulness and physical health, (b) self-efficacy would mediate mindfulness and mental health, and (c) self-efficacy would mediate mindfulness and depression. Adults living in a rural community were eligible for participation. Sample and demographic data were: n=233; mean age=27 yrs (min=18 yrs, max=85 yrs); 62% female; 95% White, non-Hispanic, 2% Hispanic, and 3% other. Participants completed a battery of psychosocial measures and received a $5 gift card incentive. Regression analyses indicated that the association between mindfulness and physical health was mediated by self-efficacy, as the effect of mindfulness on physical health was reduced in the final step (standardized beta decreased from β=.23, p<.01 to β=.07, p=ns) and self-efficacy remained a significant predictor of physical health after controlling for mindfulness (β=.30, p<.001; Sobel test statistic z=3.7, p<.001). The regression model accounted for 12% of the variance in physical health. A second set of regressions indicated that self-efficacy mediated the associations between mindfulness and mental health as self-efficacy remained significant in the third step (β=.26, p<.001; Sobel test statistic z=4.2, p<.001). The second model accounted for 26% of the variance in mental health. Self-efficacy remained a significant predictor of depression in a third set of regressions (β=-.35, p<.001; Sobel test statistic z=-4.3, p<.001), accounting for 22% of the variance in depression. Consistent with previous studies, self-efficacy was a useful explanatory mechanism for physical/mental health outcomes. These findings may be helpful as researchers seek to identify the mechanisms underlying how mindfulness incites well-being.

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B-085

PHYSICAL HEALTH, PSYCHOSOCIAL FACTORS AND DISASTER PREPAREDNESS: DATA FROM THE 2008 BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

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Recent natural disasters have highlighted the health problems encountered by residents of impacted communities, including physical and emotional stress, interruption of medical treatment, and exacerbation of pre-existing conditions. However, despite increased awareness and public health efforts, national surveys indicate no discernable effect on citizen preparedness. We hypothesized that factors associated with greater vulnerability to post-disaster physical and mental health sequelae also present barriers to adequate preparedness. We conducted an exploratory analysis of the 2008 Behavioral Risk Surveillance System (BRFSS) to assess the relationship between disaster preparedness and multiple potential risk factors including physical illness or impairment and emotional or social health concerns. To account for complex sampling design, all analyses were weighted using BRFSS sample weights. The sample included 11,745 adults (64.2% non-Hispanic White, 24.9% non-Hispanic Black, 4.2% Hispanic, and 6.7% multiracial or other race/ethnicity). Multivariable logistic regression results indicate significant relationships between diabetes (OR 1.4, 95% CI 1.04–1.84), low health related quality of life (OR 1.02, 95% CI 1.01–1.04), low social support (OR 1.7, 95% CI 1.13–2.45), low life satisfaction (OR 2.0, 95% CI 1.25–3.24), and lack of preparedness for disaster. These findings remained significant after adjusting for age, race/ethnicity, sex, and education. Disability was significantly associated with lack of preparedness in univariate analysis (OR 1.39, 95% CI 1.07–1.79), but in multivariable models, this relationship was no longer significant. Disaster preparedness messages should be disseminated in multiple contexts, particularly primary care settings. Our results indicate that 84.3% of the sample had access to care through a health plan and 79.5 % reported having their own physician. Patient-focused preparedness interventions could help reach emotionally/socially vulnerable individuals and provide the chronically ill with specific guidance for reducing interruption of care in disaster.

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B-086

CELL PHONE TOOLS FOR MOOD SAMPLING AND MOBILE THERAPY

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This exploratory study examined the promise of mobile technologies for broadening access to cognitive behavioral therapy and providing in-the-moment support. A mobile phone application was developed with touch screen scales for mood reporting and therapeutic exercises for cognitive reappraisal and physical relaxation. A one-month field study of the mobile prototype included eight individuals who reported significant stress during an employee health assessment and eight patients who were simultaneously enrolled in a four-week cognitive therapy protocol. Participants were prompted to report mood several times a day and could activate mobile therapies as needed. In weekly open ended interviews, participants discussed their use of the device and longitudinal views of their data. Analyses included thematic review of interview narratives, assessment of mood changes over both the course of the study and diurnal cycles, and interrogation of this data based on stressful incidents reported in interviews. Case studies describe participants' use of the application to increase self-awareness and to cope with stress. An example is a man with longstanding marital conflict who, after reflecting on his mood data, particularly a drop in energy each evening, started practicing the relaxation therapies on the phone before entering his house, applying the cognitive reappraisal techniques to cope with stressful family interactions, and talking more openly with his wife. His mean anger, anxiety and sadness ratings were all lower in the second half of his participation than the first half (p<=0.01 for all 3 scales). Similar changes were observed among people using the application to negotiate bureaucratic frustrations, work tensions and children's tantrums. Participants quickly grasped the mood mapping and therapeutic concepts, and applied them creatively to help themselves and empathize with others. Rapid advances in mobile computing will help deliver state of the art psychotherapies in a non-stigmatizing fashion to many people who would otherwise not have access to therapy.

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B-087

EMOTIONAL DISTRESS AND PARENTING BEHAVIORS IN PEDIATRIC FOOD ALLERGY

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Research suggests that caring for a child with food allergy can be stressful and may adversely affect parental mental health. Although a high level of emotional distress has been shown to compromise parenting in other pediatric populations, no studies have focused on this topic in families with food allergic children. This study examined links between parent emotional functioning and allergy-related parenting behaviors, and explored child allergy characteristics as moderators of the relation between distress and parenting practices. Participants were 292 parents (M age=38.87 years) of children (M age=8.01 years, 64.9% boys) with at least one food allergy. Parents completed a demographic/allergy questionnaire, the Parent Experience of Child Illness questionnaire, and the Parenting a Child with Food Allergy questionnaire. The strongest and most consistent associations between parenting practices and distress were observed between parental protection/monitoring and parent feelings of guilt/worry (r = .49, p <.01), sorrow/anger (r = .45, p <.01), and uncertainty (r = .32, p <.01). Parenting practices related to emergency education and autonomy support were unrelated to parent distress, with the exception of a small but significant positive association between guilt and autonomy support (r = .13, p <.05). Results of moderation analyses revealed that indices of parental distress interacted with number of allergies to predict protection/monitoring behaviors (Unresolved Sorrow/Anger x Number of Allergies β=-.18, p < .05; Long-term Uncertainty x Number of Allergies β=-.18, p < .05; Guilt x Number of Allergies β=-.14, p < .10). In all cases, higher distress was related to lower levels of protection/monitoring for parents of children allergic to three or more different foods compared to parents of children allergic to two or fewer foods. These findings suggest that parents who are more distressed and have children with greater numbers of allergies may be less likely to engage in parenting behaviors that could reduce their children's risk for unintentional exposures.

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B-088

DEVELOPMENT OF THE USAID AVIAN INFLUENZA COMMODITY, INVENTORY, FORECASTING & TRACKING PACKAGE

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Ninety-two human cases of H5N1, a specific genotype of the Highly Pathogenic Avian Influenza (HPAI) virus, resulted in 67 confirmed deaths (73-percent case fatality rate) during 2007. This represented a significant increase in lethality from the 60-percent average observed between 2003 and 2007. The Unites States Agency for International Development (USAID) manages a global distribution mechanism for commodities utilized to contain outbreaks of Avian Influenza (AI). Existing methods to track the distribution of containment commodities and to forecast future needs are inadequate because of the volatile nature of the H5N1 virus.

A review of the literature and interviews with infectious disease control experts and commodity logisticians revealed a number of candidate reporting strategies that could be useful to respond to the rapidly changing needs for tracking containment supplies. A team of Technical Advisors from both USAID and John Snow, Inc. (JSI) developed four new paper-and-pencil tools designed to improve USAID's capacity to monitor inventory, track distributions by foreign governments and anticipate future commodity needs for priority countries. The four tools were pilot tested in three Districts in Bangladesh. Significant findings from the pilot include: inadequate record keeping, supplies and storage facilities, as well as difficulty obtaining forecasting-related data.

Recommendations for future modifications of the system include having the Central and District levels ensure that documentation is accurate on the new tools on an annual or bi-annual basis.

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B-089

A CONTEXTUAL EXAMINATION OF NEIGHBORHOOD SOCIAL COHESION AND RESIDENTS' HEALTH AND WELL-BEING

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The influence of neighborhood contexts on the health and well-being of residents is well-documented. However, such research has focused on neighborhood disadvantage. This study focuses on the protective role of social resources within neighborhoods, and proposes that neighborhood social cohesion (NSC) is an important collective resource promoting health.

The sample consisted of 3,139 adult residents who participated in the 2008 Arizona Health Survey (AHS) in Maricopa County, the county encompassing metropolitan Phoenix. A list-assisted random-digit-dialing (RDD) methodology was used to randomly sample the adult residential population. Neighborhood variables were derived from 2000 U.S. Census Bureau data.

Multiple regression analysis showed that NSC had a positive impact on self-rated health (SRH) (β=.102, p<.001) and well-being (WB) (β=.128, p<.001), after control variables were accounted for. Education and ethnicity as moderator variables were tested and yielded interesting significant effects. Tests of neighborhood predictors of NSC revealed that ethnic homogeneity (β= .280, SD=.064, p<.001) and the percentage of residents with a bachelor's degree or higher (β= .218, SD=.002, p<.01) were significant predictors of aggregated NSC. Surprisingly, median household income and percent homeownership were not significantly related to NSC.

We found evidence for NSC as a protective factor for the health and well-being of residents. These findings have important implications for health initiatives to foster the development of socially cohesive neighborhoods. The cohesiveness of neighborhoods was not determined by economic indicators. Rather, higher education was a more important neighborhood resource. We found evidence that ethnic diversity may diminish ties of social cohesion, yet questions remain and further investigation is warranted.

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B-090

INFLUENCE OF HIV-STATUS ON MSM'S WILLINGNESS TO RECEIVE HPV VACCINE

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Background: HIV infection increases risk of persistent human papillomavirus (HPV) infection and related diseases. Since US approval of HPV vaccine for females in 2006, interest in expanding vaccination coverage to men has increased. Safety and efficacy trials of HPV vaccine are underway in both males and HIV-infected individuals, but no published study has investigated whether having HIV affects HPV vaccine acceptability. We compared willingness to receive HPV vaccine in HIV-negative and HIV-positive men who have sex with men (MSM).

Methods: 188 HIV-negative and 59 HIV-positive MSM who were part of a national panel of US households completed an online survey about HPV vaccine in January, 2009. Participants were predominantly non-Hispanic, white men (83%), most of whom had college degrees (59%), health insurance (87%), and lived in urban areas (94%). We compared HIV-negative to HIV-positive MSM using linear and logistic regressions that controlled for age, number of lifetime sexual partners, previous sexually transmitted infection (STI) diagnoses, and employment status.

Results: HIV-negative and HIV-positive MSM reported equivalent willingness to receive HPV vaccine (74% vs. 78%, adjusted OR 1.48; 95% CI .67, 3.27). HIV status was not associated with perceived knowledge, perceived severity, or belief that HIV increases risk of HPV-related diseases (all p>.05). Anticipated regret at developing HPV-related disease after declining vaccination and belief that a doctor would recommend HPV vaccine were associated with higher willingness to receive HPV vaccine (both p<.05). Perceived likelihood of HPV-related diseases was associated with higher acceptability of HPV vaccine only for HIV-negative men (adjusted OR 2.76; 95% CI 1.23, 6.19), while perceived severity of HPV-related disease was associated with higher acceptability of HPV vaccine only for HIV-positive men (adjusted OR 3.19; 95% CI 1.06, 9.65).

Conclusion: Willingness to receive HPV vaccine was high among MSM in our study. While HIV infection increases risk of HPV-related diseases, it may not prompt greater uptake of HPV vaccine. We identified several attitudes that might serve as leverage points to increase HPV vaccine uptake among these high-risk populations, should the vaccine be approved for men.

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B-091

WORRY AND HEALTH-RELATED POSSIBLE SELVES IN AFRICAN-AMERICAN MEN: RELATIONSHIPS TO HEALTH BEHAVIORS

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African-American(AA) men have poorer physical health and greater mortality rates compared to non AA men. An increasing literature has documented that both worry, aversive repetitive cognitions about perceived concerns, and health-related possible self-cognitions, future self images that function as incentives for action, serve important roles in either motivating or deterring health behaviors(HB). Despite evidence supporting the centrality of these cognitive-affective structures in motivating HB, few studies have focused on worry and possible self-structures in AA men. The study purpose is to determine relationships among worry, health-related possible selves(HR-PS), and self-reported HB in AA men.
Design: Cross-sectional Mixed-methods.
Sample: Convenience sample of 60 AA men(mean age 54.8±10.13) from urban Midwest area.
Measures: Penn State Worry Questionnaire(PSWQ);Thought-listing (Cacioppo,1997),a semi-structured interview format, measured feared and hoped-for HR-PS; HB Questionnaire (Likert scale measuring smoking, alcohol, stress management, sleep, diet, medical check-ups, prostate cancer screening, exercise).
Analyses: Content,correlation, and regression.
Results: Mean PSWQ (38.47±10.24; range 16–80), Hoped-for HR-PS (.87±.96; range 0–4), Feared HR-PS (.92±.94; range 0–4), and HB (30.98±5.45; range 8–40). Worry(r=-.30) and Feared HR-PS(r=-.30) were inversely related to HB (p<.05). Multiple regression showed that worry(B=-.31) and feared HR-PS(B=-.32)predicted HB accounting for 19% variance(p<.005).
Implications: Higher worry and feared HR-PS are factors that may inhibit engagement in positive HB. Findings have implications for health-related teaching focusing on negative outcomes, as associated worry and development of feared HR-PS may contribute to avoidance behaviors. Research targeting cognitive-affective factors that promote positive HB among AA men are important lines of inquiry towards improving health for this underserved population.
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B-092

MIND OVER BODY: PREDICTORS OF PERCEIVED HEALTH IN THE GAY COMMUNITY

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Due to concerns related to stigma and discrimination, gay men are less likely to receive or seek out adequate medical care (Finlon, 2002). The aim of this investigation was to determine psychological barriers and facilitators to positive perceived health, hypothesizing that positive coping and mindfulness will predict better perceived health, while internalized homophobia and anxiety will negatively impact perceived health.
Measures of perceived health typically are used as effective measures of accurate health (Miilunpalo, Vuori, Oja, Pasanen, & Urponen, 1997). Therefore, the General Health subscale of the Short Form 36 (Ware & Sherbourne, 1992) was used to determine perceived health. Anxiety (State-Trait Anxiety Scale; Spielberger et al., 1983), coping strategies (Brief COPE; Carver, 1997), mindfulness (Kentucky Inventory of Mindfulness; Baer, Smith, & Allen, 2004), and internalized homophobia (Internalized Homophobia Scale; Herek, Cogan, Gillis, & Glunt, 1997) were examined.
Participants were gay men (N=50), primarily of European descent (60%), with a mean age of 36 years (SD = 13.26), and living in Dallas/Fort Worth. Correlational analyses suggested relationships between general health perceptions and mindfulness via both observing and describing, anxiety, active coping, substance use, and behavioral disengagement. A regression analysis suggested that these variables account for 37% of the variance in general health perceptions (adj. R2=.37, F(6,43)=5.77, p < .01), with anxiety being the sole significant predictor (β=-.35,t=-2.84, p = .022).
Results of these analyses suggest that anxiety is a contributor to negative perceptions of health in gay men. Interventions aimed at improved perceived health within this population should focus on methods to reduce anxiety, such as relaxation techniques or exercise. By reducing the impact of this barrier, gay men may experience improvements in health status or may be more willing to utilize healthcare services.

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B-093

PERCEIVED STIGMA AMONG PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Chronic obstructive pulmonary disease (COPD) is the fourth leading cause of death in the U.S., and physical symptoms of the disease are generally quite evident, including shortness of breath, coughing, and fatigue. Supplemental oxygen is often prescribed. In addition, smoking, a highly stigmatized health behavior, is the most common cause of COPD. Thus, there are numerous potential sources of stigma among patients with COPD. The primary aim of this study was to assess perceived stigma in patients with COPD using the Social Impact Scale (SIS; Fife & Wright, 2000), developed for use with medical populations. This study also aimed to examine the association of perceived stigma with psychological distress, locus of control, and self-esteem. Forty-three women (n=19) and men with COPD (mean age=62.9±11.1 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 scale of 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 the SIS. Cronbach's α for the SIS was 0.91 and scores on the SIS were comparable to those in past studies with other medical populations (e.g., cancer, Parkinson 's disease). SIS was positively correlated with CES-D (r=0.59, p<.001), STAI (r=0.50, p<.01), MHLOC-Powerful Others subscale (r=0.55, p<.001), and MHLOC-Chance subscale (r=0.37, p<.05). SIS was negatively correlated with RSES (r=-0.46, p<.01). Age was negatively correlated with SIS (r=-0.41, p<.01) and CESD (r=-0.42, p<.01). Thus, patients with COPD report feeling stigmatized at a level comparable to patients with cancer and Parkinson's disease. Perceived stigma is associated with psychological distress, including greater depression and anxiety, and lower self-esteem. Stigma is an important dimension for consideration in research and clinical work among patients with COPD.

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B-094

PERCEIVED COGNITIVE FUNCTION, DEPRESSION AND FATIGUE IN PEDIATRIC NEUROLOGY

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BACKGROUND: In pediatric neurology, the child's perceived cognitive function (PCF) may be a useful diagnostic or outcome tool. One important question surrounds the extent to which PCF reflects non-specific symptoms such as depression or fatigue.
METHODS: The sample included 140 adolescents (A) and 179 children (C) with one of the following diagnoses: epilepsy, traumatic brain injury, cerebral palsy or brain tumor. Of them, 67% were male, 58% had previously received mental health services, and 32% had repeated a grade. PCF, depression and fatigue were measured by the pediatric Functional Assessment of Chronic Illness Therapy-PCF (pedsFACIT-PCF), the Neuro-QOL pediatric depression scale (developed specifically for children with neurological conditions), and pedsFACIT-fatigue, respectively. All scales were validated and general population based norms are available. Parents also rated the Child Behavior Check List (CBCL).
RESULTS: Compared to normative scores, adolescents reported more severe (> 1 SD) PCF (mean=30.74), fatigue (mean=21.1) and depression (mean=17.9). PCF and depression among Cs were ½ SD more severe than norms, mean=26.22 and 16.8, respectively. Fatigue (mean=12.4) was 1SD more severe than general population. PCF was moderately correlated with depression and fatigue, r=.44 & .47 and r=.67 & .67 for A & C, respectively. Stronger correlations were found between fatigue and depression, r=0.93 & 0.76 for A & C, respectively. PCF scores significantly differentiated samples within and outside of normal ranges in problems of attention, social and thought as measured by the CBCL, all p<.0001.
CONCLUSIONS: PCF is a potential clinically useful tool, sufficiently distinct from depression and fatigue. This sample was more depressed and fatigued, and had poorer PCF than normal comparators. Fatigue and depression were highly correlated, yet explained<50% of PCF variance. PCF scores also discriminated the sample within and outside of CBCL normal ranges. Further study comparing PCF to other objective data is warranted.

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B-095

SUPPORT BY TELEPHONE FOR HOSPICE CAREGIVERS (SUPPORT TECH)

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Introduction: Informal caregivers (CGs) of hospice patients experience multiple stressors which can negatively impact physical, psychological, and emotional health. The Support TECH study was a one-group, intervention-only feasibility study of a telephone counseling intervention for hospice CGs. The CBY intervention consisted of up to 12 weekly telephone counseling calls. Methods: CGs were assessed at baseline (BL), post- intervention (PI), and 3 months post-intervention (3-PI). Psychosocial measures included depression (CES-D), perceived social support (ESSI), caregiver burden (CRA), benefit finding (BFS) and coping (COPE). Effect size (Cohen's d) was computed to estimate the magnitude of change in key psychological variables from BL to PI (d1) and BL to 3-PI (d2). Results: Of the 26 participants, 19 completed the intervention and all assessment points. The mean age was 59.5 years (SD = 14.4); 94.7% were female and 68% married. Forty-seven percent of CGs were caring for a spouse and 53% for a parent. CGs reported high levels of caregiver burden (X=52.8) comparable to previously assessed CGs of end-stage cancer patients (X = 54.5). CGs showed a small reduction in depression from BL to PI (d1 = .14), and BL to 3-PI (d2 = .14). Furthermore, the BL mean depression score (X=14.57; SD = 11.09) was above the cutoff for clinical depression while the mean levels of depression at PI and 3-PI were below the cutoff. CGs reported a small reduction in perceived stress (d1 = .11) and small increases in benefit finding (d1 = .12) and social support (d2 = 13). In terms of coping, CGs reported a moderate increase in the use of active coping and moderate decreases in the use of denial and behavioral disengagement. Overall, this pilot study has demonstrated that the Support TECH Program is feasible and acceptable and a telephone-based intervention tailored to the needs of hospice CGs can impact psychosocial adjustment.

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B-096

SYMPTOM BURDEN IN ADULTS WITH CEREBRAL PALSY

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Cerebral palsy (CP) is a neurodevelopmental condition characterized by motor and postural impairments. A number of CP symptoms have been recognized, but much remains to be understood about the symptom experience of adults living with this condition. There has also been little research examining the course of CP symptoms over time; i.e., whether patients perceive their symptoms have improved, worsened, or stayed the same. In addition, the extent to which these symptoms are related to psychosocial functioning has not been widely investigated. The present study sought to: (1) determine the relative frequency and severity of 8 symptoms in adults with CP; (2) examine the perceived course of these symptoms over time; and (3) determine the associations between the severity of these symptoms and psychosocial functioning. Eighty-three community-dwelling adults with CP completed a postal survey. Respondents indicated the frequency, severity, and perceived course of 8 symptoms (pain, weakness, fatigue, imbalance, numbness, memory loss, vision loss, and shortness of breath), and completed measures of community integration (Community Integration Questionnaire) and psychologic functioning (SF-36 Mental Health Scale). The results indicated that pain, fatigue, imbalance, and weakness were the most common and severe symptoms reported. All symptoms were more often reported to have either stayed the same or worsened over time. The symptoms were more closely related to social integration than to home competency, productive activity, and psychologic functioning. Memory loss (β=-.30, p<.05) emerged as a unique predictor of social integration in the multivariate context. The findings indicate that among the many symptoms experienced by adults with CP, pain, fatigue, imbalance, and weakness may be particularly common and problematic. The symptoms appear to stay the same or intensify over time, and to be most closely associated with social functioning. Additional research is needed to identify the most effective treatments for those symptoms that impact psychosocial functioning as a way to improve the quality of life of adults with CP.

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B-098

IMPACT OF SOMATIZATION ON THE MISUSE OF PRESCRIPTION OPIOIDS

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Opioid medications are commonly prescribed for chronic pain leading to an increased risk for opioid misuse. The majority of misused opioids are obtained by personal prescription obviating the need to investigate both under and over use of opioid medications as under use provides a large supply of opioid medications in the public domain to potentially be abused. Accordingly, identifying risk factors for both over and under use of prescription opioids is warranted. Given that pain is a hallmark feature of somatization and somatizing patients utilize higher amount of pain relieving medications (Ladwig, Marten-Mittag, Erazo, & Gundel, 2001) we sought to investigate whether somatization symptom severity is a risk factor for the misuse of prescription opioid medication.

Participants were 191 veterans with a current prescription for an opioid medication. Our results showed that the percentage of participants classified as inappropriately using opioid medication increases with self-reported somatic symptom severity, $\chi 2$ (6, N = 191)=30.30, p < .001. A logistic regression analysis showed that somatization severity is significantly associated with the increased likelihood of opioid misuse after controlling for conceptually similar factors (e.g., medication side effects) (OR, .512, 95% CI, .329 to .798). A series of regression analyses testing for mediation showed that somatization severity mediates the relationship between medication side effects and opioid misuse and between depression and opioid misuse. These findings suggest that somatization is conceptually distinct from similar factors previously shown to be associated with opioid misuse.

Taken together, this study demonstrates that somatization severity is a strong predictor of both over- and under-use of prescription opioids. Clinically, these findings suggest that assessment of somatization may help to identify patients at risk for misuse of opioid medications.

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B-099

INFORMATION SEEKING DURING PAINFUL PROCEDURES IN PEDIATRIC SICKLE CELL PATIENTS

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Our study provides data on the frequency of specific coping behaviors in pediatric patients with sickle cell disease (SCD) used during painful medical procedures and how these behaviors influence pain and distress. We also discuss the potential role of cultural differences in how children with this condition, who are predominantly African American, may cope with procedural pain. This study focused on two specific information seeking behaviors (asking questions and watching the procedure) that are frequently studied in procedural pain research. We found that, in a sample of 37 pediatric SCD patients (64.9% female, ages five to 17), the majority of children chose to watch the procedure (73.0%) and did not ask questions (67.6%). These findings stand in contrast to other procedural pain studies that tend to find more equal distributions of information seeking behaviors in children within predominantly non-Hispanic White populations. Results also indicated that children who did not ask questions during painful medical procedures experienced significantly less distress (t=2.38, p<.05), but not necessarily less pain. We discuss these findings in light of research with adults and children that has established ethnic differences in attending behavior to painful stimuli as well as literature on communicative behavior in African American children in health care settings. Future research should be conducted with pediatric SCD patients in order to more thoroughly understand the role of coping behaviors on pain and distress in this population.

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B-100

C-REACTIVE PROTEIN AND PAIN SENSITIVITY: PRELIMINARY FINDINGS FROM FEMALE TWINS

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Chronic pain is a major public health concern. Two factors appear to be at the nexus of chronic pain development. First, pain sensitivity can serve as a marker for subsequent development of chronic pain. Second, inflammation may play a role in the development and maintenance of chronic pain. Several pro-inflammatory cytokines contribute to the secretion of C-reactive protein (CRP), an indicator of inflammation that has been linked to diverse conditions. Although some studies have found a link between pain conditions and CRP, no published study has examined the relationship between pain sensitivity and CRP, which was the aim of this study. As part of a study on chronic pain, data were collected from 38 female twin pairs from the community-based University of Washington Twin Registry. Twins self-reported demographic and pain information. A cold pressor task was used to determine pain threshold and tolerance. Serum levels of CRP were determined by nephelometry. On average, twins were 29 years old and had a body mass index of 24.5 kg/m2; 27% reported chronic pain. Findings from regression modeling that accounted for the correlated data indicated that after controlling for pain status (i.e., chronic localized, regional, or widespread pain), CRP was significantly associated with pain ratings at threshold (p= 0.02) and tolerance (p<0.01). Twins with CRP values of >1.9 mg/L had significantly higher pain ratings at threshold (adjusted mean [95% CI]=47 [37–57]) and tolerance (adjusted mean [95% CI]=68 [60–76]) than twins with CRP values of≤0.3 mg/L (threshold mean [95% CI]=33 [24–42]; tolerance mean [95% CI]=57 [48–66]) or 0.4–1.9 mg/L (threshold mean [95% CI]=37 [31–42]; tolerance mean [95% CI]=60 [52–67]). These findings in a relatively healthy sample of women suggest that inflammatory markers may be informative in assessing the risk for and early detection of chronic pain conditions.

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B-101

PAIN CATASTROPHIZING AS A PREDICTOR OF CURRENT ABDOMINAL PAIN SEVERITY AND FUNCTIONAL DISABILITY IN INDIVIDUALS WITH A HISTORY OF PEDIATRIC CHRONIC ABDOMINAL PAIN

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Pain catastrophizing has been associated with increased symptom severity and functional disability in chronic pain patients. It is unknown whether pain catastrophizing influences the course of symptoms and disability in individuals with a history of chronic abdominal pain (CAP). We hypothesized that higher levels of pain catastrophizing would be associated with increased abdominal pain severity and functional disability in individuals with a history of CAP.

Pain catastrophizing was assessed in adolescent and adult participants (12–32 years) with a history of CAP (n = 148, 60.8% female) using the Pain Catastrophizing Scale. The Children's Somatization Inventory and Abdominal Pain Index were used to measure gastrointestinal (GI) symptoms and abdominal pain severity, respectively, and the Functional Disability Inventory was used to provide an index of associated disability in these participants.

Results from a multiple regression analysis indicated that pain catastrophizing significantly predicted GI symptom severity (β = .301, p < .001), abdominal pain severity ratings (β = .325, p < .01), and functional disability (β = .436, p < .001). Specifically, participants who reported greater pain catastrophizing were more likely to report a greater GI symptom severity, greater abdominal pain severity, and greater functional disability. This study suggests that pain catastrophizing is an important factor involved in the maintenance of CAP and related functional disability.

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B-102

SOMATIC SYMPTOMS AND INCREASED HEALTHCARE UTILIZATION IN CHILDREN WITH NON-CARDIAC CHEST PAIN

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Chest pain is a frequent reason for referral to pediatric cardiologists. However, 95% of children experience pain that is non-cardiac in origin. In the majority of instances, the cause of the pain is idiopathic. Psychosomatic factors have been implicated as possible contributors, with chest pain being part of a broader pattern of somatization symptoms. Increased healthcare utilization (HCU) has been reported in other idiopathic pain conditions, placing a burden on the health care system. This study investigates the relationship between chest pain severity, HCU, and other somatic symptoms. Participants include sixty-one 8 to18 year olds referred to a pediatric cardiology clinic for evaluation of chest pain. Patients diagnosed with non-cardiac chest pain (NCCP) were retained in the study. Data were collected as part of the patient's medical exam. Measures of NCCP, child somatic symptoms (CSI), and HCU were administered to the child and parents prior to diagnosis. HCU was measured by the number of visits to the primary physician, ER, specialist, hospital, and school nurse in the past 12 months.

Level of NCCP was significantly correlated with HCU (r=.31, p=.00), as well as parent (r=.43, p=.00) and child (r=.39, p=.00) CSI scores. HCU was also significantly correlated with parent (r=.60, p=.00) and child (r=.56, p=.00) CSI. Partial correlation was used to further explore the relationship between level of NCCP and HCU, controlling separately for parent and child report on the CSI. After controlling for parent (r=.09, p=.488) and child (r=.09, p=.488) report of somatic symptoms, the correlation between NCCP and HCU became non-significant. Level of pain was no longer associated with HCU in either report, suggesting overall somatization levels were contributing significantly to increased HCU. Applications for this research include developing psychosocial interventions aimed at decreasing health care utilization and somatic symptoms with NCCP populations.

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B-103

IMPROVEMENTS IN DEPRESSION AND PAIN SELF-EFFICACY PREDICT SUCCESS IN PEDIATRIC PAIN REHABILITATION

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Chronic pain is common in adolescents, significantly impacts functioning, and can increase the risk of school absence, social isolation, and depression. Multidisciplinary pain rehabilitation has been shown to improve functioning for adolescents with chronic pain conditions. A number of psychosocial variables are associated with severity of disability in samples of adolescents with chronic pain. However, due to the cross-sectional nature of much of this research, it remains unclear what changes during treatment are associated with improvements in functioning. The present investigation sought to identify process variables in which changes during treatment would predict improvements in functioning for adolescents with chronic pain. Participants were 63 adolescents aged 11 to 20 (M = 15.5, S.D. 2.18; 71% female) who participated in a 3-week adolescent pain rehabilitation program. Participants and their parents completed questionnaires regarding pain, physical and social functioning, and psychological symptoms at the beginning and end of the program. A selection of measures, theoretically hypothesized to respond to treatment and to underlie improvements in functioning, were entered into a stepwise regression predicting change in functional disability. The overall regression model was statistically significant and predicted a large portion of the variance in disability improvement (R^2 = .62; F(10)=8.57, p < .001); however, not all measures were significant predictors. A second regression model including only the strongest predictors was also statistically significant and predicted a large portion of the variance in disability improvement (R^2 = .54; F (2)=34.68, p < .001). In this model, changes in both depression (β=0.50, p < .001) and pain self-efficacy (β=0.33, p < .005) were significant predictors of change in disability. After accounting for these, improvements in anxiety, catastrophizing, pain-related coping, and acceptance of pain were not significantly associated with improved functioning.

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B-104

CHRONIC PAIN ACCEPTANCE MEDIATES POSITIVE AFFECT AND PATIENT PERCEPTION OF INTERFERENCE IN LIFE ACTIVITIES

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Chronic pain (CP) is a growing and prominent healthcare concern. Patient perception of life interference due to pain has been associated with poorer treatment outcomes. Conversely, recent findings suggest that higher levels of positive affect and CP acceptance are associated with more positive patient outcomes. We examined the relationship between Positive Affect and perceived life interference. We were also interested in whether CP Acceptance would mediate the relationship between Positive Affect and Interference. Survey participants who completed at least demographic items yielded a total sample of 148. The sample was primarily female (85.1%), Caucasian (92%), Married/Partnered (68.9%), Insured (88.5%), and half reported that they were disabled. Participants were well-educated (M= 15.1 yrs; SD=2.2), with a mean income of $44,228 (SD=$39,474), a mean age of 48 (SD=10.1), and 16.8 mean years with CP (SD=12.8). Participants completed the West Haven-Yale Multidimensional Pain Inventory (MPI), Positive and Negative Affect Scale and CP Acceptance Questionnaire. Based on Baron and Kenny (1986) guidelines for test of mediation, Interference was regressed on Positive Affect (β=-.403, p<.001). CP Acceptance was then regressed on Positive Affect (β=.583, p<.001). Interference was regressed on both Positive Affect and CP Acceptance (F(2,102)35.58, p<.001, R2 = .399). Notably, the significant relationship between Positive Affect and Interference was no longer significant (β =-.045, p=.629). Inclusion of CP Acceptance (β=-.614, p=<.001) in the final regression attenuated the relationship between Positive Affect and Interference. While our online CP support group sample may be unique and relatively small, results suggest that CP Acceptance may impact patient perception of life interference and consequently be related to higher levels of activity. Treatment regimens that target increasing CP Acceptance may foster lower perceived pain-related life interference resulting in better treatment outcomes.

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B-105

PEDIATRIC CHRONIC PAIN AND DIFFERENCES IN PARENTAL HEALTH-RELATED QUALITY OF LIFE

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There is a paucity of research regarding fathers’ experiences parenting a child with chronic pain (Phares, et al., 2005). Research on pediatric chronic illnesses suggests that fathers' experiences are qualitatively different from mothers (Pelchat, et al., 2007). For example, fathers have been shown to be less involved in their child’s healthcare and caretaking than mothers (Bailey, 1991; Quittner, 1992). This study aims to elucidate fathers’ experiences by examining differences in health related quality of life (HRQOL) of parents with a child with chronic pain.

Families in an outpatient interdisciplinary pain clinic at a large Midwestern pediatric hospital completed questionnaires. Of the 590 families that completed the questionnaires, 268 adequately completed the child, mother and father reports. The majority of children were Caucasian (85%) and female (69%). Children ranged from ages 8 to 18 (M=13.5, SD=2.7). Children completed the PedsQL (Varni, et al., 2001) to assess the child’s HRQOL and the parents completed the Family Impact Module (FIM; Varni, et al., 2004) to assess the parents’ HRQOL. Parental differences on FIM scales were used as outcome variables in regression models, with child age and child HRQOL scores as predictors.

Mothers reported worse HRQOL than fathers on the Total (t(534)=-2.17, p=.030), HRQOL Summary (t(532)=-3.60, p<.001), Physical (t(531)=-4.27, p<.001), Emotional (t(532)=-3.12, p=.002), Social (t(530)=-2.42, p=.016) and Cognitive Functioning (t(531)=-2.21, p=.027) scales. Of these parental differences, the Physical Functioning differences were predicted by the child’s age and HRQOL (R2= .029, F(2,222)=3.308, p= .038), with the child’s HRQOL as a significant predictor (t=1.04, p=.018). Both regression models predicting parental differences in the HRQOL Summary (R2= .021, F(2,223)= 2.448, p= .089) and Cognitive Functioning (R2= .021, F(2,222)= 2.358, p= .097) scores approached significance, with the child’s HRQOL as a significant predictor (t=2.197, p=.029 and t=2.141, p=.033, respectively).

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B-107

PREDICTORS OF ADHERENCE TO SUPERVISED AEROBIC EXERCISE IN LYMPHOMA PATIENTS RECEIVING CHEMOTHERAPY OR NO TREATMENTS

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Background: Exercise improves health outcomes in lymphoma patients but the determinants of exercise adherence in this population are unknown. Purpose: To examine predictors of exercise adherence in lymphoma patients. Methods: In a randomized trial, 60 lymphoma patients were assigned to the exercise group and asked to attend three supervised exercise sessions per week for 12 weeks. Baseline data were collected on demographic, medical, health/fitness, psychosocial, and motivational variables. Adherence was assessed by objective attendance. Results: Adherence to the supervised exercise program was 77.8%. In univariate analyses, predictors of exercise adherence were employment status (p=0.015), past exercise (p=0.018), age (p=0.024), chemotherapy cycles completed (p=0.026), body mass index (p=0.039), disease stage (p=0.049), previous treatments (p=0.060), depression (p=0.072), and smoking (p=0.085). Higher exercise adherence was achieved by lymphoma patients that were on disability or retired, were previous regular exercisers or completely sedentary, were over age 40, completed over 85% of their planned chemotherapy cycles, were healthy weight, had no disease or disease stage IV, had not received previous radiation therapy, had lower depression, and were nonsmokers. In multivariate regression analysis, previous treatments (β=.27; p=0.019), past exercise (β=-.27; p=0.030), employment status (β=-.21; p=0.073), and body mass index (β=-.20; p=0.086) explained 40% (p=0.001) of the variance in exercise adherence. Conclusion: Demographic, medical, and psychosocial variables predicted adherence to supervised exercise in lymphoma patients. These findings may have help in the development of targeted interventions to improve exercise adherence in this understudied patient population.

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B-108

RANDOMIZED CONTROLLED TRIAL OF COMPUTERIZED TAILORED PHYSICAL ACTIVITY REPORTS

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Purpose: To examine the effect of computerized tailored physical activity reports on primary care patients’ physical activity at six months.

Methods: Participants (n=394 adults) were recruited from 22 primary care offices in Philadelphia, PA from 2004–2007 and were randomized to either a physical activity intervention group (n=187) or a contact control group (n=207). The intervention group received four feedback reports based on their responses to physical activity questions. The control group received general reports on screening based on their responses to medical screening questions. The main outcome measure was minutes of physical activity measured by the 7-Day Physical Activity Recall interview at six months.

Results: Participants were 69% female, 59% African American, and had diverse educational and income levels; the retention rate was 89.6%. After adjusting for baseline levels of activity and gender, the intervention group increased their total minutes of physical activity by a mean of 133 minutes, while the control group had a mean increase of 99 minutes (p=0.39).

Conclusions: Although we saw a time effect within groups, computerized tailored physical activity reports did not significantly increase physical activity levels between groups among ethnically and socioeconomically diverse adults in primary care. Additional research is needed to better understand the efficacy of physical activity interventions in primary care.

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B-109

THE RELIABILITY AND VALIDITY OF A QUESTIONNAIRE TESTING PARENTS' SUPPORT FOR IMPROVING THE DIET OF AFRICAN AMERICAN GIRLS AGES 9–12 YRS

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BACKGROUND- The prevalence of overweight in African American (AA) girls is higher than other ethnic groups. Increasing physical activity (PA) or decreasing energy intake is the goal of obesity prevention programs. Identifying factors that influence PA behavior is an important step in developing successful obesity prevention interventions. With this in mind, reliable and valid questionnaires to determine if parental support for PA is related to increased PA participation by AA girls are needed. We hypothesized that logistic support (LS) and explicit modeling (EM) for PA, which reflects positive parenting behaviors, would be related to positive parenting behaviors associated with diet.
METHODS - A questionnaire measuring parent modeling and logistic support for PA previously used with parents of Euro-American girls was tested. Sixty-seven AA families were recruited. Factor analysis was performed on the questionnaire. Reliability coefficients were calculated for each scale. Pearson correlations were calculated between the PA scales and the diet-related psychosocial scales for criterion validity.
RESULTS - Reliability coefficients for PA logistic support (LS) and EM for child PA were 0.51 and 0.58 respectively. Parents who reported greater LS for PA reported greater encouragement of eating fruit and vegetables (r=0.25, p< 0.05). Parents who reported greater EM for PA reported greater home availability of fruit (r=28, p<0.05), vegetable (r=39, p<0.01), and low fat foods (r=28, p<0.05), as well as serving more fruit and vegetables in the home (r=43, p<0.01), selecting healthy restaurants (r=28, p<0.05), and greater encouragement for eating fruit and vegetables (r=37, p<0.01).
CONCLUSIONS - The questionnaire used to measure parent modeling and LS for PA has shown related criterion validity with diet psychosocial questionnaires when used with AA families. Future research should investigate increasing the reliability of the questionnaire and then its construct validity using an objective measure of PA.

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B-110

USE OF THE PATH ENVIRONMENTAL AUDIT TOOL (PEAT) TO ASSESS WALKING TRAILS IN UNDERSERVED COMMUNITIES

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The Path Environmental Audit Tool (PEAT; Troped et. al., 2006) was used to determine how physical characteristics of trails related to trail usage in the Positive Action for Today's Health (PATH) randomized controlled trial. The study assessed physical environmental factors including aesthetics, access, safety, functionality that may play a role in increasing physical activity (PA). A total of 439 participants (100% African American, 274 women, 165 men, mean age=51.2) were recruited for PATH in three underserved communities matched on prevalence of minorities, income, and crime rates. Communities were randomized to three conditions: police patrolled walking trail plus social marketing (full intervention/FI), police patrolled walking trail only (WO), or health education to compare increases in moderate-to-vigorous PA. In this study we describe the feasibility of using PEAT in high crime (crime index/capita .0058 (FI), and.0057 (WO)), low income (median household income $16,804 (FI) and $22.088 (WO)) communities. Off-duty officers were paid to provide surveillance for our PEAT team. Eight graduate students were trained over a week period by international experts and co-investigators in assessing trail characteristics using the PEAT. Kappas were calculated in relation to a "gold standard" set by the investigators. Candidates who reached the criteria for reliability (all with > .80 reliability) were selected for the PEAT team. Preliminary data based on baseline data collection indicated that the average number of stray dogs was low, (FI: .28, WO: .68), the sidewalk conditions were poor, (FI: 3.0, WO: 3.0; 0=The entire trail was level; 4=none of the trail was level), there were a moderate number of overgrowth barriers on the trail, (FI: 2.3, WO: 1.7; 0=None, 4 =5 or more times) moderate to high frequency of litter, (FI: 2.5, WO: 2.8; 0=None, 4=a lot), and some vandalism, (FI: 1.7, WO: 1.1; 0=None, 4=a lot.) Further objective data from baseline and 12-month PEAT observations will be forthcoming.

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PARENTAL INVOLVEMENT IN YOUTH PHYSICAL ACTIVITY: IMPACT ON LIFESTYLE BEHAVIORS

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Parents play a key role in shaping youth lifestyle behaviors; however, little is known about the social and environmental factors that influence this relationship. The objective of this study was to examine the effect of parental involvement in their child's physical activity (PA) on youth PA, sedentary behavior, and weight status. This study is a secondary analysis of data from the 1999 Quebec Child and Adolescent Health and Social Survey (n=3665), comprising representative samples of 9, 13, and 16 year olds. Students and one parent completed questionnaires; height and weight were measured. PA frequency was categorized as low, moderate, or high, based on tertiles of age-specific 7-day activity recalls. Screen time was classified as 0–14 and >14 hours of TV&video/week. Excess body weight (overweight and obesity) was defined according to Cole's sex- and age-specific BMI cutpoints. Involvement in youth PA was categorized as neither, one, or both parents engaging in PA with their child≥once/week, based on parent reports. In separate age-specific logistic regression models, the effect of parental involvement in their child's PA on youth PA level, screen time, and weight status was tested, controlling for socioeconomic and neighborhood factors. A possible modifying effect for two-parent households was explored. Complete data were available for 69% of the sample (n=2511). Those with both parents involved in youth PA≥once/week (vs. neither), were more likely to report high PA at 13 years (OR=3.80, CI 95%=1.81–7.98) and 16 years (OR=3.89, CI 95%=1.53–9.87), and less likely to report high screen time at age 13 (OR=2.31, CI 95%=1.29–4.13). No associations were found for weight status. The favorable effect of parental involvement was observed in two-parent families only; factors influencing youth lifestyle behaviors in single-parent households need further study. Health promotion strategies should target parental involvement in youth PA, as our findings point to a favorable influence on several youth lifestyle behaviors and may reduce the future burden of cardiovascular disease.

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INDIVIDUAL CALIBRATION OF THE ACTIGRAPH GT1M ACCELEROMETER IN SEDENTARY ADULTS WITH TYPE 2 DIABETES

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Previously published accelerometer count ranges have been developed using relatively healthy, young adult populations. These count ranges may provide inappropriate normative ranges when used with older, chronically ill populations. The primary aim of this study is to develop an alternative calibration method to calculate individualized Actigraph GT1M accelerometer count ranges for physical activity (PA) at different intensity levels (light/moderate/hard/very hard) in order to assess PA in sedentary, overweight/obese adults diagnosed with type 2 diabetes. Group count ranges are also calculated, and comparisons are made between the sample count ranges and those previously published. In an on-going laboratory study, data are collected during a baseline cardiopulmonary stress test. Participants wear an accelerometer that collects activity count data. To date, participants include 9 males and 1 female, (80% Caucasian, age: 56.30±8.60 years, BMI: 34.50 ±2.93, HbA1C: 7.56±1.54). Activity counts and oxygen uptake were highly correlated (r=0.80). Linear regression analyses were used to determine individual count ranges that correspond to different PA intensity levels. One-sample t-tests were used to determine group count ranges for light, moderate, hard, and very hard intensity levels (≤1792, 1793–2585, 2586–3536, ≥3536 counts per minute, respectively) and to compare these group count ranges to those previously published (≤1951, 1952–5724, 5725–9498, ≥9499). The boundary between light and moderate PA levels was not significantly different (p=.19), however the boundary between moderate, hard, and very hard intensity levels were all significantly different (p<.001). Preliminary findings suggest that Actigraph GT1M accelerometer count ranges corresponding to different PA intensity levels vary by individual. Use of pre-established count ranges to determine time spent in various PA levels is not advised unless derived from populations similar to the population of interest.

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A COMPARISON OF PHYSICAL ACTIVITY MEASURES IN LONG-TERM CANCER SURVIVORS

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Accurate measurement of physical activity (PA) is a difficult undertaking. Various objective and self-report measures have been developed, however the most accurate and still feasible way to collect PA data remains elusive. As part of a study of long-term health effects in hematologic malignancy survivors, we collected patient reported outcomes (PRO) and conducted onsite testing of N=57 survivors (46% male), age 18–50 (M=39.6, SD=9.2). Survivors wore an omnidirectional accelerometer to measure PA intensity over 7 days. PRO included a home activity log corresponding to the 7 days the participant wore the accelerometer, typical weekly PA (Godin Leisure-Time Exercise Questionnaire modified to include all physical activity; GLTEQ), number of blocks walked daily, and total minutes and intensity of itemized PA per month (based on the Compendium of Physical Activities table of metabolic equivalents; METs). Accelerometer data and the various PA PRO were compared to physiologic indicators of cardiovascular and overall fitness, including aerobic capacity (VO_2max), body mass index (BMI) and body fat percent (BFP; from dual-energy x-ray absortiometry scan). Accelerometer data correlated well with VO_2max (r=.65, P<.001) and moderately with BFP (r=-.36, P=.02), however these data were compromised by 11 (19%) equipment malfunctions. Number of blocks walked daily correlated with VO_2max (r=.35, P=.01), but not with BFP (r=-.22, P=.12). Other PRO measures, including home activity log, GLTEQ, and total minutes and intensity of activity (MET-minutes) per month were not associated with fitness in our cohort and were generally not correlated with each other. Of note, no objective or PRO measures of PA correlated significantly with BMI. The addition of strength testing may capture more variability in the PRO measures. Results indicated that despite device problems, the accelerometer was the most accurate method of collecting PA data in our cohort. If objective data collection of PA is not possible, PRO of number of blocks walked daily may be an alternative.

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MEASURING PHYSICAL ACTIVITY AMONG SOCIALLY DISADVANTAGED ADULTS WITH PREDIABETES

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Background: Diabetes is prevalent among socially disadvantaged individuals. These same individuals report low levels of physical activity (PA). Increasing PA is a national health priority. Accelerometers offer a valid measure of PA and may increase our understanding of the relationship between PA and diabetes prevention. Purpose: We examined the feasibility of using accelerometers to measure PA in underserved adults with prediabetes participating in an ongoing RCT testing the efficacy of a YMCA diabetes prevention program. Baseline PA is described and relationships between demographic variables and PA are examined. Methods: Participants were recruited from primary care clinics and were mostly female (84%), African American (50%) with a mean age of 52 years (SD 12). Mean BMI was 38 mg/kg2 (SD 6.5). Relationships between race, gender, age, and PA were explored using Wilcoxon Rank Sum test and Spearman Rank Correlation tests. Results: To date, 61 participants were asked to wear a monitor for 7 days; 1 refused and 3 agreed but never returned the monitor. Of the 57 participants who returned monitors, 7 (15%) wore the monitor for 7 days, 23 (49%) for 5- 6 days, 14 (30%) for 1–2 days, and 5 (9%) for 0 days. Sixty-three percent of the sample engaged in 0 minutes of moderate intensity PA while 37% engaged in an average of 13 min/day (range 1.8–106 min/day). No participants engaged in vigorous activity and only 1 met PA recommendations of 150 minutes of moderate PA/week. Each year of age was associated with less daily PA (r=-0.27, p=0.039). There were no significant differences in daily PA between males and females or between African American and Non-Hispanic White participants. Conclusions: Although challenging to implement in a community-based trial, accelerometers demonstrate the low levels of PA among subsegments of underserved populations with prediabetes. Given these results, there may be tremendous opportunities to prevent diabetes more effectively through efforts that maximize regular PA.

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Meritorious Student Poster
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EXAMINING BDNF SNP AND INTRINSIC MOTIVATION TO EXERCISE

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Increased physical activity can ameliorate the impact of some of the leading causes of disease burden worldwide (WHO, GDB report, 2004). Understanding factors that underlie differences in physical activity participation is crucial to the future of exercise promotion research. It has been argued that those who are intrinsically motivated to exercise, who do so because of the pleasure they experience during exercise, are the most likely to exercise consistently (Ryan & Deci, 2000). Relatedly, a functional single nucleotide polymorphism (SNP) for the brain derived neurotrophic factor (BDNF) has been shown to be related to differences in increased positive mood in response to exercise such that those with the A allele have a more positive mood response to physical activity (Bryan et al., 2007). We tested the hypothesis that those with the A allele are more intrinsically motivated during a moderate intensity exercise session in a sample of 99 healthy, regular exercisers, aged 18 to 35 (M= 23.58, SD=3.95). Participants ran on a treadmill at moderate intensity for 30-minutes, were asked about motivations at three time points, and were given the option to continue exercising for an additional 5 minutes, as an operationalization of intrinsic motivation. Individual slopes of change in intrinsic motivation were calculated using random coefficient regression. We then compared mean differences in these slopes by gene group using one-way ANOVA. We observed a significant difference between groups, F(1,87)=6.47, p = .013. Those with the A allele had greater increases in intrinsic motivation (M = 1.29, SD = 2.35) compared to those with the G allele (M = .028, SD = 2.12). Those with the A allele were also significantly more likely to voluntarily continue exercising (55%) compared to those without an A allele (33%; p = .027). This study provides evidence that there are underlying genetic factors that may influence individual differences in the intrinsic rewards associated with exercise. Examining such factors can lead to more effective, individualized intervention approaches.

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DIFFERENCES IN PHYSICAL ACTIVITY AMONG ADULTS IN HOUSEHOLDS WITH AND WITHOUT CHILDREN

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There is evidence that parenthood affects physical activity (PA) of mothers, but impact on fathers and specific domains of PA are not known. Data for 909 women, and 965 men were used to compare PA in multiple domains among adults with and without household members less than 18 years of age. Participants were 20 to 57 years and recruited from 2 U.S. regions. Mixed Models were used to assess differences in PA and BMI, with analyses stratified by parent sex and controlling for demographics and clustering. The primary outcome was accelerometer measured daily minutes of moderate-to-vigorous PA (MVPA). Secondary outcomes were BMI and minutes of leisure, transportation, household, occupation, and total PA from long IPAQ, and past week sitting time. Parenthood was not related to men's MVPA, but women with children recorded more MVPA. Male and female parents reported higher household activity (about 1 and over 2 hours per week, respectively) and lower sitting time (4.5 and 8 hours fewer per week, respectively) compared to non-parents. Both men and women with children aged 0–5 reported the highest levels of household activity and the lowest sitting time. Household PA was generally higher and sitting time lower for mothers and fathers with more children. Household and total IPAQ PA were notably higher for women with three or more children than for other groups. Considering the potential for child-rearing to decrease available parent time, there was little difference in parents' objectively measured MVPA compared to non-parents. There was no evidence that leisure, transport, or occupational activity varied by parenthood. Parents appeared to increase sitting and reduce household activity as children aged, making parents of school aged children prime targets for PA and sedentary behavior interventions.

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MEDIATORS OF PHYSICAL ACTIVITY MAINTENANCE IN A RANDOMIZED CONTROLLED INTERVENTION TRIAL

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Introduction: Researchers postulate that interventions increase physical activity by affecting key theory-based mediators (e.g., self-efficacy). However, few studies have been adequately powered to detect the influence of these potential mediators. Furthermore, few studies have examined the effect of psychosocial mediators on physical activity maintenance following the intervention. Purpose: We examined the influence of psychosocial mediators (i.e., self-efficacy, behavioral processes, cognitive processes, and decisional balance) on physical activity six months following the end of the intervention. Methods: Healthy, sedentary adults (n=448) were randomly assigned to either a 6-month print-based tailored physical activity intervention based on Social Cognitive Theory and the Transtheoretical Model (n = 224) or to a 6-month health/wellness contact control group (n = 224). We analyzed changes in theoretical mediators from baseline to six months (end of the intervention) predicting physical activity (as measured by the 7-Day Physical Activity Recall Interview) at 12 months (six months following the end of the intervention). Results: Participants in the physical activity intervention exhibited greater increases in physical activity than participants in the control group at both six, f(1,384)=4.38, p < .05 and 12 months, f(1,356)=6.35, p < .05. Specifically, the tailored physical activity group increased from a mean of 24.5 physical activity minutes per week (SD= 27.7) at baseline to 176.7 (SD=147.7) at 6 months and 188.5 (SD=159.9) at 12 months. The control group increased from a mean of 22.7 (SD=27.0) minutes per week at baseline to 144.0 (SD=137.5) at 6 months and 148.0 (SD=135.8) at 12 months. Regarding mediators, behavioral processes met all four statistical criteria of mediation. Discussion: Our findings indicate that it may be important for researchers to focus on increasing behavioral strategies for physical activity promotion.

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WOMEN BOUND TO BE ACTIVE (COHORT 3 & 4): CAN A BOOK CLUB HELP WOMEN OVERCOME BARRIERS TO PHYSICAL ACTIVITY AND IMPROVE SELF-WORTH?

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The purpose of this study was to examine the effectiveness of Women Bound to Be Active (WBA), an 8-month physical activity (PA) book club for increasing (a) self-worth (SW; Global Self-Worth Scale of the Adult Self-Perception Profile), (b) benefits relative to barriers of PA (BBRS; Benefits to Barriers Ratio Score), and (c) PA in adult women (self-report & pedometers). Fifty one women in the contemplation or preparation stage for PA (Transtheoretical model) participated in WBA (mean age 52.7 ± 10.3 yrs). Participants met weekly for 4 months, then bi-monthly for four months with a trained facilitator. Resources included fiction and non-fiction books, a workbook, and facilitated group discussions. Women engaged in existing social groups (i.e., public library book clubs, card playing groups) served as a comparison group (C, n = 20; mean age 58.35 + 13.6 yrs). Questionnaires measuring SW, BBRS, and PA participation were completed by both groups at the beginning and end of the 8-month intervention. There was a significant interaction between time (pre vs. post) and group (WBA vs. C) for SW at follow-up, F (1,67)=4.855, p=.031.The simple main effects test (SMET) comparing groups at each level of time indicated mean baseline SW for WBA was significantly less than C, F(1,67)=4.437, p = .039, d=.41. There was no difference in SW between groups at post intervention, F(1,67)=.023, p=.879. The SMET comparing SW over time for each group indicated a significant difference (pre vs. post) for WBA, but not C (F(1,67)=9.191, p=.003, d=.28 and F(1,67) = .460, p = .500, respectively). For BBRS, there was a significant interaction between time (pre vs. post) and group (WBA vs. C), F(1,69)=4.193, p=.044. The SMET indicated that post intervention, WBA BBRS was significantly greater than C, F (1,69)=10.112, p = .002, d=.74. There was no significant difference between groups at pre for BBRS, F(1,69)=2.645, p=.108. The SMET comparing time for each group (pre vs. post BBRS) indicated a significant difference for WBA, but not C (F(1,69) = 12.485, p=.001, d=.34 and C, F(1,69) = .041, p = .839, respectively). There was a significant increase in WBA PA as measured by pedometers from pre to post (5734.12 + 2305.77 vs. 6609.46 + 2784.54 steps, p = .028). The number of women meeting the PA guidelines increased significantly at post in WBA but not C (pre=34% vs. post=58%, p = .038 and pre = 28% vs. post = 28%, p = .628). WBA represents an innovative model for helping women increase SW, overcome barriers to PA and increase PA. Future research is needed to determine the long-term effectiveness of WBA and program feasibility in those with chronic disease.

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INDIVIDUAL DIFFERENCES IN DAILY PHYSICAL ACTIVITY IN MIDDLE-AGED WOMEN: A WITHIN-PERSON ANALYSIS OF DAILY EXPERIENCES

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Middle-aged women engage in insufficient amounts of physical activity (PA) and existing intervention approaches for increasing PA have been only modestly successful. Individually-tailored intervention strategies may be more effective; however, a better understanding of individual differences in factors impacting daily PA is needed to facilitate the development of such strategies. Using the novel approach of single-subject design, we applied experience sampling methods and time series modeling techniques to examine individual differences in objectively measured PA and daily experiences of symptomatic perimenopausal and early postmenopausal women (N = 24). Participants completed fitness, body composition and hormonal status screening, followed by 30-day prospective assessment of sleep quality, daily hassles, perceived stress, somatic and hot flash symptoms, and positive and negative affect using an electronic PDA device. There were significant cross-lagged effects of daily hassles on daily PA in 8 of 24 subjects and of perceived stress, sleep quality, and negative affect in 5 of 24 subjects. That is, daily levels of these variables on a previous occasion predicted objectively assessed PA at a following time-point in these subjects. Although same-day correlations with positive affect were significant in 8 subjects, positive affect predicted subsequent PA in only 2 subjects. Daily somatic symptoms predicted daily PA for 3 and menopausal hot flashes for 2 of 24 subjects. Importantly, the direction of the relationships varied across subjects, suggesting other mediating or moderating factors may be at play. This study demonstrated that individual variation in daily PA may be partially explained by day-to-day changes in measures of stress, affect, sleep, and symptoms. The contribution of other individual and/or contextual factors and their implications for individualization of physical activity interventions are discussed.

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DOES THIS FIT? EXAMINING THE ROLE OF REGULATORY FIT IN HEALTH MESSAGES TO PROMOTE PHYSICAL ACTIVITY AMONG ACTIVE AND LESS ACTIVE ADULTS

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According to regulatory focus theory (Higgins, 2005), people differ in how they approach goal states. Promotion-focused individuals desire advancement and accomplishments; prevention-focused individuals have protection-related concerns (e.g., safety and responsibility). According to Higgins, people “feel right” (i.e., experience regulatory fit), when thinking about or utilizing behavioral strategies that match their regulatory focus. The purpose of the study was to test the effectiveness of tailored health messages. Callers to the NCI’s Cancer Information Service received one of four framed messages promoting physical activity and had their chronic regulatory focus and current level of physical activity assessed (N=605). The messages were either promotion- or prevention-focused and gain- or loss-framed. Regulatory fit would suggest that the promotion/gain messages would be most effective for promoters, while prevention/loss messages would be most effective for preventers. Approximately two weeks after receiving the material, participants were called and their intentions to engage in physical activity were assessed (N = 239). Regression analyses were used to test the regulatory fit hypothesis and to examine whether baseline physical activity moderated the effect. Controlling for demographic factors, a significant 3-way interaction emerged (β=-.32, t=-3.13, p = .001), such that the regulatory fit hypothesis was found only for those who were less active at baseline; those more active at baseline failed to show this pattern. These findings suggest that the current behavior of the population must be considered when developing framed health messages.

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SEX DIFFERENCES IN SELF-EFFICACY, SOCIAL SUPPORT AND PHYSICAL ACTIVITY BY ADIPOSITY IN UNDERSERVED ADOLESCENTS

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There is an increasing interest in understanding how adiposity may be a barrier for engaging in daily health behaviors such as physical activity (PA) in boys and girls. Previous research indicates that overweight youth engage in lower levels of PA than normal weight youth, although some investigators have not shown associations between body mass index (BMI) and PA. Some studies suggest that adiposity may negatively influence the relationship between social support and PA, and self-efficacy and PA, and that sex differences may play a role in understanding these relationships. The present study expands on past research by examining sex differences in self-efficacy, social support, and PA across adiposity levels in underserved (ethnic minority, low-income) youth. It was hypothesized that a stronger relationship between psychosocial variables and PA would be found for adolescents with lower versus higher levels of adiposity, and that this relationship may be stronger for boys as compared to girls. Participants ($N=670$; 56% females; 74% African-American) were recruited from the “Active by Choice Today” randomized controlled school-based trial. The main outcome measure was BMI calculated from height and weight obtained by trained and blinded study staff. PA was measured with 7 days of objectively collected accelerometry estimates. Reliable and valid self-report questionnaires were used to measure self-efficacy and social support (family, peer) for PA. An ordinary least-squares regression controlling for race and socio-economic status demonstrated a 3-way interaction for BMI by sex by family support on PA ($t=1.95$, $p=.052$). For boys, family support was positively associated with PA more strongly in lower as compared to higher adiposity levels. For girls, family support was not significantly associated with PA. Results indicate that a better understanding of family support is needed to promote PA in girls and overweight boys.

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GENDER DIFFERENCES IN EXERCISE DEPENDENCE’S AFFECT ON QUALITY OF LIFE

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It is well documented that the physical and psychological benefits of exercise positively influence constructs conceptualized as health related quality of life (QOL). However, the QOL of individuals who exercise excessively (i.e. exercise dependence) has not been examined. That is, do pathological motivations to exercise excessively either limit or negate the QOL benefits conveyed by exercise. The purpose of this study was to examine the relationship between QOL and exercise dependence symptoms by gender. Participants were 539 college students (M age = 19.76) who completed the Exercise Dependence Scale ($M=45.98$, $SD = 15.92$) and the SF-36 measure of QOL (physical health component score $M=69.21$, $SD=5.26$; psychological health component score $M=66.2$, $SD = 10.34$). We found a curvilinear relationship between physical health QOL and exercise dependence symptoms. More specifically, quadratic regressions revealed a curvilinear relationship within the subscales of physical health QOL. Significant relationships were found for general health ($\beta=-41.52$, $p = .014$) and physical function subscales ($\beta=36.16$, $p = .001$) in males, and role physical ($\beta = 14.05$, $p = .010$) and bodily pain subscales ($\beta=-39.49$, $p < .001$) in females. These findings extend previous research by identifying aspects of QOL that are negatively impacted by excessive exercise and exercise dependence symptoms. Furthermore, the health aspects affected by excessive exercise are different for men and women. Simply stated, these results show, by gender, where QOL is impacted when exercise motivations and behaviors become pathological. The pathological psychological motivations associated with exercise dependence may limit the QOL improvements expected with increased levels of exercise. Future research should continue to examine pathological motivations for exercise behavior and QOL differences in exercise dependence symptoms.

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MATERNAL SLEEP APNEA AND INFANT BIRTH WEIGHT

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Obesity is a significant risk factor for obstructive sleep apnea (OSA) and is associated with increased severity of OSA. Obese and overweight women also have a higher risk of birth defects and complications during pregnancy than average weight women. Maternal sleep apnea may be one mechanism of increased birth defects and complications among overweight and obese women. The present study examined the association between maternal history of sleep apnea and the birth weight of the fetus. We predicted that severity of sleep apnea would be associated with lower infant birth weight. A list of (7,991) women who had undergone a polysomnographic sleep study at the Mayo Clinic between 1987 and 2003 was cross matched with a birth database of women who gave birth at the Mayo Clinic between 1992 and 2004. From this group, women who had undergone a sleep study five years prior or five years following delivery were selected, resulting in a sample of 143 pregnancies nested within 116 women. Pregnancies resulting in miscarriage or fetal death upon delivery were not included. Multilevel modeling was used to examine the relationship between sleep apnea indices and birth weight of the infant, controlling for gestational age, medical conditions, and maternal weight during pregnancy. Maternal hypoxia during sleep, but not frequency of apneic events, was associated with lower birth weight, $p <.05$. Furthermore, hypertension during pregnancy and hypothyroidism were both associated with lower birth weight ($p<.01$). Maternal weight during pregnancy and gestational age of the infant positively covaried with infant birth weight ($p<.01$). Apnea does not explain the relationship between maternal weight and infant birth weight, but both have significant relationships. These results suggest that oxygen desaturation during apneic episodes may impact fetal growth.

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EXPERIENCE OF STRESS AMONG LOW-INCOME PREGNANT WOMEN: THE HEALTHY MOMS, HEALTHY BABIES PROJECT

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The objective of this study was to identify factors associated with prenatal stress and stress-related behaviors among 57 low-income pregnant women (65% Latina; 28% African-American; 60% with annual family income <$15,000). Approximately 46% of women demonstrated elevated stress levels during pregnancy (higher than national average on Perceived Stress Scale). Independent samples t-test analyses revealed that women with high stress levels during pregnancy had significantly more financial stress [$t(1,55)=3.0$, $p<.01$)], higher depressive symptoms [$t(1,55)=-4.2$, $p<.001$)], and a greater delay in initiating their prenatal care [$t(1,55)=-2.9$, $p<.01$)] than women with low stress levels during pregnancy. Responses on the Pregnancy Experiences Scale indicated that the top three pregnancy-related stressors were related to experiencing normal discomforts during pregnancy, such as heartburn and fatigue (42%), not getting enough sleep (38%), and having concerns about physical symptoms, such as stomach pain and spotting (36%). In contrast, the top three positive attributes of pregnancy reported included thinking about the baby’s appearance (93%), thinking about one’s ability to be a good mother (89%), and receiving more courteous responses and assistance from others since becoming pregnant (80%). Less than 10% of women reported engaging in relaxation strategies during pregnancy, with the most frequent strategies used being massage (9%) and meditating while taking baths, praying, and listening to music (7%). However, these types of relaxation strategies alone were not effective in reducing women’s stress levels during pregnancy. Approximately 92% of women reported wanting to receive prenatal health programs that would teach them how to better manage their stress and qualitative data analyses revealed women’s preferences for how these programs could be delivered. These results highlight the need for stress management programs among low-income pregnant women and have important public health implications for how these programs may be tailored and delivered effectively among this population.

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SOCIAL, ECONOMIC AND HEALTH COSTS OF UNINTENDED PREGNANCY: THE CIRCLE OF CARE PROGRAM IN TROUP COUNTY, GEORGIA

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Estimates indicate(NCPTUP, 2008) that adolescents giving birth before the age of 18 costs the United States at least $9.1 billion dollars annually. Latest available national data indicate a slight increase in rates of unintended teen pregnancy after a 15 year period of steady decline. The unintended teen pregnancy rate in Troup County, GA in 2006 was 51.9/1,000, which was higher than the national average of 41.9/1,000(Kids Count, 2008).The purpose of this study was to review the Circle of Care intervention program, a collaborative multi-agency teen pregnancy prevention program. The Circle of Care program was developed in 1997 through the efforts of multiple community partner organizations. These organizations included the local school system, the Division of Family and Child Services, Troup Family Connection, the local teen public health clinic, the local hospital and other community based organizations. Participants in the program received multiple services including case management, family assessment, parenting classes, home visits, family planning assistance and services from the teen health clinic and Division of Family and Child Services. Results of the study utilize data from 2007 and include 39 teen participants. Outcomes indicate that Circle of Care participants gained social, economic and health benefits from participation in the program including: higher rates of high school enrollment, no repeat pregnancies, and no reported incidences of child abuse or neglect. On average, 25% of teen mothers have a repeat pregnancy prior to the age of 20. Projected cost savings from reduction in dropout rates and no repeat pregnancies are reported. These evaluations are based on a per capita expenditure of $1,250. Evaluation of the Circle of Care program supports the efficacy of multi-level, collaborative efforts to reduce unintended teen pregnancy and subsequent social, economic and health risks.

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RISKY BUSINESS: MESSAGE FRAMING AND THE MODERATING EFFECTS OF RISK INFORMATION AND PAP TEST STATUS ON WOMEN'S PERCEPTIONS OF THE HPV VACCINE

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Framing a message in terms of the benefits of engaging in a behaviour (gain frame) or the costs of failing to engage in a behaviour (loss frame) affects health decision making (Rothman & Salovey, 1997). Emerging evidence (e.g., Aponovitch et al., 2003) indicates that gain- and loss-framed messages are differentially effective depending on characteristics of the message and its recipient. The current study examined the moderating effects of risk information (message characteristic) and participants' sexual health history (recipient characteristic) on the persuasiveness of gain- and loss-framed messages encouraging women to obtain the Humanpapilloma Virus (HPV) vaccine. Consistent with prospect theory, a gain-framed message would be most effective when women have had a pap test and received a low risk message whereas, a loss-framed message would be most persuasive when women have not had a pap test and received a high risk message. Using a 2 Frame x 2 Risk x 2 Pap Status design, we randomly assigned participants (n=200; Mage=22.12 yrs ±2.22) to read a framed message. Participants then completed a 32-item questionnaire assessing constructs of protection-motivation theory (Rogers, 1975). ANOVAs revealed a three-way interaction for response efficacy (F(1, 187)=6.91, p<.01) and a two-way interaction for self-efficacy (F(1, 185)=6.29, p=.02). Post hoc paired comparisons revealed that response efficacy tended to be highest when women who had been pap tested received the low risk gain-framed message and when women who had not been pap tested received the high risk loss-framed message. Self-efficacy to be vaccinated tended to be highest when women received either the low risk gain-framed message or the high risk loss-framed message. Results provide preliminary evidence to support the moderating effect of risk information and recipient characteristics. Future research should continue to investigate the impact of risk information and recipient characteristics on the persuasiveness of framed messages.

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EFFECTS OF SEXUAL HEALTH PSYCHO-EDUCATIONAL GROUP ON REHABILITATION STAGE OF MAJOR PSYCHIATRIC PATIENTS

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The purpose of this study was to examine the effects of the sexual health psycho-educational group interventions in improving self-help behaviors, sexual knowledge, sexual attitude and sexual performance in rehabilitation stage of major psychiatric patients. Subjects were selected using convenience sampling at psychiatric day treatment center and out-patients department of a major medical center in northern Taiwan. Sixty 20–45ages rehabilitation stage of psychiatric patients were assigned into experimental and control group. The subjects in the experiment group received an 8-weeks small sexual health psycho-educational group intervention that taught the knowledge of sexual health care, and the skills of constituting self-awareness, problem-solving strategies, and self-control. Outpatient Department patients in the control group not received any intervention. There were three waves of data collection: pre-test, post-test, and one month follow-up. A structured questionnaire including the scale of learned resourcefulness, sexual knowledge, sexual attitude, and sexual performance was used to assess the functions of self-help and sexual health care.

The results of this study demonstrated that subjects in the experimental group experienced improved in the skills of self-help, level of sexual knowledge, sexual attitude, and sexual performance. Moreover, the improvement of the level of sexual knowledge, sexual attitude and sexual performance in the experimental group remained significant at the end of the first month during follow-up compared with the control group.

In conclusion, this study provided an interventional model of sexual health psycho-educational group for nurses who are taking care of rehabilitation stage of major psychiatric patients. In addition, the findings suggest that sexual health psycho-educational group intervention is important in promoting sexual knowledge, sexual attitude, and sexual performance for the rehabilitation stage of major psychiatric patients.

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CONDOM BELIEFS AND USE IN 1998 AND 2009

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There have been a variety of programs aimed at disseminating information about the risks of unprotected sex. Comprehensive programs state that condoms are the best protection against both unwanted pregnancy and sexually transmitted diseases (STDs). Abstinence-only programs, some researchers think, provide misleading, if any, information about condoms. What is the impact of these programs on students' understanding?

I administered surveys to similar cohorts in 1998 and 2009 to measure undergraduates' 1) perceptions of the prevalence of condom use 2) understanding of the protection they provide 3) own use and 4) reasons for their lack of use. The surveys were completed anonymously in an auditorium at a large public university. The 1998 (N=227) and 2009 (N=264) samples were compared; there were no significant differences in age, gender, or sexual activity.

1) More '09 than '98 participants believed that most unmarried heterosexuals use condoms, p<.001, and that more sexually active people use condoms every time they have sex, p=.002.

2) Although 90% in both years thought that condoms are the best protection against STDs, more people in '09 than '98 indicated that condoms are the most effective form of birth control, p<.001. Additionally, more '09 participants understood that one can contract STDs from receiving oral sex, p=.020.

3) More people in '09 than in '98 agreed with the statement that every time they have sex they use a condom, p=.001. The '09 participants who indicated the time lapse before they stopped using condoms waited longer on average (6 mos.) than participants in '98 (4.5 mos.), but the difference was not significant.

4) Sexually-active participants checked reasons provided or wrote-in reasons for not using condoms in the past. Two reasons were listed among the top four in both years: Use other birth control (43% in '98, 45% in '09) and Sleep with only one person (40% in '98, 22% in '09).

These data suggest that education programs have been effective and that the rise of abstinence-only education has not increased misinformation. There is room for improvement, however. More education on the ramifications of partners' past and current sexual behavior is needed.

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RELATIONSHIPS BETWEEN SHORT SLEEP DURATION AND OBESITY IN RURAL LOUISIANA SCHOOL CHILDREN

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Previous studies have found short sleep duration to be associated with increased obesity in children. However, most of these studies used questionnaires to assess sleep. This study assessed relationships among objective measures of sleep duration, percent body fat (PBF), and body mass index z score (BMIZ) in a sample of rural, Louisiana children. Participants included 4th to 6th grade students participating in an accelerometer sub-study of the LA Health Study. Participants were instructed to wear an accelerometer for 72 hrs. Participants completed an in-person assessment in which height (stadiometer), weight (Tanita 310), and PBF (Tanita 310) were measured. Physical activity and sleep duration (Actigraph GT1M) were accessed over 72 hours. Energy intake during lunch (food photography method) was assessed over three days. Participants (N = 222, M age = 10.38 yrs; 65.9% female; 76.4% African American; M BMI percentile=69.18) with accelerometer data for at least two nights were used in analyses. Participants slept an average of 8.19 hrs (SD=0.81) a night. Hierarchical regression analyses assessed whether sleep explained variance in PBF and BMI beyond that explained by age, gender, ethnicity, depression, physical activity, and energy intake. Demographic and behavioral variables explained 8.67% of the variance in PBF ($p < .01$). Sleep duration explained an additional 2.90% of the variance ($F=3.92$, $p < .001$). In the final step of the model, sleep ($\beta=-.18$) and physical activity ($\beta = -.23$) were significantly related to PBF. Turning to BMIZ, demographic and behavioral variables explained 6.59% of the variance in BMIZ ($p < .05$). Sleep duration was negatively associated with BMIZ explaining an additional 2.77% of the variance ($F=3.10$, $p < .01$). In the final step of the model, sleep ($\beta=-.17$), physical activity ($\beta = -.18$), and energy intake ($\beta = .14$) were related to BMIZ. These analyses using objective measures of sleep and obesity corroborate previous studies which found short sleep duration to be associated with greater BMI and PBF.

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DEVELOPMENT AND ASSESSMENT OF A MEDICAL STUDENT CURRICULUM FOR BRIEF MOTIVATIONAL INTERVIEWING

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Motivational Interviewing (MI) has become a recognized intervention to help patients with behavior change since its founding in the 1980s for use in alcohol addiction. This patient-centered approach relies upon the practitioner to accentuate the patient's ambivalence to change rather than maintaining the status quo of the behavior. Using a well-defined set of precepts, MI can provide the medical practitioner with a repertoire of tools to utilize in a busy practice by using brief interventions to move the patient away from inaction to change talk and the resultant cessation of the untoward behavior. Very few US medical schools teach MI principles at varying points in their curriculum. We have been teaching MI for the past five years and over the past two years have instituted a four year curriculum which emphasizes the patient-centered model starting the first week of the first year and extending through fourth year electives. The basic precepts of communication taught include open-ended questions, affirmation, reflective listening and summarization (OARS), patient agenda setting, ask/inform/listen and MI. Starting this academic year, third year students assessed this curriculum with a series of questionnaires given prior to and immediately following a four hour MI workshop, (taught by formally trained faculty) as well as after a mandatory tobacco cessation patient project. This evaluation assess how they view the MI intervention for tobacco cessation, whether or not they are using it for behavior change, and whether or not they see it modeled by other faculty. Our preliminary data show a significant increase in the confidence level of students after the workshop as well as a positive impression of the utility of MI in behavioral change. We plan to share more formal data with attendees and encourage a discussion on other institution's experiences using this promising approach for medical personnel.

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B-135

SMOKING WITHIN THE LESBIAN, GAY, BISEXUAL, AND TRANSGENDER (LGBT) COMMUNITY

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Research regarding smoking in the Lesbian, Gay, Bisexual, and Transgender (LGBT) community is imperative due to a disproportionate amount of those within the LGBT using tobacco products. Those within the LGBT community are nearly twice as likely to smoke as those in the general population, and traditional campaigns to prevent smoking within this population have been largely ineffective.

A thorough literature search was conducted to identify peer-reviewed articles regarding the current state of smoking within the LGBT community. Twenty-two articles were identified as containing especially relevant information. Nine focused on social influences on use and onset including minority stress; four detailed cessation and prevention strategies. Three articles focused on advertising, and two focused on variations of smoking patterns and disparities within the community. Two focused on youth, one was a literature review, and one focused on smokeless tobacco.

Like most smokers, LGBT youth start before the legal age of smoking, but tend to start smoking earlier than the general population. Patterns of usage within the community tend to imitate those within the general population, just at higher overall rates of use. Little has been researched about prevention and cessation programs that could prove effective. However, some studies alluded to potential success of programs tailored specifically toward the LGBT community, as they would be sensitive to other issues within the community that might influence tobacco use.

Research on social influences is plentiful in this area; however, it is still generally inconclusive. One emerging hypothesis suggests that the prevalence of the "bar culture" within the population that contribute to high levels of tobacco use. Research shows that tobacco companies have strongly targeted those within the LGBT community by targeting venues and publications specific to them.

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SOCIOECONOMIC DISADVANTAGE AND ABRUPT QUITTING

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Objective: Quitting smoking is done either abruptly or gradually. Likelihood of success is greater in abrupt quitting. The objective of this research was to examine socioeconomic differences in abrupt quitting.

Methods: The analysis used data from 6034 smokers from Waves 1 through 6 (2002–2008) of the International Tobacco Control (ITC) Four Country Survey, a prospective study of a cohort of smokers in the US, Canada, UK, and Australia. Logistic regression was used to examine the association of socioeconomic disadvantage with abrupt quitting after controlling for a host of demographic, psychosocial, and smoking-related factors.

Results: One unit increase in a 12-point socioeconomic disadvantage index was associated with a decrease of 7% in the odds of abrupt quitting ($p<0.001$).

Conclusion: Lower socioeconomic smokers are less likely to adopt abrupt quitting. The results shed light on the mechanism of the link between socioeconomic disadvantage and smoking behavior.

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MODEL SELECTION IN LATENT CLASS AND MIXTURE MODELS: WHAT IS TO BE PREFERRED?

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Different types of research (e.g., exploratory or confirmatory; descriptive or theoretically driven) have different goals. Research approaches such as null hypothesis testing or model fitting entail different preferences and assumptions. Furthermore, research is typically guided by common principles, such as parsimony and generalizability. Following a brief review of these topics, typical model selection practice used with latent class and mixture models is located in this research context. It is argued that confirmatory and null-hypothesis testing approaches have been applied automatically and inappropriately in the growing body of latent class and mixture model applications. Current practice appears to follow from a null-hypothesis testing tradition, emphasizing parsimony and simplicity. However, latent class and mixture models follow more naturally from a model fitting framework, which defaults toward more complexity, rather than simplicity. A rationale for favoring complexity and a hypothesis generative approach to the use of these techniques is given. An empirical illustration employing US national data on tobacco use patterns will be discussed. Motivating features of this example include the fact that a sub-group analysis is theoretically motivated, yet the state of the substantive literature provides little specific guidance on what sub-groups to expect.

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FIDELITY OF TELEPHONE DELIVERY OF MOTIVATIONAL INTERVIEWING FOR ADOLESCENT SMOKING CESSATION

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Telephone implementation of interventions developed for face-to-face settings has facilitated confidential access to treatment while also raising important questions about treatment fidelity. Few studies of Motivational Interviewing (MI) report evaluations of treatment fidelity in any setting, partly because it is often used in combination with other treatment modalities. When the integrity of such interventions is examined, it is often the other component that is evaluated. This study evaluates adherence to MI during telephone delivery of an effective adolescent smoking cessation intervention integrating MI and cognitive behavioral skills training (CBST). Implementation took place among 1058 smokers (48.4% female, mean age 16.7 years) comprising the experimental arm of a large randomized controlled trial. Four counselors with no prior MI experience were trained to deliver the intervention. A 15% random sample of 683 audio-recorded counseling calls with adolescent smokers was reviewed for fidelity to MI using the Motivational Interviewing Treatment Integrity (MITI) code. Results demonstrate that for the global ratings of “MI spirit” and “empathy,” and for “ratio of reflections to questions,” more than 94% of calls met fidelity benchmarks. For the fidelity measure “percent MI-adherent behaviors,” 85.7% of calls met fidelity benchmarks. Benchmarks were not consistently achieved for the two fidelity measures “percent open questions” (25.2%) and “percent complex reflections” (18.9%). Notably, fidelity scores were as good or better in calls delivering MI with CBST, compared to calls using MI alone, and were significantly better for two behaviors: Reflections to questions (97.8% vs. 91.80%, p = .006) and MI-adherent behaviors (91.43% vs. 80.95%, p = .06). Results show that MI can be delivered with fidelity via telephone to adolescents when used alone or in combination with CBST.

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WHY ADOLESCENTS SMOKE? PARENTAL INFLUENCES ON SMOKING

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Chilean adolescents have one of the highest smoking rates in the world according to data from the World Youth Tobacco Survey. Data recently collected in Chile suggest, that although severla efforts have been made to reduce the number of adolescents who start smoking, these have not been effective. Most of these interventions intend to increase perceived risk of tobacco use, limit the exposure of youth to tobacco and teach adolescents to reject tobacco offers from peers. Although most research have examined peers influence, we had some previous data that suggest that parents and other adults play a much more important role in this behavior. We also wanted to further understand early experiences of smokers and how this behavior influenced their interpersonal relationships. We conducted a qualitative study, 6 focus groups with smoking youth aged 14 to 23 (N=24). All focus groups were conducted by a trainer interviewer, then transcribed ad-verbatim in order to analyze the results. Our main findings suggest that many of the participants learned to smoke from their parents. Some were directly trained by one of their parent, while others learned to smoke as a way to deal with stress (mothers). Further results also suggest that those adolescents who started to smoke assumed a higher status in their household. Once their parents found out they smoked, they became participants of other activities that were perceived as positive and that provided them with a higher status. These findings however, suggest that adolescents do not learn this behavior only by observing their parents smoke, they are also being trained to smoke by their parents. They also learned with their parents some benefits associated with smoking. Similar results have been previously described in other latino population in the United States. This is an issue that future interventions with this population should address. We are currently conducting a study with over 600 adolescents in order to further examine the roles of parents and other adults in this behavior.

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CORRELATES OF EXPERIMENTAL SMOKING IN COLLEGE STUDENTS

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Recent findings indicate that there is convergence with respect to patterns of substance use among adolescents and young adults. However, there remains evidence of some gender differences in patterns of substance use. We compared 91 students who reported smoking “occasionally but not regularly” and who had smoked within the past 30 days but less than one cigarette/day with 35 current daily smokers and 363 never-smokers. Students were recruited from psychology classes at a large Midwestern university; targeted efforts were made to recruit women and students of color. Experimental Smokers (ES) and Daily Smokers were about twice as likely as Never-Smokers (NS) to be male (18.7% and 20.0% vs. 10.5%; p<.05). There were no significant differences between groups by age or race. Alcohol problems were reported by 83.5% of ES and 74.3% of DS, compared with 56.5% of NS (p<.001). ES and DS scored significantly higher than NS on both the Center for Epidemiological Studies-Depression (ES: 15.6 ±1.1; DS: 15.6 ±1.6; NS: 13.1 ±.7; p<.05) and the Dieting and Bingeing Severity Scale (ES: 3.5 ±.1; DS: 3.7±.2; NS: 3.1 ±.1; p<.01), controlling for gender. We conclude that experimenters more closely resemble daily smokers than they do never-smokers on a number of key variables known to be elevated in smokers. Because these students may not identify themselves as smokers, it is important to tailor prevention efforts to this population. We consider these targeted prevention efforts focusing specifically on the relevance of gender in reaching this group of experimental smokers.

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THE INFLUENCE OF DEPRESSION HISTORY ON MOTIVATION TO QUIT, CESSATION COUNSELING UTILIZATION, AND SMOKING CESSATION IN THE GET PHIT TRIAL

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The Get PHIT trial tested a brief motivational intervention offering biologically-based feedback (i.e., CO exposure and lung functioning), advice to quit, and access to future cessation counseling to 536 smokers (mean age= 51; 53% female; 82% white). Based on prior research suggesting depression history may predispose smokers to worse cessation outcomes and the fact that people with depression have a more negative world view, we hypothesized that depression history would be a general prognostic factor in this trial (i.e., predict change in motivation, utilization of free telephone counseling offered to participants, and cessation). We also hypothesized that people with a positive history of depression (DH+) would respond differently to the biologically-based counseling which highlighted their personal health risks associated with smoking, possibly due to a more hopeless or fatalistic view of their health and/or the benefits of quitting smoking. DH+participants (n=226) were more likely to be female (66% vs 44%; P< .001) and were less likely to be married or living as married (50% vs. 60%; p=.02) than participants with no history of depression (DH-; n=310). Results of regression analyses indicated that depression history was not a poor prognostic factor; it was not related to motivation or quitting (7 and 30 day point prevalent abstinence) at 30 days, 6 or 12 months. However, DH+participants were more likely to have enrolled in cessation counseling by 12 months (33% vs. 25%; p=.05). There was no evidence that the effect on quitting of the experimental intervention was dependent on depression history. Thus, contrary to our hypotheses and implications from prior research, depression history did not appear to influence cessation outcomes or intervention effectiveness. DH+ smokers' increased uptake of free counseling services with no better treatment outcome however, suggests that current phone-based counseling may not be effectively meeting the needs of DH+smokers.
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SMOKING CESSATION STRATEGIES USED BY ADOLESCENTS WHO ARE CUTTING DOWN VS. QUITTING

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Many teens engage in smoking reduction with the intention to quit. However, research demonstrates that adolescents who cut down their cigarette consumption are likely to relapse to their previous smoking pattern and are not as prepared for cessation as those who are quitting. Those who cut down may be less likely to quit because they lack adequate motivation, or it may be that they use less effective cessation strategies. The purpose of this report is to determine whether the smoking cessation strategies used by adolescent smokers who are cutting down are different from those used by students who are quitting.
Participants were 183 high school students caught with tobacco at school. The students averaged 16 years of age, with 75% male and 56% Caucasian. Over 62% of the teens smoked daily, and 72% (N=132) reported an attempt to quit or cut down smoking during the study. These youth were asked to identify all of 26 potential strategies for quitting/cutting down that they had used during their recent attempt. For example, adolescents were asked about their utilization of strategies such as information gathering, social/professional support, replacement activities, and stimulus control.
Our results demonstrated that teens who engaged in an actual quit attempt used more effective methods for smoking cessation compared to those who were cutting down. For example, teens who planned to quit were 2.18 times more likely to remove cigarettes from the home (p<.05) and 3.95 times more likely to avoid friends who smoked (p<.01) than those who were cutting down. In contrast, teens who were cutting down were 4.72 times more likely to switch to other forms of tobacco (p<.05) and 3.63 times more likely to smoke others' cigarettes (p<.01) than teens who wanted to quit. These findings suggest that adolescents who aim to quit smoking are probably more serious about the attempt and have more information about effective smoking cessation methods, compared with those who are reducing their consumption of cigarettes.

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B-144

IMPACT OF RACIAL DISCRIMINATION, PAST SUBSTANCE USE, AND ETHNIC IDENTITY ON SUBSTANCE USE VULNERABILITY AMONG AFRICAN AMERICAN YOUNG ADULTS

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Previous research has found positive associations between reports of racial discrimination and reports of substance use (e.g., Borrell et al., 2007; Gibbons et al., 2004). Ethnic identity (EI) has been shown to be a protective factor against the negative effects of racial discrimination on depression and self-esteem among minorities (e.g., Greene, Way, & Pahl, 2006; Lee, 2005). A number of researchers have speculated that EI may also be protective against use (e.g., Phinney et al., 1996); however, these factors have not been examined in an experimental setting. The present study examined EI (T1) as a buffer against the negative effects of discrimination on willingness to use and a scenario-based (reports of use at a party) risk measure of substance use (T2) among 116 African American young adults. Past substance use was also examined. Participants were randomly assigned to imagine and write about a non-discrimination or racial discrimination-based event. Multiple regression analyses revealed that the discrimination-based scenario was associated with higher willingness to use and higher scenario-based risk (βs = .17; .21, ps < .05). For willingness, significant 2-way interactions (Past Use x Discrimination; EI X Discrimination; Past Use by EI) revealed that willingness was highest among: users in the discrimination condition, participants with lower EI in the discrimination condition, and among users with lower levels of EI (βs = .27, -.25, .21, ps < .03). The significant 3-way interaction revealed that willingness was highest among users with lower EI in the discrimination condition (β=-.21, p < .02). The same pattern was found with the 3-way interaction on scenario-based risk (β=-.38, p < .01), such that users with lower EI in the discrimination condition reported more substance use in the party-based scenario. These findings demonstrate that discrimination-based experiences are a risk factor for substance use, especially among Black young adults with lower levels of EI who have used substances in the past.

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THE RELATIONSHIP BETWEEN ALEXITHYMIA & PHYSICAL HEALTH IN COLLEGE STUDENTS

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Alexithymia is a cluster of cognitive-affective characteristics that influence how individuals experience and express emotions (Taylor & Bagby, 2004). Its core deficits are a diminished ability to identify and verbalize emotions, difficulty distinguishing emotional and physical sensations, and a concrete, reality-based cognitive style (Bankier et al., 2001). Numerous studies have linked alexithymia with increased somatic complaints (Lumley, 2004), as well as an array of psychological difficulties, including substance abuse (see Taylor et al., 1997), disordered eating (Mazzeo & Espelage, 2002), and self-injurious behavior (Polk & Liss, 2007). However, most studies assess alexithymia and its deleterious outcomes in clinical populations. Few studies focus on subclinical outcomes in community samples. Additionally, researchers often study alexithymia as a single construct, rather than examining the unique contribution of each deficit (e.g., difficulty identifying/describing feelings, concrete cognitive style) to the outcome.
The present study examined alexithymia in relation to somatic complaints and health risk behaviors (i.e., smoking, alcohol/drug use) in a sample of 270 undergraduates (53% female, 87% white). Participants completed the Toronto Alexithymia Scale (TAS; Bagby et al., 1994), Southern Methodist University Health Questionnaire (SMU-HQ; Watson & Pennebaker, 1989), and Substance Abuse Subtle Screening Inventory (SASSI-3; Miller, 1997). The TAS subscales (Difficulty Identifying Feelings, DIF; Difficulty Describing Feelings, DDF; Externally-Oriented Cognitive Style, EOC) were evaluated as predictors. Total scores on the SMU-HQ and SASSI-3 scales, as well as a single smoking item, each served as outcome variables. Multiple and logistic regression results indicated that scores on the TAS-DIF significantly predicted increased alcohol and drug use, smoking, and somatic complaints (e.g., headaches, GI problems). The remaining TAS subscales were not significant predictors of substance use, smoking, or somatic complaints. Implications and future directions for the findings will be discussed.

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BUDS, SWEAT, AND BEERS: EVALUATING THE METHODOLOGY IN ALCOHOL RESEARCH

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Alcohol research has throughout its history struggled to overcome a lack of a gold-standard for measurement. The field has relied heavily on the self-report, despite its own distrust in the veracity of that report. Corroborating reports have been used to overcome limitations in collecting self-reported data, but have been subjected to many of the same criticisms; and research findings regarding both have been mixed. Despite claims on both sides of this issue, studies exploring the utility of secondary reports as a primary research question are limited. The current study sought to investigate what impact the inclusion of collateral informants may have on self-reports of alcohol consumption in a population of heavy-drinking college students. Continuous transdermal alcohol monitoring technology was also introduced as an independent measure of alcohol consumption, and was varied in this experiment. It was hypothesized that when a collateral report was obtained, self-reported levels of alcohol consumption would vary systematically, and would correspond more closely to independent measures (transdermal reports). A fully-crossed randomized-control design was used to test these hypotheses. Participants included 96 heavy-drinking college students who completed baseline measures of typical drinking and one-week follow-up measures of actual drinking. Average self-reported drinking quantities were assessed using a 2x2 (collateral x transdermal) factorial ANCOVA. Effects for collateral, transdermal monitor, and their interaction were non-significant at the $\alpha=0.05$ level [$F(1, 88) = 2.86$, $p=0.09$, $\eta^2 = 0.03$; $F(1, 88) = 1.67$, $p= 0.20$, $\eta^2 = 0.02$; $F(1, 88) = 1.67$, $p=0.20$, $\eta^2 = 0.02$; respectively]. Correlations for each participant's self- and transdermal- reports of alcohol consumption were aggregated within groups [collateral ($r^2=0.75$) and no-collateral ($r^2=0.77$)] and compared using a t-test. Observed differences were non-significant at the $\alpha=0.05$ level [$t(40)=0.21$, $p=0.84$]. Implications for the use of self- and collateral- reports, as well as transdermal technology in alcohol research are discussed.

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REPLICATING PREVENTION SUBGROUPS FOR ALCOHOL AND SMOKING ACROSS SAMPLES AND BEHAVIORS

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Substance abuse prevention programs have reported limited evidence of efficacy. Interventions have typically focused at the class or community level. In recent years, tailored interventions that focus on the individual level have been demonstrated to be effective for a wide variety of behaviors. This paper will describe a basis for the development of two new tailored interventions for tobacco and alcohol prevention. Most students classify themselves in the Acquisition Precontemplation Stage (i.e., not smoking and not planning to start smoking in the next six months). Two sets of cluster analysis were performed on 3,393 sixth grade students. For both smoking and alcohol, the sample was randomly split into five subsamples. Cluster analysis was performed within each subsample independently based on three variables: Pros and Cons from the Decisional Balance Inventory and Situational Temptations Inventory. Across the five subsamples, the same four clusters were identified for both smoking and alcohol and replicated in all subsamples: (1) Most Protected, characterized by low Pros and Temptations and high Cons;(2) Ambivalent, characterized by average scores on all three; (3) Risk Denial, with low Cons and average Pros and Temptations and; (4) High Risk, with high Pros, low Cons, and very high Temptations. Finding the same four clusters within Acquisition Precontemplation for both smoking and alcohol and replicating the results across the five subsamples provides strong evidence of the robustness of these results. The Most Protected was the largest subgroup for both behaviors. These clusters, along with the other Stages of Acquisition and the Stages of Cessation can provide a basis for tailored interventions.

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ALPHA LEADERSHIP AND ATHLETICS: EXPLORING THEIR ALCOHOL USE AND SEXUAL HABITS

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Leadership and leadership gender norms are evolving. Being a woman and a being leader are two identifications that are no longer in conflict. As a result a new leadership figure, the Alpha female, has emerged. The Alpha Female believes she is a leader who is strong, confident, and extroverted. Research indicates that other females look to the Alpha for guidance. It is unclear how the identification as an Alpha Female will relate to drinking and sexual habits. This current study used the Alpha Female Inventory (AFI), Sexual Experiences Survey (SES), and a number of alcohol based items to report on 635 females at 12 different colleges and universities. In addition to alpha status, athletic status was also explored with respect to the dependent variables. A higher proportion of alphas were found in the athlete population $\chi 2(2) = 18.14$, $p < .001$. Across a number of alcohol consumption items, non-alphas were more likely to report drinking alcohol at higher levels. For example, non-alphas drink more on a typical drinking occasion, $F(1, 110)= 4.94$, $p=.03$. There was no difference between Alphas and non-alphas with respect to victimization status or number of sexual partners. It seems that Alpha Females are less likely to engage in heavy episodic drinking. Athletic status did not differ across the alcohol and sexual habit variables. Given the previous literature that suggests that women look to Alpha Females for guidance, interventions might use Alpha Females as role models or change agents. Implications will be discussed.

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HIGH-RISK PRACTICES CONTRIBUTING TO BACTERIAL INFECTIONS AMONG INJECTION DRUG USERS

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Injection drug users (IDUs) are at risk for a host of medical complications, including blood-borne viral disease (e.g., HIV, Hepatitis C), drug overdose, and bacterial infections (e.g., skin abscesses). Despite the high number of IDUs who report a lifetime history of skin abscesses, few studies have addressed risk factors related to these infections. The current study examined rates of bacterial infections among 51 adult heroin, cocaine and methamphetamine users in Denver, CO and high-risk practices that predict skin infections. Participants were recruited through a drop-in center for drug users, a local research/clinical drug treatment center, and by advertisement in a free local newspaper. All participants completed a structured interview focused on drug use, health and medical issues related to injection, and high-risk practices contributing to bacterial infections. Among all participants, 55% reported a lifetime history of at least one skin infection and 29% reported having a skin infection in the last year. Participants also reported a high rate of Hepatitis C infection (57%) and described past diagnoses of other bacterial infections (10 - 12% reported endocarditis and blood sepsis). Participants described involvement in a number of high-risk practices that place them at risk for viral and bacterial infections, such as failing to bleach-clean needles before reusing and failing to clean one's skin before injecting. Those with a skin infection in the last year were significantly more likely to inject intramuscularly (OR = 1.57) and to report greater heroin injection frequency (OR = 1.08) compared to IDUs with no history of skin infections. Heroin and speedball injectors reported a higher number of past abscesses compared to methamphetamine and cocaine injectors. Clinical implications based on these findings suggest that there is a need to educate IDUs about bacterial infections and teach them behavioral skills to reduce risk of infection. Incorporating this information into HIV and Hepatitis C prevention programming may be a useful way to impart information to IDUs.

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B-150

IMPLEMENTING EVIDENCE-BASED PRACTICES IN OUTPATIENT ALCOHOL TREATMENT FACILITIES

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The study's purpose was to assess evidence-based practices (EBPs) of outpatient alcohol treatment programs. Four outpatient alcohol treatment program facilitators from a rural inland Northwest community participated in the study. The alcohol treatment programs were assessed using the Robertello Evaluative Tool (RET) for Evidence-Based Practices in Outpatient Alcohol Treatment. The RET assessed and evaluated EBPs in five areas: theoretical frameworks; mission, goals, and objectives; treatment methods; client demographics; and client recidivism. After completion, program facilitators were interviewed. Analysis methods included Likert scale ratings collected on theoretical frameworks, mission, goals, and objectives, and treatment methods; qualitative data was segmented, coded, and themes were developed. Descriptive statistics and measures of central tendency were calculated for client demographic and recidivism information. Each facility was presented with a Practice Recommendation Summary (PRS) for EBP implementation. Analysis of the treatment programs suggested that EBPs for theoretical frameworks, mission, goals, and objectives, client recidivism and client demographics were not implemented at most facilities. Practitioners need assistance in program planning including translating alcohol treatment research into practice, recognition, and implementation of EBPs. Using successful assessment criterion may improve alcohol treatment program practices and track overall program effectiveness. Program facilitators reported the RET assessment process was easy to use and accurately reflected facility problems in implementing EBPs. Program facilitators found the PRS to be helpful and valued the examples that were provided to implement the recommendations. The RET can serve as a foundational tool for the assessment of EBPs and provide individual alcohol treatment providers a resource for transitioning alcohol research and theory into practice.

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B-152

ADAPTIVE FUNCTIONING AFTER PEDIATRIC INTESTINAL TRANSPLANTATION LESS SATISFACTORY THAN AFTER PEDIATRIC LIVER TRANSPLANTATION

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Purpose: Solid organ transplantation is a life saving procedure for children with diseases refractory to treatment. Isolated liver transplantation (LTX) is well-established, but intestinal and multivisceral (ITX) are newer procedures. Given the tremendous resources expended for transplantation, improvement in real life adaptive functioning is an important index of success. This study describes and compares levels of adaptive functioning of ITX and LTX patients.

Method: We collected socio-demographic and Adaptive Behavior Assessment System-II (ABAS-II) cross-sectional data from the caregivers of 13 ITX and 12 LTX recipients who were 1 to 5 years post-transplant. The ABAS-II is a validated measure assessing 10 areas of functioning that collapse into conceptual (CON), social (SO), and practical (PR) domains plus an overall score (GAC).

Findings: ITX recipients were 2–13 years of age (Mean=4.9, SD=3), 38% male, and 69% Caucasian. LTX recipients were 2–18 years of age (Mean=8.5, SD=5.4), 50% male, and 83% Caucasian. CON, SO, PR and GAC levels ranged from “Extremely Low” to “Above Average” for ITX recipients with most (> 62%) falling in the “Extremely Low” to “Borderline” range. Levels ranged from “Extremely Low” to “Superior” for LTX recipients with most (66%) falling in the “Average” to “Superior” range. ITX patients’ scores on PR and GAC were statistically lower than LTX patients’ and the general population. For the total sample transplant type, i.e., ITX vs. LTX, was statistically associated with CON, PR, and GAC levels (rho = .39-.41) with better outcomes associated with LTX. No statistically reliable relationship was found between adaptive functioning and socio-demographic factors.

Conclusion: Findings highlight challenges in real life functioning which should not be overlooked. Provision of supportive services should be included with medical management.

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B-153

SPIRITUALITY, DEPRESSION, AND QUALITY OF LIFE IN PATIENTS FOLLOWING LUNG TRANSPLANTATION

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The importance of religious participation in promoting physical and mental health is controversial, particularly in patients with chronic disease. This study investigated the relationship between church attendance and spiritual experiences and mental and physical health outcomes assessed in patients listed for lung transplantation. Patients with end-stage lung disease (N=176; mean age=49, SD=12.8; 51% female; 90% Caucasian) completed an assessment battery of depression (BDI-II), health-related quality of life (SF-36), and spiritual experiences and religious coping (Spiritual Experiences Questionnaire [SEQ], COPE), prior to lung transplantation and 6 months post-transplant. On average, patients attended church several times a year (M=3.8 ± 2.0), with 65.6% attending at least once a year. Linear models examined the prospective relation between pre-transplant religious participation and post-transplant depression and quality of life, adjusting for pre-transplant level of the outcome, gender, ethnicity, age, and severity of illness (O2 use, FEV1, and 6-min walk distance). At 6-months post-transplant (N=133), pre-transplant spiritual experiences and religious coping did not predict depression (p=.21 and p=.39, respectively), physical quality of life (p=.40; p=.79), or psychological quality of life (p=.90; p=.20). Findings indicate that religious participation and spirituality prior to lung transplantation appear unrelated to subsequent psychological adjustment or survival following transplantation.

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Friday
April 9, 2010

Symposium 10 9:00 AM–10:30 AM 3001

MENU LABELING POLICIES: POTENTIAL TO CHANGE POPULATION HEALTH

Prabhu Ponkshe, MA, LLB,[1] Julie E. Maher, PhD,[3] Brian Elbel, PhD, MPH,[2] Brian Saelens, PhD[4] and Mary Story, PhD, RD[5]

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Childhood obesity is widely recognized as a major public health challenge with potential consequences on the health and healthcare needs of youth and adolescents in United States. The Society of Behavioral Medicine's Policy Brief on Childhood Obesity emphasizes the fact that the current multi-level environment (e.g., media, industry, schools, home, community, government) encourages the development of childhood obesity, so change must occur on all levels.

One level for change is targeted at "consumption behavior" of families and children who frequent fast food restaurants. In recent years, a number of states and localities have considered proposals that would require menu labeling in restaurants. For example, regulations in New York City and Seattle/King County now require chain restaurants to post calorie information for all standard items on menus and menu boards. A similar regulation was passed in Multnomah County, Oregon, but it was preempted by a statewide bill that will be implemented in January 2011.

A summary of current research on menu labeling by the Healthy Eating Research program of the Robert Wood Johnson Foundation shows that the number of U.S. restaurants that provide nutrition information has increased over the past decade; however, the majority of restaurants do not provide consumers with nutrition information at the point of purchase (e.g., on the menu). This symposium will examine current evidence from New York City, Multnomah County, and Seattle/King County on current policies on menu labeling and the latest evidence on the potential for affecting consumer behavior and consumer choices in fast food restaurants. The debate on national policies on menu labeling will also be included in the symposium.

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Symposium 10A 3002

THE INFLUENCE OF CALORIE LABELING ON FOOD CHOICE

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On July 19, 2008, New York City (NYC) became the first U.S. jurisdiction to implement restaurant calorie labeling legislation in an attempt to address the obesity epidemic. Using data collected before and after labeling was introduced in New York City and from a comparison location (Newark, NJ) during the same time period, we examined the influence of calorie labeling on food choice. Given the increased risk of obesity and related health problems associated with low-income, racially and ethnically diverse populations, we focused our attention on these groups. Short surveys as well as receipts (lunch and dinner) were collected outside fast-food restaurants from 1,400 adults and adolescents. In addition to analyzing calories purchased at fast food restaurants, we also examined the percentage of consumers who reported noticing and responding to calorie information. Overall, we did not see a population-level change in calories purchased for adults. The percentage of people who reported seeing calorie information increased to 54% in NYC after labeling, with no change in Newark. We anticipate that findings from the children and adolescent sample will be similar to the adults; however, complicated by other family, environmental and social factors that influence a child's food choice.

At the conference, in addition to expanding on the results above, we will report on a) the food choices of children and adolescents, and b) how people estimate calories purchased from fast food restaurants and how this changes with labeling. Calorie Labeling is a great first step but may require additional evidence-based policy research.

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Symposium 10B 3003

VARIABILITY IN FAST-FOOD CUSTOMER PURCHASES BEFORE THE IMPLEMENTATION OF A STATEWIDE MENU LABELING POLICY

Julie E. Maher, PhD,[1] Myde Boles, PhD,[1] Jane M. Moore, PhD, RD[2] and Alicia Knapp, BA[1]

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The goals of the study are to determine the variability in average calories, saturated fat, and sodium of fast-food customer purchases; percentage of customers who have seen nutrition information for food items sold in fast-food restaurants and for whom nutrition information influenced their purchase; and menu offerings and nutritional values of menu items in fast-food restaurant chains before implementation of a statewide menu labeling policy. This study is being conducted in Multnomah County, Oregon. It uses a double pre-test design that includes a repeated cross-sectional intercept survey of 2500 customers in spring and fall 2009. Customers are from 50 fast-food establishments from the top 10 most common burger, sandwich, Mexican/taco, and coffee chains. We also analyze menu offerings and nutritional values of menu items at the 50 establishments. A large amount of variation in customers' purchases before implementation of menu labeling could suggest other underlying factors that may affect customers' food choices. These findings will be useful for interpreting other studies' observed changes in food choices associated with implementation of menu labeling policies.

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Symposium 10C 3004

THE IMPACT OF MENU LABELING REGULATION ON RESTAURANT ENVIRONMENTS IN KING COUNTY/SEATTLE

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Changing food-related policy and the corresponding food environment may be a necessary approach to impacting obesity at the population level. One such policy is the provision of more point-of-purchase information about food content. Regulation about labeling menu items in chain restaurants with calorie, saturated fat, sodium, carbohydrate information began in January 2009 in King County/Seattle, WA. This presentation will explore whether, how, and which restaurant environments changed in response to this menu labeling regulation. Eighty chain restaurants were visited and their environment evaluated using the Nutrition Environment Measures Survey - Restaurant (NEMS-R) both before and after the menu labeling regulation was implemented. Changes in the availability of more healthful food and beverage choices, signage/promotion, and other facilitators/barriers to healthful eating will be examined (data forthcoming). In addition to the possible impact of menu labeling on individual food choices, it is important to evaluate the other changes in the environment within restaurants encountered by consumers.

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Symposium 11 9:00 AM–10:30 AM 3005

LONGITUDINAL TRAJECTORIES OF CHRONIC ILLNESS OUTCOMES ACROSS ADOLESCENCE

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Adolescence, with its accompanying biological, psychological, and social changes, offers distinct challenges for adolescents living with a chronic disease. Research across a variety of chronic illnesses suggests that disease management behaviors and indicators of disease status deteriorate during adolescence. In addition, evidence suggests that adolescents with a chronic illness are often slower at achieving normative developmental tasks when compared with their healthy peers. Researchers have long been interested in identifying factors that contribute to disease management and normative development among adolescents with chronic illness. The literature suggests that parents and peers are quite important, but much of what we know about their influence on disease processes comes from cross-sectional research. This symposium brings together findings from longitudinal studies of adolescents with chronic illness. Presentations will focus on longitudinal trajectories of chronic illness outcomes and changes in illness-related outcomes over time, illustrating various ways in which members of an adolescent's social network can influence outcomes across adolescence. The first presentation examines metabolic control in adolescents with type 1 diabetes over a five-year period, highlighting the importance of the family environment and peer relationships for explaining differences in trajectories of metabolic control. The second presentation examines the particular aspects of maternal and paternal involvement that are associated with changes in adolescents' adherence to a type 1 diabetes regimen over time. The third presentation examines the achievement of normative developmental tasks among adolescents with spina bifida; findings suggest that parents may impact chronically ill adolescents' ability to take on developmentally-appropriate roles and responsibilities. Presentations will highlight different approaches for analyzing longitudinal data, and presenters will discuss implications of longitudinal findings for interventions.

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Symposium 11A 3006

TRAJECTORIES OF GLYCEMIC CONTROL OVER EARLY TO MIDDLE ADOLESCENCE

Vicki S. Helgeson, PhD,[1] Pamela Snyder, MA,[1] Howard Seltman, PhD,[1] Dorothy Becker, MBBCh,[2] Oscar Escobar, MD[2] and Linda Siminerio, PhD[3]

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Research has shown that glycemic control declines over the course of adolescence. The question remains, however, whether there are distinct patterns of change in glycemic control. We followed a group of early adolescents ($n = 132$) for five years and used trajectory analysis to identify distinct developmental patterns of glycemic control. We identified a relatively stable, good control group and a poorer, deteriorating group. Next, we used demographic, medical, and psychosocial variables to predict trajectory membership. Although age and sex did not distinguish the two trajectories, social status, pubertal status, and body mass index (BMI) did (-.04, $p < .05$; .71, $p < .01$; .17, $p < .01$). Individuals in the deteriorating group began the study with lower social status, higher pubertal status, and a higher BMI. Household structure distinguished the trajectories (1.76, $p < .05$), indicating that children from two-parent families were more likely to be in the good control group. Controlling for these demographic and medical variables, two psychosocial variables significantly distinguished the trajectories—friend conflict (1.11, $p < .05$) and diabetes quality of life (1.63, $p < .05$). The deteriorating group was characterized by higher peer conflict and poorer diabetes quality of life at study start compared to the stable good group. Two measures of self-care distinguished the trajectories—the number of meter readings taken per day (as determined by glucometers, -.81, $p < .01$) and the number of clinic appointments attended over the five years (-.20, $p < .01$). Individuals in the deteriorating trajectory attended fewer appointments over the five years and tested less frequently. It is particularly important to examine glycemic control during adolescence because research has shown that good glycemic control during adolescence predicts long-term health outcomes. The implications of these findings for intervening with families of early adolescents will be discussed.

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Symposium 11B 3007

LONGITUDINAL TRENDS IN MATERNAL AND PATERNAL INVOLVEMENT AND ADOLESCENTS' ADHERENCE TO THE TYPE 1 DIABETES REGIMEN

Pamela S. King, PhD,[1] Cynthia Berg, PhD,[1] Jorie Butler, PhD[1] and Deborah Wiebe, PhD[2]

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Body: Proper management of type 1 diabetes requires adherence to a complicated and demanding treatment regimen. Despite the fact that poor adherence has serious short- and long-term consequences for health, research suggests that adherence declines significantly during adolescence. Several cross-sectional studies suggest that parental involvement is positively associated with adolescents' adherence to the diabetes regimen (e.g., Greening et al., 2006). It remains to be seen whether parental involvement is associated with longitudinal trajectories of adherence across adolescence, and whether particular aspects of parental involvement are more important than others for explaining changes in adherence over time. In this study, we examined longitudinal associations between adherence and three distinct aspects of parental involvement: warmth, monitoring, and behavioral involvement. 252 adolescents with type 1 diabetes were followed for two years [Mage at time 1= 12.49 (1.53)]. Indicators of parental involvement, adherence, and self-efficacy were assessed at four time points. Results of multilevel modeling analyses revealed significant average declines in adherence across adolescence. After accounting for the significant effects of time since diagnosis, insulin pump status, and diabetes self-efficacy (ps<.05), both mothers' and fathers' involvement were associated with adherence behaviors across adolescence. Adolescents who reported more maternal (M) and paternal (P) warmth (.11M, .10P) and monitoring (.13M, .11P) when they began the study started off on a better adherence trajectory than adolescents with less warmth and monitoring from their parents (ps<.05). Results also suggested that changes in maternal warmth (.12) and monitoring (.13), and changes in paternal monitoring (.11) were positively associated with changes in adolescents' adherence behavior (ps<.05). Possible mechanisms responsible for these associations and implications of this study for future research and interventions will be discussed.

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Symposium 11C 3008

INTRINSIC MOTIVATION AND THE TRANSFER OF RESPONSIBILITIES IN ADOLESCENTS WITH AND WITHOUT SPINA BIFIDA

Rachel Wasserman, BS, Grayson Holmbeck, PhD, Katie Devine, PhD, Lauren Kelly, MA, Lily Gershenson, BA and Caitlin Taylor, BS

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Children with spina bifida (SB) tend to lag behind their healthy peers in transferring non-medical responsibilities from parent to child. It was hypothesized that intrinsic motivation (i.e. without external incentive) would predict the frequency with which children begin to manage non-medical responsibilities. 136 children (68 with SB and 68 typically developing matched samples) were recruited for a larger, longitudinal study. Mother, child, and teacher questionnaire data were collected every two years beginning at age 8/9 through 16/17. At time 1(T1): 68 SB & 68 comparison (C) families participated; T5: 52 SB & 61 C. Mother and child completed a questionnaire regarding responsibility for non-medical tasks or decisions. Combining mother and child data, the proportion of items that mother and child agreed that the was child is responsible was calculated. Teachers completed a scale measuring intrinsic versus extrinsic motivation (Harter, 1980). Correlations were conducted to examine if motivation at one time period was related to agreement regarding child responsibilities two years later. There were significant correlations between (1) motivation (M) at 10/11 and responsibilities (R) at 12/13, r = .32, p = .01; (2) M at 12/13 and R at 14/15, r = .28, p = .03; and (3) M at 14/15 and R at 16/17, r = .41, p = .00. For children with SB, there were significant correlations between M at 12/13 and R at 14/15, r = .30, p = .03; and M at 14/15 and R at 16/17, r = .32, p = .04. Regression analyses showed that motivation significantly predicted the increase in responsibility from ages 10/11 to 12/13 t(58)=3.37, p < .01 and from 14/15 to 16/17, t(51) = 2.03, p < .05 for the comparison group, but not the SB group. Intrinsic motivation predicts changes in parent-child agreement regarding child responsibilities over time for typically developing adolescents but not adolescents with SB, despite significant correlations between the variables for both groups. Research and clinical implications will be discussed.

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Symposium 12 9:00 AM–10:30 AM 3009

IMPULSIVE CHOICE AND HEALTH BEHAVIOR: EMERGING APPLICATIONS FOR THE MEASUREMENT OF DELAY DISCOUNTING

Amanda Wheat, MS,[1] James Diller, PhD,[2] Elizabeth Blum, PhD,[3] Paula Prentice, BS[1] and Brady Reynolds, PhD[4]

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Living a healthy lifestyle requires engaging in behaviors (e.g., eating healthily, quitting smoking, using sunscreen, employing safe sexual practices) that involve foregoing immediate reinforcement/reward in favor of delayed positive health consequences. Individuals who choose behaviors that are immediately rewarding instead of selecting those that promote positive long-term health outcomes can be said to make “impulsive” choices. Impulsive choice can be quantified using either self-report methods or through experimental delay discounting tasks. Delay discounting is the loss of value (discounting) of a reinforcer as the delay to its presentation increases. The delay discounting paradigm easily extends to health behavior and may be qualified by choosing a smaller, more immediate reward (e.g. the sensation of smoking a cigarette) rather than a more valuable reward which is in the distant future (e.g. reduced risk for lung cancer). Noting these similarities, it is clear that investigations into impulsivity and the measurement of delay discounting can be valuable in the study of health behaviors.<p>This symposium will include recent research linking impulsive choice with health behaviors. Papers presented will span topic areas ranging from basic physiology of delay discounting to behavioral risk factors for disease, while simultaneously addressing the role of impulsivity and delay discounting in several health behaviors. The first presentation will address the physiological differences between individuals with differing rates of delay discounting. The second presentation will report differences in delay discounting in HIV+rural substance users. Finally, the role of impulsivity and discounting in indoor and outdoor tanning will be discussed in the third presentation.

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Symposium 12A 3010

AN INVESTIGATION OF DELAY DISCOUNTING AND CARDIOVASCULAR REACTIVITY

James Diller, PhD, Michael M. Gale, BA and Connor H. Patros, BA Expected 5/2010

Psychology, Eastern Connecticut State University, Willimantic, CT.

This study examines the relation between impulsive choice and cardiovascular reactivity. Impulsive choice has been defined as the selection of a small, immediate reward, to the exclusion of a larger, delayed reward (Ainslie, 1974). Drugs of abuse (caffeine, cocaine, alcohol) have been shown to modify levels of impulsive choice (Diller, Saunders & Anderson, 2008; Evenden & Ryan, 1996; Pitts & McKenney, 2005). Because drugs of abuse can alter impulsivity, and these drugs have well-defined physiological effects, there may be a cardiovascular substrate of impulsive choice. It has been suggested that higher degrees of physiological reactivity to stress may be predictive of future coronary disease (Lovallo & Gerin, 2003; Gerin et al., 2000, Schwartz et al., 2003). An accepted animal model of attention-deficit hyperactivity disorder is the spontaneously hypertensive rat (SHR), which was bred initially for its cardiovascular profile. Relative to control subjects, SHRs exhibit hyperactivity, shorter attention spans, and increased impulsivity (Sagvolden et al., 1992). This model supports the notion that there may be a relation between cardiovascular features and impulsive choice. The present study explores the relation between impulsivity (measured using a computerized delay discounting task) and cardiovascular reactivity (measured as change in heart rate during a serial subtraction task) in a college-based sample. Data were collected from 30 participants (18 female). A linear regression using the standardized residual scores suggests that there is a predictive relation between the magnitude of cardiovascular reactivity and our measure of impulsivity, β=-.39, t(28)=-2.22, p < .05, R^2 = .15. That is, higher degrees of impulsivity are associated with higher degrees of reactivity. Evaluating the relation between impulsive choice and changes in the cardiovascular system may provide additional information about the genesis of impulsivity, possibly leading to improved screening methods for the behavioral and health-related problems associated with this type of maladaptive choice.

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Symposium 12B 3011

DELAY DISCOUNTING AND IVR COMPLIANCE IN RURAL HIV+ADULTS

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HIV rates have increased disproportionately in the rural South. Understanding relevant risk patterns is essential for developing population-appropriate interventions. This study used telephone-based Interactive Voice Response self-monitoring (IVR SM) with rural HIV+substance users. The study was guided by behavioral economics (BE), which is concerned with patterns of choice over time. Participants were 54 HIV+patients (66% male; 55% white) from an HIV medical clinic in rural Alabama. Eligibility required reports of drug or alcohol use and partner sex over the past 90 days. Participants completed baseline assessments of substance abuse (W.H.O. ASSIST); time perspective (Zimbardo Time Perspective Inventory, Consideration of Future Consequences); sexual practices, self-efficacy and outcome expectancies (SE/OE); and a computerized task measuring discounting of delayed rewards. After training, they reported daily substance use and sexual behavior for up to 10 weeks using the IVR SM. Participants with IVR compliance >70% of possible call days had lower baseline reward discounting (t = 2.45, p = .02). OE for HIV status disclosure was positively associated with reward discounting (p = .08) and negatively associated with IVR compliance (p = .04). OE for condom use was negatively associated with substance abuse (p = .06). Exchanging sex for other commodities was positively associated with both depression (p = .05) and substance abuse (p = .02). Findings support a BE analysis of relationships among drug use, commodity exchange for sex, and related HIV risk/preventive behaviors. Higher discounting indicative of greater impulsivity was associated with decreased participation in IVR SM measurement of risk patterns, even though overall IVR compliance was similar to lower risk samples. Foreshortened time perspectives also were positively associated with HIV status disclosure, sexual exchange, and lower outcome expectancies for condom use. Future research directions will be discussed.

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Symposium 12C 3012

THE DARK SIDE OF IMPULSIVITY: THE PREDICTIVE VALUE OF IMPULSIVITY IN RELATION TO TANNING

Paula R. Prentice, BS, Amanda Wheat, MS, Sarah Stahl, MS and Kevin Larkin, PhD

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Recent research shows that impulsivity is associated with deleterious health behaviors. Tanning, an associate of increased skin cancer risk, has not been investigated in relation to impulsivity. This study explored the association between impulsivity, reasons for tanning, and sunscreen use in a sample of university students (n=496; 83% female). Participants provided reports of tanning behavior, impulsivity (Barrett Impulsiveness Scale; BIS), and reasons for tanning (Physical Appearance Reasons for Tanning Scale; PARTS). Most participants had purposefully sunbathed outdoors (91%) or indoors (73%). Linear regressions showed that impulsivity was related to tanning for reasons related to (1) the media (e.g. "I want to be as tan as people in magazines") $F(1, 460) = 14.7$, $p <.001$, $\beta = .18$, (2) the influence of family and friends (e.g. "I try to get a tan because my family members say it is attractive") $F(1, 460) = 19.3$, $p <.001$, $\beta = .20$, and (3) the desire to reduce acne visibility (e.g. "Tan skin helps me cover up acne-related scars") $F(1, 460)=6.62$, $p <.05$, $\beta = .12$. Impulsivity also was linked to intentions to tan in the future. A linear regression indicated that BIS score was positively associated with intentions to use a tanning salon in the next two weeks, $F(1, 464) = 21.41$, $p < .001$, $\beta = .21$. For sunbathers, impulsivity was negatively associated with the average percentage of time sunscreen reportedly was used on the face $F (1,392)=7.68$, $p < .01$, $\beta=-.14$ and the body $F (1,398)=6.93$, $p < .01$, $\beta=-.13$. Overall, results suggest that the reasons for tanning, as well as reported sunscreen usage while tanning, are both influenced significantly by impulsivity. Individuals who are impulsive may be more easily influenced to engage in unsafe tanning by positive portrayal of a tan appearance in the media, attitudes of friends and family about tanning, and desire to conceal acne. Additionally, they may be subject to a heightened risk of skin cancer due to their reported propensity to engage in, and intentions to continue, poor health behaviors that are associated with skin disease.

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Symposium 13 9:00 AM–10:30 AM 3013

CURRENT HEALTH DISPARITIES IMPACTING GAY AND BISEXUAL MEN: MOVING BEYOND HIV

Peter S. Theodore, PhD

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Gay and bisexual men face many health disparities beyond those captured within the fields of HIV and substance abuse treatment. This presenter will review current research on various healthcare issues beyond HIV that disproportionately impact gay and bisexual males relative to heterosexual males. Findings will be reviewed that suggest high rates of the human papilloma virus (HPV) place gay and bisexual men at increased risk for anal and colorectal forms of cancer. Gaps in the relevant literature will be examined with future directions of research proposed (e.g., studies that increase awareness of cancer risk and investigate barriers to cancer screening in gay and bisexual male communities). Additionally, the presenter will review research that indicates gay and bisexual men experience higher levels of body image issues and disordered eating. Current diagnostic criteria for eating disorders will be critically evaluated with heterosexist biases highlighted and community-relevant factors (e.g., internalized oppression, sexual objectification, muscle dysmorphia and obsessive weight lifting/exercise) explored using a biopsychosocial model. Lastly, future directions for research in this area of healthcare will be proposed (e.g., development and evaluation of community specific interventions that address body dissatisfaction, disordered eating and exercise among gay and bisexual men).

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Symposium 13A 3014

BEHAVIORAL RISK FACTORS AND DISPARITIES IN HEALTH AMONG LESBIAN AND BISEXUAL WOMEN

Elizabeth Sosa, BS and Peter Theodore, PhD

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A small but growing body of literature has begun to investigate disparities in health status, access to care and treatment among lesbian and bisexual women. This presenter will review the research on behavioral risk factors associated with various medical conditions such as breast cancer, cervical cancer, human papilloma virus (HPV), other sexual transmitted infections, cardiovascular disease and stroke. Specifically, data suggesting increased rates of alcohol consumption, use of tobacco and other drugs, increased body mass, and elevated counterparts will be reviewed. Within the context of a biopsychosocial model, the presenter will discuss proposed links between such behavioral risk factors, psychological conditions (e.g., anxiety disorders, depression and suicidality), and the medical conditions reviewed. This discussion will include a critical analysis of conflicting views in the literature regarding the absolute risk of breast cancer, cervical cancer, and HPV among lesbian and bisexual women relative to heterosexual women. The presenter will also review multiple issues that create barriers to assessment, diagnosis and treatment (e.g., discrimination based on sexuality, heterosexism among practitioners, internalized oppression, delayed treatment seeking, and financial obstacles). Lastly, this presenter will highlight current gaps in the literature and suggest future areas of research that will improve existing healthcare services to lesbian and bisexual women (e.g., including sexual orientation as a variable within large population health surveys, investigating associations between sexual identity, body image, and behavioral health variables, and exploring training issues and barriers among practitioners about discussing sexual identity and sexual health).

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Symposium 13B 3015

CURRENT ISSUES AND CONTROVERSIES IN TRANSGENDER HEALTH

Cristina L. Magalhaes, PhD

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Transgender health historically has received limited attention from the scientific community and only in recent years has captured the attention of professionals outside a relatively small international group of researchers and clinicians. The field is fraught with controversy, and there is limited research to support current clinical practices. This presentation will address current healthcare issues impacting the transgender community and highlight areas for future research. One major controversy is found in the mandatory mental health diagnosis that singularly gives access to medical and surgical care to gender-variant individuals in order to reduce gender distress. The diagnostic criteria for Gender Identity Disorder (GID) will be critically examined by exploring the conflicting roles the diagnosis plays in facilitating access to care, while perpetuating stigmatization of the transgender community. The World Professional Association for Transgender Health Standards of Care (WPATH-SOC) represents a consensus among interdisciplinary specialists regarding the psychological, medical, and surgical management of GID. The 6th edition was released in 2001 and is now under a new revision to reflect the current thinking of researchers and practitioners around the world who work with this community. This presentation will discuss standard treatment approaches for the management of Gender Identity Disorder (GID), associated risks and side effects within the context of a harm reduction model and with an emphasis on the importance of supportive and identity affirming interdisciplinary healthcare. It will also discuss eligibility criteria for treatment and the role mental health providers play in facilitating and preventing access to hormone therapy and sex reassignment surgery. Moreover, the many barriers to care faced by the transgender community – including real and perceived stigma, high rates of unemployment, and limited insurance coverage - will be discussed.

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Symposium 13C 3016

BEYOND HIV: HEALTH DISPARITIES AMONG GAY, LESBIAN, BISEXUAL, AND TRANSGENDER COMMUNITIES

Peter S. Theodore, PhD, Cristina Magalhaes, PhD, Elizabeth Sosa, BS and Ron E. Duran, PhD

California School of Professional Psychology, Alliant International Univeristy, Los Angeles, Alhambra, CA.

Research addressing health disparities among gay, lesbian, bisexual, and transgender (GLBT) communities has mostly focused on the associations between substance use, sexual risk behaviors, and HIV-related prevention and treatment guidelines. Awareness of and methods to reduce additional health disparities facing GLBT persons is limited and under-researched by comparison. During this symposium, presenters will review existing research on healthcare issues beyond HIV that impact GLBT persons. Each presenter will highlight medical conditions of increased prevalence within a particular GLBT community, and discuss various issues that threaten access to healthcare, delay diagnosis, and complicate treatment of said medical conditions. Community specific factors—behavioral (e.g., smoking, alcohol use, disordered eating), psychosocial (e.g., victimization, stigma, internalized oppression, sexual objectification), and situational (e.g., unemployment, lack of insurance, heterosexist biases among treatment providers)—that contribute to health disparities will be explored, and controversies surrounding specific diagnostic and treatment issues impacting particular communities will be examined. Each presenter will end by summarizing the current gaps in the literature on healthcare for his or her particular community, and make suggestions for future areas of research that will improve the state of GLBT healthcare.

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Symposium 14 9:00 AM–10:30 AM 3017

HUMAN HEALTH AND THE NESTED NATURE OF THE VARIABLES WE USE TO UNDERSTAND IT: THE UTILITY OF THE SIMULTANEOUS IMPLEMENTATION OF MULTIPLE LEVELS OF ANALYSIS IN THE MODELING OF HEALTH BEHAVIOR

Marcella H. Boynton, PhD[1] and Bernard F. Fuemmeler, PhD, MPH[2]

[1]Center for Child and Family Policy, Duke University, Durham, NC and [2]Department of Community and Family Medicine and Psychology and Neuroscience, Duke University Medical Center, Durham, NC.

With the improvement of human health an increasing priority in many parts of the world, health behavior researchers have focused on the understanding and change of cognitions and behaviors associated with mental and physical health. While methods, theories, and behavior change techniques from psychology and other allied fields have been successfully applied to the study of human health, some of the traditional approaches have proved to be limited. The purpose of this symposium is to highlight the importance of a multi-level perspective in health behavior research and to outline several studies employing a range of methods in which various combinations of within-person, individual, dyadic, group, cultural, and structural variables are simultaneously considered models of health behavior.

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Symposium 14A 3018

PREVENTION EFFORTS SUCCEED BEST WHERE THEY ARE MOST NEEDED: INDIVIDUAL VS. SOCIAL-STRUCTURAL PREDICTORS OF HIV PREVENTION INTERVENTION EFFICACY AND THE EXPLANATORY POTENTIAL OF INTERGROUP THEORY

Tania B. Huedo-Medina, PhD,[1] Blair T. Johnson, PhD,[1] Marcella H. Boynton, MA[2] and Michelle R. Warren, BA[1]

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Because numerous HIV interventions have been evaluated in a myriad of contexts and cultures, meta-analyses can examine both individual (e.g., attitudinal) and structural (e.g., income inequality) features as moderators of intervention efficacy. Analyses of two separate meta-analytic databases, one with data from 31 primary-level interventions in Latin American and the Caribbean and another with 72 studies from mass media interventions conducted worldwide, indicated that, overall, interventions increased HIV knowledge and condom use. Although a number of individual-level variables significantly related to the magnitude of effect sizes, several became non-significant or exhibited between-level interactions after structural factors were included in the models. Specifically, intensive interventions (those with at least 3 hours of content) succeeded better in countries with lower human development index values (an index that integrates standardized measures of measures of life expectancy, literacy, educational attainment, and GDP per capita) or lower Gini coefficients (a measure of income inequality). Both patterns reveal that intensive HIV prevention activities succeed best where and when the need and the equality in the population are the greatest. A similar pattern was observed in the worldwide database with an opposite trend of the Gini coefficient for Asia, Africa and West. Both comparisons suggest that structural factors can be quite powerful predictors of behavior, and may have a differential impact depending upon the cultural context.

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Symposium 14B 3019

WHY BOTH BETWEEN- AND WITHIN-PERSON VARIABILITY MATTERS IN UNDERSTANDING THE IMPACT OF ACCULTURATION ON HEALTH DECISION-MAKING: A DAILY DIARY APPROACH

Marcella H. Boynton, PhD[1] and Blair T. Johnson, PhD[2]

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There are significant health disparities between Hispanics and Whites with respect to a number of health conditions, including HIV/AIDS, substance abuse, and obesity. One factor that may help to illuminate the mechanisms underlying these disparities is the impact of acculturation on health behavior decision-making; however, little research to date has examined this potentially important relation. Additionally, studies of health deficits in Hispanic populations have typically employed one baseline questionnaire and one to two post-test questionnaires. This methodology lacks the capacity to create a complete model of daily changes in factors associated with acculturation and health decision-making. The purpose of this study was to examine how daily fluctuations in constructs associated with acculturation can impact health behavior (i.e., sexual risk behavior, alcohol use, nutrition, and exercise). The results are derived from a daily diary study with Hispanic young adults living in Connecticut. Participants were male and female Hispanics recruited from area educational and community centers. P’s completed daily measures once per day for three weeks by calling an automated telephone system (i.e., interactive voice response (IVR) system); they also completed comprehensive pre- and post-test measures. Multilevel modeling findings from this study suggest that Hispanics face significant psychological and structural barriers when making certain health decisions. The results also indicate that unique daily risk profiles exist for different Hispanic groups and different health behaviors. Some relevant factors include degree of acculturation, gender, national background, theory of planned behavior (TPB) components, and identity-based motivations.

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Symposium 14C 3020

SOCIODEMOGRAPHIC FACTORS MODERATE THE SYNERGISTIC EFFECTS OF PERSONALITY ON HEALTH-RISK BEHAVIOR

Rick H. Hoyle, PhD,[1] Jamieson L. Duvall, PhD[2] and Ajlina Karamehic-Muratovic, PhD[3]

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Risk-related personality traits such as sensation seeking and impulsivity are potent predictors of substance use, particularly during adolescence. Although statistical models predicting the use of alcohol, tobacco, and other drugs by adolescents routinely include risk-related personality traits and demographic characteristics such as ethnicity and gender, they rarely consider the possibility of synergistic effects of multiple traits or the moderation of those effects by gender and ethnicity. To address this gap in the literature, we analyzed relevant data collected during in-home interviews of more than 8,000 middle and high school students (13% African American, 87% White; 51% female). Across substances, we found the well-documented strong effect of sensation seeking but only at high levels of impulsivity. At low levels of impulsivity, the sensation seeking effect was weak for alcohol and tobacco use and nonsignificant for marijuana use. The inclusion of gender and ethnicity (African American or White) in the model, individually and in interaction, revealed that the Sensation Seeking x Impulsivity effect was consistently strong for African American females but weak or nonsignificant for African American males, White females, and White males. These findings suggest that the effect of personality on substance use by adolescents is both more complex than typically assumed and not invariant across levels of gender and ethnicity. Research on substance use and other health-risk behaviors should evaluate the effects of risk-related personality traits against the backdrop of sociodemographic factors such as gender and ethnicity.

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Symposium 15 9:00 AM–10:30 AM 3021

IMPROVING QUALITY OF BEHAVIORAL INTERVENTION IN TYPE 2 DIABETES

Robert M. Kaplan, PhD

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Improving Quality of Behavioral Intervention in Type 2 Diabetes.
This symposium is designed to evaluate current efforts to translate evidence on the management of Type 2 Diabetes Mellitus into practical community based interventions. Although risk factors for diabetic complications have been known for many years, and both behavioral and medical methods for controlling blood glucose are well studied, population level control of Type 2 Diabetes has been disappointing. Behavioral interventions are even more important since five recent clinical trials failed to show that Metformin resulted in in improved health outcomes. Robert Kaplan will present new data on the management of Type 2 Diabetes in California managed care organizations. Despite extensive investment in quality improvement efforts, no California health plan other than Kaiser Permanente ranks above the 90th percentile for heart and diabetes performance measures. Data from several sources will be used to show that higher performing plans tend to make greater use of behavioral intervention. Edwin Fisher will review achievements from Diabetes Initiative of the Robert Wood Johnson Foundation that evaluated validated diabetes self management interventions in Federally Qualified Health Centers and other settings. They identified the 6 key resources and supports for self management. The importance of identifying the social contexts and priorities of individual's lives is also noted. Dominick Frosch will discuss an ongoing randomized clinical trial evaluating disease management programs that use telephone coaching to support patients outside of periodic clinical consultations. Early results from this trial suggest that telephone coaching improves self-care behaviors in minority and underrepresented ethnic group members. The discussant will be Richard Roberts, who is trained both as a primary care physician and an attorney. Roberts is a past president of the American Academy of Family Physicians (AAFP) and the Wisconsin Medical Society. He is currently President-Elect of the World Organization of Family Doctors (Wonca).

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Symposium 15A 3022

THE CONTROL OF TYPE 2 DIABETES IN CALIFORNIA COMMUNITIES

Robert M. Kaplan, PhD

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Background. There are substantial differences between communities in their success in managing Type 2 diabetes mellitus. This paper reports data from several different sources on the control of diabetes in California communities.
Method: As part of a statewide initiative to improve the quality of health care in California, we recently estimated that poor control of diabetes results in about 343,000 avoidable sick days and $56 million in lost productivity for California residents. Using data from the Healthcare Effectiveness Data and Information Set (HEDIS), we evaluated control of type 2 Diabetes by region and provider group in California.
Results: HEDIS defines poorly controlled Diabetes as HbA1c levels greater than 9%. Nationwide 19% or fewer of patients the top performing (90th percentile) health plans have HbA1C values >9%. No California health plan meets this threshold. Nationwide and in California, about 30% of patients who are in treatment for diabetes are poorly controlled. Regional analysis within California suggests wide variation in control by community. Demographic characteristics only partially explain these variations. Application of GPS mapping identified communities in particular need of attention. The use of multiple providers in diabetes care and the availability of heterogeneous care teams appeared to be related to better control of diabetes.
Conclusions: The traditional model of diabetes care has produced disappointing results for the control of type 2 diabetes in California communities. New approaches to diabetes management need to be deployed and evaluated.

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Symposium 15B 3023

TALES FROM THE TRENCHES: IMPROVING DIABETES CARE IN COMMUNITY-BASED PRIMARY CARE WITH TELEPHONE COACHING

Dominick L. Frosch, PhD, Visith Uy, BS, Christian Bogeberg, BA, Socorro Ochoa, AA and Carol Mangione, MD

Medicine, UCLA, Los Angeles, CA.

Background: Ethnic minorities are disproportionately affected by the diabetes epidemic and metabolic syndrome. Disease management programs that use telephone coaching to support patients are increasingly deployed by health insurances, but little is known about their efficacy to improve behavioral self-management in underserved populations.
Methods: This study is a two-group randomized controlled trial (N=200) comparing an intervention package consisting of a motivational DVD program about diabetes self-care (developed by the Foundation for Informed Medical Decision Making), combined with 5 telephone coaching sessions from a diabetes educator, to usual care. Participants (18% African American, 53% Latino) are drawn primarily (89%) from a community-based free clinic. The intervention focuses on supporting participants in identifying and implementing behavior change goals. Participants complete assessments, including hemoglobin A1c, blood pressure and lipids, at baseline and six months. An interim survey is conducted 1-month post-enrollment.
Results: Average baseline hemoglobin A1c was 9.67% (SD = 1.99), with a range of 7.0 to 16.0%. A substantial proportion of participants (33%) showed only elevated A1c, but 51% had two metabolic syndrome risk factors and 14% had all 3 risk factors. Participants reported an average of 6.3 medications (Range = 1–16). The majority of participants assigned to receive telephone coaching completed all 5 sessions (79.6%). Average time to the first telephone coaching session was 31 days (Range=7–107 days). Preliminary results indicate that participants assigned to receive telephone coaching were more likely to self-report making behavior changes (61.5% vs. 39.1%) than those assigned to the usual care group.
Discussion: The majority of participants in this clinical sample had multiple risk factors that could benefit significantly from behavioral intervention. Engaging these high-risk patients requires significant effort, but findings suggest that telephone coaching has potential to improve self-care behaviors.

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Symposium 15C 3024

ECOLOGICAL-BEHAVIORAL PERSPECTIVE IN THE DIABETES INITIATIVE OF THE ROBERT WOOD JOHNSON FOUNDATION

Edwin Fisher, PhD

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The *Diabetes Initiative* examined whether self management programs with demonstrated efficacy could succeed in real-world settings. An ecological-behavioral perspective emphasizing contexts of individuals, interventions, and programs guided this initiative.

Individual Level: People do not eat carbohydrates, fats and protein, but breakfast, lunch and dinner. Self management needs to be contextualized amidst the interests and problems that comprise people's lives. E.g., goal setting needs to accommodate diverse interests and demands on the individual. Depressed mood often poses another important context for diabetes management.

Intervention Level: 60–70% of adults with diabetes receive no self management education. The varying contexts of people's lives assures that no one intervention will reach all. Rather than searching for the ***best*** practice, programs will reach and help more by providing choices among ***good*** practices that appeal to varied preferences. Quality improvement can refine the choices offered.

Program Level - Standardization by Function, not Content: The diversity of the *Diabetes Initiative*'s 14 sites made clear that no single self management intervention would be feasible in all contexts. Rather than a specific treatment package, standardization was promoted through *Resources and Supports for Self Management*, the key functions that each program was to address: 1) Individualized assessment, 2) Collaborative goal-setting, 3) Skills enhancement, 4) Ongoing support, 5) Community resources, and 6) Continuity of clinical care. Projects implemented these in diverse ways, and process evaluation indicated their relationship with improved metabolic control.

The behavioral-ecological perspective puts self management in the contexts of individuals' lives, interventions, and programs. *Diabetes Initiative* programs following this approach in real-world settings achieved improvements in metabolic control comparable to those in research settings, and cost effectiveness estimated at $39,563 per quality adjusted life year, well below the benchmark of acceptable cost of $50-$75,000.

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Symposium 16 9:00 AM–10:30 AM 3025

DEVELOPING MULTIPLE RISK FACTOR INTERVENTIONS

Wayne F. Velicer, PhD[1] and Brian Oldenburg, PhD[2]

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Multiple health behavior interventions follow a different conceptual model than single risk factor interventions. Single risk factor interventions are a selection model, i.e., the population of potential participants are screened to select the subgroup that is at risk and all others are eliminated. Multiple risk factor interventions are a classification model, i.e., all participants are assessed and treated for all behaviors for which they are at risk. Single risk factor studies are more easily implemented in a simple research design but multiple risk factors studies more directly model real world settings. However, multiple risk interventions present a unique set of questions such as: (a) Should interventions be sequential or simultaneous?; (b) Should interventions be integrated or modular?; (c) If interventions are integrated, what is the optimal method of integrations?; (d) If interventions are modular, which risk factor interventions should be implemented first?; and (e) Does success with one risk factor increase or decrease the chances of success with other risk factors? The special concern for multiple risk factor interventions is the increase in subject burden and delivery costs. The degree of covariance between risk factors can provide the bases for integrating interventions and, therefore, reducing subject burden and delivery costs. All three presentations in this symposium address the issue of co-variation between risk factors and the impact of co-variation on intervention development.

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Symposium 16A 3026

INTERRELATIONSHIPS ACROSS THREE HEALTH BEHAVIORS: THEORY AND RESEARCH

Sonia Lippke, PhD,[1] Claudio Nigg, PhD[2] and Jay Maddock, PhD[2]

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The goals of the study were to investigate interrelations between multiple behaviors and to apply one theory of behavior change and integrate this with two theories of multiple behavior. The theory of behavior change was the Transtheoretical Model and to explain of co-occurrence of different behaviors, Transfer Theory and Compensation Theory were applied. Contingencies across behaviors of N=3,519 individuals revealed stronger correlations between nutrition and physical exercise ($r = .15$, $p < .01$) than between smoking and nutrition ($r = .08$, $p < .01$) or smoking and exercise ($r = .03$, $p = .08$). Smoking moderated the correlation of nutrition and exercise: In current- and ex-smokers, the correlations of nutrition and exercise were higher ($r = .17$; $r = .21$, ps $< .01$) than in never-smokers ($r = .11$, $p < .01$). Frequencies revealed that ex-smokers were more likely to prepare and initiate change in their exercise behavior and more likely to prepare, initiate or maintain change in their nutritional behavior than never-smokers or current-smokers, indicating the hypothesized transfer effects. Furthermore, smokers were more likely to exercise than to eat healthy. Also, those who are not contemplating changing their nutrition are most likely to be regular exercisers. Findings can guide theory building and testing, as well as guiding interventions targeting more than one behavior.

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Symposium 16B 3027

CO-VARIATION: A PROMISING APPROACH TO MULTIPLE BEHAVIOR CHANGE INTERVENTIONS

Sara Johnson, PhD, James Prochaska, PhD and Karen Sherman, MA

Pro-Change Behavior Systems, Inc., West Kingston, RI.

Transtheoretical Model (TTM)-based computer-tailored interventions for multiple behavior change (MBC) are effective. However, fully tailored interventions (FTI) for multiple behaviors increase response burden and delivery costs, limiting feasibility and dissemination potential. Leveraging co-variation of behavior change (i.e., when taking action on one treated behavior increases the odds of taking action on a second) represents an innovative approach to MBC interventions. Data from three randomized trials will be presented to demonstrate the potential of interventions utilizing co-variation. Among 404 adults (50.4% male; 83% White) in a medication adherence study, random effects modeling indicated that those receiving a FTI for adherence and minimal messaging for related behaviors were significantly more likely to reach Action (A) or Maintenance (M) for exercise (43.5% vs. 24.7%, Odds ratio (OR)=2.39, $z=2.37$, $p<.05$) and dietary fat reduction ((24.7% vs.12.5%; OR=1.57, $z=2.06$, $p<.05$). Logistic regression performed on data from 1206 adults (50.8% male; 78% White) in a weight management intervention indicated that on each pair of the three treated behaviors (exercise, healthy diet, and emotional eating), the ORs for taking action on one behavior if a participant took action on another ranged from 2.52 to 5.18 in the treatment group vs. 1.24 to 2.63 in control. Among 1800 high school students (mean age=15.97, 49.2% male; 71.5% White) who received FTIs for exercise paired with stage-matched interventions for fruit and vegetable and reducing TV time, logistic regression indicates that the OR for likelihood of reaching A/M for a behavior if A was reached on another behavior ranged from 1.99–2.36 among the treatment group at the end of treatment (6 months) as compared to 0.5–1.0 in the control group. Across all studies, progress on one behavior led to progress on another among treatment but not control participants. Suggestions for a planned co-variation approach that has the potential to produce the greatest impact with the least demands on participants will be presented.

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Symposium 16C 3028

EFFICACY AND COST EFFECTIVENESS OF A MULTIPLE RISK FACTOR TAILORED INTERVENTION

Marci Campbell, PhD,[1,2] Marlyn Allicock, PhD,[1,2] Carol Carr, MA,[2] Brenda DeVellis, PhD,[3] Ahinee Amamoo, MPH[4] and Robert Sandler, MD, MPH[4]

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Tailored interventions potentially can improve multiple risk factor interventions for chronic disease prevention. This study tested the efficacy of two different health communication methods to promote fruit and vegetable (F&V) consumption and physical activity. The randomized trial compared computer-tailored print communications (TPC) and telephone-delivered motivational interviewing (TMI). Cost-effectiveness also was assessed for each intervention compared to control.

The study design was a 2 x 2 randomized controlled trial conducted among North Carolina participants recruited from a population-based sample. A total of 735 older adults (mean age 66, 40% African American, 38% colon cancer survivors) completed the study. Baseline and 12-month telephone surveys assessed demographics, health, behaviors, and psychosocial factors (response rate 90%). F&V intake was validated by serum total carotenoids. Interventions included 4 TPCs, 4 MI calls, combined (both interventions), or control (generic health information).

Findings showed that the combined intervention was most effective for dietary change (1.0 daily serving increase of F&V, $p<.05$) compared to 0.5 serving increase for each independent intervention and no change for the control group. No significant effects were found, however, for physical activity. Cost effectiveness evaluation showed that both the combined and TPC-only interventions were most cost effective, whereas TMI-only was not cost effectiveness. Evidence from this study supports intervention dissemination for dietary change; other more intensive approaches may be needed to promote physical activity in older adults and among cancer survivors.

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Symposium 17 9:00 AM–10:30 AM 3029

RELATIONSHIP PROCESSES AND INTERVENTIONS IN CANCER

Sharon Manne, PhD,[1] Christine Rini, PhD,[2] Hoda Badr, PhD,[2] Shelby Langer, PhD[3] and James C. Coyne, PhD[4]

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The diagnosis of cancer in one family member can have significant repercussions for the entire family. In this symposium, we will present four studies that either evaluate relationship processes or intervene to improve relationships among couples coping with cancer or pre-cancerous illnesses using novel approaches including observational, physiological, and daily diary methods. Dr. Rini will present results from her study of transplant patients which evaluated the role of the perceived effectiveness of partner support in patient distress. Results indicated that partner support was associated with greater patient distress when the support was ineffective, but no such association occurred when the support was effective. Dr. Badr will discuss an electronic diary study of couples coping with metastatic breast cancer assessing associations between partners' perspectives on pain, mood, spouse support, and relationship quality. Results indicated the association between pain and marital quality was mediated by patient mood. Dr. Langer will present observational data examining the associations of altruistic versus egoistic motivations of protective buffering and depressive symptoms among cancer survivors and their spouses, and physiologic and behavioral correlates of buffering. Dr. Manne will present the results of a randomized trial evaluating the efficacy of an intimacy-enhancing intervention for couples coping with prostate cancer. Results suggest significant beneficial effects on couples' distress, intimacy, and communication. Dr. Coyne will discuss these findings in light of current theories of relationship support and processes.

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Symposium 17A 3030

EFFECTIVE PARTNER SUPPORT AND PATIENT ADJUSTMENT TO HEMATOPOIETIC STEM CELL TRANSPLANT: A MIXED METHODS STUDY

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Hematopoietic stem cell transplant (HSCT) is an aggressive treatment for hematological cancers and other diseases. It typically involves lengthy hospitalization and prolonged recovery, making patients highly dependent on their primary caregiver—usually their partner. Yet, support provided by partners varies in its effectiveness, and this variation (social support effectiveness) should in turn influence whether partner support has its intended beneficial effects. This mixed methods study investigated effective versus ineffective support provided by partners during and after HSCT. Men and women (n=225) who were 1–3 years post-HSCT and married/partnered completed quantitative measures of partner HSCT-related enacted support (the frequency with which it occurred), the effectiveness of that support, and psychological distress. We hypothesized that the effects of receiving more partner support would be moderated by its effectiveness, such that receiving more partner support would predict greater patient distress when the support was ineffective and less patient distress when it was effective. Findings from hierarchical multiple regression offered partial support: Receiving more partner support predicted greater patient distress when the support was ineffective ($p=.002$), but the amount of partner support was not related to patient distress when the support was effective ($p=.88$). A subset (n=25) of patients also completed a semi-structured interview with questions about partner support during and after HSCT. Qualitative analyses revealed specific support behaviors that characterized more versus less effective partner support. Most involved support that was not provided or that was insensitive (e.g., minimizing the patient's situation). The findings have implications for development of psychosocial interventions for couples and highlight benefits of considering the effectiveness of enacted support when investigating its association with patient outcomes.

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Symposium 17B 3031

PAIN, SPOUSAL SUPPORT, AND RELATIONSHIP QUALITY IN METASTATIC BREAST CANCER

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Pain management among women diagnosed with metastatic breast cancer (MBC) is a significant quality of life concern. Patients often rely on their partners to provide physical and emotional support when they are in pain. However, the interplay between patient pain and mood and the impact of these factors on spousal support and relationships in MBC remain unclear. This electronic diary study of 55 couples where the patient was initiating chemotherapy for MBC examined the effects of patient pain and mood on spousal support and relationship quality. Patients and their male partners completed assessments on separate palm computers 6 times a day (in the morning, 4 times during the day, and in the evening) for 14 consecutive days. Both rated the patient's pain (Brief Pain Inventory), their own mood (circumplex adjectives), the provision/receipt of physical and emotional support, and the degree to which cancer interfered with their relationship. Lower-level (1->1->1) multilevel models with the couple as the unit of analysis were used to test mediation. Patient and partner reports of greater patient pain in the morning were associated with both reporting in the evening that cancer interfered with the quality of time they spent together that day ($ps<.01$). After controlling for the effects of patient daytime pain and demographic/medical factors, results showed that patient daytime mood (i.e., active, peppy, tired) mediated this association for both partners, accounting for 13–44% of the total variance. An association between patient morning pain and evening reports of providing/receiving physical and emotional support was also found to exist as a mediated effect through patient daytime tired affect ($p<.05$). Findings shed light on the antecedents of support provision and receipt in MBC and suggest that cancer pain may interfere with the quality of the spousal relationship through its adverse effects on patient mood.

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Symposium 17C 3032

PROTECTIVE BUFFERING AMONG COUPLES COPING WITH CANCER: MOTIVATIONS AND CONSEQUENCES

Shelby Langer, PhD,[1,2] Jonathon D. Brown, PhD,[1] Suzanne Hall, BS,[1] Julia Herbert, BA,[1] Allison Stover, MPH[2] and Karen Syrjala, PhD[2,1]

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Protective buffering (PB), hiding illness-related concerns from one's partner, is seemingly a prosocial act. Yet theoretically it also affords self-protection by minimizing negative emotional experience and avoiding conflict. This study examined affective consequences and behavioral correlates of PB and motivations for PB (egoistic and altruistic) among 94 cancer survivors and their spousal caregivers (CGs). Patients receiving hematopoietic stem cell transplantation and their CGs (mean age 53; 4% Hispanic; 93% Caucasian; 70% male survivors and 71% female CGs) completed measures of depression, PB, and motivations for PB approximately 50 days post-transplant. A randomly selected subsample of 32 CGs also completed a talking exercise, expressing thoughts and feelings about their partner's illness while the partner listened. Linguistic, facial, physiologic, and subjective indicators of emotion among CGs were recorded. Actor Partner Interdependence Model analyses were conducted to examine PB motivations as predictors of depression. An actor x dyad member interaction for egoistic motivations ($p < .05$) indicated that the more patients buffered to protect themselves, the more depressed they felt. A partner x dyad member interaction for altruistic motivations ($p < .05$) indicated that the more patients buffered to protect their CG, the more depressed their CG felt. With respect to the subsample, CG use of PB was associated with the utterance of fewer words about health during the talking exercise ($p < .01$) and greater self-reported negativity immediately preceding and during the exercise ($p < .01$); CG facial positivity was associated with elevated galvanic skin response ($p < .05$); and CG egoistic motivations were associated with more positive perceptions of the exercise ($p < .05$). Findings provide behavioral evidence of PB and suggest that PB enacted by patients may paradoxically hurt the very object of such protection. Finally, the chance to communicate feelings may offer benefit to CGs wanting to shield themselves from distress.

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Symposium 17D 3033

INTIMACY-ENHANCING INTERVENTION FOR COUPLES COPING WITH LOCALIZED PROSTATE CANCER

Sharon Manne, PhD,[1] David Kissane, MD,[2] Talia Zaider, PhD,[2] Christian Nelson, PhD[2] and Gary Winkel, PhD[3]

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The diagnosis and treatment of localized prostate cancer can reduce patient and partner quality of life. Along with the challenges that accompany the diagnosis of any cancer, the erectile dysfunction and urinary leakage which may prove permanent after surgical treatment can pose a significant challenge to men's masculinity. Partners have their own concerns. Preliminary data suggests that enhancing intimacy via improvements in communication strategies couples use to deal with cancer concerns may be a prime target for intervention. To this end, we have developed a five session intimacy-enhancing couples' therapy (IEC). IEC's primary goal is to increase couples relationship-enhancing communication, reduce relationship-compromising communication, and bolster emotional intimacy. A randomized clinical trial with 60 couples was conducted comparing IEC with Usual Care (UC). Couples completed measures of distress, marital quality, cancer concerns, communication, and relationship intimacy pre- and one week post-treatment. Men completed measures of sexual satisfaction and confidence. Comparisons indicated that IEC patients reported significantly greater reductions in distress and concerns and improvements in marital satisfaction as compared with UC patients. IEC wives reported significantly greater reductions in cancer-specific distress and cancer concerns than UC wives and greater improvements in relationship satisfaction. As compared with UC, IEC significantly improved patient's self-disclosure, perceived partner disclosure, and intimacy. Among IEC patients, sexual satisfaction and confidence were significantly improved as compared with UC. Compared with UC, IEC improved wives' mutual constructive communication and reduced demand-withdraw communication. Overall, our data suggest that our intervention shows promise as an effective way to facilitate couples' adaptation to early stage prostate cancer.

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Symposium 18 9:00 AM–10:30 AM 3034

QUALITY OF LIFE AMONG HISPANIC CANCER SURVIVORS: LESSONS LEARNED AND CHALLENGES FOR THE FUTURE

Beth Meyerowitz, PhD,[1] Frank J. Penedo, PhD[2] and Julia H. Rowland, PhD[3]

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Hispanics account for over 15% of the US population, with growth rates of greater than 3 times that of the total US population. Among the Hispanics living in the US, over 80,000 are diagnosed with cancer annually, most of whom will survive for more than 5 years after receiving their diagnoses. Thus, a large and increasing number of Hispanics will be living with the aftermath of having been diagnosed with and treated for cancer. Very little research is available on post-cancer survivorship among Hispanics, however. Medical, socioeconomic, and cultural factors should be taken into account in this research, as well as the potential challenges of barriers to care, immigration stressors, and minority status. In this symposium, findings will be presented from 3 research groups that are conducting studies with Hispanic cancer survivors in different parts of the country. The first speaker will present data on sociocultural and psychosocial correlates of adjustment among Hispanic prostate cancer survivors. The second presentation will address quality of life among Hispanic breast cancer survivors and their family members. The third paper will describe predictors of depression among Latinas with cervical cancer. These studies document the importance of considering culturally-relevant models of adjustment and salient constructs in the context of the heterogeneous population of Hispanics in the US. In addition to current findings, the speakers will discuss the special challenges in conducting research with Hispanic cancer survivors, including recruitment/retention and development of culturally-appropriate assessment tools. Implications for development of interventions to improve quality of life among Hispanic cancer survivors and their family members will be explored. Dr. Julia Rowland will discuss the lessons learned from these studies and the challenges for future research with Hispanics in the context of the larger literature on cancer survivorship.

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Symposium 18A 3035

SOCIOCULTURAL AND PSYCHOSOCIAL CORRELATES OF QOL AMONG HISPANIC PROSTATE CANCER SURVIVORS

Frank Penedo, PhD

Department of Psychology and Sylvester Comprehensive Cancer Center, University of Miami, Coral Gables, FL.

Prostate cancer (PC) is the most frequently diagnosed cancer in men and the second leading cause of cancer-related death. Several indicators suggest that Hispanic (H) men have a substantial disadvantage in adjusting to treatment-related changes in quality of life (QoL). Ethnic minorities are more likely to be diagnosed with advanced disease, receive less aggressive treatment and have shorter survival rates relative to non-Hispanic whites. Minority men may also have reduced treatment opportunities as a result of less PC knowledge, limited health care access, and more health care barriers. Furthermore, they also report less satisfaction with treatment outcomes. Despite these disparities, very few studies have addressed correlates of QoL outcomes among H men treated for PC. The experience and perceived outcome of treatment may be significantly influenced by the interaction of ethnic group membership with medical, socio-demographic, psychosocial and health care factors. Furthermore, specific components of ethnicity (e.g., acculturation, cultural values) have not been assessed in PC populations to date. In this symposium, we will present data on 75 Hispanic men who were assessed at diagnosis and prior to treatment, and followed over a two-year period post-diagnosis. We will explore the role of ethnicity in relation to PC disease-specific (e.g., sexual functioning) and general QoL. Specifically, we will present data on the extent to which the relationship between ethnicity and QoL is explained via several domains (i.e., medical, socio-demographic, psychosocial and health care). We will also explore relationships among components of ethnicity (e.g., ethnic identity, acculturation, discrimination, cultural values) and factors known to influence QoL in cancer populations (e.g., sociodemographic, psychosocial). Data from this study will have implications for primary and secondary prevention strategies that are specifically targeted towards Hispanic PC survivors.

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Symposium 18B 3036

THE IMPACT OF BREAST CANCER ON LATINA SURVIVORS AND THEIR FAMILIES

Amelie Ramirez, DrPH

Institute for Health Promotion Research, UT Health Science Center at San Antonio, San Antonio, TX.

Little research exists about the experience of Latina breast cancer survivors and their families. So the Institute for Health Promotion Research (IHPR) launched a series of studies to assess the psychosocial impact of cancer on Latina breast cancer patients and their families. First, the IHPR collected baseline data on psychosocial/spiritual quality of life issues among the families of 50 Latina breast cancer patients, finding that the greatest impact on patients' family members is an increased sense of vulnerability to cancer that dissipates over time. This research found high interest for genetic testing among Latina survivors' family members, yet knowledge/participation levels were very low because of cultural and religious beliefs, fear, intimidation of the medical system, and logistical barriers. IHPR researchers also evaluated the association of religiosity/spirituality (R/S) and health-related quality of life (HRQOL) among Latina breast cancer survivors, finding that high levels of R/S were significantly, positively correlated with several HRQOL dimensions (social and functional well-being). Further, high R/S levels predicted better social well-being and a better patient-doctor relationship. Another study examined the concordance between 83 Latina breast cancer patients' and their primary support family members' perceived barriers to cancer treatment, and patient responses closely resembled those of family members. Latina breast cancer survivors with less than a high school diploma have higher levels of concordance with family than their peers with more education, and face related barriers to breast cancer care, suggesting that involving families in the treatment plan may improve breast cancer treatment compliance. Study data will help map stages families go through in living with a breast cancer patient, develop culturally sensitive educational materials, and pave way for education about breast cancer genetic testing and new longitudinal studies to improve the quality of life of patients and their families.

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Symposium 18C 3037

QUALITY OF LIFE OF LATINA CERVICAL CANCER PATIENTS: PREDICTORS OF DEPRESSION & RESEARCH CHALLENGES

Lina M. D'Orazio, MA and Beth E. Meyerowitz, PhD

Psychology, University of Southern California, Los Angeles, CA.

Latinas makeup the majority of cervical cancer (CxCA) cases in the US, yet, little is known about the quality of life of these patients. Two studies of indigent Latina CxCA patients conducted in an urban county hospital by our research team provide preliminary psychosocial data for this understudied population. In both studies, the most notable finding was that patients reported high rates of depression on the Center for Epidemiologic Studies Depression Scale. Two-thirds of each sample scored at/above a cut-off score indicating symptoms similar to those reported by people with depressive disorders. In the first study, predictors of depression that were both related to the cancer experience (e.g., physical symptoms) and to non-cancer related stress specific to the experiences of Latinos in the US were identified. In the second study, we extended the previous findings by identifying mediators of the relations between these predictors and depression using standardized measures, in addition to exploring the possible cultural relevance of patients' attitudes towards the future (ATF), such as optimism or fatalism. Among the 51 patients interviewed, the pattern of predictors found in the first study was replicated, now with higher levels of non-cancer related stress and cancer-related physical symptoms and lower levels of optimism about the future significantly predicating depression (R2=.61). Upon examining the Hispanic Stress Inventory, immigration stress, particularly discrimination, stood out as a significant predictor of higher depression. The relation between ATF and depression was mediated by approach coping, while the relation between discrimination and depression was mediated by avoidance coping. For this symposium, these findings will be discussed with special attention to potential targets for culturally-sensitive interventions for depression. We will also share the measurement challenges we encountered (e.g., linguistic equivalence and cross-cultural validity of constructs) that can guide future research with monolingual Spanish-speakers.

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Friday
April 9, 2010
1:30 PM–3:00 PM

Symposium 19 1:30 PM–3:00 PM 3041

"PAIN MANAGEMENT IN THE PRIMARY CARE SETTING: AN OPPORTUNITY FOR BEHAVIORAL MEDICINE"

Martin Cheatle, PhD[1] and Francis J. Keefe, PhD[2]

[1]Psychiatry, University of Pennsylvania, Philadelphia, PA and [2]Duke University Medical Center, Durham, NC.

Chronic pain is becoming a public health crisis. Over 50 million people in the United States suffer from chronic pain with many of these individuals experiencing significant physical, behavioral and psychological comorbidities. The majority of these patients are followed by primary care practitioners who typically have a paucity of experience, time or resources to manage these complex cases. While the biopsychosocial model has been demonstrated as efficacious in this patient population, the incorporation of behavioral medicine principles in the primary care setting has not been fully realized. This symposium will examine the opportunity for the integration of behavioral medicine pain practices into primary care. Three topical areas will be reviewed: "Fibromyalgia Syndrome: Perils of the Patient Uniformity Myth" (Dennis Turk, Ph.D. University of Washington); "Implementation of a stepped care approach to pain care in the VA" (Robert Kerns, Ph.D., Veterans Health Administration) and "A primary care, integrated disease management program for patients with chronic pain and co-occurring mood and substance use disorders" (Martin Cheatle, Ph.D., University of Pennsylvania). The potential and process for behavioral medicine to be incorporated into the management of chronic pain disorders in primary care will be discussed (Francis Keefe, Ph.D., Duke University).

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Symposium 19A 3042

FIBROMYALGIA SYNDROME: PERILS OF THE PATIENT UNIFORMITY MYTH

Dennis Turk, PhD

University of Washington, Seattle, WA.

Fibromyalgia syndrome is a common pain disorder followed in primary care practices. There are many misconceptions regarding the diagnosis and treatment of fibromyalgia.

The goal of this presentation is to provide an overview of the range of factors involved in fibromyalgia syndrome and the importance of using these factors to understand and customize treatments for subgroups of patients with fibromyalgia.

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Symposium 19B 3043

A PRIMARY CARE, INTEGRATED DISEASE MANAGEMENT PROGRAM FOR PATIENTS WITH CHRONIC PAIN AND CO-OCCURRING MOOD AND SUBSTANCE USE DISORDERS

Martin Cheatle, PhD

University of Pennsylvania, Philadelphia, PA.

Ideally patients with complex pain disorders would have access to an integrated pain management facility that provides both opioid and non-opioid treatment and comprehensive assessment and monitoring of physical, psychological and addiction issues. In practice, even many specialty pain clinics do not offer this level of chronic disease management. The majority of these cases are treated by primary care physicians with a dearth of time, training, and availability of resources and lack of established guidelines for management of chronic non-cancer pain. A primary care integrated disease management program based on the biopsychosocial model will be reviewed. The emerging role of behavioral medicine in this field will be discussed.

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Symposium 19C 3044

IMPLEMENTATION OF A STEPPED CARE APPROACH TO PAIN CARE IN THE VA

Robert D. Kerns, PhD

PRIME Center, VA Central Office, West Haven, CT.

The Veterans Health Administration (VHA) National Pain Management Strategy recently celebrated its ten year anniversary. An evidence and population based stepped care model serves as the VHA single standard of pain care and assures timely and consistent access to assessment and management of most common pain conditions in the primary care setting. The competencies expected of primary care providers are well defined and system supports including provider education programs and practice guidelines, access to integrative care management and mental health professionals, and criteria for referral to secondary and tertiary consultation services, among other resources, are increasingly in place. The model and implementation data will be reviewed, and barriers and facilitators of system change will be discussed.

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Symposium 19D 3045

PAIN MANAGEMENT IN THE PRIMARY CARE SETTING: AN OPPORTUNITY FOR BEHAVIORAL MEDICINE-DISCUSSANT

Francis J. Keefe, PhD

Psychiatry and Behavioral Sciences / Medical Psychology, Duke University Medical Center, Durham, NC.

Dr Francis Keefe will discuss the potential and process for behavioral medicine to be incorporated into the management of chronic pain disorders in primary care using examples from the three presentations: “Fibromyalgia Syndrome: Perils of the Patient Uniformity Myth” (Dennis Turk, Ph.D. University of Washington); “Implementation of a stepped care approach to pain care in the VA” (Robert Kerns, Ph.D., Veterans Health Administration) and “A primary care, integrated disease management program for patients with chronic pain and co-occurring mood and substance use disorders” (Martin Cheatle, Ph.D., University of Pennsylvania).

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Friday
April 9, 2010
3:15 PM–4:45 PM

Symposium 20 3:15 PM–4:45 PM 3046

CHRONIC PAIN: PREDISPOSITION TO PERSISTENCE-TRANSLATION FOR TREATMENT

Martin Cheatle, PhD

University of Pennsylvania, Philadelphia, PA.

Chronic pain is a significant health care problem affecting more than 60 million people in the United States. Translational research is critical in addressing this burgeoning public health crisis. This symposium will review the latest research on bio-behavioral risk factors examining the confluence of genetic predisposition, physiological and psychological risk factors (Lindsay Kindler, PhD, RN, CNS); possible neurophysiological and neuropsychological factors contributing to the maintenance of chronic pain (Kimberly Sibille, MA, PhD); and application of these principles to the clinical arena (Amy Wachholtz, PhD,MDiv).

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Symposium 20A 3047

BIO-BEHAVIORAL RISK FACTORS FOR THE DEVELOPMENT OF CHRONIC PAIN

Lindsay Kindler, PhD, RN

Comprehensive Center for Pain Research, University of Florida, Gainesville, FL.

It is well recognized that a complex combination of bio-behavioral mechanisms contributes to the onset of chronic pain (George, et al., 2008; Gupta, et al., 2007). Emerging evidence suggests that these mechanisms lead to alterations in sensory processing in the peripheral and central nervous system (Marchand, 2008). Genetic predisposition combines with physiological (hyperexcitable peripheral and central neurons, alterations in serotinergic, dopaminergic and enkephalinergic pathways) and psychological (stressors, trauma, depression and anxiety) risk factors to produce pain and sensory amplification in many chronic pain disorders including those previously identified as somatization disorders, such as fibromyalgia, irritable bowel syndrome, tempromandibular joint disorder, and chronic fatigue syndrome. This presentation will focus on the identification of bio-behavioral risk factors that produce alterations in the peripheral and central (spinal) processing of sensory information leading to the experience of chronic pain. Understanding painful disorders under the auspices of an integrated psychophysiological framework involving both mind and body will assist in the diagnosis, treatment and prevention of such syndromes.

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Symposium 20B 3048

FACTORS CONTRIBUTING TO THE MAINTENANCE OF CHRONIC PAIN: RELEVANCE FOR TREATMENT

Kimberly Sibille, PhD

Center for Comprehensive Pain Research, University of Florida, Gainesville, FL.

Imaging studies have provided evidence of changes in different brain regions coinciding with the experience of chronic pain. Terms such as neurosensitization, central sensitization, synaptic plasticity, and the neuromatrix of pain have been used to describe the development of complex pathways in the brain involved in the processing of nociceptive information and perception of chronic pain . Consolidating the evidence, it is likely that the neurophysiological and neuropsychological changes that have been observed are the result of a combination of pain related “learning” and “stress” related changes. Research suggests that an array of biopsychosocial factors contribute to the perpetuation of symptoms of chronic pain and the related experience of suffering. Biological factors such as neuroendocrine, autonomic and immune factors have been associated with psychological and genetic factors with support for a bidirectional influence on chronic pain. Similarly, a number of candidate genes have been correlated with endogenous pain modulation, inflammatory and immune responses, as well as psychological factors. This presentation will focus on features related to pain related central sensitization in the brain and explore the biopsychosocial factors contributing to and perpetuating the experience of chronic pain and suffering. Models related to the underlying mechanisms of chronic pain will be presented. The relevance of core psychological principles in the development of comprehensive treatment modalities will be addressed.

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Symposium 20C 3049

THE ROLE OF SPIRITUALITY IN CO-MORBID PAIN & ADDICTION TREATMENT

Amy Wachholtz, PhD, MDiv

Psychiatry, University of Massachusetts Medical School, Worchester, MA.

There is a paucity of research in empirically validated treatment options for patients with co-morbid pain and addiction. Helping patients access spiritual and religious coping resources has been repeatedly shown to be a protective factor against relapse in the context of addiction treatment (Geppert, Bogenschutz, & Miller, 2007). And in a separate context, religious/spiritual coping has been shown to be a component in effective psycho-social pain management (Wachholtz, Pearce, & Koenig, 2007). I will discuss the empirically validated approaches for integrating spirituality into treatment for the individual diagnoses, and propose methods of integrating spirituality into a comprehensive treatment program for co-morbid pain and addiction

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Symposium 21 3:15 PM–4:45 PM 3050

TRANSITION FROM PEDIATRIC TO ADULT CARE FOR ADOLESCENTS WITH CHILDHOOD CHRONIC ILLNESSES

Ronald Iannotti, PhD[1] and Deborah J. Wiebe, PhD, MPH[2]

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Self-management of chronic illnesses during the transition from pediatric to adult care is critical for the health of the patient, yet this is a period that frequently is accompanied by lapses in regiment adherence and inconsistent health care. Pediatric care tends to be parent-oriented, as parents usually have primary responsibility for management of pediatric chronic illnesses; adult care is usually patient-centered as young adults take over primary responsibility for their own health care. However, most pediatric and adult clinics lack good systems for guiding this transition in responsibility. Furthermore, there has been a lack of research on the psychosocial determinants and consequences of this process.

The presentations in this symposium contribute to our understanding of the transition and suggest solutions for improving the ways pediatric and adult clinics manage this process. The first paper studies adolescents with cancer and addresses the need to prepare them for the transition. Specifically, it describes the development and utility of a new socio-ecological model of transition readiness that incorporates psychosocial, developmental and system factors. The second paper surveys samples of children and young adults with type 1 diabetes to examine different points in the transition. Findings indicate the importance of patient coping skills and diabetes management support from family and friends for successful transition as reflected in both quality of life and regimen adherence. The translation of theory and research to clinical practice is presented in the third paper. After assessing behavioral indicators of health care management in pediatric transplant recipients, the presentation describes the application of these findings to a clinical intervention designed to improve medical and psychosocial outcomes. The dynamics of family influences and the implications of these findings for pediatric and adults clinics will be highlighted by the discussant.

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Symposium 21A 3051

A SOCIO-ECOLOGICAL MODEL OF TRANSITION READINESS

Lisa A. Schwartz, PhD,[1] Lisa K. Tuchman, MD, MPH[3] and Lamia P. Barakat, PhD[1,2]

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Transition readiness to adult-based care for adolescents and young adults (AYA) with chronic health conditions has mostly focused on age, disease skills and knowledge, not taking into account relevant psychosocial, systemic, and developmental factors. The lack of theoretical frameworks has hindered efforts to operationalize and assess transition readiness, which, in turn, has hindered efforts to identify targets of intervention and measure outcomes. A new theoretical model–the Socio-Ecological Model of AYA Readiness for Transition (SMART)–and supportive pilot data from a childhood Cancer Survivorship Program (CSP) will be described.

A provider-completed questionnaire was piloted in the CSP to test the feasibility of transition assessment and to assess the relationship of transition readiness to patient age, disease/treatment-related variables, and SMART components. Providers completed the questionnaire on 100 patients aged 18 and over (Mage=21.77; range=18–30) and deemed the measure to be feasible and clinically useful. Chi-square analyses revealed that many SMART components were significantly related ($p < .05$) to transition, while age was not. In particular, items that related to intention to transfer the patient soon included patient-related characteristics, patient disease knowledge and self-management skills, patient goals/beliefs, parent-related variables, and provider-related variables. Data support: 1) the feasibility and utility of such a measure and 2) SMART in that transition is a dynamic process related to more than just age, disease knowledge, or skills. Next research steps with patients and parents and generalization to other populations will be discussed.

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Symposium 21B 3052

SOCIAL INFLUENCES ON TRANSITION FROM PEDIATRIC TO ADULT DIABETES CARE

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Type 1 diabetes is usually diagnosed during childhood and is followed by years of intensive management of diabetes by the parents and the patient, supported by the family-centered approach of a pediatric health care team. Leaving the pediatric clinic can be difficult for patients and their families. The transition from pediatric to adult diabetes care is frequently accompanied by a failure to schedule or attend regular clinic appointments, problems with diabetes self-management, and a decrease in glycemic control.

Indicators of successful diabetes management were assessed in a sample of 59 youth, ages 18 to 22, who had transitioned out of two urban hospital pediatric diabetes clinics. Glycemic control and adherence to their diabetes regimen were also assessed in 69 youth in the same pediatric clinics. One goal of standard diabetes care is for clinic visits every three months; 7% of post-transition youth had not received diabetes care in the previous 12 months and 39% had attended two or fewer clinic visits during this period. However, frequency of post-transition clinic visits was unrelated to glycemic control, adherence, or quality of life. Post-transition youth had significantly poorer glycemic control ($t=4.16$, $p < .0001$) and adherence ($t=4.99$, $p < .0001$) compared to pre-transition adolescents. In regression analyses controlling for age and gender, adherence and quality of life during the post-transition years were significantly ($p < .01$) related to support for diabetes management by family and friends and personal coping style. Family and friend support and personal coping style were also related to perceive health status ($p < .05$).

Adolescents who have transitioned out of their pediatric diabetes clinics are at risk of reduced health care and poor diabetes management. Greater social and personal resources for post-transition youth may reduce these risks.

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Symposium 21C 3053

A TRANSLATIONAL APPROACH TO TRANSFERRING LIVER TRANSPLANT RECIPIENTS FROM PEDIATRICS TO ADULT ORIENTED CARE SETTINGS

Rachel A. Annunziato, PhD,[1] Brittany Hogan, BS, in progress,[1] Codette Barton, RN,[2] Tamir Miloh, MD,[2] Ronen Arnon, MD,[2] Kishore Iyer, MD[2] and Nanda Kerkar, MD[2]

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Objective: For transplant recipients, life-long health care management is critical. For example, lapses in medication adherence may result in organ rejection, graft loss and even death. In an examination of the transfer from pediatrics to adult-oriented care at our site, we found that adherence significantly declines both after transfer and relative to those receiving care solely in either a pediatric or adult setting. To determine other specific areas patients struggle to master, we next administered a survey assessing behaviors indicative of health care management. The purpose of this study is to present how we have translated our findings into systemic changes in clinical procedures.
Methods: All liver transplant recipients who transfer out of pediatrics now receive a comprehensive clinical protocol which includes a transition checklist containing prerequisite items derived from our prior work. Patients are furthermore invited to enroll in a research study prospectively tracking both medical and psychosocial outcomes at six-month intervals. Outcome measures include an index of general psychiatric symptoms, quality of life, health care management, qualitative questions about the transfer process, and adherence to medications. Data are discussed by the pediatric and adult teams and additional adjustments to the transfer process are implemented in response.
Results: We will present a summary of our clinical interventions (e.g., the checklist, adjustments in timing of appointments, and how health care management skills are now addressed); baseline and initial follow-up data from the prospective cohort; and the resources required for implementation.
Conclusions: In conclusion, preliminary studies have demonstrated that transplant recipients are vulnerable to disruptions in health care management when they transfer out of pediatrics. The present study describes one site's translational efforts to improve the transfer process.

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Symposium 22 3:15 PM–4:45 PM 3054

CERVICAL CANCER PREVENTION AMONG WOMEN LIVING IN RURAL POPULATIONS: THE EXAMPLE OF OHIO APPALACHIA

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Appalachia is a region defined by proximity to the Appalachian Mountains. It is characterized by low socioeconomic and education levels, higher unemployment rates, and barriers to health care. These factors contribute to the high rates of chronic diseases including cancer. Cervical cancer is preventable and women living in Appalachia have higher cervical cancer incidence and mortality rates compared to rates in the United States. Limited information is known among women living in Appalachia about risk factors for cervical cancer, such as infection with Human Papillomavirus (HPV), cigarette smoking, engaging in risky sexual behaviors, and cervical cancer screening.
The goal of this symposium is to present information collected from the three projects associated with The Ohio State University Center for Population Health and Health Disparities which focused on understanding and addressing the increased cervical cancer rates in Appalachia Ohio. The Center used the Social Determinants of Health (SDH) as a theoretical framework to be able to investigate social/environmental, access, behavioral and biological factors in relation to cervical cancer etiology. The three projects include: (1) a randomized controlled trial of a lay health advisor intervention study to increase Pap test use among women overdue for Pap test;
(2) a randomized controlled trial of a lay health advisor intervention to increase smoking cessation; and (3) a case control study focusing on the correlates of HPV infection among Appalachian women with abnormal Pap tests compared to women with normal Pap tests. The results of those studies provide information to design interventions addressing multiple factors in the SDH to reduce other health care and cancer disparities in this underserved population.

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Symposium 22A 3055

A RANDOMIZED CONTROLLED TRIAL OF A LAY HEALTH ADVISOR INTERVENTION TO INCREASE CERVICAL CANCER SCREENING AMONG WOMEN LIVING IN OHIO APPALACHIA

Electra D. Paskett, PhD, Mira L. Katz, PhD, Cathy Tatum, MA, Jill Oliveri, DrPH and Amy Lehman, MAS

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Purpose: To evaluate a lay health advisor (LHA) intervention to improve Pap smear rates among women living in Ohio Appalachia in a randomized controlled trial.
Methods: Women (n=285) from 14 clinics who were overdue for a Pap test were randomized to a LHA intervention (2 in-person visits that were tailored to the individual's barriers to Pap test receipt, 3 mailings based on stage of change, and phone calls) versus usual care (a letter from their physician and a cervical cancer/Pap test brochure).
Completion of Pap test at 12 months by self-report and medical record review was the outcomes of the study.
Results: Women were mostly White (95.5%), 67.8% were 18–50 years of age, only 7% had less than a high school education, 63.5% were married/living as a couple, and 37.2% had annual household incomes<\$20,000. After 12 months, women in the LHA intervention self-reported significantly higher rates of Pap test completion (73%) compared to women who received usual care (54%) (OR=2.30; 95% CI=1.25, 4.24). Logistic regression analyses indicated that the odds of completing a Pap test was significantly higher among women who were married (OR=2.65; 95% CI=0.79, 8.84) and women who were divorced/widowed/separated (OR=5.34; 95% CI=1.42, 20.11) compared to women who were never married. Additionally, older (>50 years old) women (OR=0.19; 95% CI=0.06, 0.59) and women 31–49 years old (OR=0.27; CI=0.09, 0.77) were less likely to have completed a Pap smear compared to women <30 years of age.
Conclusions: This study suggests that including some form of social support in the form of a LHA can increase Pap test rates among women living in Appalachia. These strategies may be important to change cancer screening behaviors among underserved populations.

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Symposium 22B 3056

EFFECTIVENESS OF A NURSE-MANAGED, LAY-LED TOBACCO CESSATION INTERVENTION AMONG OHIO APPALACHIAN WOMEN

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The Ohio State University, Columbus, OH.

Purpose: To evaluate a nurse-managed tobacco cessation intervention delivered by lay health advisors (LHA) to adult women in Ohio Appalachia in a randomized controlled trial.
Methods: Intervention participants (n=147) were enrolled in a nurse-managed lay-led protocol that incorporated nicotine replacement and behavioral counseling. Control participants (n=155) received a personalized letter from their physician who advised them to quit smoking and requested they schedule a clinic appointment to discuss cessation.
Results: At 12 months, self-reported abstinence was 19.1% (intervention group) and 9.0% (control group), with cotinine-validated rates of 12.2% and 7.1%, respectively (p=0.13). Logistic regression analyses indicated adjusted odds of cotinine-validated quitting was associated with cigarette consumption per day (OR=0.94; 95% CI, 0.89–0.99) and CES-D score ≥ 16 (OR=0.39; 95% CI, 0.17–0.90).
Conclusions: A LHA approach that is managed by a nurse may serve as an effective cessation strategy among this high-risk population. Additional efforts are needed to sustain long term abstinence, even after intensive intervention.

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Symposium 22C 3057

PREDICTORS OF ABNORMAL CERVICAL CYTOLOGY AMONG WOMEN IN OHIO APPALACHIA

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Purpose: The purpose of this case control study was to determine what social/environmental (access to screening), behavioral (age of onset of sexual intercourse, number of partners, male partner factors, multiparity, oral contraceptive use, smoking), and biological (HPV status, HPV type, HPV variants, HPV viral load) determinants alone or in combination contribute to the increased risk of cervical abnormalities among women living in Appalachia.

Methods: A case control study was conducted among Appalachian women who were age 18 and older, without a history of cervical cancer, and not pregnant who presented to one of 18 health clinics for routine Pap test. Cases were defined as cervical cytology showing atypical squamous cells or worse which includes all grades of squamous intraepithelial lesions and cervical cancer.

Results: A total of 847 controls and 284 cases were recruited, with the study population (95% White) reflecting the population of Appalachia. The prevalence of any type of HPV was 43% which is higher than the rate of 26.8% in the United States (U.S.) and the prevalence of HPV types included in the HPV vaccine was 12.0% compared to a U.S. prevalence rate of 3.4%. Women infected with the HPV types 6, 11, 16, 18 were significantly ($p< 0.001$) more likely to be younger, of lower SES status, be current smokers, have a history of an abnormal Pap smear, report a higher number of lifetime male sexual partners, and report higher CES-D scores.

Conclusions: This study suggests women living in Appalachia have high rates of HPV infection and high rates of associated factors (smoking, depression, etc.) that put them at high risk for developing cervical cancer. This information can be used to develop HPV and cervical cancer prevention strategies.

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Symposium 23 3:15 PM–4:45 PM 3058

RELIGION/SPIRITUALITY AND CARDIOVASCULAR HEALTH AND ILLNESS: PATHWAYS OF INFLUENCE

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Strong associations between religion/spirituality and cardiovascular health have long been observed, yet surprisingly little research has explicated the mechanisms underlying these relationships. This symposium comprises three presentations of new research findings regarding associations of religion/spirituality and cardiovascular health, illuminating psychological and physiological pathways through which religion/spirituality may exert its effects. In addition, these studies illustrate a variety of useful methods for examining these issues and highlight directions for future research. First, Kevin Masters will present results of a laboratory-based study of examining how intrinsic (I) and extrinsic (E) religious orientations affectcardiovascular reactivity (CVR) in a sample of community residents. Findings suggested that pro-religious individuals (those high in both I and E) had lower CVR, an effect that may be related to lower levels of empathy in the pro-religious. Second, Crystal Park will present findings from a longitudinal study of patients with severe congestive heart failure. This study found that global spirituality was linked to depression though the pathway of forgiveness but no other spiritual construct. Further, this effect was moderated by race: the effects were much stronger for African-Americans than for Caucasians. Third, Amy Ai will present results of a prospective interview-based study of open-heart surgery patients that examined of preoperative spiritual struggle and interleukin-6 (IL-6). Results showed that both preoperative anxiety and excess plasma IL6 contributed to higher postoperative depression. Spiritual struggles and anger coping, as well as greater multi-comorbidity, were related to higher levels of postoperative depression. Evidence suggested the relationship with depression may be mediated by the struggle-IL-6 link. Discussant Tim Smith will draw together common themes from these studies with an aim toward providing directions for future research

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Symposium 23A 3059

RELIGIOUS MOTIVATION AND CARDIOVASCULAR REACTIVITY IN MIDDLE-AGED ADULTS

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Research suggests that religiousness may be protective against hypertension whereas enhanced cardiovascular reactivity predicts its development. However, religiousness is multidimensional and individuals classified as highly religious may differ in many ways relevant to their religiousness. Thus the constructs of intrinsic and extrinsic religious motivation may be informative. Research suggests that older intrinsically religious (IR) adults experience less cardiovascular reactivity to laboratory stress than older extrinsically religious (ER) participants. The present study extends this line of research to middle aged adults and those who are non-religious (NR) and pro-religious (PR). A community sample ($N = 131$, 40–70 years, 70% female) classified as either IR, NR, or PR on the basis of mid-point (not median) splits on the I-E Scale Revised were included. Participants completed the NEO-PI and other measures then underwent two laboratory stressors; 1) mental arithmetic, and 2) interpersonal role-play confrontation on behalf of an unfairly treated significant other. Aggregated change scores revealed a significant effect for systolic blood pressure (SBP) ($p = .002$) wherein PR demonstrated significantly reduced reactivity compared to IR and NR. The findings for diastolic blood pressure ($p = .47$) and heart rate ($p = .06$) were not significant though the pattern of results mirrored those for SBP. These findings may indicate the presence of a protective effect among middle-aged adults characterized by religious motivation consisting of both intrinsic and extrinsic dimensions. They may benefit from both the central belief aspects of their religion as well as its ability to meet social and other needs. However, discriminant function analyses demonstrated that the PR are characterized as more religiously active ($p < .001$) but also more aggressive, neurotic and less compassionate ($p = .037$). These findings render several alternative interpretations possible including: 1)chronic physiological adaptations to stress that reduce reactivity but increase recovery, or; 2) response to social demand aspects of the experimental situation.

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Symposium 23B 3060

SPIRITUALITY AND DEPRESSION IN CONGESTIVE HEART FAILURE PATIENTS: MEDIATING PATHWAYS AND THE MODERATING EFFECTS OF RACE

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Depression is a pervasive problem for those living with congestive heart failure (CHF) (e.g.,Gottlieb, 2003). Recent research suggests that global spirituality may be a factor that protects CHF patients against depression (e.g., Bekelman, 2007). However, the pathways through which spirituality might influence depression remain unknown. The present study examined multiple dimensions of spirituality (e.g., private and public religious behaviors, religious coping, forgiveness, meaning, religious social support) (assessed with the Fetzer/NIA (1999) BMMRS) as predictors of subsequent depression in a sample of 100 patients diagnosed with severe CHF (60 males, 40 females, 56% Caucasian, 37% African-American). Spiritual dimensions were assessed with the Fetzer/NIA (1999) Brief Multidimensional Measure of Religion and Spirituality and depression was assessed with the Center for Epidemiological Studies-Depression scale (Radloff, 1977). Results indicated that higher levels of global self-rated spirituality predicted lower levels of depression assessed 3 months later, an effect that was fully mediated by forgiveness. Most dimensions of spirituality were unrelated or only weakly related to depression, consistent with some previous research (Koenig, 1994). Further analyses, however, suggested that relationships between spiritual dimensions and depression varied by race. In particular, relationships between spiritual dimensions and depression were stronger for African-Americans than for Caucasians (cf., Branch et al., 2006). These findings suggest that various dimensions of spirituality may differentially influence depression and further, that these relationships may vary by demographic or cultural characteristics. Suggestions for future research examining the various pathways through which spirituality may influence depression and other aspects of well-being will be discussed.

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Symposium 23C 3061

DEPRESSION FOLLOWING OPEN-HEART SURGERY: THE PATHWAY OF INTERLEUKIN-6 AND SPIRITUAL STRUGGLE

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Objectives: Faith factors (i.e., factors pertaining to religion and spirituality) have been linked with well-being and adequate coping. Few studies have investigated negative aspects of religious coping, such as spiritual struggle, which has drawn increasing attention in psychology. Based on the multidisciplinary literature and on previous findings, the current analysis estimated parallel psychophysiological pathways from preoperative distress (indicated by anxiety) to postoperative depression in patients undergoing open-heart surgery. Methods: Methods: Using standardized instruments, trained research assistants conducted sequential interviews before and after surgery in middle-aged and older cardiac patient. Medical and surgical indices were selected from a national database (the Society of Thoracic Surgeon's Database). Plasma samples were drawn in the morning before operation to obtain the data on interleukin-6 (IL-6), a stress-related biomarker. Results: Structural equation modeling (SEM) demonstrates a link between spiritual struggle and interleukin-6 (IL-6) that mediated the indirect effects of preoperative anxiety on postoperative depression. Avoidant coping also mediated the influence of anxiety on postoperative maladjustment. Further, hope played a protective mediating role to moderate the undesirable influences of the spiritual struggle—IL6 link and maladaptive coping on postoperative mental health attributes. Pain was directly related to post-operative hostility, whereas medical comorbidity was indirectly linked to post-operative depression through its relation to the struggle-IL-6 pathway. Conclusions: This study may be among the first to demonstrate a spirituality-related psychophysiological pathway that mediates preoperative distress and depression following open-heart surgery. It is vital then for researchers, not only in the psychology of religion, but in the field of general psychology, to incorporate well-differentiated measures of both potentially helpful and harmful spiritual dimensions in studies of the mind-body connection.

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Symposium 24 3:15 PM–4:45 PM 3062

DEVELOPING AND IMPLEMENTING FAMILY-CENTERED INTERVENTIONS: CHALLENGES EXPERIENCED, SOLUTIONS IDENTIFIED, AND LESSONS LEARNED

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Powerful protective factors for children's healthy development and risk factors for problem behaviors and maladjustment are rooted in the family. One implication is that interventions to improve young people's health should target relevant components of family systems. While the important role of the family in child health is increasingly acknowledged, this recognition has not translated into widespread development and implementation of family-centered programs. The general reluctance to address the family system in child health programs may stem from the frequently cited complications of conducting extended interventions with families - most notably, the challenges of recruiting, engaging and retaining families in interventions. To address such challenges, this symposium brings together an interdisciplinary group of experts to discuss three ongoing family-centered programs that address a range of health topics including (1) the management of pediatric sickle cell disease, (2) stress and coping in families experiencing childhood cancer, and (3) positive child rearing strategies in families with grandmothers raising their teenage granddaughters. In addition to describing the programs and outlining preliminary findings, the presenters will discuss the challenges experienced, solutions identified, and lessons learned. Particular topics to be addressed include strategies to engage family caregivers in interventions, the role of formative research in developing family-centered programs, theoretical models guiding program development and implementation, and strategies to empower families to make positive behavioral changes. The final presenter and discussant will outline the Family-centered Action Model of Intervention Layout and Implementation (FAMILI), which was designed to address these important issues and provide a framework for the development of family-centered programs that are ecologically-valid and culturally-responsive.

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Symposium 24A 3063

PROBLEM-SOLVING INTERVENTION FOR DISEASE MANAGEMENT AND SCHOOL FUNCTIONING FOR SCHOOL-AGE CHILDREN WITH SICKLE CELL DISEASE AND THEIR FAMILIES

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Children with sickle cell disease (SCD) are at risk for poor quality of life (QoL) and school functioning due to medical, sociodemographic and psychosocial influences. Effective interventions to improve pain management for children with SCD are reported in the literature but interventions that target QoL and school functioning are lacking. Moreover, although family functioning is supported as a resistance factor for children with SCD, families are seldom included in published interventions. Utilizing a randomized, delayed control group intervention methodology, the present study aims to examine the effectiveness of family problem-solving to improve QoL and increase school functioning (school attendance, access to school resources) for children with SCD and their families. In 4 sessions offered over the course of a 1-day intervention plus 3 follow-up phone calls, 4–6 families (patient, caregivers, school-age siblings) work together and individually to learn and apply problem-solving skills to relevant examples and family-specific problems, culminating in an outline of family goals to target after the intervention. Sickle cell centers commonly use weekend workshops to promote educational and research initiatives as this format increases feasibility and acceptability of programming. Effectiveness of these workshops has not been assessed, but brief interventions are cited in the pediatric literature as effecting improved disease management and adaptation for patients and families. We will review preliminary findings at the 6-month post-baseline assessment and information on acceptability of the intervention to families. Also described will be identified barriers to participation (interest is high but commitment is low) and our efforts to enhance recruitment and retention through community partnerships in design and implementation.

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Symposium 24B 3064

FAMILY-CENTERED STRESS MANAGEMENT FOR CHILDHOOD CANCER: A MULTIMODAL INTERVENTION FOR CHILDREN NEWLY DIAGNOSED WITH CANCER AND THEIR FAMILIES

Linda J. Ewing, PhD, RN,[1] Anna L. Marsland, PhD, RN,[2] Chelsea L. Howe, MA[3] and Kristin A. Long, MS[2]

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There is substantial evidence that a diagnosis of childhood cancer is a potent stressor for the ill child and his or her family members, affecting quality of life in psychological, social and behavioral domains. It is suggested that a parent's ability to cope with the stress is related to the psychological and physiological responses in themselves and their children. While the benefit of interventions to reduce stress and increase coping ability among adult cancer patients has been well documented, there are no equivalent studies with families experiencing childhood cancer that target parents and children. This study is an initial effort to implement a multimodal stress management and coping enhancement intervention for children with cancer and their family members.

Fifty children aged 8 to 17 within one month of a childhood cancer diagnosis, and their parents, were randomized to the intervention or standard psychosocial care. The intervention included 6, one-hour face-to-face sessions with a health psychologist supplemented by between session telephone contact and a web-based internet component designed to provide information and support in a timely manner to family members, including siblings, who are at risk for later adjustment difficulties. The primary aims of the study were to: 1. document the feasibility and preliminary utility of a stress management intervention to decrease distress in the child with cancer and his/her family members; and 2. determine whether participation in the intervention was associated with an increase in the use of active coping skills associated with lower levels of distress. We will report on primary outcomes that were assessed at baseline and 6 months post-intervention and review findings on the feasiblity and acceptability of the intervention, including the barriers to family participation, especially those related to participation of fathers.

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Symposium 24C 3065

A FORMATIVE EVALUATION OF CHALLENGES AND NEEDS EXPERIENCED BY GRANDMOTHERS RAISING TEEN GRANDDAUGHTERS: FOSTERING FAMILY-CENTERED PROGRAMS

Willa M. Doswell, RN, PhD, FAAN

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African American grandmothers have historically played a pivotal role in providing care to their grandchildren. Approximately 4.5 million children are living in a household headed by either or both grandparents. Children under 18 are being raised by grandmothers for the following reasons: 1) parental abandonment and neglect, 2) Parental illness (mental and/or physical), 3) Substance abuse, 4) Incarceration, 5) Military deployment and deaths, and Teen pregnancy. Grandchildren living with grandmothers are more likely to live in poverty. Grandmothers are less educated, more likely to live in substandard housing, in poorer health, and more likely to experience food insecurity. Grandmothers, raising teen granddaughters are who tend to have more traditional life values juxtaposed against the behavior of today's adolescents which is influenced by sexually explicit films, videogames that show explicit violence, hip hop music, recreational drug use, and permissive sexual behavior. Forty African American grandmothers, ages 45–80, from a local support group participated in an informal discussion to determine their challenges and needs when faced with the responsibilities of raising their teen granddaughters, and to identify what information would be most helpful to successfully parent. Information was collected through informal note taking by a non-participating facilitator. IRB approval was obtained. Key challenges grandmothers reported were: 1) talking about pubertal changes and healthy sexual behaviors; 2) talking about peer influences and heterosexual relationships; 3) understanding teen language and slang used; 4) preserving their personal social relationships, 5) how to interact with their own children's life styles and behavior choices; 6) how to maintain their own health and quality of life due to inadequate finances, and 7) Legal Custody issues and options. In this symposium these adverse circumstances and plausible solutions will be discussed based on this formative assessment.

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Symposium 25 3:15 PM–4:45 PM 3066

CAN WE ACHIEVE A WORLD WITHOUT DIABETES? ADDRESSING HEALTH RISK BEHAVIORS AND DEPRESSION

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The incidence of Type 2 diabetes is on the rise, presenting a growing economic and social burden to society. Globally, the number of people with diabetes is projected to double in the next 20 years reaching 366 million by 2030. In the U.S., ~24 million people have Type 2 diabetes, resulting in $116 billion in excess medical expenditures and $58 billion in reduced national productivity. Major risk factors for diabetes include smoking and obesity, and each of these is independently associated with depression. In this symposium we will discuss possible mechanisms for the link between depression and diabetes and risk factors for the onset and exacerbation of the disease. Our first presenter will discuss mechanisms for the depression - diabetes link, and make recommendations for how to design studies to better evaluate the relationship between these conditions. Our second speaker will present data on the prevalence of depression among diabetics and effects of treating the depression on lifestyle, HbA1c, and medical costs. He will also describe maladaptive effects of depression on symptom burden, functioning, self care, medical costs, complications, and mortality. The 3rd speaker will present data from an evaluation of smokers with diabetes (vs. matched controls without diabetes) who call a state tobacco quitline. Important findings on demographic and tobacco use characteristics will be discussed in light of the non-significant differences in quit rates and the trend for smokers with diabetes to gain more weight after quitting. The role of depression in these outcomes will also be discussed. Finally, our discussant will tie it all together by presenting promising interventions that might include stress management, diet and exercise and how to achieve a diabetes-free world.

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Symposium 25A 3067

THE RELATIONSHIP BETWEEN DEPRESSION AND DIABETES: A REVIEW OF MECHANISMS AND IMPLICATIONS FOR TREATMENT

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A strong literature documents that depression is common among patients with diabetes and is consistently associated with increased health care costs and utilization, hyperglycemia, increased risk of complications, and earlier mortality. Depressed diabetes patients also experience significant reductions in functioning and quality of life. This set of consistent findings has led to a call for routine screening of diabetes patients for depression and to research on the development of interventions that could be effective in treating depression and improving diabetes outcomes. Implicit in this research is the assumption that depression is causally related to the negative health outcomes noted above. However, the empirical evidence for this assumption is mixed. This presentation will consider the empirical evidence for the relationship between depression and diabetes with a focus on two questions. First, what are the likely mechanisms for this relationship and to what extent are they supported by the available empirical evidence? Second, based on the current state of the science, what types of intervention approaches are most likely to be effective in reducing depression and improving diabetes outcomes? It will be argued that although definitive statements cannot be made about the principal mechanism(s) explaining the link between diabetes and depression or whether the relationship is indeed causal, comprehensive interventions that target depression along with health behaviors such as treatment adherence, physical activity, diet, and smoking are most likely to maximize effects on diabetes outcomes. This argument will be supported by findings demonstrating that depression is consistently associated with treatment nonadherence and other negative health behaviors in diabetes and by a review of existing trials suggesting that treating depression alone is unlikely to change health behaviors or significantly impact diabetes control. Preliminary pilot data for one such approach that is being tested in depressed type 2 diabetes patients will be presented.

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Symposium 25B 3068

DEPRESSION AND DIABETES: UNHEALTHY BED FELLOWS

Wayne J. Katon, MD,[1] Michael Von Korff, ScD,[2] Elizabeth HB Lin, MD, MPH,[2] Paul S. Ciechanowski, MD, MPH,[1] Carolyn Rutter, PhD[2] and Joan E. Russo, PhD[1]

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Patients with diabetes have a prevalence rate of comorbid depression that ranges from 12% to 17%. This lecture will describe a 5-year prospective study that examined bidirectional links between depression and diabetes. Patients with comorbid depression and diabetes compared to those with diabetes alone were found to have poorer adherence to disease control medications (antihypertensive, lipid lowering and oral hypoglycemic medications), but no significant differences in control of HbA1c, LDL or blood pressure over the 5-year period. After controlling for socioeconomic variables, severity of medical illness and health risk behaviors, those with comorbid depression and diabetes compared to patients with diabetes alone had an approximately 35% higher risk of subsequent microvascular and macrovascular complications and 50% greater risk of mortality over a 5-year period. These findings suggest that biologic mechanisms such as abnormalities in cytokine levels are important to study to enhance understanding about the adverse impact of depression in patients with diabetes.

Three recent trials of collaborative depression care versus usual primary care have shown improvements in quality of depression care, depression and physical functioning outcomes, but no differences in HbA1c levels over a 12-month period. These trials also showed that collaborative care was associated with a significantly increased number of depression-free days and decreased total medical costs over a 24-month period. A new model of care, called TEAMcare, will also be described which has integrated depression care into care of patients with diabetes and/or heart disease who have poor medical disease control.

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Symposium 25C 3069

ROLE OF DEPRESSION ON CESSATION & WEIGHT GAIN AMONG SMOKERS WITH DIABETES

Terry Bush, PhD

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Diabetes is one of the top causes of death and disease nationwide. About 90% of those with the disease have Type 2 diabetes, the type linked to obesity. Smoking, obesity and sedentary lifestyle by themselves are important risk factors and for diabetics, these comorbidities dramatically increase mortality risk and all are associated with depression. Smoking cessation lowers the health risks but weight gain that accompanies quitting can be problematic for diabetics. Little is known about cessation related weight gain in smokers with diabetes, their ability to quit smoking and the impact of depression on these outcomes. We compared diabetics with matched controls on the use and effectiveness of the Washington State Tobacco Quit Line (WAQL) and provide information on weight gain and depression. In 2008, 8.5% of the 9190 WAQL callers were diabetic. Diabetics were older (51 vs. 45, p<.001), more likely to be obese (59% vs. 36%, p<.05), depressed (45% vs. 30%, p<.05), and to have smoked for 20+ years (86% vs. 66%, p<.001); cases made more visits to a health care provider (HCP) and were more likely to report being advised to quit smoking (89% vs.76%, p<.001), to lose weight (62% vs.32%, p<.001), and to follow a special diet/exercise plan (51% vs.14%, p<.001) compared with controls. At 7 months (n=242), groups did not differ in satisfaction, quit rates or weight gain; 7-day quit rates were 29% for cases, 26% for controls; females were more likely to quit and those with weight concerns less likely to quit. Of the 66 who quit smoking, 52%of cases vs.36% of controls gained weight averaging 23.2 vs.14.7 pounds; clinically important but not significant possibly due to small sample size. Although cases differed from controls on several characteristics, their quit rates were similar. Several of these differences such as greater likelihood of being obese, depressed, older and having smoked for longer, have each been shown to have a negative impact on cessation, but controlling for these factors did not change the findings. Results indicate a need to find ways to increase quit rates for those for whom the health and economic consequences of smoking are greater

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Symposium 26 3:15 PM–4:45 PM 3070

BUILDING FOR THE FUTURE: SUCCESSFUL APPROACHES TO OPTIMIZING FUNCTION AND PHYSICAL ACTIVITY FOR ALL OLDER ADULTS

Barbara Resnick, PhD CRNP,[1] Elizabeth Galik, phd,[1] Eun Shim Nahm, PhD,[1] Marianne Shaughnessy, phd[1,2] and Kathleen Michael, PhD[1,2]

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Despite repeated evidence of the benefit of low to moderate intensity physical activity (PA) less than a third of older individuals engage in the recommended 30 minutes daily of low to moderate intensity PA at least five days a week. The plethora of clinical trials done to demonstrate the benefits of PA have likewise demonstrated that older adults adhere to the exercise regimens while they are participating in the trial but often fail to continue to adhere after the trial is completed. Furthermore, interventions proven to be effective in controlled research settings must be disseminated to a larger population in the communities in which they live so as to maximize the public health benefits of the interventions. In this symposium, we will present multiple research programs that demonstrate how evidence based findings are disseminated into real world situations. The first presentation will demonstrate how a social ecological model with social cognitive theory guiding the interpersonal interactions is used to optimize function and PA among institutionalized older adults. In the second presentation, a research program focused on recovery post stroke will describe how an intensive exercise intervention developed and tested in the lab environment is being disseminated to the community using a social cognitive theory approach. The last presentation will focus on reaching a large population of older adults using innovative technology-based interventions also guided by social cognitive theory to increase adherence to osteoporosis prevention behaviors including medication adherence, exercise, and diet. All of these research programs demonstrate successful approaches to optimizing function and PA among older adults. Directions for future work to further disseminate these interventions will be address.

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Symposium 26A 3071

CHANGING THE PHILOSOPHY OF CARE IN GERIATRICS: FUNCTION FOCUSED CARE

Barbara Resnick, PhD CRNP and Elizabeth Galik, PhD,
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There is evidence to suggest that the majority of older adults, particularly those that are institutionalized, are inactive and have limited opportunities to engage in physical activity (PA). Moreover, the activity that they do is mainly in seated positions. Traditionally nurses, and other caregivers, have propagated this inactivity by providing care for (bathing or dressing an individual) as opposed to with (helping the individual to complete as much of his or her own care as possible) older adults. Performing activities for older adults when they can functionally perform these activities alone or with appropriate cueing and supervision, facilitates functional decline and causes further deconditioning and disability. To alter this declining trajectory, our research and clinical work implements a function focused care approach to care which optimizes function and PA in older individuals. This approach is best implemented using a social ecological model and social cognitive theory to guide the interpersonal interactions. A two tiered approach is used teaching nurses and nursing assistants how to evaluate and optimize function and PA and how to motivate older adults to engage in these activities. We have completed numerous studies in nursing homes, assisted living, acute care, and home settings and included older individuals with moderate to severe cognitive impairment. Findings have consistently shown that a function focused approach results in strengthening the nurses beliefs in the benefits of this approach and the time they spend providing function focused care, helps older individuals maintain and improve function, increases the time older adults engage in PA, improves mood and decreases disruptive behavior. In this presentation we will describe the implementation process of Function Focused Care, challenges and successes, and future initiatives to disseminate this philosophy to all caregivers.

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Symposium 26B 3072

OPTIMIZING FUNCTION AND PHYSICAL ACTIVITY POST STROKE

Kathleen Michael, PhD[1,2] and Marianne Shaughnessy, PhD[1,2]

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Following conventional rehabilitation, many stroke survivors adopt sedentary activity patterns that contribute to a cycle of “learned non-use” and cardiovascular deconditioning that compounds disability and leaves survivors vulnerable to recurrent cardiac and cerebrovascular events. Two interventions, tested first in the lab setting, were developed to increase exercise activity in subacute and chronic stroke survivors in the home setting. The first tests the effects of a 12-week home-based educational/motivational program on self-efficacy and outcome expectations for exercise and exercise behavior in subacute (<6 months) stroke survivors. Participants are recruited and randomized to: 1) education with motivational reinforcement and customized exercise prescription, or 2) education only. Both groups are followed by telephone weekly, and outcomes include ambulation using step monitoring, walking speed, cognitive measures, functional activity and quality of life questionnaires. Preliminary data suggest that increases in self-efficacy, outcome expectations and ambulatory behavior increase in the intervention group, and decline in controls. The second study examines the efficacy of low-intensity adaptive physical activity in individuals with chronic stroke, to increase balance, improve walking function, and increase cardiovascular fitness, and examines whether improvements are carried over into behavioral activity profiles in home and community. Progressive gym-based adaptive physical activity sessions are conducted 3 times/week for 6 months, along with individual home exercise prescriptions. Preliminary results show increases in Berg Balance Scale scores (p=0.006), Dynamic Gait Index (p = 0.01), Six minute walk distance (p = 0.02), and VO2 peak (p = 0.03). Both studies confirm the need for behavioral interventions to promote increased free-living physical activity patterns, and suggest the utility of interventions to enhance self-efficacy and outcomes expectations.

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Symposium 26C 3073

THEORY-BASED ONLINE HEALTH INTERVENTIONS FOR COMMUNITY-DWELLING OLDER ADULTS

Eun shim Nahm, PhD

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Recent advances in information technology have revolutionized healthcare, and increasing numbers of health interventions have been delivered online. While older adults are one of the fastest growing online user groups and have a significant interest in health information, few online interventions have focused on them. Over the years, our investigative team has conducted a series of online trials surrounding older adults' health behaviors. In one online trial (N = 245), we tested the effects of a social cognitive theory (SCT) based online intervention to prevent hip fracture that focused on increasing calcium intake and exercise. Findings showed preliminary effectiveness of the intervention on selected outcomes and supported SCT as an effective model for online health interventions. In an ongoing online trial, we are testing the feasibility of using an SCT-based online support program targeted for informal caregivers of older adult hip fracture patients. In particular, this program helps caregivers become motivators for their loved ones during their rehabilitation process. Participants have been eager to use the program, and responses from hospital and clinical staff members have also been positive. Based on these prior findings, we developed a large scale online study that will compare the long-term impact of two SCT-based online bone health interventions in adults age 50 and older. With the rapid growth of technologies and older adult online communities, SCT-based online interventions offer a great potential to efficiently disseminate behavior-oriented health interventions to large numbers of community dwelling older adults.

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Symposium 27 3:15 PM–4:45 PM 3074

DIRECTIONS IN STRESS AND COPING RESEARCH IN CHRONIC ILLNESS

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The study of stress and coping processes by Lazarus and Folkman’s paradigm is nearly 30 years old, but retains its relevance to behavioral medicine research. The goal of this symposium is to bring together senior researchers to highlight new directions the field is taking. The speakers will present major findings across their own body of work, introduce exciting new conceptualizations, and reflect on next steps. Each presenter has developed new theoretical perspectives and conducted multiple studies testing those theories with chronically ill populations. The presenters' charge is not to present findings from a single study, but to provide an analysis of the state of the science, using it to illustrate lessons learned about stress and coping research. The presenters' depth of expertise uniquely positions them to illuminate new research directions, vital to continued progress. The presentations cover an array of chronic illnesses (cancer, infertility, rheumatoid arthritis). The first preenter discusses longitudinal and experimental research that addresses the adaptive value of coping through emotional approach (intentional emotional processing and expression) in the context of infertility and cancer. The second presenter describes the proactive coping model, which outlines processes through which people act on information in advance of a problem to either prevent it or reduce its effects. She will illustrate the application of the model with research on genetic testing for melanoma cancer risk, a cancer for which potentially effective risk-reducing behaviors are available. The third presenter puts coping in its social context, describing recent models of dyadic (or couples) coping, and testing those models with illnesses as disparate as rheumatoid arthritis and metastatic breast cancer. The discussant, Susan Folkman, PhD, one of the original authors of the stress and coping paradigm, will highlight commonalities in these approaches and, drawing on her line of research, underline the roles of positive emotions and meaning-making in understanding coping processes.

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Symposium 27A 3075

THINKING DIFFERENTLY ABOUT EMOTION-FOCUSED COPING: RESEARCH ON COPING THROUGH EMOTIONAL APPROACH

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A generally accepted conclusion of research in stress and coping processes is that emotion-focused coping attempts typically are associated with dysfunctional outcomes. Studies from our and other research groups challenge the "bad reputation" of emotion-focused coping by demonstrating that the obtained association between emotion-focused coping and maladjustment is driven by limitations in previous empirical and conceptual work on this construct. I will discuss longitudinal and experimental research that demonstrates the adaptive potential of coping through emotional approach (i.e., intentional emotional processing and expression) in the context of several medical stressors, including infertility and cancer. I will also address important individual and environmental parameters that condition the relations of emotional approach coping and adaptive outcomes, including the interpersonal context and dispositional constructs relevant to emotion regulation. Understanding the moderators and mediators of coping through emotional approach, as well as other coping processes, is an important next step in research.

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Symposium 27B 3076

GENETIC TESTING AND THE PROACTIVE MANAGEMENT OF FAMILIAL CANCER RISK

Lisa G. Aspinwall, PhD,[1] Jennifer M. Taber, BA[1] and Sancy A. Leachman, MD, PhD[2,3]

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The proactive coping model (Aspinwall & Taylor, 1997) outlines multiple processes through which people may acquire and act on information in advance of a problem to either prevent it or reduce its effects. With the advent of predictive genetic testing, the technology exists to provide people with tailored information about their own future health problems, but little is known about how people think about and use such information to reduce future health risks. Existing evidence suggests that information concerning the genetic basis of disease can induce fatalism and reduce interest in prevention behaviors. If this is the case, the promise of genetic testing to promote risk-reducing behaviors will not be met. We examined the prospective impact of melanoma genetic test reporting over a 2-year period among 45 members of Utah CDKN2A/p16-mutation positive pedigrees. A positive p16 test result confers a 76% lifetime risk of melanoma; however, melanoma is one of the few hereditary cancers for which potentially effective risk-reduction measures (i.e., daily avoidance of UV exposure) are available. Among unaffected family members (those without a personal history of melanoma) who received positive test results, genetic test reporting, paired with counseling about the importance of photoprotection and screening, successfully increased both prevention and screening behaviors. These gains were accompanied by decreases in beliefs about the inevitability of cancer given a positive test result and increases in perceived control over the development of future melanomas. As more diseases are identified for which personal behavior and/or environmental exposure interact with genetic vulnerability, it will become increasingly important to understand not only how people conceptualize the necessity and effectiveness of their own proactive actions to detect, manage, and even prevent such diseases, but also how people manage the psychological and behavioral consequences of such vigilance.

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Symposium 27C 3077

COPING IN SOCIAL CONTEXT: DYADIC COPING AND COPING CONGRUENCE

Tracey A. Revenson, PhD

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Relatively few studies investigate coping as a relational phenomenon, for example, how family members cope with the stressors they face as a unit. As many chronic stressors and life strains involve multiple persons, the next challenge is to conceptualize and study stress, coping, and adaptation beyond the individual level of analysis. In this presentation, I lay out a framework for studying dyadic or couples coping and present empirical research on dyadic coping among couples facing chronic illness. Dyadic coping recognizes mutuality and interdependence in coping responses to a specific shared stressor, indicating that couples respond to stressors as interpersonal units rather than as individuals in isolation. Coping congruence involves efforts to maximize the congruence or "fit" between the partners' coping styles, in order to cope most effectively as a couple. Strategies that work in direct opposition or cancel each other out would be considered incongruent and lead to worse psychosocial outcomes. Data from studies of couples coping with rheumatoid arthritis, chronic back pain, and metastatic breast cancer will be presented to illustrate dyadic coping. Across studies, findings indicate that coping processes that are beneficial for one member of the couple are not necessarily beneficial for the other, or for the well-being of the relationship. Moreover, incongruent coping does not always lead to worse psychological outcomes.

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Friday
April 9, 2010
6:15 PM–7:45 PM

Poster C C-001

ASSOCIATION OF HEALTH STATUS INDICATORS WITH BREAST AND COLORECTAL CANCER SCREENING

Anjali Deshpande, PhD, MPH,[1] Elliot J. Coups, PhD[2] and Amy McQueen, PhD[1]

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Background: Studies suggest that persons with chronic health conditions or poor health status are less likely to be screened for cancer. The purpose of the current study is to determine whether people with poor health status indicators are less likely to be adherent to breast and/or colorectal cancer screening (CRCS) guidelines.
Methods: Analysis of data from the 2005 National Health Interview Survey involved 12,215 adults aged 50 years or older. Health status indicators included: overall self-reported health status, number of chronic health conditions, and functional impairment due to a chronic condition. Individuals were adherent to CRCS guidelines if they reported having a home-based fecal occult blood test in the past year or either colonoscopy or sigmoidoscopy in the past 10 years. Women were adherent to breast cancer screening guidelines if they reported having a mammogram in the past 2 years.
Results: The health status indicators were differentially associated with cancer screening adherence. Adherence to CRCS was lower among individuals reporting poor/fair health status, but was higher among those with a greater number of chronic conditions. Functional impairment was not associated with CRCS among men, but was positively associated with screening adherence among women. Adherence to mammography was lower among women reporting poor/fair health status, but was higher among women with 1 or 2 chronic health conditions compared to those with no chronic conditions. Functional impairment was not associated with mammography adherence.
Conclusions: For both breast and colorectal cancer screening, poor health status was associated with lower adherence, whereas having a greater number of chronic health conditions was associated with greater adherence. These findings have implications for cancer prevention efforts by physicians who treat the growing number of older patients with chronic health conditions.

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C-002

ROLE OF GYNECOLOGIC SYMPTOM BURDEN IN DEPRESSION IN NEWLY DIAGNOSED GYNECOLOGIC CANCER PATIENTS

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Previous studies have documented high rates of depression in gynecologic cancer patients. While select demographic factors such as low income are believed to predispose gynecologic cancer patients to depression, less well known is the role of gynecologic symptom burden. To the extent that such symptoms are associated with depression, treatment such as radiotherapy that is likely to exacerbate these symptoms may result in worsening depression. In the present study, we assessed depressive symptoms and examined potential risk factors for depression, including gynecologic symptom burden, in 143 newly diagnosed gynecologic cancer patients prior to treatment. Participants completed the Center for Epidemiologic Studies Depression Scale (CES-D), the Memorial Symptom Assessment Scale-Short Form (MSAS-SF) and the Menopausal Symptom Scale (MSS). Mean age of participants was 55 years (SD=12.9) and 76% had cervical or endometrial cancer. Mean CES-D score for the sample was 16.2 (SD=11.2; range=0–48) and 43% reported scores of 16 or greater. In univariate analysis, more depressive symptoms were associated with younger age, single status, lower income, premenopausal status and more severe gynecologic symptoms at diagnosis (p values < .05). Depressive symptoms were not associated with race, education, cancer type or disease stage identified subsequently via surgical staging (p values > .05). In multivariate analysis, demographic variables accounted for 15% and gynecologic symptom burden for 10% of the variability in depressive symptoms. Menopausal status did not account for additional variability. Age, income and symptom burden but not single status remained independently associated with depressive symptoms. These findings provide further empirical evidence that depression is highly prevalent in gynecologic cancer patients and that younger patients and low income patients may be at greater risk for depression. Further, these findings suggest that gynecologic symptoms such as pelvic pain, vaginal dryness, and urinary leakage that may be exacerbated by treatment may lead to worsening depression in these patients.

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C-003

PROSPECTIVE LONGITUDINAL STUDY OF PERCEIVED THREAT AND PTSD SYMPTOMS IN WOMEN WITH GYNECOLOGIC CANCER

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Background: The diagnosis of gynecological (gyn) cancer received by over 80,000 women a year can represent a substantial life threat as survival rates range from 94% to 24% depending primarily on disease stage. Although past research has documented symptoms of posttraumatic stress disorder (PTSD) in these women, prospective longitudinal studies are lacking and little attention has been paid to the impact of disease stage. We hypothesized that PTSD symptoms would be highest in women with advanced cancer, and would decline over time following diagnosis and treatment.
Method: Women with advanced cancer (n=22), early cancer (n=31), benign gyn disease (n=33) and no disease (n=25; post-annual pelvic exam) were recruited from a major hospital, signed informed consent and completed questionnaires (Perceived Threat, Impact of Event Scale (IES), PTSD Checklist (PCL) at 3 times: 1 week pre-surgery (Time 1), 7 weeks post-surgery or comparable time (Time 2), and 16 months post-surgery (Time 3). Participants were mainly Caucasian (96%), married (63%) and post-menopausal (68%).
Results: Perceived threat did not differ across disease groups at Time 1, but there were differences at both later times (F(2, 93.1)=11.83; p<.001; group x time interaction); women with advanced cancer reported the highest levels. IES scores were consistently higher for the disease groups compared to the no disease group (F(3,104.2)=11.19; p<.001), but were not significantly different from one another. IES scores declined over time, most markedly for the 3 disease groups (group x time interaction (F(6,163.8)=2.60; p=.02). Using established PCL criteria for PTSD caseness, survival analysis indicated significant differences across the groups in risk of PTSD [Wilcoxon χ^2 (3, N =96) =7.83, p=.050] with 34% of advanced cancer, 16% of early cancer, and 15% of benign disease groups reaching PTSD criteria.
Conclusion: PTSD symptomatology in patients with even benign disease suggests the need for broad based intervention. Advanced gyn cancer may warrant intensive screening.

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C-004

PATIENT QUESTION ASKING DURING CANCER CLINICAL INTERACTIONS: ARE DIFFERENCES RELATED TO DISPARITIES IN ACCESS TO INFORMATION?

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Background: Differences in patterns of patient question asking during clinical interactions are related to the amount of information provided by physicians. These differences, if associated with specific patient groups, may represent a source of disparities in patients' access to information.
Purpose: To investigate whether there are differences in question asking during cancer clinical interactions by patient demographic characteristics and the presence and behavior of patients' companions.
Methods: Data included 109 oncologist-patient-companion interactions video recorded at a comprehensive cancer center serving a diverse, urban patient population. Interactions were systematically observed and coded using the Karmanos Information Seeking Analysis System (K-ISAS).
Results: No significant relationships were found between patient demographic characteristics and total frequency of questions asked, but Black patients asked significantly fewer direct questions (relative to the total frequency of questions) than White patients (p < .000). Black patients were also significantly less likely to have companions present during the interaction than White patients (p <.000). Companions were found to influence patient question asking; the sum of questions asked by patients and companions was significantly greater than the frequency of patient questions t (107)=4.29, p < .000, but the presence/absence of companions by itself did not affect the frequency of patient question asking. The total frequency of companion questions was significantly and positively associated with the total frequency of patient questions (p = .03).
Discussion: Differences in question asking by Black and White patients suggest that Black patients may receive less information from their oncologists than White patients. Future research is needed to investigate ways to reduce or eliminate this potential source of disparities in access to information.

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C-005

CANCER SURVIVORSHIP AND DEPRESSION: DIFFERENCES IN THE ROLE OF COPING SELF-EFFICACY IN SHORT AND LONG-TERM SURVIVORS

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Purpose: At the completion of treatment, medical commitments and social support will often decline and survivors will be expected to return to their pre-illness roles and responsibilities. As a consequence, they may need to cope more independently with symptoms and distress. However, symptoms of depression are frequently reported in survivors (Stanton et al., 2005) and are associated with reduced quality of life, immunosupression, and difficulties in disease recovery (Hopko, 2008; Kiecolt-Glaser et al., 2002). The current study explored depression in survivors and examined whether coping self-efficacy (i.e., personal agency), was a better predictor of depression in long-term survivors (LTS) than short-term survivors (STS). Method: 145 cancer survivors (M age=62.98 years, female=64%) completed self-report measures of depression (CES-D), social support (ISEL), and coping self-efficacy (Cancer Behavior Inventory: CBI). Participants were an average of ten years post-treatment and were divided at the median (7 yrs.) into STS (n=68) and LTS (n=77) groups. Results: After controlling for age, sex, education, and income, regression analysis revealed that coping self-efficacy accounted for 47% of variance in depression in STS, and 60% in LTS (no difference). However, examination of coping self-efficacy subscales revealed differences between the two groups. Emotion regulation was the sole significant predictor of depression in STS (p < .01), while emotion regulation (p < .05), symptom management (p < .05) and ability to remain active (p < .05) were all strong predictors in the LTS group. Social support was not a significant predictor of depression in either group. Conclusion: The results suggest that in short-term survival emotion regulation is critical in managing symptoms of depression; whereas, in long-term survival a more diverse set of coping skills may be necessary. The current study identifies coping self-efficacy as both an important predictor of depression and a potential target for psychological intervention and support services.

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C-006

DIFFERENT RELATIONSHIPS OF CANCER TREATMENTS TO DEPRESSIVE SYMPTOMS IN BREAST VS GYNECOLOGIC CANCER

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Depressive symptoms are common after cancer diagnosis. Factor analytic studies suggest two types of depressive symptoms, somatic (e.g. fatigue, insomnia) and cognitive/affective (e.g. low mood, guilt). Specific cancer treatment may be related to somatic depressive symptoms but previous studies have not tested this. The current study examined which cancer treatments (chemotherapy, surgery) were related to cognitive/affective or somatic depressive symptoms and whether the relationship differed by cancer site (breast, gynecologic). Method: 249 women with newly diagnosed breast (n=84) or gynecologic (n=165) cancer were screened within one year of diagnosis. The typical patient was Caucasian (90%), married (62%), not working (55%) and 56.2 years of age. The subscales of the Beck Depression Inventory-2 were used to measure somatic and cognitive/affective depressive symptoms. Four hierarchical multiple regressions were conducted, using somatic symptoms or cognitive/affective symptoms as the outcome. Variable entry was as follows: 1) demographics; 2) disease variables including site; 3) treatment (recent surgery or chemotherapy); 4) treatment by site term. Results: Significant chemotherapy by disease site interactions were found in somatic (p=.02) and cognitive/affective symptoms (p=.01). Chemotherapy was related to greater somatic symptoms in gynecological patients but not breast patients. Chemotherapy was related to greater cognitive/affective symptoms in gynecologic patients but fewer symptoms in breast patients. Surgery was not related to either type of depressive symptoms for either group (ps>.10). Discussion: Interestingly, chemotherapy was associated with elevated cognitive/affective as well as somatic depressive symptoms. This effect was only for gynecologic but not breast cancer patients, which could reflect differences in chemotherapy regimen. Future research could determine whether these symptoms respond to standard antidepressant and cognitive behavioral treatments. Physicians should consider disease site and recent treatments when monitoring or screening for depressive symptoms.

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C-007

OVERWEIGHT AND OBESITY IN LONG-TERM BREAST CANCER SURVIVORS: HOW DOES SEXUAL ORIENTATION IMPACT BMI?

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Background: Obesity increases risks of breast cancer recurrence and shorter survival. In the healthy population, BMI disparities by sexual orientation are documented, showing sexual minority (SMin) women, that is lesbians, are heavier than heterosexual women. If this disparity persists in breast cancer survivors, it will put SMin breast cancer survivors at greater risk for morbidity and mortality and will indicate a need for survivorship interventions.
Purpose: This study assesses BMI in long-term breast cancer survivors of different sexual orientations and examines discrimination as an explanatory factor for the hypothesized greater BMI in SMin survivors.
Methods: Using a cancer registry, 257 heterosexual and 69 SMin survivors were recruited to participate in a one-time telephone survey in which survivors' self-reported BMI, discrimination experiences, demographic and clinical characteristics were assessed.
Results: Differences between groups were found in demographic characteristics and SMin reported more experiences of discrimination. With the exception of a greater rate of lumpectomy for surgical treatment and a longer time since diagnosis among SMin, there were no clinical differences. Adjusted multinomial logit models do not support disparities in obesity due to sexual orientation.
Conclusions: Because SMin and heterosexual survivors do not differ with respect to obesity, one may question if SMin are more likely to improve their weight-related behaviors after a cancer diagnosis than heterosexual survivors.

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C-008

PREDICTIVE MODELS OF POSTTRAUMATIC GROWTH IN BREAST CANCER SURVIVORS

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Intrinsic religiosity and marital support have been shown to impact levels of posttraumatic growth (PTG) in female breast cancer survivors (Siegel & Schrimshaw, 2000; Weiss, 2004). However, findings relating emotional support to PTG are mixed. Little research examines the relationship between social support and spirituality in predicting PTG. Finally, the influence of ethnicity on types of PTG experienced has been understudied (Tedeschi and Calhoun, 1996). Thus, the aim of the current research was to determine whether spirituality and emotional support together predict PTG in an ethnically diverse sample of female breast cancer survivors. Eighty-seven Caucasian and 64 African American women completed the Brief COPE scale (Carver, 1997), the Interpersonal Support Evaluation List (Cohen & Hoberman, 1983), the Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being (Peterman et al., 2002), and the Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996). Multiple linear regression analyses revealed that in Caucasians, spirituality and emotional support explained 22.5% of variance in PTG relating to others (F = 13.080, p<0.001). Emotional support explained 6.8% of variance in PTG appreciation for life (F= 6.587, p=0.012). Spirituality explained 19.9% of variance in PTG new possibilities (F = 22.320, p<0.001), 27.6% in PTG spiritual changes (F=32.452, p<0.001), and 19.4% in total PTG (F = 21.892, p<0.001). Spirituality and appraisal support (emotional support assessed by ISEL) accounted for 10.8% of variance in PTG personal strength (F=5.083, p=0.008). In African Americans, the strongest predictive models of PTG differed from those observed in Caucasians. Emotional support and time since diagnosis accounted for 14.6% of variance in PTG new possibilities (F=5.229, p=0.008). Spirituality accounted for 7.9% of variance in PTG spiritual changes (F=5.310, p=0.025). Findings underscore the importance of considering ethnicity when constructing predictive models of PTG in breast cancer survivors.

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C-009

CANCER INFORMATION SEEKING AMONG CANCER SURVIVORS: FINDINGS FROM HINTS 2007

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PURPOSE: This investigation uses Johnson's Comprehensive Model of Information Seeking as a framework to examine cancer information seeking among cancer survivors in which health-related factors, shaped by information-carrier factors, motivate information seeking. METHODS: The data of 468 cancer survivors were drawn from the 2007 Health Information National Trends Survey. In the hypothesized model, the four health-related factors of demographics (education and income), direct experience (distress), salience (cancer threat), and beliefs (cancer fatality and causes) predicted the information-carrier factors of characteristics (perceived poor quality and lack of comprehension) and utility (relation of information accessible to individual needs) which, in turn, predicted information seeking (number of types of cancer information sought). Structural equation modeling was used to evaluate the model. RESULTS: Tests of the global model suggest that the model fit is adequate (CFI=.87, GFI=.95, RMSEA = .064), but the goodness-of-fit statistic was less-than-adequate [$X^2(54)=157.94$, $X^2/df=2.93$]. Though direct experience (greater distress) predicted lower perceived utility (β=.39, p<.05), paths between the health factors and utility were generally low. Among endogenous variables, more negative perceptions of information-carrier characteristics predicted lower perceived utility (β=-.67, p<.001). Modification indices suggested the addition of two paths to the model such that greater salience predicted greater information seeking (β=.37, p<.001) and more positive perceptions of information-carrier characteristics (β=-.26, p<.001). Goodness-of-fit of the model showed improvement by adding these paths [$X^2(52)=104.81$, $X^2/df=2.02$], and the overall model fit was acceptable (CFI = .93, GFI=.97, RMSEA = .047). CONCLUSION: These findings suggest that health-related factors may directly predict information seeking in cancer survivors. Results will be discussed in terms of their theoretical implications and potential applied value.

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C-010

ACCURACY OF THE HOSPITAL ANXIETY AND DEPRESSION SCALE AS A SCREENING TOOL FOR EMOTIONAL DISTRESS IN CANCER PATIENTS: A META-ANALYSIS

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Purpose. The Hospital Anxiety and Depression Scale (HADS) has been shown to have a broad evidence base with regard to its efficacy as a screening tool for emotional distress in cancer patients based on ‘gold standard’ reference standards (Vodermaier, Linden, & Siu, in press). The present meta-analysis on the HADS aims to synthesize and quantify its screening efficacy both in terms of the use of its subscales, as well as the type of reference criterion.

Methods. Meta analysis of the evidence on the total scale as well as the depression and anxiety subscales was analytically summarized with regards to the ability to discriminate between cases and non-cases in the diagnoses of any psychiatric disorder, any type of depressive disorder, major depressive disorder, and any type of anxiety disorder.

Results. Systematic searches of PubMed and PsycINFO databases as well as recent domain-specific conference proceedings by the two authors resulted in inclusion of a total of 26 studies (κ=.89). Sensitivity and specificity for the diagnostic category of any psychiatric disorder were .76 (CI .74-.79) and .73 (CI .71-.75) for the HADS total (n=18), .75 (CI .71-.78) and .59 (CI .57-.62) for the depression subscale (n=8), and .71 (CI .67-.74) and .64 (CI .62-.67) for the anxiety subscale (n=6).

Conclusion. The HADS total scale provided both adequate sensitivity and specificity and its performance was found to be superior to those of its subscales. To date, the HADS is the most extensively validated scale for use as a screening tool for emotional distress in cancer patients and, in contrast to other measures, the reference standards used in its validation are of the ‘gold standard’.

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C-011

EARLY-STAGE BREAST CANCER PATIENTS UNDERSTANDING OF GENOMIC TESTS THEY RECEIVE

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Background: Genomic recurrence risk test results now inform clinical decisions about adjuvant treatment for women with early stage breast cancer. It is therefore important that women understand these tests so they can make informed decisions about their medical care. We sought to understand patients’ knowledge of these tests and correlates of their knowledge.

Methods: Participants in this cross-sectional study were 78 women, treated for early-stage, estrogen receptor-positive breast cancer with 0–3 positive lymph nodes, whose medical records indicated they received Oncotype DX tests previously. We mailed a questionnaire that assessed knowledge of genomic recurrence risk testing (13 item scale, alpha = .83) and reviewed medical charts of consenting patients.

Results: Knowledge about genomic recurrence risk testing was low (mean knowledge score=67%, SD = .23). Low knowledge scores were more commonly due to responses of “don’t know” than incorrect answers. Most women (91%) clearly understood that test results can aid decisions about chemotherapy, and few (22%) understood that the test’s estimate of the chance of metastasis assumes the patient is receiving hormone therapy. Higher knowledge about genomic recurrence risk testing was associated with higher education (r=.41, p<.001), health literacy (r=.22, p<.05), and numeracy (r=.42, p<.001). Knowledge was higher among women who recalled receiving both verbal and printed information about the test and among women who had active roles in deciding about their treatments. Higher knowledge was also associated with having fewer concerns about genomic testing.

Discussion: Differences in knowledge about genomic testing across topics and demographic groups indicates a need for educational efforts through clinicians and health educators.

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C-012

PATIENT PERCEPTIONS OF DECISION MAKING AND A WEB-BASED DECISION-MAKING AID FOR EARLY STAGE PROSTATE CANCER

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Background. This cross-sectional pilot study of men with early stage prostate cancer describes the: 1) personal characteristics associated with patterns of use of a web-based decision aid, and 2) patients’ perceptions of the software and its role in the decision-making process. Methods. Men (N=32) with early-stage prostate cancer, age 70 years or younger, who have not started treatment were recruited at their surgical consult. They completed a baseline assessment: demographics, decision-making preferences and computer/Internet use, then viewed a multimedia program via a secure website (with tracking features) with information about prostate cancer and treatment options. A sample completed a follow-up in-depth interview. Results. Almost all were Caucasian (94%), 47% had a high school education or less, 72% were 51–64 years of age and 60% were employed. 38% said they were currently considering their treatment options, and only 12% had made a final decision. Half stated that they wanted to make their treatment decisions and almost 47% want to share the responsibility with their provider. Patients said spouses (56%) and family (21%) had a great deal of influence. While 66% stated their treatment options, only 44% strongly agreed that they understood their own values, and only 16% strongly agreed that they were clear about their best choice. After using the software, 4 in 5 men said: it helped them think about the pros and cons and what was important to them; their role in the decision; and what questions to ask their provider. One patient said, “I came in with 13 questions–now have 5 left to ask”. Conclusions. The findings support the complexity of decision making and the value of decisional software to help them understand the pros and cons and the importance of their own values for an informed decision. Further analyses of variations across demographic and decision making factors will be presented.

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C-013

PHYSICIANS’ USE OF KEY BEHAVIORS FOR PROMOTING INFORMED DECISION-MAKING (IDM): A LATENT CLASS ANALYSIS

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Background. To develop a behavioral measure for a physician CME program to promote IDM for prostate cancer screening, we identified 9 key behaviors from conceptual and empiric sources: 1) let men know that there is a decision to be made; 2) tell men that experts disagree; 3) make sure men have information; 4) check understanding; 5) ask men what they think; 6) refer undecided men to other sources; 7) invite men to ask questions; 8) make plans for a follow-up for undecided men; and 9) document discussion.

Purpose. To classify physicians based on key IDM behaviors.

Methods. Two samples were analyzed using latent class analysis: sample 1 (n=246), American Academy of Family Physicians National Research Network members (Jul- Nov 07) and sample 2 (n=53), primary care physicians in a CME trial (Nov 07-Apr 09). Respondents reported frequency of each behavior on a 5-point scale, 1=never - 5=always. We collapsed the scale: never/rarely/sometimes vs often/always.

Results. A 3-class solution fit best: 59% of respondents were high IDM users; 30.5%, medium IDM users, and 10.5%, low users. High and medium IDM users were highly likely to endorse IDM content and documentation (#1,2,3,7,9). High users were less likely to endorse behaviors for undecided men. Even fewer (<40%) medium IDM users endorsed behaviors for undecided men or to check understanding. The only item endorsed by low IDM users was the general behavior, invite men to ask questions (64%).

Discussion. Our measure classified our samples of physicians into low, medium, and high IDM users, primarily using the 5 IDM content items. All 3 classes reported low frequency of behaviors for undecided men (refer to other sources, follow-up plans) as well as checking comprehension. Focusing physician interventions on strategies to help undecided men and to assess understanding is important as well as IDM content.

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C-014

CANCER PERCEPTION: EXAMINING DISPARITIES BETWEEN INDIVIDUALS WITH DIFFERENT CANCER EXPERIENCES

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Introduction: The impact of an individual's exposure to cancer, either through personal or family diagnoses, on their beliefs about cancer is not well-studied. Using 2007 data from the Health Information National Trends Survey (HINTS), a large biennial cross-sectional survey initiated in 2003, we evaluated the effect of cancer experiences on an individual's perceptions about cancer risk. We examined the relationship of previous cancer experience with perceptions of cancer causation, detection, and outcome.
Methods: Weighted analysis was performed on the HINTS 2007 dataset using Stata® v11. Responses were compared for persons with and without a cancer diagnosis and persons with and without a family history of cancer. Significant differences were found only in the comparisons of individuals with and without cancer. Individuals with cancer (versus without) were significantly more likely to 1) strongly agree that getting tested regularly for cancer helps early detection and treatment success (OR=1.53 [95% CI=1.30,1.79]), 2) believe greater than 75% of cancerous individuals survive five years (OR=1.69 [1.47,1.94]) and 3) strongly disagree cancer prevention was not possible (OR=1.26 [1.08,1.48]). Individuals without cancer were more likely to agree behavior causes cancer (OR=1.19 [1.04,1.36]).
Results: Findings indicate that one's own individual experiences with cancer exert a greater influence on one's perception of cancer than those experiences tied to family member's cancer. Additionally, perceptions of individuals with limited cancer experiences are not aligned with those for whom have more exposure to cancer. Current findings highlight the need for additional community-based initiatives to increase early detection and reduce cancer misinformation in persons with limited cancer experience.

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C-015

SOCIOECONOMIC DISPARITIES IN SUN PROTECTION BEHAVIOR AND SCREENING

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There is evidence of socioeconomic disparity in health promotion and cancer screening behaviors. We explored income and education disparities in sun protection behavior and self- and clinician- screening. Using baseline survey data from a multi-site melanoma risk communication intervention study of melanoma survivors (cases) and first-degree relatives of cases (FDRs), we explored differences in past-7-day sun protection behavior and self- and clinician-screening. Our sample included 313 cases and 313 FDRs, 99% and 96% white race. In the case sample, 12.5% reported less than a high school education, and 16.3% reported an income of less than $50k/yr. In the FDR sample, 11.2% reported less than high school education and 30.7% reported an income of under $50k/yr. In cases, people with lower income were less likely to have used sunscreen (SPF 15+) in the last seven days than those with higher income (15.6% vs 27.4%, $p<0.05$). People with lower education were less likely to report ever having done a skin self-exam (37.0% vs 63.0%, $p<0.05$), but there were no disparities in frequency or thoroughness of the exam. There were no statistically significant differences in having had a clinician exam, but people of lower education and income were less likely to report having the skin on their backs or legs examined or undressing during medical exams. For FDRs, increasing income is related to increasing likelihood of hat use and staying in the shade ($p<0.05$ and <0.001, respectively), and higher education was related to more frequent hat use (53.4% vs 38.2%, $p<0.05$). People of lower education were less likely to report having had a clinician skin exam (74.5% vs 87.5%, $p<0.01$) or undressing at least partially during a medical exam. There is evidence of income and education disparity in sun protection behavior and in self- and clinician- skin exam, and that less thorough clinician exam may be related to lower education and income. These findings are relevant for melanoma screening and prevention interventions for people of lower income and education.

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C-016

STATEWIDE HPV VACCINE INITIATION AMONG ADOLESCENT FEMALES IN NORTH CAROLINA

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Background. Human papillomavirus (HPV) vaccination may be particularly important in the southern U.S. due to higher rates of cervical cancer. We determined the statewide level of HPV vaccine initiation among adolescent girls in North Carolina and identified correlates of vaccine initiation.
Methods. We used data from 617 parents of adolescent females from North Carolina who completed the population-based 2008 Child Health Assessment and Monitoring Program (CHAMP) survey. A majority of parents were age 40 or older (68.4%), female (83.2%), married or member of an unmarried couple (76.5%), and employed (68.7%). Most parents reported their daughters were non-Hispanic white (67.6%), aged 10 to 15 years (71.6%), and had some form of healthcare coverage (95.0%). We identified correlates of vaccine initiation using weighted multivariate logistic regression.
Results. Overall, 31.3% of parents reported their daughters had received at least one dose of HPV vaccine. Vaccine initiation was higher among daughters age 13–15 years (OR=2.03, 95% CI: 1.12–3.67) or 16–17 years (OR=3.21, 95% CI: 1.76–5.86) compared to those 10–12 years old. Additional correlates of HPV vaccine initiation included the daughter having a preventive check-up in the last 12 months (OR=5.09, 95% CI: 2.43–10.67), having received meningococcal vaccine (OR=2.50, 95% CI: 1.55–4.01), or being from an urban area (OR=1.81, 95% CI: 1.02–3.21). Among parents of unvaccinated daughters, intent to vaccinate in the next year was higher among those with daughters aged 13 years or older. Parents of unvaccinated non-Hispanic white daughters reported lower levels of intent to vaccinate within the next year compared to parents of unvaccinated daughters of other races.
Conclusions. HPV vaccine initiation in North Carolina is comparable to other U.S. areas. Future efforts should focus on increasing vaccination among younger females, who may benefit the most from HPV vaccine, and those in rural areas.

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C-017

FACTORS RELATED TO HPV VACCINE UPTAKE AMONG RURAL LATINO PARENTS

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Latinas have a 1.5-fold increased cervical cancer incidence and mortality compared to non-Hispanic white women. This study aims to specifically explore factors related to HPV vaccine uptake to prevent cervical cancer among Latinas. Latino parents took part in 30-minute questionnaires at rural community events that were designed for participants with low levels of literacy. The participants included 89 Latino parents or guardians of daughters ages 9–17 (79 mothers and 10 fathers; mean age=38; mean years of education=8.73; most with incomes less than $25,000 per year). About 31% of parents (n=28) were certain that their daughter(s) had received at least one HPV vaccine of the series, 46% of parents (n=41) had not received the HPV vaccine for their daughter(s), and 22% (n=20) were not certain if their daughter(s) received the HPV vaccine. Contrary to expectations, with each one year increase in education among parents, the odds for vaccine uptake decreased (OR=.84; 95% OR CI: .71 - .99). Participants who were not certain if their daughter(s) received the vaccine had a decreased odds of knowing that HPV causes cervical cancer (OR=.25; 95% OR CI: .07 - .94), a decreased odds of knowing the correct number of vaccines in the series (OR=.11; 95% OR CI: .022 - .57), a decreased odds of knowing if insurance covered the vaccine (OR=.03; 95% OR CI: .006 - .19), and a decreased odds of previously hearing about the vaccine on TV or radio (OR=.07; 95% OR CI: .02 - .30) compared to those who had received at least one of the HPV vaccines. Participants who knew that they had not received the vaccine for their daughter(s) had a decreased odds of knowing the age recommendations for the vaccine (OR=.25; 95% OR CI: .08 - .74) and a decreased odds of knowing if insurance covered the vaccine (OR=.08; 95% OR CI: .02 - .41) compared to those parents who had received at least one vaccine. Culturally and linguistically appropriate cervical cancer prevention and HPV vaccine awareness programs are needed.

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C-018

RELIABILITY OF CLINICIAN VS. CLINICIAN ADVERSE SYMPTOM REPORTING

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Adverse symptom reporting is vital in clinical trials and drug labeling to assess and ensure patient safety. The standard approach to collecting adverse symptoms in cancer trials is clinician reporting using the Common Terminology Criteria for Adverse Events (CTCAE), which rates symptoms based upon descriptive clinical criteria. Despite the importance of this information, the reliability of these items has not been verified. At Memorial Sloan-Kettering Cancer Center, patients receiving chemotherapy are evaluated via CTCAE items by a clinician in an office suite, and again shortly thereafter by a second clinician in a chemotherapy suite, with no information passed between clinicians. To measure the reliability of these evaluations, a retrospective analysis of medical charts was completed in a sample of 433 patients aged 26–91 (M=62.39; 41.8% male) receiving chemotherapy, who were enrolled in an observational study conducted between March 2005 and August 2009. Cancer diagnoses included lung (N = 153), prostate (N = 127), and gynecologic (N = 153), with 23% of patients enrolled in a clinical trial. For the first post-chemotherapy visit, intraclass correlation coefficients were moderate for fatigue (0.52), dyspnea (0.75), nausea (0.55), vomiting (0.50), diarrhea (0.63), constipation (0.48) and neuropathy (0.73); and low for rash (0.17). These values were stable over up to six follow-up visits and did not differ based on age, gender, or whether a patient was enrolled in a clinical trial. Given the short period of time and lack of interventions between reporting time points, the most likely cause of this lower than expected agreement between different clinicians is limited reliability of clinician reporting of this information. This finding has implications to clinical trials, as it brings into question the reliability or accuracy of symptom safety information. The investigators are currently evaluating patient-reported outcomes as an alternative and potentially more reliable method for collecting this information.

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C-019

MULTIPLE COMPONENTS IN VULNERABILITY ESTIMATES OF HEALTH THREATS: A TEST OF JUXTAPOSED NUMERICAL AND INTUITIVE VULNERABILITY ESTIMATES TO LUNG CANCER AMONG SMOKERS

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Measures of vulnerability to health threats ask people to estimate the likelihood of a threat numerically (e.g.,0–100%) or verbally (e.g.,not vulnerable - extremely vulnerable). However, it has been argued (Windschitl, 2003) that measures of vulnerability contain estimates of both objective vulnerability and intuitive (or gut feeling) vulnerability - two estimates that can differ. Therefore, we sought to determine whether people's estimates of vulnerability contain both components. Moreover, we tested whether the weight of the two components is moderated by differences in numeracy. Regular smokers (N=97) were randomly assigned to respond to one of two types of vulnerability questions. One asked people to estimate both their objective statistical likelihood (0–100%) and their intuitive likelihood (0–100%) of developing lung cancer if they continued to smoke (juxtaposed condition). The other asked a more standard question, for which people estimated only their objective statistical likelihood (standard condition). All participants then reported their concern and worry for developing lung cancer and completed a measure of numeracy. In the juxtaposed condition, intuitive estimates were more strongly correlated than statistical likelihood estimates with concern (r=.64 vs. r=.29) and worry (r=.55 vs. r=.20) about lung cancer (correlation differences, ps<.001). In addition, statistical likelihood estimates were more strongly correlated in the standard condition than in the juxtaposed condition with concern (r=.56 vs. r=.29) and worry (r=.30 vs. r=.20), although the correlation differences were not quite significant. Finally, the differences in correlation strength were stronger for people low in numeracy (p<.001). The findings provide support for the argument that common measures of vulnerability tap two distinct estimate components, and the distinctions are especially clear for people low in numeracy. Implications for vulnerability assessment will be discussed.

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C-020

INTEREST IN HEALTH INFORMATION AFTER OVARIAN CANCER (OC) SCREENING: TESTING A MODEL OF A TEACHABLE MOMENT (TM)

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Background: The TM has been proposed as an opportunity to increase the likelihood of positive health behavior change after a threatening medical event. It is suggested cancer screening settings may be an ideal setting for TMs (Carlos, 2004; McBride et al., 1999). However, few hypothesis-driven studies have tested the currently accepted model of the TM (McBride et al., 2007), which posits increased risk perception and negative affect are key components of the TM, in a cancer screening setting. Methods: Women (n=204; M=66 yrs) completed a baseline survey prior to routine OC screening and a follow-up survey within 24–72 hrs of OC screening. At both times, women completed measures of OC risk perception, positive and negative affect (PANAS), and interest in receiving health information(HI) across 10 general and cancer-specific topics. Results: Results of paired sample t-tests supported the H that participation in routine OC screening would result in greater overall interest in HI at follow-up (p<.01). Specific HI topics in which women were more interested post OC screening included: risk for OC and breast cancer, how to sleep better, cancer screening tests, and how to eat healthily(all p's<.05). Multiple regression analysis revealed our TM model, which included changes in affect and OC risk perception as predictors of change in HI interest, was significant (Multiple R=.25, p<.05). As hypothesized, increased positive affect predicted greater interest in HI (p<.05) while change in negative affect was unrelated to change in HI interest. Contrary to H, change in OC risk perception did not predict change in HI interest(p>.05). Conclusions: Clinically, results suggest participation in routine cancer screening can serve as a TM thus serving as a potential platform for broader health behavior change efforts. Theoretically, results extend McBride et al's TM model and suggest medical events increasing well-being and positive affect can serve as TM's in addition to medical events associated with threat and feelings of enhanced vulnerability.

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C-021

THE INFLUENCE OF QUALITY OF RISK COMMUNICATION AND PATIENT CONFIDENCE ON DECISIONAL REGRET AND WORRY IN MEN UNDERGOING TREATMENT FOR EARLY-STAGE PROSTATE CANCER (PCA)

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Objective: Decisional regret in men following treatment for early stage PCa is known to be a function of treatment choice and subsequent outcomes. This study examined how patient's perceived quality of communication with their physician about their treatment options and their confidence in the effectiveness of their decision-making influences their decisional regret and worry about PCa following treatment for early-stage PCa..

Methods: 63 men with localized PCa (stage T1 or T2) participated in a study assessing the burden of decision making in men undergoing treatment for early-stage prostate cancer. Men pre-treatment, within one-year post-treatment or on active surveillance were eligible. Patient perception of the quality of risk communication and confidence in decision were measured using the Combined Outcome Measure for Risk Communication and Treatment Decision making Effectiveness scale (COMRADE). Regret following treatment decision was assessed using the Decisional Regret Scale (5-items) and worry about prostate cancer was measured using a modified version of the Breast Cancer Worry Scale (5-items).

Results: Higher quality physician risk communication was correlated with lower decisional regret after treatment (p=0.002) and lower levels of worry about PCa (p=0.03). Higher confidence in the decision was also found to correlate with less decisional regret after treatment (p<0.001), but not with PCa worry.

Conclusions: These results suggest that good risk communication in the clinical encounter may improve patients' regret about choices made. Further research should investigate whether regret persists across the survival period and what additional factors are associated with regret. Impact of interventions to improve risk communication should include regret.

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C-022

BENEFIT-FINDING AND SOCIAL RESOURCES IN CANCER SURVIVORS PARTICIPATING IN A GROUP PHYSICAL ACTIVITY PROGRAM

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Evidence suggests that cancer survivors can identify positive ways in which their lives have changed from having cancer but few studies have explored the role of social resources in benefit-finding. In a nonrandomized trial assessing the impact of participation in two group-based physical activity interventions, we examined relationships between benefit-finding and social resources (e.g., social well-being, marital status, religious affiliation).

We recruited 120 cancer survivors from community sources (80% European American, average age=56, average time since diagnosis=5.5 years). We assessed demographic, clinical and psychosocial variables at baseline and after the 8-week intervention. We used multiple regression to explore relationships between social factors at baseline and benefit-finding at follow-up.

At baseline, benefit-finding was greater in men than women ($t=-3.0$, $p=.0034$), in African Americans than European Americans ($t=-4.6$, $p<.0001$) and in those who reported a religious affiliation compared to those who did not ($t=-3.2$, $p=.002$). Benefit-finding was not associated with marital status, previous group memberships, or employment status. Social well-being at baseline was associated with more benefit-finding at follow-up ($\beta=.12$, $p=.03$), controlling for gender, race, stage at diagnosis, and baseline level of benefit-finding; intervention group was not significant in this model. Further exploratory analyses showed a gender interaction with a significant relationship between social well-being and benefit-finding for men ($p=.006$) but not women.

In a group of cancer survivors motivated to participate in a physical activity program, we found that social well-being (e.g., friend/family support, family acceptance of illness) was associated with benefit-finding over time. These preliminary findings highlight the potential importance of gender in the processes underlying positive growth experiences.

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C-023

ILLNESS PERCEPTIONS AND CANCER SCREENING: CLARIFYING THE ROLE OF SUPERNATURAL AND FATALISTIC PERSPECTIVES

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Guided by the Common Sense Model of Illness Representations, supernatural and fatalistic perspectives that facilitate and impede colorectal (CRCS) and prostate cancer screening (PCS) were examined. The sample included 373 African American men, ranging from 50–70 years of age who had not been diagnosed with prostate or colorectal cancer. Using the IPQ-R (Illness Perception Questionnaire-Revised) exploratory factor analyses of supernaturally-based perceptions of cancer screening yielded a two-factor solution: Supernatural (e.g., including hexes and witchcraft as well as God's judgment) and God Causal (e.g., God allows it, God could cause it). As hypothesized, Fatalistic Cause, $r = .20$, $p = .000$, was associated with more Cancer-specific Emotions. Fate Locus of Health Control was associated with more Cancer-specific Emotions for PCS, $r = .14$, $p = .008$, CRCS. $r = .31$, $p = .000$, as well as greater emotional representations of cancer, $r = .22$, $p = .000$. Contrary to expectations, Supernaturally-Related Causes and God Locus of Health Control (GLHC) were associated with more anticipated Consequences, r's from .14 to .16, p's < .01, and negatively associated with PCS Attitudes, r's from -.17 to -.19, p's < .005. GLHC was associated with PSA testing, $B = .050$, $p =.003$, and more anticipated Consequences for CRCS, $r = .25$, $p = .000$. Intrinsic Religiousness was positively associated with PCS attitudes, r's from .27 to .35, p's = .000, CRCS attitudes, r's from .33 to .44, p's = .000, and getting digital rectal exams, $B = 13$, $p = .003$. These findings clarify aspects of religiousness that may be positively and negatively associated with screening receptivity.

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C-024

QUALITY OF LIFE CHANGES OVER TIME IN AGE-MATCHED WOMEN WITH AND WITHOUT EARLY-STAGE BREAST CANCER

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Little is known about differences in quality of life (QOL) between women with ductal carcinoma in situ (DCIS) and early-stage invasive breast cancer (EIBC). Although their treatments are similar, DCIS and EIBC are clinically distinct which may differentially affect QOL. We hypothesized that QOL in DCIS patients would 1) be similar to QOL in EIBC patients but worse than QOL in controls one month after definitive surgical treatment and 2) be better than QOL in EIBC patients and approach QOL in controls after two years. We interviewed 1096 women (16.8% DCIS, 33.3% EIBC [25.7% Stage I, 7.6% Stage IIA], 49.9% controls; mean age 58, range 40–91; 23.7% non-white) a mean 7 weeks (T1), 6 months (T2), 12 months (T3), and 24 months (T4) after surgery (patients) or screening mammogram (controls). The generalized estimating equations method was used to examine changes in QOL by diagnostic group (DCIS, EIBC, controls) for each of the eight RAND 36-item Health Survey subscales. Controlling for QOL covariates at T1, women with DCIS (each $p < .05$) and EIBC (each $p < .001$) reported lower QOL at T1 than controls on all eight subscales. EIBC patients reported lower QOL at T1 than DCIS patients in general health, emotional well-being, fatigue, pain, social functioning, and role limitations due to physical problems (each $p < .05$) but DCIS patients were similar in physical functioning and role limitations due to emotional problems. DCIS (each $p < .01$) and EIBC (each $p < .001$) patients reported significant (and minimally clinically important) improvements in emotional well-being, fatigue, social functioning, and role limitations due to emotional and physical problems over the two years. At T4, DCIS patients reported better emotional well-being than controls ($p < .03$); DCIS patients did not differ significantly from controls on the other subscales or from EIBC patients on any subscale. Although DCIS and EIBC patients reported worse QOL than controls at T1, QOL in DCIS and EIBC patients improved over the two-year study period.

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C-025

GROUP SERVICES FOR CHILDREN UNDERGOING STEM CELL TRANSPLANTATION: PRACTICE PATTERNS ACROSS TRANSPLANT CENTERS

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A large number of children undergo stem cell transplantation (SCT) as treatment for an array of hematological and oncological diseases. These demanding regimens can have appreciable effects on quality-of-life, but psychosocial screening and intervention services vary widely. Group services are commonly regarded as useful. Unfortunately, there is little systematic information about practice patterns across transplant centers, leaving clinicians with limited guidance. In a survey of 65 transplant centers (82.2% response rate) enrolled in the Pediatric Blood and Marrow Transplant Consortium, 60.0% reported offering some type of group services for their pediatric patients. We contacted these centers again 15–18 months later, in order to obtain important information about the structural characteristics of their group programs and the common barriers they experienced.

Strikingly, only 55.0% of centers who had previously offered group services indicated that they were still doing so at follow-up. Staff turnover was the most prominent reason for this change. Among those who continued to provide groups, institutional support was rated moderately high (M=3.9, range =1–5). Group composition was rarely limited to transplant patients (7.1%), and instead included children receiving other treatments for oncologic/hematologic diseases, and sometimes their siblings as well (36.4%). The most common therapy goal involved emotional support (100%), as opposed to coping skills, medical education, etc. The most frequent structure involved a drop-in format (93.9%). Few programs were grounded in theoretical models (14.3%), few provided pre-group orientation (14.3%), and few assessed outcomes (7.1%). Results highlight common challenges involved in developing and sustaining group services for pediatric transplant patients.

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C-026

SYMPTOM RECOVERY AFTER BREAST CANCER TREATMENT: A 10-YEAR STUDY

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Background: Cross-sectional data show lymphedema, pain, fatigue, and other symptoms among 5-year cancer survivors; however, there are few longitudinal studies to describe the course of symptoms. This study aims to systematically describe treatment-related symptoms from diagnosis through 10 year follow-up.
Methods: Patients (N=194) newly-diagnosed with stage II (89%) or III (11%) breast cancer were assessed following surgery and then reassessed 11 times over 10 years. All patients were treated with surgery and chemotherapy; 58% also received radiotherapy. The typical patient was 51 years old, Caucasian (90%), married (67%), had some college (72%), and had a family income of more than $50K/year (56%). Research nurses rated 127 signs/symptoms across 19 body categories (e.g., infection, cardiac, pain, metabolic) on a 0–4 scale: 0=none, 1=mild, 2=moderate, 3=severe, 4=life-threatening. For each patient with the symptom, we identified the number of changes in symptom status (present vs. absent) across the follow-up. We then used Kaplan-Meyer survival curves to identify median time to first remission of the symptom.
Results: Three patterns emerged. Pattern 1, Early Improvement, included hair loss, nausea, and stomatitis (mouth sores), and showed symptoms which remitted within 6 months of ending treatment. Pattern 2, Later Improvement, included motor weakness, restlessness, and vaginitis, and showed symptoms which remitted within 5 years. Pattern 3, Fluctuating/Persistent, included fatigue, arthralgia, and lymphedema, and showed symptoms were apparent during treatment and were slow to remit or showed a fluctuating course. Despite their persistence, there were gradual reductions in the prevalence of Pattern 3 symptoms.
Conclusions: Comprehensive survivorship care should include counseling regarding the expected course of treatment-related symptoms/side effects. Pattern 2 symptoms, such as skin pigmentation or disorientation, may be slow to remit but do not return after remission, while Pattern 3 symptoms, such as fatigue and arthralgia, may require regular monitoring and intervention, even among long-term survivors.

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C-027

ENGAGEMENT OF LUNG CANCER PATIENTS IN QUALITY OF LIFE ASSESSMENTS ADMINISTERED BY TABLET COMPUTER AS A ROUTINE PART OF CLINICAL CARE

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Routine monitoring of quality of life (QOL) requires repeated assessment of patients, and review of QOL survey results by treating physicians. Lack of engagement by patients or physicians may lead to a response bias in which patients do not vary their responses to survey items. This program review examined patient engagement in routine QOL assessment, defined by variable responding on the Patient Care Monitor (PCM) survey. Data were collected from the electronic medical records of 5 community oncology practices. Eligible patients had received chemotherapy for treatment of lung cancer, and had completed ≥ 2 PCM surveys during or after treatment. The PCM is an 86-item survey that assesses physical symptoms, physical functioning, and psychological functioning, with items rated from 0 (not a problem) to 10 (as bad as possible). The variance of 47 core items was computed, where low variance was interpreted as low engagement. A competing interpretation was that low variance reflected mild or absent symptoms. Three-level linear mixed models (LMM; time within patient within physician) were used to estimate the variance attributable to each level, and to identify predictors of variable responding. Data were collected for 9,344 PCM surveys from 984 patients treated by 38 physicians. Patients were 49% female, 70% Caucasian, with mean age of 65.7. Fewer than 3% of PCM surveys had 0 variance. PCM variance and PCM mean were highly correlated (r = .842, p < .001), showing that variable responding was associated with elevated symptoms. LMM showed that 58.6% of variance was attributable to patient (p < .001), and 3.6% was attributable to physician (p = .019). Variable responding increased with time since starting chemo (p < .001), with number of comorbid conditions (p = .025), and with stage of disease (p = .017). Findings suggest that physician differences are not strongly related to PCM response variability, and that low variability responding reflects mild symptoms rather than disengagement.

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C-028

PROCESSING SPEED AND IQ DISCREPANCIES AMONG SURVIVORS OF PEDIATRIC CANCER

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Purpose: Pediatric cancer survivors who received CNS-directed treatment are at risk for lasting functional impairments, including declines in IQ post-treatment. However, it remains unclear the extent to which these lower scores represent global cognitive decline versus domain-specific impairment. This study examines the association between processing speed and estimated IQ scores in a sample of adolescent survivors post-treatment for childhood acute lymphoblastic leukemia (ALL) or brain tumor (BT).
Methods: An estimated IQ score was derived from the Vocabulary and Matrix Reasoning subtests of the WASI. A Processing Speed Index (PSI) score was obtained from the WISC-IV or WAIS-III according to participant age.
Results: Adolescent survivors (49 ALL, 50 BT), ages 12–17, were evaluated. The sample was 51% male and 6 years post-treatment on average. The mean PSI score among survivors (M=87.77) was significantly lower than the test population mean score of 100, $t(98)=-8.03$, $p < .001$. In contrast, the mean IQ score of survivors ($M = 101.42$) closely approximated the population mean. No significant differences in PSI or IQ scores were identified between ALL and BT survivors. Cranial irradiation was related to lower PSI scores in this sample, $t(97) = 2.30$, $p < .05$; however, IQ scores did not differ by treatment.
Conclusion: Findings suggest that many pediatric BT and ALL survivors, particularly after cranial irradiation, exhibit slower processing speed than expected for their age, while general intellectual reasoning ability remains largely intact. Describing post-treatment cognitive declines by way of IQ scores alone is likely to provide an incomplete characterization of the quality of cognitive late effects exhibited in this population. A more global indicator of general intellectual ability might underestimate dysfunction or fail to isolate the specific underlying deficits contributing to impairment, such as sluggish processing speed as identified in this sample.

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C-029

UNDERSTANDING THE BODY IMAGE CONCERNS OF PATIENTS WITH CUTANEOUS CANCERS IN THE HEAD AND NECK REGION

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For reasons that are unclear, there has been extremely limited attention in the scientific literature to examining the psychosocial needs of patients with cutaneous malignancies. Patients with skin cancer in the head and neck region encounter particularly salient challenges due to the fact that these tumors affect a highly visible and socially significant part of the body. It is important to consider that some patients with skin cancer experience devastating consequences involving facial disfigurement and functional impairment when portions of or entire facial structures must be removed. Body image and appearance-related concerns may also predominate the clinical picture even for patients experiencing less obvious forms of disfigurement. The purpose of this study was to obtain descriptive information about the nature and extent of body image concerns, satisfaction with care received regarding body image issues, and interest in psychosocial services targeting body image disturbance for patients with skin cancer in the head and neck region. Because there are no validated tools to evaluate body image concerns in this patient population, we designed a self-report questionnaire to evaluate our outcomes of interest. This survey was administered to 107 patients who have undergone or are planning to undergo surgical treatment for facial skin cancer. Preliminary results demonstrate that 65% of the sample acknowledged concerns or embarrassment about specific body image changes at some point during their treatment, while 47% endorsed such concerns at the time of the evaluation. A small portion of patients (15%) expressed dissatisfaction with care involving body image issues. Approximately 25% of participants indicated they were interested in receiving additional resources to help them cope with appearance-related changes. A wealth of data were collected here that will be further described and provide targets for the development of psychosocial interventions for this patient population.

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C-030

RELIGIOUS FACTORS AND HPV VACCINE ACCEPTANCE AMONG MULTIETHNIC CAREGIVERS

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Human papillomavirus (HPV) is the most common sexually transmitted infection in the US, with some infections causing genital warts as well as cervical and other cancers. A vaccine that provides protection against some types of HPV is available to females ages 9 to 26. Widespread uptake of the vaccine will require understanding factors that promote or impede vaccine acceptability among caregivers with age-eligible daughters. Religious factors may be particularly relevant given that HPV is sexually transmitted. The aims of this research were to explore the association between religious affiliation and attendance in relation to caregiver attitudes and acceptance of the HPV vaccine and related policies. A web-based survey was conducted during 2007–08 among a sample drawn from a nationally representative online research panel of households. A total of 476 Black, White, and Hispanic caregivers with at least one daughter (ages 9–17) completed the survey. Compared to caregivers who did not attend religious services, caregivers with frequent attendance were: 1) more likely to have decided against vaccination for their daughter(s) than to be undecided (OR = 2.92; 95% CI: 1.25–6.84; p=.01); and 2) more likely to have decided against vaccination for their daughter(s) than planning to have them vaccinated in the future (OR=5.51; 95% CI: 2.31–13.16; p=.0001), controlling for race, age, and education. Higher religious attendance was also associated with more conservative views about the appropriate age and gender for HPV vaccination, more negative attitudes towards vaccinations, and perceptions that their place of worship would disapprove of vaccination. Moderate associations were also found for religious affiliation. These findings suggest that religious factors play a role in shaping HPV vaccine acceptance among caregivers, and warrant further investigation to inform more successful dissemination of the vaccine.

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C-031

CORRELATIONS OF THE FACIT-SP WITH MEASURES OF EMOTIONAL WELL-BEING AMONG CANCER SURVIVORS

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The Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-Sp) is a 12-item measure commonly used to assess spiritual well-being (SWB) in cancer patients/survivors. It has been suggested that the FACIT-Sp, particularly the Peace and Meaning subscales, assesses emotional states rather than the distinctly spiritual. Although SWB may be associated with emotional well-being (EWB), a sufficiently high level of correlation would raise questions about whether a similar construct is being measured. We examined correlations between the FACIT-Sp subscales and EWB measures to test the hypothesis that FACIT-Sp subscales are highly correlated with EWB measures. We analyzed data from 10,033 survivors of 6 cancers who participated in the American Cancer Society's Studies of Cancer Survivors (SCS), a nationwide, population-based quality-of-life assessment of survivors, with cohorts approximately 1, 3, 6 and 11 years from diagnosis. We examined correlations of the FACIT-Sp subscales (Meaning, Peace, and Faith) with EWB as measured by the SF-36 Mental Component Score (MCS), the Profile of Mood States-Short Form (POMS-SF) subscales, and the Cancer Problems in Living Emotional Distress subscale, before and after controlling for demographic and medical variables. Peace was highly correlated with EWB measures for all 4 time cohorts, particularly the POMS-SF (r ≧ -.662) and the MCS (r ≧.653). For all 4 cohorts, Meaning was also strongly correlated with the POMS-SF (r ≧ -.575) and the MCS (r ≧ .512). Faith was least correlated with EWB (POMS-SF r ≦ -.295; MCS r ≦ .209). After controlling for demographics and medical characteristics, Peace and Meaning were positively associated with EWB. Faith was negatively associated with MCS only. The FACIT-Sp Peace and Meaning subscales are highly correlated with measures of EWB. The low correlation of the Faith subscale with EWB suggests that this subscale is measuring something distinct from EWB. Further research should explore the strong correlation of Peace and Meaning to EWB, as well as the additive value of these subscales.

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C-033

APATHY AND HEALTH BEHAVIORS IN PERSONS REFERRED FOR CARDIAC EVALUATION

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Apathy is common in persons with neurological damage and cardiovascular disease (CVD) is associated with adverse neurocognitive outcome. Given the importance of health behaviors like exercise and diet to manage CVD symptoms, the current study examined the role of apathy in these self care behaviors. 100 persons referred for perfusion stress tests at a local hospital completed self-report measures of apathy (Apathy Evaluation Scale; AES), depression (Beck Depression Inventory; BDI), and health behavior as part of a larger study. Persons averaged 62.7 ± 11.9 years of age, 23% were female, and 71% had high blood pressure. Preliminary analyses revealed that men [r=.17, p<.05] and persons with type 2 diabetes [r=-.22, p=.01] had lower levels of apathy on the AES. Partial correlations adjusting for these variables and BDI scores showed that apathy levels were independently associated with physical activity [r = .27, p=.01] and frequency of alcohol use in the past month [r=-.22, p=.03]. Interestingly, higher apathy scores were associated with more exercise and less drinking. To clarify these findings, correlations using AES subscales showed that physical activity was correlated with quantifiable and behavioral apathy, and alcohol usage was correlated with behavioral and self-evaluative apathy. These results suggest that apathy is associated with health behaviors, though the pattern was unexpected. It is possible that persons with greater apathy may inaccurately report greater physical activity due to the high perceived exertion of exercise or that significant others have taken responsibility for health behaviors and require the person to exercise. Similarly, apathetic individuals may not pursue social activities like getting together with friends to consume alcohol. Further work is needed in CVD patients and other samples to better understand the impact of apathy on health behaviors.

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Meritorious Student Poster

C-034

THE RELATIONSHIP OF MODIFIABLE AND NON-MODIFIABLE CARDIOVASCULAR RISK FACTORS AND STRESS-RELATED BLOOD PRESSURE IN ADOLESCENTS

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Both lifestyle and genetic factors contribute to cardiovascular disease risk. The purpose of this study was to examine whether body mass index (BMI), a modifiable risk factor, and family history of hypertension, a non-modifiable risk factor, predicted stress-related laboratory reactivity, recovery and ambulatory blood pressure (ABP) in adolescents. Adolescents (91 boys, 31 girls; Age M= 16.1) wore ABP monitors for 24 hours and completed a foot immersion cold pressor task as part of a larger study examining cardiovascular risk in youth with and without elevated blood pressure. While BMI was positively related to baseline systolic blood pressure (z=3.45), BMI was negatively associated with the systolic blood pressure reactivity curve (z=-1.86). For every one unit increase in BMI, the reactivity curve was -.28 mmHg less steep. Family history was positively related to baseline systolic (z =2.92) and diastolic (z =1.94) blood pressure, and significantly related to linear recovery for diastolic blood pressure (z=-3.36). Family history was associated with a -0.55 mmHg steeper decline in recovery. Neither BMI nor family history significantly predicted stress-related systolic or diastolic ABP. While the negative relationship between recovery and family history has been previously reported, the negative relationship between BMI and reactivity suggests the need to explore the mechanisms underlying blood pressure.

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C-035

EDUCATION STATUS AND ADHERENCE TO THE DIETARY APPROACHES TO STOP HYPERTENSION (DASH) DIET

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Lifestyle changes such as diet and exercise are important components of hypertension treatment. One of the most commonly prescribed diets, the DASH diet, lowers blood pressure in adults with hypertension. A substantial amount of research shows a correlation between low socioeconomic status, as defined by education level, and poorer dietary habits; however, conflicting findings exist. While many studies used different outcome measures for diet, none focused specifically on the DASH diet. To evaluate the relationship between education status (ES) and DASH diet adherence, we analyzed baseline data from hypertensive veterans participating in a clinical trial to lower blood pressure ($n=355$). The sample was 37% African-American, 13% Hispanic, and 43% White. They were predominantly male and the average age was 66 years. We assessed dietary adherence using the Willett Food Frequency Questionnaire. DASH diet adherence to food groups were scored individually and summed to yield an overall composite score. ES was classified as less than high school (LHS; $n=56$), completed high school or some college (HS; $n=119$), and completed college (CC; $n=222$). Using robust regression analysis, we examined the relationship between ES and DASH adherence, while adjusting for age, race, total calories consumed, body mass index, diabetes, and a prior history of stroke and/or myocardial infarction. The HS education group, in comparison to LHS, showed lower overall adherence to the DASH diet ($p<0.05$). HS education was also predictive of greater total fat consumption ($p<0.05$), saturated fat ($p<.01$), and sodium ($p<0.05$) when compared to LHS. Lastly, CC was predictive of higher total fat consumption ($p<.05$) in comparison to LHS. These data suggest that the HS and CC groups may need a different approach to diet education. Future studies should seek to identify reasons behind lack of DASH diet adherence in order to develop better diet-based tailored interventions.

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Meritorious Student Poster
C-036

EXPLORING CULTURAL THEMES IN MISSING DATA:A SURVEY PROJECT EXAMINING CORRELATES OF HYPERTENSION AMONG RUSSIAN SPEAKING IMMIGRANT WOMEN

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The prevalence and impact of missing data (MD) are significant concerns in health research. Previous research has identified specific methodological and participant characteristics associated with MD; yet, few studies have investigated cultural variations related to it. Failure to take such influences into account can skew analysis and interpretation. The present study explores patterns of MD through a culture lens in a population of immigrant women from the former Soviet Union with hypertension. 105 Russian-speaking immigrant women with hypertension, ages 65–89, completed self-report measures examining health and health care beliefs and psychological influences on hypertension management behaviors. The percentage of each question missing was computed and standardized. Z-scores were computed to determine which questions were significantly more likely to be missing. MD patterns were also qualitatively analyzed. Separate-variance t-tests were calculated to determine whether the patterns of MD were influenced by age, marital status, national identity, length of time in US, and disease severity. The depression and anxiety scale had a significantly greater percentage of MD than other measures (13.8% missing;$z=5.40$, $p<.01$). Questions related to American social acculturation and adherence to physicians' medication recommendations were more likely to be unanswered. Jewish identity, marital status, and disease severity significantly influenced the amount of missing data for several questions; women who identified as being Jewish($t(98)=3.6$, $p<.01$), widowed($t(97)=9.9$, $p<.01$), or more ill($t(41)=3.5$, $p<.01$) were more likely to leave answers blank. Cultural issues such as American social acculturation, culturally-mediated health care experiences, and mental health taboos should be taken into account when designing survey instruments, particularly among this group. Qualitative research exploring participants' perception of survey questions, particularly among those who choose not to answer selective questions, is warranted.

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C-037

EFFECTS OF THE INTENDED PRAY COPING ON LONG-TERM ADJUSTMENT AFTER OPEN-HEART SURGERY

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Objectives: Depression and anxiety predict poor outcomes in cardiac disease, including open-heart surgery, among older adults. Despite the growing evidence for faith effects, findings are not always consistent between studies and among different faith factors within studies. This prospective study seeks to examine multifaceted faith effects on long-term postoperative adjustment. Methods: The analysis capitalized on the preoperative survey data and medical variables from the Society of Thoracic Surgeons' National Database of patients undergoing open-heart surgery. Patients in the current sample completed a mailed survey 30 months postoperatively. Two hierarchical multiple regressions were performed to predict depression and anxiety, respectively, controlling for key demographics, medical indices, and mental health. Results: Predicting lower levels of depression at the follow-up was preoperative intended use of prayer for coping, as well as optimism and hope. Predicting lower levels of anxiety at the follow-up was subjective religiousness, as well as married status and hope. Poorer adjustment, however, was predicted by reverence in religious contexts, preoperative mental health symptoms, and medical comorbidity. Including optimism and hope at follow-up in the model did not eliminate faith effects. Conclusions: The influence of faith factors on the long-term postoperative adjustment is independent and complex, with mediating factors yet to be determined.

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C-039

COMBINED FAMILY AND INDIVIDUAL THERAPY IMPROVES GLYCEMIC CONTROL IN POORLY ADHERENT ADOLESCENTS WITH TYPE 1 DIABETES MELLITUS (T1DM)

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BACKGROUND: Successful treatment of T1DM requires rigorous blood glucose testing, nutrition planning, and insulin. Many adolescents are unable to maintain the tempo of self-management required to achieve glycemic control [hemoglobin A1c (A1c)<7.5%].
HYPOTHESIS: Combined individual and family therapy might improve A1c in poorly adherent adolescents.
STUDY DESIGN: After institutional review board approval, we retrospectively reviewed 3 groups of adolescents with T1DM. Group 1 ($n=59$) were non-adherent, failed to meet A1c goal, and were referred to child psychology. Group 2 ($n=40$) were non-adherent, failed to meet A1c goal, were referred to child psychology, but failed to appear. Group 3 ($n=58$) were not felt to need therapy but were matched for gender, age, yr with T1DM and insurance.
RESULTS: Demographics were similar in all groups: Group 1 (24 male/35 female) were 15.24 ± 0.49 yr old and had T1DM for 4.59 ± 0.52 yr. Seven (12%) had public or no insurance. Group 2 (16 male/24 female) were 15.23 ± 0.56 yr old and had T1DM for 4.93 ± 0.71 yr. Ten (25%) had public or no insurance. Group 3 (24 male/34 female) were 15.19 ± 0.43 yr old and had T1DM for 6.23 ± 0.57 yr. Six (10.3%) had public or no insurance. Group 1 had a gradual, sustained decrease in A1c (-0.36%, 10.06–9.71%) while Group 2 had an increase (+0.51%, 10.15–10.6%). The combined difference in A1c between Groups (0.87%) was statistically significant ($p=0.0087$), clinically important (9% reduction) and reduces the risk of complications by 30% between groups. More patients in Group 1 (8/49, 16.3%) than Group 2 (2/31, 6.5%) achieved a final A1c<7.5% but this was not significant ($p=0.19$).
CONCLUSIONS: Despite the small study and therapy for only 1 yr, combined individual and family therapy improved glycemic control for non-adherent teenagers. These pilot data also show that the need for psychological intervention in adolescents with T1DM is common (99 referred / 1,019 total patients, 9.7%) and might be under recognized [Group 3 had an increase in A1c similar to that of Group 2 (+0.5%, 8.66–9.14%)].

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C-040

PREDICTORS OF SELF-REPORTED DISCRIMINATION IN THE DIABETES STUDY OF NORTHERN CALIFORNIA

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Background
While previous studies report relationships between self-reports of discrimination and health outcomes, few focused on factors that influence whether individuals perceive events as discriminatory.
Methods: The analyses were of baseline (2005–06) survey data from the Diabetes Study of Northern California, a race-stratified sample of diabetics in Kaiser Permanente Northern California. The outcomes were reports of racial discrimination in everyday life and from healthcare providers. We used logistic regression models to examine socioeconomic, acculturative, and psychosocial predictors of discrimination.
Results: The sample (n=17,795) included 20% blacks, 23% Latinos, 13% Asians, 11% Filipinos, and 27% whites. While 34% reported general discrimination, only 5% reported healthcare discrimination. All minorities were more likely than whites to report discrimination. Younger age (<50 vs. ≥65 OR=3.39; 50–64 vs. ≥65 OR=2.34), higher education (high school graduate vs. <hs: OR=1.29; >hs vs. <hs OR=1.63), poor health literacy (OR=1.53), lower subjective SES score (OR=0.92 for 1-point increase), immigrant status (OR=1.53), higher emotional instability score (OR=1.39 for 1-point increase), and lower social support score (OR=0.90 for a 1-point increase) were related to reports of general discrimination. Younger age (<50 vs. ≥65 OR=1.54), disability status (OR=1.96), poor health literacy (OR=1.42), limited English proficiency (OR=2.46), and higher emotional instability score (OR=1.31 for 1-point increase) were related to reports of healthcare discrimination.
Conclusions: Among diverse diabetes patents with uniform access to care, predictors of general vs. healthcare-related discrimination differ. Distinguishing type of discrimination and identifying risk factors for reporting discrimination may provide insight into how these experiences influence health and treatment outcomes differently by race.

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Meritorious Student Poster
C-041

LONGITUDINAL STABILITY OF ILLNESS REPRESENTATIONS AMONG ADOLESCENTS WITH TYPE 1 DIABETES

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Cognitive representations about a chronic illness serve to guide the self-regulation of that illness and are associated with health outcomes. Although cross-sectional age differences in illness representation have been found, little is known about longitudinal change in illness representation or their associations with physical/psychological health outcomes over time. Illness representations were assessed in 252 adolescents (M age = 12.49 years, SD = 1.53, 53.6% females at study initiation) diagnosed with type 1 diabetes mellitus. Participants were assessed approximately every six months for a period of 2 years with the Illness Perceptions Questionnaire Revised (IPQ-R, Moss-Morris et al., 2002). Also measured were depressive symptoms with the Children's Depression Inventory (CDI, Kovacs, 1985), adherence to the diabetes regimen with the Self-Care Inventory (SCI, La Greca, Follansbee, & Skyler, 1990), and metabolic control (HbA1c) obtained from medical records. Multilevel modeling revealed no significant trends across time for the following dimensions: chronicity, cyclicality, personal control, parent control, treatment control, coherence, and emotional representations. Only severity showed a significant increase across time, with adolescents viewing their illness as more severe with age. Variability in treatment control and emotional representations did not covary with either adherence or HbA1c over time. However, high emotionality in illness representations was more strongly associated with negative emotional adjustment for older adolescents than younger adolescents. The results reveal substantial stability in most dimensions of illness representations across age, with little change in representations as a function of illness outcomes. The effect of a chronic illness on one's emotional representations, however, is affected by one's global affect.

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C-042

MODIFIABLE CONTRIBUTORS TO THE RURAL-URBAN DISPARITY IN TYPE 2 DIABETES

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The prevalence of type 2 diabetes is greater in rural than urban areas. Contributors such as obesity and physical inactivity are known modifiable contributors to type 2 diabetes and are also more prevalent in rural areas. However, there has never been a nationally representative analysis of these factors controlling for non-modifiable contributors (sociodemographic, access to care, disability). Given the high prevalence of unhealthy modifiable contributors to type 2 diabetes in rural settings, we hypothesized that the relationship between rurality and type 2 diabetes is mediated by these modifiable contributors (obesity and physical inactivity). The current study utilized a nationally representative database, the Medical Expenditures Panel Survey (MEPS), to test the hypothesis that modifiable contributors mediate the relationship between rurality and type 2 diabetes.
Controlling for non-modifiable contributors rendered the association between rurality and type 2 diabetes non-significant (OR = 1.23, p = .082). Adding modifiable contributors to the model further weakened the relationship between rurality and type 2 diabetes (from OR = 1.23, p = .082 to OR= 1.14, p = .265) at a significant level (p < .01). Controlling for modifiable contributors resulted in a 39% reduction in the odds ratio of having type 2 diabetes among rural populations from the model controlling for non-modifiable contributors alone. The results of these analyses support the hypothesis that the relationship between rurality and type 2 diabetes was partially mediated by modifiable contributors. Rural areas have traditionally been slower to adopt healthy behaviors. Taken together with the results of this study, the higher rates of obesity and physical inactivity seen in rural areas may be contributing to the rural-urban disparity in type 2 diabetes. Intervening on modifiable contributors such as obesity and physical inactivity may help ameliorate the rural-urban disparity in type 2 diabetes.

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C-043

MEMORIES OF INSULIN SHOTS, NEGATIVE EMOTIONS, AND DIABETES QUALITY OF LIFE

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Coping with diabetes may be influenced by the illness experience of family members. Relationships between memories of a family member's insulin use and adults own coping and quality of life were studied. The Brief Illness Perception Questionnaire's emotional items, Recollections of Diabetes Experiences Survey subscale on insulin memories, and a Diabetes Quality of Life Scale were completed. Participants (n=92) were 43% White, 44% Black, 20% Hispanic, 51% male, 31% aged 26–49 years, and 36% had incomes below $20,000 annually. Positive associations between memories of family members fearing insulin and strong, frequent, and/or unstoppable memories of those family members taking insulin shots (R 2=.26, F (1,48)=16.23, p≤.0001) were detected. Family members' fear of insulin was weakly associated with negative emotions toward diabetes (R 2=.08, F (1,71)=5.9, p≤.02). Both family members' fear of insulin and participants' emotions toward diabetes explained 26% of the variance in flashbacks of family members' injecting insulin(F (2,48)=8.0, p=.001). Family members' fear of insulin contributed unique variance(β=.52, p≤001) in injection flashbacks. Negative emotions toward diabetes mediated realtionships between the memory of fear and injecting of insulin. Memory of insulin fear and injection, and negative emotions toward diabetes explained 28% of the variance in quality of life (F (3,48)=5.8, p=.002). Fear of insulin by family (β=.-.42, p=.009) and particpants' negative emotions(β=-.30, p≤.0001) contributed unique variance in explaining quality of life. Remebering family members'who feared insulin may result in flashbacks insulin injections. Negative emotions toward diabetes and rumination over the family member's experience in order to make sense of one's own diabetes may result in poor quality of life. Counseling of patients with a legacy of diabetes could include probing about the insulin-related experiences of family members.

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C-044

DEMOGRAPHIC PREDICTORS OF DEPRESSION AND METABOLIC CONTROL IN YOUTH WITH TYPE 1 DIABETES

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Adolescents with type 1 diabetes (T1D) are at increased risk for depression and deteriorating metabolic control. The purpose of this cross-sectional study was to examine demographic predictors of these problems in a diverse sample of youth with T1D.

Baseline data from a multi-site clinical trial were used for this analysis, which included demographic (i.e., income, race/ethnicity, gender, and age), clinical (HbA1c), and depressive symptom data [Children's Depression Inventory (CDI)]. Youth in the sample (n=187) had a mean age of 12.4 years, mean duration of diabetes of 7.9 years, mean CDI of 6.3 (+ 7.4), with 14% scoring above the clinical cutoff for elevated depressive symptoms, and mean HbA1c of 8.4 (+ 1.6). The sample was 53% female and included diverse racial/ethnic groups (62% White, 26% Hispanic, 8% Black, 4% Multiracial).

Linear regression analyses indicated that age was significantly associated with depressive symptoms (η2 = .20, p = .005), such that youth age 14 reported significantly more depressive symptoms than younger children. Race/ethnicity was marginally associated with depressive symptoms (η2 = .13, p = .080). Non-white youth reported more depressive symptoms than white youth. Predictors of metabolic control were age (η2 = .14, p = .041) and income (η2 = .18, p = .013). Youth age 14 had significantly poorer metabolic control (mean HbA1c=8.8) than youth age 11 (mean HbA1c=7.9). Youth in the lowest (<$40K/year) and middle ($40–80K/year) income categories had significantly poorer metabolic control (mean HbA1c=8.9) than youth in the highest income category (>$80K/year, mean HbA1c=8.0). Gender was not a significant predictor of depressive symptoms or metabolic control.

These findings suggest that age and race/ethnicity are important factors to consider when screening for depression, whereas age and income level may be stronger risk factors for poor metabolic control. For both depressive symptoms and metabolic control, 14 years seems to be a critical age. These results may inform the timing of screening programs and preventive interventions for youth with T1D.

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C-045

DISABILITY IN PATIENTS WITH SCHIZOPHRENIA AND DIABETES MELLITUS

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Diabetes is a chronic disease condition that can cause early disability and death. Schizophrenia is associated with a 2- to 3-fold increased risk of diabetes as well as disability. To identify intervention targets for disability-related interventions for patients with comorbid diabetes, a better understanding of disability predictors is needed. General diabetes literature has identified diabetes complications, depressive symptoms, and cognitive functioning as important predictors of disability. Studies of disability in patients with schizophrenia have identified gender, psychiatric symptoms, depressive symptoms, and cognitive functioning as important predictors. Little if any work has been conducted to understand disability predictors in patients with both schizophrenia and diabetes. We examined predictors of disability in this population to fill this gap. We expected that diabetes complications, psychiatric symptoms, depressive symptoms, cognitive functioning, and need for support would predict diabetes. Method: A total of 64 patients, over the age of 40 with diagnoses of schizophrenia and comorbid diabetes completed measures of sociodemographics, psychiatric symptoms, cognitive functioning, diabetes complications, needs for diabetes support and disability. Correlates of disability were examined and variables with significant correlations to disability were entered into a multiple regression analysis. Alpha was set to p< 0.05. Results were two-tailed. Results: Women reported more severe disability than did men. Disability scores significantly correlated with positive (r(63)=0.28, p<.05), and general psychiatric symptoms (r(63)=0.29, p<.05), depressive symptoms (r(63)=0.63, p<.001), and need for diabetes support (r(63)=0.33, p<.05), but not with diabetes complications. Variables entered into the regression accounted for 54% of variance in disability scores, (F(5, 58 df) = 12.18, p<.001). Gender, support needs and depressive symptoms predicted disability in patients with schizophrenia and diabetes. Conclusions: Interventions to reduce disability in this population should address needs for support and depressive symptoms.

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C-047

PHYSICIAN COMMUNICATION WITH PARENTS AT RISK FOR LOW LITERACY

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It is estimated that 90 million Americans are at risk for limited health literacy. Minority communities and people with low incomes are disproportionately represented. Limited literacy skills have been linked to a variety of health outcomes including: screenings, maintenance and risk of hospitalization. In 1998, the AMA recognized that limited health literacy influenced both medical diagnoses and treatment. In 2001, the AMA released a toolkit for providers to improve communications with at risk populations. Aims & Methods: This study explores the use of difficult terms and concepts as part of well childcare in an urban pediatric clinic. 77 parents of children being seen at an urban pediatric primary care practice were enrolled in a randomized trial to improve safety practices. Well child visits were recorded and coded as part of the intervention. Additional literacy aims were added to the coding process and are presented here. Physicians providing care were first and second year residents. Coders were trained about communication needs of low literacy population using the AMA Healthy Literacy Toolkit. Coders recorded words and concepts which they deemed potentially difficult for a population at risk for low literacy. Word and concepts identified as difficult were reviewed by the author for final determination. Results: The average parent participant could be described as a 26-year-old African-American female who completed high school, rents her home and has more than one child. 84% of children were publically insured. In 55% of visits physicians used word and concepts deemed difficult for low literacy populations. The range of difficult word and concepts used ranged from 0–14 with a mean of 2.22 per encounter. In some instances n=18(23%) the doctor used a difficult word or concept and provided and explanation. However the majority (77%) of time the phrase or concept was used without further explanation. Techniques for identifying and communicating with low literacy populations will be discussed.

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C-048

RELIABILITY AND VALIDITY OF THE TRANSFORMATIONAL TEACHING QUESTIONNAIRE (TTQ)

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A potentially important paradigm, and one that has yet to be systematically applied to educational and health promotion contexts, is transformational leadership theory (Bass & Riggio, 2006). Transformational leadership has been studied in a diverse range of work contexts and has been found to be associated with a variety of adaptive consequences among those being led (e.g., elevated self-efficacy, motivation, well-being). In this research we drew from theoretical tenets within transformational leadership theory to develop a reliable and valid measure of transformational teaching, for use within school physical education contexts. Transformational teaching is conceptualized as the extent to which teachers demonstrate idealized influence, inspirational motivation, intellectual stimulation and individualized consideration in their interactions with students. In Phase 1, we utilized established instrument development procedures, involving teachers, students, and experts in transformational leadership theory to ensure that items exhibited sound content validity, and were developmentally appropriate. In Phase 2, multi-level confirmatory factor analytic procedures were used with data derived from 2671 grade 8–10 adolescents, including 133 classes. The results provided strong support for the reliability of the Transformational Teaching Questionnaire (TTQ) as well as evidence for good factorial validity. Specifically, the most parsimonious model was represented by a second-order two-level model, with the four a priori transformational teaching dimensions subsumed within a higher-order factor (termed transformational teaching) at both the student and class levels (χ2 (201) = 2258.410, p<. 001, CFI = .940, TLI = .928, RMSEA = .061, SRMRwithin = .037). Taken together, the findings of this research provide support for the psychometric properties of the TTQ for use within educational and physical activity contexts with adolescents.

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C-049

IDENTIFYING BULLIES, VICTIMS, AND BULLY-VICTIMS IN TRADITIONAL AND CYBER BULLYING

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The purposes of the current study were 1) to classify adolescents into bullies, victims, and bully-victims based on their involvement in traditional (physical, verbal, social exclusion and rumor spreading) and cyber bullying; 2) to explore demographic variability; 3) to validate the classification by comparing internalizing and externalizing problems; and 4) to examine the roles played by parents, peers, and school.

A nationally representative sample from the 2005/06 HBSC study was used for the current study. The sample consisted of 7,475 US adolescents in grades 6 through 10. The Olweus' Revised Bully/Victim Questionnaire was used to measure traditional bullying with new items assessing cyber bullying. A series of latent class analysis (LCA) models with 2 to 5 classes were tested to identify the best model.

The four-class model was identified as the best model, including a class of bullies (12.0%), a class of victims (29.7%), a class of bully-victims (5.9%), and a class of non-involved (52.5%). Boys were more likely to be bullies or bully-victims, whereas girls were more likely to be victims. Compared to 10th graders, younger adolescents were more likely to be bullies (8th graders), victims (6 to 8th graders), and bully-victims (6 to 9th graders). Compared to Caucasian adolescents, African-American adolescents were more likely to be bullies (OR = 1.89) or bully-victims (OR = 2.09). Hispanic adolescents were more likely to be bully-victims (OR = 1.57), but less likely to be victims (OR =0.77). The class of bully-victims reported the highest level of depression and substance use and lowest level of parental support and school bonding. Victims reported higher depression than bullies or the non-involved, whereas the bullies had higher frequency of substance use than victims or the non-involved. In addition, bullies reported the highest level of peer support.

Membership in the bully-victim class puts adolescents at risk for both types of psychosocial adjustment problems yet improvements in parental and school support may reduce this risk.

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C-051

HIV-SPECIFIC STRESS AND ANTIRETROVIRAL MEDICATION ADHERENCE: AN EXPLORATORY STUDY AMONG CURRENT AND FORMER INJECTING DRUG USERS

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Psychosocial distress is considered a critical determinant in poor medication adherence among HIV-infected individuals, particularly former and current intravenous drug users (IDU's). Little is understood, however, regarding the contribution of HIV-specific stress to poor adherence among IDU's. To clarify this issue, 97 HIV-infected IDU's in methadone maintenance treatment (55% male, 64% Hispanic, 19% African-American) were administered the Centers for Epidemiological Studies-Depression Scale (CES-D) and a new measure of HIV-specific stress based on qualitative data. Adherence with highly active antiretroviral therapy (HAART) was electronically monitored at baseline and 1-Month. Four scores were generated by the new 13-item measure, Total HIV Stress and 3 subscales identified by exploratory factor analysis (Cronbach's Alpha .84 - .91): Social Isolation/Grief (e.g., "Feeling lonely because of HIV"), Disclosure (e.g., "Trying to keep secret that I am HIV positive"), and Future Uncertainty (e.g., "Not knowing when I could get sick from HIV"). In hierarchical regression models - after controlling for gender, drug use and depression (β=-.050, p = .65) - the HIV stressors were independent predictors of 1-month adherence: Total HIV-Stress score (ΔR2 = .069, β=-.34, p<.01), Future Uncertainty (ΔR2 = .055, β=-.28, p<.05) and Disclosure (ΔR2 =.063, β=-.28, p <.05). When examined as predictors of changes in adherence from baseline to 1-month, depression (β=-.044, p = .53) was not an independent predictor after controlling for baseline adherence, gender and substance abuse in contrast to the Total HIV Stress score (β=-.22, p<.01), and subscales for Disclosure (β=-.21, p<.01), and Social Isolation/Grief (β=-.19, p<.05). The findings support the relevance of stress-coping models to adherence in the seropositive IDU population and may contribute to the further development of cognitive-behavioral and stress-management interventions in this population.

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C-052

ASSESSMENT OF AFRICAN-AMERICAN FAITH LEADERS' IMPLEMENTATION OF A COMMUNITY-BASED PARTICIPATORY RESEARCH HIV PREVENTION PROGRAM

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Background: YOUR Blessed Health (YBH) is a health education program designed to increase the capacity of faith-based organizations and their faith leaders to address HIV/AIDS among African Americans. The project is a partnership between YOUR Center, a faith-based HIV/AIDS service organization, researchers from the University of Michigan School of Public Health, and 46 African American churches.

Purpose/Research Questions: The purpose of this study is to test the following research questions: What proportions of faith leaders discussed key sexual health behaviors (e.g., condom use)? What are potential predictors of faith leaders' decision to discuss key sexual health behaviors?

Methods: Fifty-five pastors, pastors' spouses, and other faith leaders were trained to deliver an HIV prevention curriculum to youth and adult congregants. A structured telephone survey was administered to these faith leaders to assess their comfort level discussing key sexual health topics. Measures of association between comfort level discussing key sexual health behaviors and potential correlates (e.g., demographic factors, denomination, and contextual factors) will be analyzed.

Results: Preliminary study findings indicate comfort level discussing HIV/AIDS in a faith setting increased for 63% of the faith leaders. On a 5-point scale (where 1=not comfortable and 5=extremely comfortable), the faith leaders averaged 2.88 in their comfort level talking about HIV/AIDS prior to participating in YBH compared to 3.88 after undergoing the YBH training and delivering the curriculum.

Conclusions: This exploratory research study aims to fill several gaps in the faith-based HIV/AIDS literature. It will provide the quantitative data needed to describe the distribution of comfort level discussing key sexual health topics among faith leaders. These data may be used to design more rigorous and culturally appropriate faith-based HIV prevention programs.

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C-053

CHANGES IN SOCIAL SERVICE NEEDS AND UTILIZATION IN AN HIV-POSITIVE COMMUNITY SAMPLE: 1999–2007

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For optimal health-related outcomes, persons living with HIV can benefit from a variety of medical and social services. Although less than half of the HIV-positive population is currently engaged in HIV clinical care at any given time, a larger proportion may be connected to other social or community services, but this is dependent on infrastructure and funding, as well as perceived need. A statewide survey of community-dwelling individuals with HIV was completed in Alabama in 1999 and again in 2007, assessing the use of and need for services at both time points. Recruitment assured a sample that was representative of the HIV-positive population (both in and out of medical care), and surveys were administered by HIV-positive interviewers to reduce participant discomfort with discussing personal needs and service use. These data, adjusting for differences in cohorts (employment and living with a partner), indicate that in 2007, individuals living with HIV were less likely to express a need for financial assistance (adjusted odds ratio (aOR)=0.4; $p \le 0.0001$), legal services (aOR=0.1; $p \le 0.0001$) or dental services (aOR=0.01; $p \le 0.0001$). They were more likely in 2007 to need assistance with housing (aOR= 3.1; $p \le 0.0001$), mental health counseling (aOR=1.8; p=0.005), food (aOR=1.5; p =0.004), and employment (aOR=1.5; p=0.004). When asked about current service engagement, respondents were less likely in 2007 to report currently using housing assistance (aOR=0.3; $p \le 0.0001$) and transportation assistance (aOR=0.5; $p \le 0.0001$), but more likely to report using case management services (aOR=4.2; $p \le 0.0001$) and substance abuse treatment services (aOR=2.5; p=0.001). Basic needs appear to be a higher priority for community dwellers living with HIV. AIDS service organizations and HIV health providers should assess basic needs (food, shelter, employment) as well as mental health and substance use needs, to maximize health and wellness outcomes in these individuals.

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C-054

TEST OF A SOCIAL-COGNITIVE MODEL OF REGULAR HIV-TESTING AMONG HETEROSEXUAL MEN

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Background: The HIV epidemic is increasing among ethnic minority heterosexual men living in urban areas, suggesting HIV testing needs to be part of preventive health care particularly among those engaging in high-risk behaviors. CDC recommends annual HIV screening for high-risk individuals. Research suggests social influence and risky behavior are associated with regular HIV testing.
Method: This study examined the association between education, sexual risk behaviors, perceptions of peer behavior and sexual partner beliefs, reasons for testing, and regular HIV testing behavior among 71 adult heterosexual men who completed an anonymous survey while seeking treatment at a city STD clinic in Milwaukee, WI. The average age was 36 years ($SD=11$). Most reported being African American (86%).
Results: Getting HIV-tested regularly was positively correlated with greater perception that most of one's friends had been HIV-tested ($r=0.35$, $p<0.05$), getting HIV-tested was part of one's regular health screen ($r=0.29$, $p<0.05$), and greater perception of sexual partner's desire for testing ($r=0.25$, $p<0.05$). No significant correlations were found between regular HIV testing and sexual risk variables.
A multiple logistic regression analysis found that after controlling for higher education ($OR=2.7$, $p<0.05$), greater perception that most of one's friends had been HIV-tested ($OR=1.9$, $p<0.05$), and getting HIV-tested because it was part of a routine STD check-up ($OR=4.5$, $p<0.05$) were significantly associated with getting HIV-tested regularly (Nagelkerke R-square=0.32, $p<0.05$). Sexual risk was not significant in the model.
Conclusions: Our findings suggest sexual risk behavior may influence decisions to initially seek HIV testing however it may not impact decisions to obtain regular HIV testing as a prevention strategy. Future research is needed to evaluate the effectiveness of prevention efforts which address social norms and policy changes that include HIV testing as part of other routine medical exams.

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C-055

"40 & FORWARD": A PILOT GROUP INTERVENTION TO REDUCE HIV SEXUAL RISK BEHAVIOR AND IMPROVE MENTAL HEALTH OUTCOMES AMONG OLDER AGE MEN WHO HAVE SEX WITH MEN

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Background: Prior research has shown that psychosocial factors play a role in HIV and STD risk among men who have sex with men (MSM). Although widely studied among MSM in general, the influence of psychosocial factors on the growing population of older MSM in the US has been largely unstudied.
Methods: This was an open phase pilot of "40 & Forward", a manualized group intervention to reduce HIV sexual risk behavior and depression-related withdrawal and anxiety-related social avoidance among MSM age 40 and older. Data from 33 participants across four groups were analyzed, comparing baseline and post-intervention assessments. The intervention was conducted in collaboration with Massachusetts Department of Public Health prevention programming.
Results: Participants (mean age=51; 36% HIV-positive; 15% non-white) who completed the intervention demonstrated statistically significant reductions in severity of depressive symptoms (CES-D mean score 32.27 vs. 21.73; $p=0.0001$), fear of negative evaluation (BFNE mean score 39.58 vs. 35.48; $p=0.04$), and increased condom use self-efficacy (CUSES mean score 19.97 vs. 26.79; $p=0.002$). No statistically significant differences were found in social anxiety, loneliness, HIV sexual risk behavior, or substance use during sex.
Conclusions: This pilot of "40 & Forward" had moderate to large effects on several key psychosocial outcomes. The next iteration of the intervention may benefit from including greater emphasis on sexual risk reduction information, motivation, and behavioral skills. Ongoing assessment and redesign of direct-service programming for MSM is essential and offers considerable benefit to specific segments of the population.

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C-056

HIV STATUS IMPACTS PSYCHOSOCIAL RISK AND RECENT HEROIN USE IN DEPRESSED PATIENTS ON METHADONE MAINTENANCE FOR OPIOID DEPENDENCE

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Background. Both depression and substance abuse interfere with self-care and increase vulnerability to poor health outcomes. Depressed mood is also a proximal predictor of heroin craving in patients on methadone maintenance. Given elevated rates of psychosocial distress in HIV, the current study tested whether HIV-infected status increased risk for recent heroin use in depressed patients on methadone maintenance for opioid dependence. Depressive symptoms and quality of life mechanisms were explored.
Method. Equivalent comparison groups of depressed HIV-uninfected ($n=80$) and HIV-infected ($n=80$) patients on methadone maintenance completed a battery of self-report measures, including the Beck Depression Inventory, Quality of Life Inventory, and questions about substance use in the past month.
Results. Among participants (47% male; M age=42.7 years [$SD=8.9$]), 14% reported recent heroin use. HIV-infected participants reported more severe depressive symptoms ($t=2.38$), lower satisfaction with self-esteem ($t=-2.34$) and goals/values ($t=-2.23$), and greater likelihood of recent heroin use ($OR=3.08$, $CI=1.14$–8.35; all p's<.05) relative to HIV-uninfected participants. Lower satisfaction with self-esteem also predicted greater likelihood of recent heroin use ($OR=.80$, $CI=.70$-$.93$, $p<.01$). In a logistic regression model that adjusted for HIV status, self-esteem, and covariates, the relationship between HIV status and heroin use became non-significant. HIV status did not predict satisfaction with health, money, intimacy/love, or helping others.
Conclusion. For depressed patients on methadone maintenance for opioid dependence, HIV-infected status elevates risk for more severe depressive symptoms and heroin abuse. Lower satisfaction with self-esteem may partially account for this risk. These findings in HIV clarify health risk reduction targets among vulnerable patient groups at risk for psychological sequelae.

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C-057

HIV STIGMATIZATION AMONG PROVIDERS: A SYSTEMATIC REVIEW OF THE EVIDENCE AND IMPLICATIONS FOR HIV CARE

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Healthcare providers play a direct role in promoting and maintaining the overall health of HIV+persons. As such, it is important to understand the extent to which stigmatization among healthcare providers still exists and the potential effects that such negative attitudes and behavior may have on HIV+patients. We conducted a systematic review of 21 studies conducted since 1995 to (a) characterize the extent to which stigmatizing attitudes and behaviors exist among health care providers, (b) describe the potential effects of stigmatization on the well-being of HIV+ patients, (c) identify methodological and conceptual limitations of reviewed studies, and (d) provide directions for future research. Findings confirm that while provider stigma has decreased since the early 1990s, as many as 25% of providers still harbor stigmatizing beliefs. Further, a significant minority of physicians and nurses report engaging in overtly stigmatizing behaviors, including patient avoidance, differential treatment, and to a lesser extent, treatment refusal. Of note, HIV+patients report experiencing stigmatization within healthcare settings at a far greater frequency than rates that are reported by providers. These differences not withstanding, review findings confirm that provider stigmatization remains a concern for HIV+patients, and may exert negative effects on medication adherence, serostatus disclosure, access to care, and overall treatment quality. Future research should strive for a more uniform approach to assessing patient stigmatization in health care settings and advance a conceptual framework to clarify the relationship between provider stigmatization and negative treatment outcomes. We propose utilizing behavioral observation methods to more accurately assess stigma in treatment settings and provide recommendations for future research designed to inform interventions to reduce negativity directed towards patients receiving HIV care.

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C-058

GENDER DIFFERENCES IN RELATIONSHIPS AMONG SOCIAL FACTORS AND SELF-EFFICACY FOR CONDOM USE

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Distinctions have been made between nondirective (NS) and directive support (DS). NS involves the support provider cooperating with the support recipient and accepting the recipient's thoughts and choices. In contrast, DS entails the support provider taking control and prescribing the support provider's view of correct feelings and best choices. This study examined how NS and DS influence self-efficacy for condom use. Undergraduate students (N=316; M age = 19.40; 68.0% female; 77.0% Caucasian; 95.6% heterosexual; 74.0% sexually active) completed a battery of questionnaires about sexual practices, social support, and thoughts and behaviors associated with condom use. Path analysis assessed relationships among NS and DS, HIV knowledge, perceived benefits and barriers to condom use, and self-efficacy for condom use. An exploratory two-group analysis compared path models for men and women. The model fit the data well for both men and women, CFI = 1.00; SRMR=0.07; $\chi 2 = (42, N = 286)=40.04$, p=0.56. In both genders, NS had a direct positive relationship with condom use, self-efficacy, and perceived benefits. Through its direct and indirect effects, NS explained 12.6% of the variance in self-efficacy for women and 4.8% of the variance in self-efficacy for men. These findings suggest that NS may have positive effects on health behavior by increasing perceptions of benefits of a behavior and one's ability to perform a behavior. However, interesting gender differences emerged. Among women but not men, NS was associated with greater knowledge and DS was associated with lower knowledge. Among women, then, NS may encourage conversations that impart knowledge, but DS may cause the individual to disengage from such conversation, resulting in lost opportunity to ask questions or gain necessary information about key health behaviors.

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C-059

QUALITY OF LIFE AND PSYCHOLOGICAL DISORDERS IN THE DRUG-USING, DRUG-USING HIV INFECTED AND NON-DRUG USING HIV INFECTED MALES, VERSUS A REFERENCE GROUP OF HEALTHY MEN IN THE COUNTRY OF IRAN

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Background &Objective: Researches have shown that substance abuse, HIV infection and their coincidence can impose negative effects on the affected people. The aim of the present study was to investigate psychological disorders and quality of life (QoL) in 4 groups of male subjects, including: drug-using, drug-using HIV infected, non-drug using HIV infected as well as a reference group of healthy men.

Methods: Study samples consisted of 350 men, falling into 4 groups: drug-using, drug-using HIV infected, non-drug using HIV infected as well as a reference group of healthy men (100 subjects in each group, except for the reference group which included 50 subjects). The procedures of assessing psychological disorders and QoL were done by means of SCL-90 and SF-36 questionnaires, respectively. Multivariate analysis of variance (M-ANOVA) was employed in order to compare the data from the four groups.

Results: Significant differences were identified among the four groups in terms of all the components of SF-36 and all of the SCL-90 ones. Compared to the healthy group of subjects, drug-using, drug-using HIV infected and non-drug using HIV infected got higher scores in SCL-90 questionnaire and lower scores in SF-36 questionnaire (Pvalue=0.001).

Conclusions: Substance abuse and HIV infection negatively affect individuals' psychological health and QoL. Considering the great damages that the issues cause to the psychological health and QoL, comprehensive public health programming and development of new understandings of these two issues, seem to be necessary.

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C-061

ACCULTURATION, HEALTH, AND HEALTHY EATING OF KOREAN AMERICANS

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PURPOSE: Promoting health by increasing healthy diet is a major health promotion objective, yet little is known about eating habits of Korean Americans. The purpose of this study was to examine factors influencing eating habits of Korean American adults.

METHODS: A cross-sectional, descriptive study was used in a convenience sample of 517 Korean American adults in a Midwestern city. A mailed survey measured health, acculturation, healthy eating benefits and barriers, self-efficacy for healthy eating, and self-reported eating patterns. Descriptive statistics was used for analysis.

RESULTS: The sample was 57.1% female with a mean age of 41.6±13.40. Poor physical health was reported by individuals who were female (t=2.59), older (F=7.94), less acculturated to American culture (F=8.42), and who completed the Korean survey (t=3.32), at p<.01.

Individuals who were younger (F=5.03), less acculturated to American culture (F=3.45), who completed the Korean survey (t=2.77) were more likely to perceive poor mental health (p<.01). Participants reported retaining traditional Korean diets despite level of acculturation. Poor eating habits were seen among individuals who were male (t=3.15), younger (F=8.03), less educated (F=6.80), less acculturated to American culture (F=6.61), and who completed the Korean survey (t=4.92), at p<.01. Individuals who had higher self-efficacy (r=.53) and benefits (r=.40), and less barriers (r=-.33) were more likely to have healthy eating habits.

CONCLUSION: The health of Korean Americans in this study was comparable to scores of the general U.S. population. The findings of this study reveal the necessity of developing culturally appropriate interventions.

RESEARCH IMPLICATIONS: Culturally appropriate interventions should be targeted to Korean American adults who have poor eating habits by providing education of population-specific benefits of healthy eating, especially related to hypertension and diabetes (prevalent in Korean American adults); and cooking classes to model healthier recipes for traditional Korean dishes to increase self-efficacy.

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C-062

FOOD SUSTAINABILITY IN TOP U.S. NEWSPAPERS

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Food sustainability has become a household term, thanks in part to information diffused by the mass media. The purposes of our study were to determine (1) how frequently food sustainability-related articles were published in top-100 U.S. newspapers from 2002 through 2008 and (2) these articles' predominant news frames. We used a grounded theory approach to develop the content analysis code book by reviewing past and present food sustainability-related newspapers articles, all of which were obtained via LexisNexis Academic. In a series of seven pilot studies, two evaluators (100% overlap) coded relevant articles published from 1997 through 2000 until $\kappa \geq 0.70$ for all variables. To optimize the precision and recall of sample articles drawn from LexisNexis, we used the search terms "food" and "sustainab!" and retrieved articles relevant to particular industries (e.g., agriculture, food and beverage) and subjects (e.g., new products, trends). Our final sample for the content analysis contained 284 newspaper articles, with the fewest (4.6%) published in 2002 and the most (25.7%) published in 2007. Articles most frequently appeared on Sundays and Wednesdays (23.9% and 25.4%), newspapers' largest food advertisement days, and the majority of articles were published in West Coast newspapers. Articles were framed by quoting farmers or ranchers (25.4%) and chefs (22.2%) as food sustainability experts. Food sustainability was presented in the context of organic (55.3%) or locally produced (56.3%) foods. Food cost often (41.2%) was used to frame articles, while "food miles" was less frequently used (18.3%). These data show an increasing and consistent publication pattern in newspaper articles focusing on food sustainability and the frames that most frequently resonate with readers.

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C-063

WEIGHT LOSS STRATEGIES USED BY FIRST YEAR COLLEGE STUDENTS: AN EXPLORATORY STUDY

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The transition to college can be one that leads to a change in health behaviors such as diet and exercise. A significant weight gain in the first year has been found; therefore, the weight loss strategies used may be of interest. The purpose of this study was to examine weight loss strategies used by first year college students over the course of the year. 391 first year students (144 male, 247 female) were asked to report the frequency by which they engaged in 12 different weight loss strategies. The survey was administered at the start and end of students' first year. At baseline, numerous differences were found with females being more likely to engage in exercise for weight loss ($p < .001$), self-induced vomiting ($p = .002$), use diuretics ($p < .05$), moderate calorie restriction ($p < .001$), and changes in types of food eaten ($p < .001$) for the purposes of losing weight. There were no gender differences in the use of diet pills, laxatives or smoking cigarettes for weight loss ($p > .05$). When asked about motives for exercise, men were more likely to report exercising for general health ($p = .012$) while females were more likely to exercise for weight loss ($p < .001$). When compared to baseline, the first year of college did not result in any changes in weight loss strategies used. However, over time there was a significant decrease in the amount of exercise reported for general health ($p = .004$) and a non-significant increase in the amount of exercise engaged for weight loss ($p = .065$). Gender differences observed at baseline persisted at the end of the first year. These data suggest that males and females engage in different behaviors for weight loss and have implications for efforts to educate students on safe and effective strategies for weight loss/maintenance. Additionally, over time it seems that in relation to exercise, first year students begin to place less importance on general health and more on weight loss. This may speak to an increase in body image-related concerns that occur over the first year of college.

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C-065

USING A PERSONAL DIGITAL ASSISTANT (PDA) TO DOCUMENT DIETARY SELF-MONITORING IN WEIGHT LOSS PARTICIPANTS

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Adherence to dietary self-monitoring typically declines over time. Self-monitoring is usually assessed using paper diaries, which fail to document the actual times of recording. PDAs, however, can date and time stamp diary entries. This study examined the correspondence between the actual recorded dates and times of dietary entries with that self-reported in the PDA by weight loss participants and the association between recording/reporting correspondence and weight change. This analysis was limited to the first 6 months of dietary self-monitoring for the two treatment arms using the PDA (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 PDA, while the PDA recorded the actual date and time and recorded individual dietary entries made in each session. Weight was measured at weekly intervention sessions. Data were analyzed using descriptive and longitudinal analysis methods. Participants were white (78%), female (85%), aged 21 to 59 years (Mean=46.5, SD=9.3), and well educated (Mean=15.5, SD=2.9 years) with an average BMI of 34.1 (SD=4.5). Participants tended to report recording times on average 20.5 hours (SD=24.4) earlier than actual PDA recordings; however, the difference between self-report and actual recording times tended to increase over time ($F=4.80$, $p<.0001$). The proportion of days with at least 3 instances of dietary recording declined over 6 months, starting at 83% (SE=2.5) and decreasing to 66% (SE=2.8) by the final session ($F=5.19$, $p<.0001$). The change in weight between intervention sessions was associated with the proportion of days with at least 3 instances of dietary recording ($F=42.39$, $p<.0001$) and the difference between self-report and actual recording times ($F=3.51$, $p=.0612$), suggesting that increases in weight may be associated with less daily recording and greater differences between self-reported and actual recording times. These data add to the evidence that frequency and timing of self-monitoring are significantly related to weight loss outcome.

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C-066

CAN PHYSICIANS PREDICT WHICH PATIENTS WILL IMPROVE NUTRITION, PHYSICAL ACTIVITY, AND WEIGHT?

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Background: Outcome expectations predict physician counseling, but few have examined whether physicians' expectations are accurate (e.g., they know which patients will change). We examined whether physicians' outcome expectations aligned with patients losing weight, improving nutrition and physical activity.
Method: We identified preventive and chronic care encounters between 40 physicians and 461 of their overweight or obese patients. After each encounter, we assessed whether physicians discussed nutrition, physical activity, and weight, and whether patients would change as a result of the counseling (1=Not at all likely to 5=Extremely likely). At baseline and three months later, we assessed patients' nutrition (Kristal Fat and Fiber Scale), physical activity (Framingham Physical Activity scale), and actual weight.
Results: Many (58%) physicians discussed nutrition; 68% discussed physical activity, and 53% discussed weight. Among patients whose physician reported discussing weight, 30% lost>3lbs by the 3-month follow-up survey; of those whose physician reported discussing nutrition and physical activity, 35% and 33% improved their fat and fiber intake and physical activity significantly. Most physicians thought that patients were at least somewhat likely to lose weight (83%), improve nutrition (86%) and improve physical activity (82%). Physicians accurately predicted weight loss for 25% of patients; conversely, 12% accurately predicted the patient would not lose weight. Physicians incorrectly predicted improvement (58%) or no improvement (5%). Similar patterns were found for physical activity and fat and fiber behaviors.
Conclusion: Physicians were overly optimistic about their patients improving their weight-related behavior and often were not accurate in estimating who would change. Interventions may not need to improve expectations about the impact of their counseling; however, given less than a third of patients changed, physicians may need to learn more effective counseling techniques.

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C-067

GENDER-SPECIFIC ASSOCIATIONS OF DIETARY RESTRAINT WITH PSYCHOSOCIAL FACTORS, FAST-FOOD CONSUMPTION AND BODY MASS INDEX

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BACKGROUND: Research on dietary restraint has been mostly conducted in women. The objective of this study was to explore gender differences in associations between dietary restraint and psychosocial factors (sense of mastery, reward sensitivity), fast-food consumption and body mass index (BMI) in a population-based sample.
METHODS: Anthropometric measures and survey data were obtained from 344 individuals (49.7% men) aged 18–57 years (M=34.8, SD=8.7) sampled from 7 Montreal census tracts representing the spectrum of socio-economic status and language (French/English). BMI (kg/m2) was calculated. Dietary restraint, sense of mastery and reward sensitivity were self-reported using the Restraint, Mastery and Behavioral Activation System scales, respectively. Fast-food consumption was measured by asking participants if they had visited a fast-food restaurant at least once in the previous week. Regression models with (1) mastery and reward sensitivity predicting dietary restraint and (2) dietary restraint predicting either fast-food consumption or BMI were conducted. Analyses were gender-stratified and accounted for age, education, and income as well as spatial clustering of observations.
RESULTS: Mastery was not significantly related to dietary restraint ($p>0.10$) for either gender. Higher dietary restraint was associated with higher reward sensitivity ($\beta=0.10$, $p=0.03$) and higher fast-food consumption (OR=1.29, $p=0.01$) only in men. Higher dietary restraint was associated with larger BMIs in both women ($\beta=2.3$, $p=<0.0001$) and men ($\beta=1.8$, $p=<0.0001$), but the association was stronger for women (p (interaction)=0.01).
CONCLUSION: Results suggest that associations between dietary restraint and psychosocial factors, fast-food consumption, and BMI vary by gender. Future studies should explore further psychosocial and behavioral factors that could explain such gender differences.

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C-068

THE ASSOCIATION OF SCREEN TIME RULES AND MEDIA AVAILABILITY ON ADOLESCENT SEDENTARY BEHAVIOR

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The Academy of Pediatrics recommends that children spend no more than 2 hours/day engaged in screen time behaviors. In order to meet these guidelines parents may impose rules on television watching, video game playing, and computer use. This study investigated associations between screen time, rules, and the availability of media items in the child's bedroom. The sample included 160 parent/adolescent dyads from Boston, Cincinnati, and San Diego. Parents and adolescents answered questions on demographics, 8 screen time rules, availability of media items, and screen time behaviors. Multiple regression models adjusting for age, gender, and ethnicity (white vs. non-white) were specified for each of the three screen time behaviors as dependent variables and rules and media environment as independent variables. Models were estimated for adolescent data and parent data. Data from adolescents indicated that rules for TV, compute use, and total number of rules were significant predictors of time spent watching TV (β=-.23), using the internet/computer for entertainment (β = -.19), and playing video or computer games (β = -.18), respectively. Data from parents indicated that only rules for TV were significantly associated with TV viewing (β = -.27, $p < .01$). The interaction between rules and availability of media items in the bedroom were tested but did not reach statistical significance. In addition, both parent and adolescent data indicated that having a TV in the bedroom was associated with TV viewing time (β = .21 and .25, respectively, $p < .01$). Adolescent data also indicated a positive association between having at least one video game system in the bedroom with time spent playing video games (β = .20, $p < .01$). These findings provide additional support for potential intervention strategies that encourage parents to set limits on screen time and not allowing TV or other media items in the child's bedroom.

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C-069

PHOTOGRAPHIC STOCK ART: A LACK OF DIVERSITY FOR EFFECTIVE HEALTH COMMUNICATION

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Visual images in health communication can be powerful. They capture and hold attention, engender positive reactions, and may enhance cultural appropriateness. Images are more effective when depicting attractive individuals that convey similarity with the target population. Photographs obtained online from commercial stock art companies are a convenient, cost-effective, time-efficient, and high-quality option when creating health materials. A content analysis of existing photographs available from seven large stock art suppliers - Getty Images, Blend, Fotosearch, Shutterstock, Corbis, Jupiter and Real Latino Images - was conducted to document whether they provide the diverse images often needed for health communication. A sample of 1,100 photographs drawn proportional to the size of the provider libraries, were downloaded from provider's website. Two trained coders assessed the characteristics of the photographs using a coding protocol (inter-coder reliability >0.70). A total of 825 photographs depicted people clearly enough to be assessed. Photographs were diverse on gender (31% depicted males, 47%, females, 22%, both) but not on age (20% depicted children, 50% young adults, 30% middle-aged adults but only 3% infants, 4% teens, and 5% older adults), race (82% depicted Whites, 8% African Americans, 15% Asians, <1% other; and coders could not differentiate Hispanics) or SES (0% depicted low SES; 1% high SES, 99% middle SES). Diversity of health conditions was very low (3% depicted overweight persons, <1% obese or underweight, 4% wearing eyeglasses, <1% with reduced mobility, in casts or bandage, or with Down's Syndrome, 0% with hearing aids, blind, physical effects of stroke, missing or artificial limbs, skin disease, sunburn, autism, or oxygen use). Health behaviors (e.g., 12% in physical activity, 6% practicing sun protection) or common contexts for health messages (e.g., 10% in workplaces, 27% socializing, 2% studying, 4% eating a meal, 1% with a health professional) were depicted infrequently. There is a need for a more diverse set of photographic stock art to create maximally effective health communication.

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C-070

PARENT AND SCHOOL STAFF PERSPECTIVES ON CHILDHOOD OBESITY PREVENTION

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We conducted formative research to guide development of a school-based intervention to prevent obesity in minority youth. Focus groups were conducted to assess parental and school staff perspectives on children's health. Hispanic parents (N=9) and school staff (teachers, administrators, and community liaisons; N=7) of 1st graders attending a public elementary school participated. All sessions were audiotaped and transcribed verbatim. Transcripts were reviewed using an open-coding process whereby no preconceived ideas about possible themes were imposed on the coding structure. Two independent raters coded the responses into themes and a third rater addressed the discrepancies in the coding schemes. QSR NVivo was used to code, categorize the themes, and conduct the content analysis structures. Themes were identified as topics, issues, or program suggestions that were discussed in more than one focus group. Findings indicate that parents and school staff have conflicting views over whose responsibility it is to provide nutritional education and participation in physical activity (PA). Parents felt that the school should teach children about healthy nutrition, and want teachers to provide guidance in the cafeteria. They also wanted teachers to provide more structured PA in school. In contrast, school staff noted that parents have the primary responsibility of ensuring that their children get adequate nutrition and PA. They noted that it is difficult to incorporate PA into the school schedule due to academic pressures. Parents expressed that school schedules and food quality play a role in the childhood obesity epidemic, while school staff felt that healthier food choices provided at the school cannot compete with the appealing but less healthy options sent from home. Despite their contrasting views, parents and teachers agreed with the need for a comprehensive school-based obesity prevention effort emphasizing parent and teacher collaboration to promote healthy school and home environments.

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C-071

THE RELATIONSHIP BETWEEN COLLABORATIVE READINESS AND SCIENTIFIC PRODUCTIVITY IN THE TRANSDISCIPLINARY RESEARCH ON ENERGETICS AND CANCER (TREC) CENTERS

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In recent decades there has been growing interest in the use of transdisciplinary (TD) research teams to facilitate scientific advances in health outcomes, practice, and policy. As investments in team science have grown, the importance of evaluating the scientific and societal outcomes of these TD research teams has increased. The TREC Centers are an initiative funded by NCI to promote TD collaborations in research on energy balance and cancer. 47 TREC members completed a baseline survey at the start of the initiative that assessed factors hypothesized to be associated with collaborative readiness (i.e., antecedent conditions that exert strong influence on the success of TD collaborations). Results from the survey were linked to bibliometric data to examine the relationship between collaborative readiness and subsequent indices of team collaboration and productivity. Over the past five years TREC members each averaged 7.9 TREC related manuscripts and 7.6 presentations. TREC publications and presentations had an average of 6.9 and 3.8 co-authors, respectively. Linear regression analyses suggest that perceived interpersonal collaboration at baseline was significantly related to increased number of publications (p=.001), number of presentations (p=.032) and average number of publication co-authors (p=.02). Finally, a measure of the researcher's propensity to endorse multidisciplinary attitudes and tendencies was significantly related to total number of presentations (p= .006). These results suggest that collaborative processes at the outset of TD team research may predict subsequent productivity and collaboration. Implications and future directions will be discussed.

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C-072

CHILDCARE PROVIDERS PERCEPTION OF IDEAL BODY SIZE (IS) FOR YOUNG CHILDREN

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Childcare providers can influence the development of eating and activity patterns in young children. We hypothesized that provider BMI and race might be associated with perception of IS depending upon child age and race. We studied 38 F providers (X age=40, range 18–61y; X BMI=32.6±7.5; Education=84% at most some college; 74% B; 58% commercial, 42% homecare). BMI was measured. Using race and gender specific Collins Body Silhouettes (Collins, 1991) of very underweight to very overweight (1–7) child figures, caregivers chose the picture which represented IS of B and W, M and F, at 1, 2, and 10y. Means of caregiver IS were compared by age, sex and race of child and caregiver. Caregiver BMI was correlated with IS by sex, age and race of child. B providers were heavier (p<. 06), but similar age, education, marital status and equally represented in both care settings. Avg. child IS was below the avg. figure (4.0) for all age and race groups except slightly higher for W M. IS was significantly different: between 10y. B and W M (t=-2.03, p <.05, W larger), W 10 y. and W 1y M and F (ts=3.03, 2.11, ps<.01, .04 respectively, 10y larger),and marginally different between 2 y. B and W F (t=-1.80, p<.08, W heavier). IS compared by age showed F and M perceived to have larger IS as they aged (F Xs = 2.8, 3.1 and 3.8; M Xs = 2.8,3.4,4.0) with significant increase in IS at age 10 compared to ages 1 and 2 (ps<.01). Provider's BMI was inversely related with IS for W 1y. M (r=-.35, p<.04) and W 2yrs F (r.= -39, p<.04) and trended towards significance for W 2yrs M and W 1yr F (ps <.07). B providers BMI was inversely related with W 10y. M (r=-.39, p <.06) and W 10y. F (r=-.47, p<.03) IS. There were no associations between BMI and IS for non-B providers. IS is larger for W children when assessed by B caregivers. Associations between providers' BMI and IS was only found between B caregivers and W children. There appear to be different perceptions of IS depending upon the race of the provider and the age and race of the child. This perception could impact feeding and activity practices in a childcare setting.

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C-073

ENHANCING LONG-TERM WEIGHT LOSS MAINTENANCE: KEEP IT OFF TRIAL DESIGN AND BASELINE DATA

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Weight loss maintenance is one of the most critical challenges for obesity treatment. Recruiting people to a maintenance intervention after they have lost weight can provide maintenance-tailored intervention messages and support when they are at highest risk for weight regain has potential to enhance long-term weight control.The Keep It Off trial is a randomized controlled trial of an interactive phone-based intervention to help adults who have recently intentionally lost at least 10% of their body weight, maintain that weight loss over a 24-month period. 419 eligible adult men and women were randomized to either the Self-Directed Intervention Comparison Condition or the Guided Intervention. Primary study outcomes are 24 month weight change and percent achieving weight loss maintenance. Secondary aims include: a) subgroup analysis of intervention effectiveness (e.g., BMI status, weight loss method); b) mediating factors (e.g., self-efficacy, physical activity, dietary intake, social support); c) process measures (e.g., adherence) as predictors of weight outcomes; and d) intervention costs to evaluate intervention scalability. About 82% of participants are female; average age is 47 years; and average baseline BMI was 28 kg/m2. The average amount of weight lost prior to study entry was 16% of starting body weight. About one-third of participants reported losing weight with the assistance of a formal weight loss program, with the remainder reporting a self-initiated diet and/or exercise plan. The Keep It Off study offers a potentially efficacious approach to the perennial problem of weight regain. By recruiting participants after they have already lost weight to an intervention focused explicitly on maintenance, the intervention holds promise for modifying the typical relapse curve. If shown to be efficacious, the use of phone-based intervention delivery offers potential for widespread dissemination.

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C-074

COMPARISON OF PSYCHOSOCIAL PROFILES IN PATIENTS PRESENTING FOR GASTRIC BANDING AND GASTRIC BYPASS SURGERIES

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Little information is known regarding whether patients presenting for different bariatric surgeries differ from a psychosocial perspective and whether psychosocial profile differences are associated with demographic factors such as ethnicity. The present study compared rates of pre-surgical depressive, binge eating, and personality characteristics in Caucasian and African American patients undergoing laparoscopic adjustable gastric banding (LAGB) or gastric bypass (GB) surgery. Two hundred and seventy-two patients presenting for either LAGB or GB surgery completed self-report measures of depressive symptomatology (Beck Depression Inventory - 2), binge eating symptomatology (Binge Eating Scale) and personality/psychopathology (Personality Assessment Inventory) as a component of their pre-operative psychological evaluation. In the total sample, GB patients endorsed more symptoms of somatization, anxiety, depression, and stress and less resistance to treatment and dominance as compared to LAGB patients when controlling for body mass index (BMI) and education. When psychosocial profile comparisons between surgery groups were made within ethnic groups, no differences were found between the psychosocial profiles of Caucasian GB and LAGB surgery patients. However, among African American patients, GB patients endorsed higher rates of depressive, somatic, and anxious symptoms as well as higher affective instability and less resistance to treatment than LAGB patients, when controlling for BMI and education. These results suggest that some psychosocial differences may exist for patients presenting for different bariatric surgeries, particularly among African American patients. These differences could reflect or impact motivation for surgery and satisfaction with surgery outcomes. Future research should explore the clinical significance of these differences and whether different psychosocial profiles impact bariatric surgery outcomes.

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C-075

OVERWEIGHT AND OBESE MALE VETERANS WHO BINGE EAT

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Although 40% of binge eaters are male, little is known about the characteristics of men who binge eat, especially in older populations. In an ongoing study of psychosocial and behavioral factors associated with weight management, 71 overweight/obese male veterans completed the following questionnaires: MOVE!23 questionnaire, Questionnaire for Eating and Weight Disorders - Revised, Barriers to Being Active Quiz, Eating Habits Confidence Survey, Prime-MD Patient Health Questionnaire - 9, Perceived Stress Scale, Exercise Self-Efficacy Scale, and the Multidimensional Body-Self Relations Questionnaire - Appearance Scales. Mean age of the full sample was 60.9 years (SD=8.0) and mean body mass index (BMI) was 36.3 (SD=6.6). Of the study sample, 16 (22.5%) reported binge eating (i.e., eating an unusually large amount of food within 2 hours and feeling a loss of control) in the past 6 months, with frequency ranging from less than weekly to nearly every day. Veterans reporting binge eating were no different in age or BMI than veterans who did not binge eat. Binge eaters, however, reported more barriers to physical activity, particularly self-motivation to exercise, higher levels of depression and stress, lower confidence in their ability to engage in physical activity, eat healthy foods, and reduce calories, and less social support from family and friends in encouraging healthy eating habits. Further, they reported lower levels of satisfaction with their general appearance and were more likely to have used prescription medication for weight loss (all p's > .05). Results suggest that overweight/obese male veterans who binge eat have different psychosocial characteristics than veteran males who do not binge. Their mood is lower, they are less confident in their ability to adhere to dietary and physical activity behaviors critical for successful weight loss/maintenance, and they perceive their social environment as less supportive in promoting such behaviors. Addressing these specific challenges for obese male veterans reporting binge eating may promote better treatment outcomes in weight loss programs.

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C-076

SOCIAL PROBLEM SOLVING INVENTORY PREDICTS SUCCESS IN BEHAVIORAL WEIGHT CONTROL

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Problem-solving skills training is a key component of behavioral weight control programs, however, few studies have attempted to measure these skills as they relate to successful weight loss. The Social Problem Solving Inventory (SPSI; D'Zurilla et al., 2002) is an empirically-validated measure that assesses three problem solving styles (rational, impulsive/careless, and avoidant) and problem orientation (positive vs. negative). In the current study, the 25-item short version of the SPSI was administered pre- and post-treatment to 34 rural women randomized to a 6 month phone-based behavioral weight control intervention delivered individually or to a group. Instructions were modified to direct participants to answer the questions regarding how they typically deal with problems specific to weight management. Participants lost 10.7%±8.5% and 9.0%±6.1% of baseline weight in group and individual conditions, respectively, in intent to treat analysis. All SPSI scales demonstrated good internal consistency (alphas = .71 to .85). From pre- to post-treatment, the total SPSI score significantly increased (p < .01), whereas negative problem orientation significantly decreased (p = .02). Positive problem orientation, rational problem solving style, and impulsive/careless problem-solving style showed trends toward improvement (p = .07 to .08). After controlling for treatment, baseline scores for positive problem orientation (r = .49), rational problem solving style (r = .39), and the total scale (r = .35) were significantly correlated with weight loss at 6 months (all ps < .05). When examining change scores, only change in positive problem orientation significantly correlated with weight loss after controlling for treatment (r = .43; p < .05). Results provide preliminary reliability and validity evidence for use of the SPSI in obesity research and indicate that improvement in positive problem orientation (viewing problems with persistence, optimism, and confidence) may be a key component in successful weight loss.

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C-077

BARRIERS TO WEIGHT MANAGEMENT AMONG LATINA IMMIGRANT WOMEN IN ALABAMA

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Introduction: Minority and low-income populations, including Latinos, are at high risk of being over weight and obese. Few studies have explored perceived barriers to weight management among Latina immigrant women. This project explores perceived barriers to weight management and the role of social support. Methods: Focus groups were based on constructs from the Health Belief Model and a literature review. Four groups were conducted with obese/overweight Latina immigrant women(BMI >25) who were recruited from a community hospital. Each focus group was moderated by a bilingual-bicultural woman, lasted 90 minutes and began with a brief demographic survey. Discussion topics included: health, obesity, weight management, barriers to weight management, diet and physical activity. Themes pertinent to weight management were identified using 100% consensus coding with a combined deductive/inductive approach. Results: There were 25 female participants. Mean age was 39 years; the majority was from Mexico. Mean time living in the U.S. was 7 years. Participants believed it is possible to manage weight through lifestyle modification, but two significant barriers were identified, namely food availability and reduced physical activity. They voiced a lack of fresh foods and the glut of prepackaged/canned foods in stores compared to home country. Participants identified this barrier, combined with decreased physical activity in the U.S., as the key challenges to weight loss. Increased family and social support were also identified as motivators, whereas lack of time and energy hindered efforts to lose weight. Participants voiced the need for family involvement and for more information, such as how to modify diet with regard to food types and portion sizes. Conclusions: Food availability and reduced physical activity were identified as major barriers to weight management among Latina immigrant women. These results suggest that practical solutions to making better food choices and incorporating physical activity into daily practices are essential to successful weight management.

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C-078

SELF-REPORT AND PARENT-PROXY RATINGS OF HEALTH RELATED QUALITY OF LIFE (HRQOL) IN OBESE CHILDREN

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Purpose: In addition to long term health risks, recent research has also shown that obese children may have deficits in health related quality of life (HRQOL). The aim of this study is to evaluate HRQOL in obese children using recently developed obesity-specific HRQOL measures. Methods: Ninety-four obese or overweight children (mean age = 10.8 years) enrolled in a pediatric obesity program. Participants completed an obesity-specific HRQOL measure; children completed a self-report version (Sizing Me Up) and parents completed a parent-proxy version (Sizing Them Up). Heights and weights also were measured. Results: Child zBMI scores were significantly correlated to parent BMI, (r = .411, p<.001), self-reported Teasing/Marginalization (r=-.290, p <.01) and Social Avoidance (r=-.217, p < .05), and moderately correlated with the self-reported Positive Attribute scale, r = .176, p = .097. Significant correlations also existed between zBMI scores and parent-proxy rated Physical Functioning (r=-.253, p < .05) and School Functioning (r=-.271, p<05). ANOVA showed significant differences between by BMI percentile groups (≥99th, 98th, and≤97th) on several subscales. Significant differences were found for self-reported Teasing/Marginalization (F= 5.509, p < .01) and Positive Attributes (F=3.357, p < .05), and parent-proxy rated Emotional Functioning (F=5.144, p < .05), Teasing/Marginalization (F=6.279, p < .05), and Total Quality of Life (F=3.563, p < .05). Conclusions: Previous research has shown that obese children exhibit lower HRQOL compared to normal weight peers. However this study suggests that differences in HRQOL also may exist within groups of obese children, with higher zBMI and BMI percentile linked to greater impairment in some HRQOL dimensions. Future research should further elucidate these differences and their potential clinical implications.

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C-079

THE LIFESTYLE CHANGE (TLC) PROGRAM: A TRANSLATION OF THE DIABETES PREVENTION PROGRAM TO A PRIMARY CARE SETTING FOR AT-RISK AND DISADVANTAGED PATIENTS

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Obesity is a chronic medical condition affecting 30% of the adult population, and 30% of Medicaid recipients. Certain populations have been identified as having an increased risk for obesity (e.g., minorities and lower SES persons). Despite the availability of effective weight loss treatments, most individuals who are at higher risk do not receive treatment for overweight/obesity. Identifying opportunities for accessing at-risk populations and providing treatment is one critical link to tackling the obesity epidemic. Primary care clinics offer an excellent setting to assess primary and secondary obesity prevention interventions. The use of the primary care setting to monitor and manage patients' weight and weight-related comorbidities has been the focus of a number of systematic studies. However, weight loss has been modest. The Diabetes Prevention Program (DPP) is an intensive behaviorally-based lifestyle intervention which targets weight loss through improved dietary intake and increased physical activity. An adaptation of the DPP is being conducted in four Louisiana hospitals which serve uninsured, predominantly low income, minority patients. The Lifestyle Change (TLC) Program is a group-format, hospital-based lifestyle intervention for patients referred for overweight/obesity nutritional counseling. The purpose of this demonstration program is to test the feasibility of whether a primary care office-based lifestyle change program can yield clinically significant weight loss in a population of at-risk, disadvantaged patients. To date, a total of 79 patients (88.6% women, 49.4% African American) have completed the weight loss program. Mean weight loss was 12.53 lbs (4.68% weight reduction). Qualitative analyses will be conducted to examine weight loss and its impact on other health indicators (e.g., lipids, blood glucose, blood pressure).

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C-081

PSYCHOLOGICAL WELL-BEING OF GRASS-ROOTS CADRES IN THE FACE OF BEREAVEMENTS AND MEANINGFUL BUT CHALLENGING POST-QUAKE RESTORATION WORK IN SICHUAN CHINA: WORSENED OR SUSTAINED?

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Since the catastrophic 512 earthquake in Sichuan, China, grass-roots cadres (government officials) have fought at the front of post-quake relief, reconstruction and restoration work around the clock while bearing deep grief over the losses of beloved family members. A survey conducted to a cohort of cadres (N=70) of a devastated town shows 70% of participants lost immediate family members. 80% of participants had suffered complicated grief and anxiety, 72.9% PTSD, and 60% depression. On the other hand, as to work well-being, only 25.7% of participants scored higher than the median score (48) of burnout (by MBI with a score range 0–96), while 75.7% scored higher than the median score (51) of engagement (by UWES with a score range 0–102), suggesting a status of work engagement instead of job burnout among grass-roots cadres. Further semi-structured interviews revealed 53.85% of bereaved cadres had been coping with their grief by devoting themselves to intensive workload and seeking support and meaning from work, indicating a protective role of meaningful work for cadres in the face of bereavements and yet an imbalance in the dual-process model of grieving. Suggestions on following interventions were discussed.

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C-083

EXPLANATORY MODELS OF DEPRESSION: INFLUENCES ON SELF-EFFICACY, SELF-STIGMA, CAUSAL BELIEFS & TREATMENT PREFERENCE

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Patients' decisions regarding depression treatment preferences and treatment outcomes appear to be influenced by their explanatory model of depression (Thwaites, Dagnan, Huey, & Addis, 2004), and there appear to be numerous drawbacks to healthcare providers using unidimensional explanatory models of depression (Schrieber & Hartrick, 2002; Goldstein & Rosselli, 2003; Wyatt & Livson, 1994). The present study employed vignette-based experimental methodology to examine the impact of a primary care giver's explanatory model of depression (biomedical vs. biopsychosocial) on participants' beliefs about depression etiology, self-efficacy, perceived self-stigma, and depression treatment preference. Undergraduate psychology students (n=280) completed the Reasons for Depression questionnaire before and after reading an experimental vignette in which a physician described depression as a biomedical illness or a biopsychosocial illness. Post vignette, participants completed the Patient Activation Measure, the General Self-Efficacy Scale, the Self-Stigma of Mental Illness Scale, the Center for Epidemiologic Studies Depression Scale, and treatment preference questions. Analyses revealed no significant main or interactive effects for explanatory model or gender on self-efficacy and self-stigma. As expected, a small but significant shift toward biological causal beliefs about depression (B=-.161, SE B =.06, p=.004) was observed for biomedical group participants. Participants preferred psychotherapy over other treatment options, and significantly more women than men reported being likely to seek psychotherapy [t(277)=-1.48, p<.002]. Cross sectional analysis revealed a significant negative correlation (-.17) between participants' beliefs about their ability to engage in depression treatment and self-stigma, which suggests that more stigmatized persons might have lower perceived abilities to engage in treatment. Future research should explore the relationships between providers' explanatory models of depression and patients' beliefs about themselves and their illness within a clinical population.

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C-084

MINDFULNESS AND WELL-BEING IN RURAL COMMUNITY PARTICIPANTS: A REPLICATION AND EXTENSION OF A MECHANISTIC MODEL

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Prior research has studied meditation and well-being in an effort to investigate underlying mechanisms of action. The present study examined the relationships among awareness, acceptance, self-compassion, and theoretically important mechanisms through which these constructs may initiate changes in health. Based on Johnson, Wiebe, & Morera, 2009, it was hypothesized that self-efficacy, rumination, and depression would be mediators between exogenous constructs and perceived health competence and preventive health behaviors. Perceived health competence and preventive health behavior were hypothesized to significantly influence both physical and mental health outcomes. Utilizing SEM, we tested models informed by current theory and guided by previous research to determine whether theorized pathways hold in a rural sample. The sample consisted of 233 meditation-naïve participants living in a rural community of approximately 5,000 residents. The sample's demographic characteristics were: mean age 27.2 yrs (min=18 yrs, max=85 yrs); 62% female; 95% White, non-Hispanic, 2% Hispanic, and 3% other; mean years of education=14.7. Participants completed a battery of instruments in exchange for a $5 gift card incentive. SEM was conducted using a two-step approach with LISREL 8.80. Fit indices (χ^2=(277)525.41, p<.001, RMSEA=.06, SRMR=.07, CFI=.96, NNFI=.96) supported a model with acceptance, awareness, and self-compassion specified as exogenous constructs; self-efficacy, rumination, and depression were mediators between the exogenous variables and health outcomes (perceived health competence, preventive health behaviors, and physical/mental health). The model accounted for 42% of the variance in self-efficacy, 50% in rumination, 40% in depression, 60% in preventive health behaviors, 22% in perceived health control, and 88% of health-related quality of life. Results were consistent with current theory of proposed mechanisms of mindfulness. This study represents a replication of previous modeling efforts that may elucidate the psychosocial mechanisms through which mindfulness may incite well-being.

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C-085

IMPACT OF INDIVIDUAL, ENVIRONMENTAL, AND POLICY LEVEL FACTORS ON HEALTHCARE UTILIZATION AMONG U.S. FARMWORKERS

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Despite significant disease burden, healthcare use by farmworkers is low. This study examined individual, environmental, and policy level correlates of U.S. farmworker healthcare use, guided by the Behavioral Model for Vulnerable Populations and the Ecological Model. The primary data source consisted of the 2006–2008 administrations of the National Agricultural Workers Survey (N=4,891). Two sources were used to obtain variables reflecting Federally-Qualified Health Center (FQHC) county-level resources: Geographic Information Systems and the federal Uniform Data System (2005 and 2006). Two additional sources were used to characterize rurality and border proximity. Multilevel logistic regression analyses were performed using Hierarchical Linear Modeling due to the nested structure of the data. Probability weights were applied in all analyses.

The majority of farmworkers were Hispanic (80.0%) and male (78.4%), with an average age of 35.6 (SE=.3) years. Annual family income (M=22,668.0; SE=304.9) and educational attainment (M=7.7; SE=.1) were low. Just over half (57.3%) used U.S. healthcare in the previous two years. Several factors were independently associated with healthcare use in multilevel models (all in the expected direction), including, at the individual level: sex, immigration status, migrant status, English language proficiency, access to transportation, and lifetime diagnosis of chronic disease; at the environmental level: FQHC staffing resources and proximity to the U.S.-Mexico border; and, at the policy level: insurance status and workplace payment structure. Recommendations for change at all three levels of influence, with an emphasis on FQHC service delivery, are made so that healthcare access and use can be improved for this vulnerable population.

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C-086

PEDESTRIAN SAFETY WHILE LISTENING TO MUSIC

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Most drivers listen to music (Dibben & Williamson, 2007), but both quick tempo (Brodsky, 2001) and loud volume (Slawinski & Macneil, 2002) distract drivers. Little research examines how listening to music affects pedestrian safety.

Eighteen college students (M = 23.9 years, SD=6.7; 56% male; 50% White, 44% African American) listened to music and crossed streets in an immersive, interactive virtual street environment (Schwebel et al, 2008). Distraction while crossing was rated on a 5-point scale, from not distracted (1) to very distracted (5). No distraction ratings of 4 or 5 were made. Fifteen students felt little (2) or no (1) distraction. Three felt somewhat (3) distracted. Volume was rated on a 5-point scale, with anchors at 1 (very low, hear most background noise), 3 (moderate, hear some background noise), and 5 (very loud, hear no background noise). All students chose similar volumes (M=3.7, SD = 1.1). An ANOVA, with distraction (1 vs 2 vs 3) as independent variable and volume as dependent, was not significant.

We next considered tempo. Students chose two songs from their personal listening devices; a metronome measured song tempo. Students rating no or little distraction chose first songs with similar tempos, 134.2 and 137.3 beats per minute (bpm), respectively. Students rating some distraction chose a slower first song, 88.7 bpm (F (2, 15) = 2.4, p = .13). All groups listened to similar-tempo second songs; distraction levels 1, 2, and 3 had tempos of 144.7, 146.3, and 152.7 bpm, respectively. Thus, students rating more distraction began with slower-tempo songs and experienced a tempo increase (mean change=64 bpm). Students rating no or little distraction had minimal tempo change (6 and 12 bpm increases, respectively).

Results support driving research. Two key findings emerged: (a) students generally did not perceive distraction while crossing virtual streets and listening to music, and (b) students experiencing a change from slower to faster songs reported greater distraction.

Note: This research is ongoing. We expect a larger sample (N=50) in April.

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C-087

CORRELATION OF QUALITY OF LIFE AND PTSD IN PEDIATRIC BURN PATIENTS

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A burn injury is traumatic for children given the accident experience, burn care,and social reentry after hospitalization. Psychological consequences of burns have the potential to impact the child’s adjustment. Approximately 25–33% of pediatric burn survivors develop PTSD, and over 50% present with acute stress. However, little is known about the impact of PTSD on health-related quality of life (HRQL) in post-injury functioning in children (Saxe et al., 2005; Landolt et al., 2002). Previous studies have separately examined HRQL status and incidence of PTSD in children with burns, but there is a lack of research on their association. Landolt et al. (2009) recently completed such a study in pediatric burn survivors and found a negative association between PTSD and HRQL. The purpose of this study was to similarly examine the correlation of HRQL and PTSD in pediatric burn survivors. 22 pediatric burn survivors (ages 5-–18) completed PedsQL self-report forms and the UCLA PTSD Index to determine post-injury HRQL and incidence of PTSD symptoms. Data on gender, time since injury, annual household income,injury circumstance, and pre-existing psychological diagnoses were collected. A Pearson correlation was used to examine the relationship between HRQL and PTSD. Differences between injury circumstance, gender, age, and time since burn and PTSD were examined through ANOVA. 29% of children in this sample met full PTSD diagnostic criteria. 57% had symptoms of re-experiencing, 76% exhibited increased arousal, and 48% experienced avoidance symptoms. PTSD symptoms were negatively correlated with HRQL (r=-.79, p = .01),with increased PTSD symptoms associated with lower reported HRQL. PTSD symptoms were negatively associated with HRQL psychosocial adjustment (r=-.85, p = .01) but not with HRQL physical functioning. HRQL was negatively correlated with symptoms of re-experiencing (r=-.69, p = .01), avoidance (r=-.69, p = .01), and arousal (r=-.81, p = .01). PTSD symptoms did not significantly vary by age, gender, injury circumstance, or time. This study corroborates results of the study by Landolt et al.(2009).

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C-088

REDUCING THE IMPACT BIAS IN SELF-REPORTED AFFECTIVE FORECASTS: WHY THE QUESTIONNAIRE MATTERS

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Affective forecasting - or predicting the impact of an upcoming event on one’s emotions - influences myriad personal decisions. In medicine, for example, patients frequently decide between alternative treatments (Smith et al., 2008). These decisions are informed by affective forecasts of treatment options’ likely impacts on well-being and happiness. Unfortunately, research using self-report questionnaires demonstrates that people are prone to bias when making such predictions. Impact bias (Wilson & Gilbert, 2003), for example, is the tendency to overestimate the intensity and duration of emotional reactions. Whereas various explanations for impact bias exist, the influence of questionnaire wording has not been examined. People face a challenging task when completing research questionnaires and use preceding questions as context to inform answers for subsequent questions (Grice, 1975; Schwartz, 1999). Given the relevance of affective forecasting for important health decisions, we maintain that research in affective forecasting should examine closely whether methodological issues such as questionnaire wording influence findings. Thus, the present study examined the influence of subtle questionnaire wording differences on impact bias.

178 college students completed one of two affective forecasting questionnaires. 92 completed a standard questionnaire, and 86 completed a modified version, which was constructed with careful consideration of question wording, order, and context, based on conversational norms. Results indicated that the impact bias was significantly lower among participants who completed the modified questionnaire (F(1, 176)=6.56, p<.05). This result suggests that impact bias resulted from potentially faulty questionnaires, rather than participants’ prediction errors. Future users of self-reported affective forecasting measures should carefully consider these findings. Reduction of the impact bias should lead to more accurate predictions, and therefore better results when predictions are used for medical decisions.

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C-089

THE EFFECT OF A CHILD’S AGE AND SEVERITY OF CHRONIC ILLNESS ON THE LIKELIHOOD OF HIRING A HEALTH CARE ADVOCATE

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A health care advocate (HCA) can be defined as a professional who represents the needs, views, and desires of a patient and his/her family in a clinical setting. Increasing rates of morbidity in the pediatric population have been shown to place a heavy burden on the child's family. A HCA may attenuate this burden. The present study examined the effects of a child’s age and severity of illness on the likelihood of hiring a HCA. Randomly selected participants (N = 1115) were asked to read a scenario describing a child whose illness was either high or low in severity and who was 1, 7, or 13 years old. Based on the scenario, participants were asked to report their likelihood of hiring a HCA. Likelihood of hiring a HCA was subdivided into eight categories. A scale formed using these eight categories demonstrated good internal consistency (α = .919). A 2 (severity of chronic illness: low or high) by 3 (child’s age: 1, 7, or 13) between-subjects Hierarchical Linear Regression (HLR) was performed; it included significantly correlated demographic factors on step 1. When entered on step 2, the severity of the child’s illness and age variables explained a significant amount of overall variance [F(7, 1079) = 15.437, p < .001, R2 = .001]. Further, the two variables explained an additional eight percent of the variance [ΔF(2, 1072)=4.592, p = .010]. However, only the severity of the child’s illness variable was significantly associated with the likelihood ti hire a HCA (DV) (B=-.180, p =.010). Individuals reported that they would be more likely to hire a HCA for a child whose illness was low in severity. The interaction term, entered on step 3, did not explain any significant additional variance [Δ F(1, 1071) = .765, p = .382, ΔR2 = .001]. Future research should investigate why participants are more likely to hire a HCA for a child whose illness is low in severity.

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Citation Poster
C-090

THE IMPACT OF FAMILY HISTORY ASSESSMENT ON DISEASE RISK PERCEPTIONS: RESULTS FROM THE FAMILY HEALTHWARE IMPACT TRIAL (FHITR)

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In 2004, the CDC developed Family Healthware, a self-administered web-based family history tool that assesses familial risk for six common chronic conditions and provides personalized prevention messages based on risk. The Family Healthware Impact Trial (FHITr), a cluster-randomized trial, was undertaken to evaluate the clinical utility of the tool. The purpose of the present study was to examine the impact of Family Healthware on risk perceptions and to determine whether the impact varied across diseases included in the tool. A total of 3786 patients were enrolled in FHITr. Perceived risk was assessed at baseline and six month follow-up. Overall, based on familial risk as identified by Family Healthware, the percentage of individuals who underestimated their risk for disease at baseline (i.e., perceived risk reported as average or below average) varied greatly and was highest for heart disease (41%), stroke (37%), and diabetes (22%). Participants did not tend to underestimate their risk for colon, breast, and ovarian cancers (range 7–12%). Although Family Healthware significantly increased risk perceptions among underestimators for heart disease (15% vs. 9%, p<.005), stroke (11% vs. 8%, p<.05), diabetes (18% vs. 11%, p<.05), and colon cancer (17% vs. 10%, p=.05) compared to controls, the majority of underestimators did not change in their disease risk perceptions. Those who changed in risk perceptions tended to be younger, female, and have a higher BMI. Results from this study demonstrate the relatively resistant nature of risk perceptions. It remains to be determined whether changes in risk perceptions correspond to any changes in health behaviors in the Family Healthware impact trial.

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C-091

STRESSFUL LIFE EVENTS PREDICT EATING DISORDER RELAPSE: SIX-YEAR PROSPECTIVE OUTCOMES

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Objective: To examine the natural course of eating disorders (ED) and to test for the moderating effects of stressful life events (SLEs) and personality disorder (PD) co-morbidity on ED relapse over six-years of repeated follow-ups. Method: 117 female patients with either bulimia nervosa (BN)(N=35) or EDNOS (N=82) were prospectively followed after remission in the Collaborative Longitudinal Personality Disorders Study. EDs were assessed with the SCID-I/P and monitored with the Longitudinal Interval Follow-up Evaluation during follow-up. PDs were assessed with the Diagnostic Interview for DSM-IV PD (DIPD-IV), and monitored with the Follow-Along version of the DIPD-IV during follow-up. SLEs were assessed with the Life Events Assessment (LEA). Follow-up assessments were conducted at 6- and 12-months and then yearly through 72 months. Proportional hazard regression analyses were performed to examine the link between time-varying levels of SLEs and ED relapse. Cox regressions controlled for the same covariates used in prior work including duration of ED, number of co-morbid psychiatric disorders, and time-varying status of PDs. Results: Of the 117 women with a remission from ED, 50 (43%) subsequently relapsed over the course of 6 years (BN and EDNOS did not differ significantly in relapse). Total number of negative SLEs reported by ED patients significantly predicted subsequent ED relapse (Hazard Ratio (HR) =1.5). Specific types of SLEs that significantly predicted ED relapse were elevated work stressors (HR=3.0) and elevated recreation stressors (HR=3.1). Psychiatric comorbidity and ED duration were unrelated to relapse; non-significant trends were observed for higher proportion of BPD criteria to increase likelihood of relapse and higher proportion of OCPD criteria to decrease likelihood of relapse. Conclusions: Higher work stress and higher recreation stress represent significant warning signs for triggering relapse for women in remission from BN and EDNOS.

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C-092

AN EVALUATION OF POSTTRAUMATIC GROWTH ASSOCIATED WITH A RELATIVE'S SERIOUS ILLNESS

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Posttraumatic growth (PTG) is defined as positive psychological change experienced as a result of the struggle with highly challenging life circumstances. PTG has been found to occur in people who have experienced a serious or chronic illness. Previously identified correlates of PTG include posttraumatic stress (Cordova, Giese-Davis, Golant, Kronenwetter, Chang, & Spiegel, 2007) and problem-focused coping (Sheikh, 2004). There is evidence to suggest that PTG can also develop as a result of an indirect experience with a traumatic event, such as following a serious illness of a family member or close friend (Thornton & Perez, 2006; Weiss, 2004). In this study, Tedeschi and Calhoun's (2004) model of PTG, which emphasizes the cognitive processes involved in adaptation to trauma, was used to understand the process by which individuals adjust to the experience of having a relative with a serious illness. This study aimed to identify the correlates and predictors of PTG in a sample of sixty young adults who had an indirect experience with serious illness. Participants completed measures of PTG, posttraumatic stress, and coping with respect to their experience with a relative's serious illness. PTG was significantly associated with posttraumatic stress, and the adaptive coping strategies of planful problem solving and positive reappraisal. The final hierarchical regression model composed of trait anxiety, illness-related variables, posttraumatic stress, and adaptive coping strategies accounted for 55% of the variance in PTG. Correlates of PTG from this study are consistent with those demonstrated by individuals who reported PTG after personally experiencing an illness. This suggests that the process of PTG development in individuals with a relative may parallel that of individuals with a serious illness themselves. Interventions designed to elicit positive outcomes for illness survivors may be applicable and beneficial for family members as well.

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C-093

EFFECTS OF COMORBID ANXIETY DISORDERS ON TREATMENT OF DEPRESSION IN PATIENTS WITH MULTIPLE SCLEROSIS

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Anxiety disorders are prevalent, underdiagnosed, undertreated, and frequently comorbid with depression in individuals with Multiple Sclerosis (MS). This study examined the effects of comorbid anxiety on outcomes for the treatment of depression among people with MS. Eighty-three patients received 16 weeks of telephone-delivered psychotherapy for depression. They were assessed using the SCID interview for Major Depressive Episode (MDE) and anxiety disorders at baseline, along with MDE at end-of-treatment and over 48 weeks post-treatment. Data were analyzed using linear mixed models for repeated measures. Forty percent of the participants were diagnosed with one or more anxiety disorders via the SCID for DSM-IV at baseline. There was a trend toward a main effect of anxiety disorder diagnosis on diagnosis of MDE (p=.058), and there was a significant interaction effect of time and anxiety disorder diagnosis (p<.05) on this outcome. Participants with anxiety disorders were more likely to be diagnosed with MDE at baseline (t = 2.67, p<.01) but there was no significant difference at post-treatment (p=.28). Over the 48 week follow-up, participants without anxiety disorder diagnosis continued to improve with regards to the percentage rate diagnosed with MDE, whereas those with anxiety disorder did not (p<.05). Although individuals with anxiety disorders improved over the course of treatment on self-reported anxiety symptoms (p<.05), there was a main effect of anxiety disorder (p<.05) suggesting these individuals continued to experience more anxiety symptoms throughout and after treatment. Findings indicate among individuals with MS, anxiety is associated with greater frequency of MDE. While patients with comorbid anxiety respond to treatment as well as patients without anxiety in terms of MDE diagnosis, patients without comorbid anxiety continue to improve while patients who begin treatment with comorbid anxiety do not. Individuals with comorbid anxiety disorders also experience more initial and residual anxiety symptoms.

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C-094

DOES SATISFACTION WITH ABILITIES MEDIATE THE RELATIONSHIP BETWEEN DISABILITY AND DEPRESSIVE SYMPTOMS IN OLDER ADULTS WITH MOBILITY DISABILITY?

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Although disability has been linked to depression in older adults, the mechanisms through which disability influences depressive symptoms remains to be examined. We hypothesized that satisfaction with one's abilities would mediate the relationship between disability and depression in older adults with mobility disability. Data were collected from 108 residents of independent- and assisted-living facilities (M age=85.4 years, Range=68–99 years). Participants completed the 5-item Geriatric Depression Scale (GDS), the Satisfaction with Abilities Scale, and the abbreviated Disability-Limitations subscale of the Late-Life Function and Disability Instrument (LL-FDI). Path analysis was used to examine the hypothesized relationships and the effect of covariates (age, gender, race, and marital status). Greater disability was significantly associated with dissatisfaction with abilities (β=-.62, p < .01), which in turn, was associated with higher depression scores (β=-.54, p < .01). Although disability was significantly associated with depressive symptoms (r=-.32), there was no direct relationship between disability and depression when satisfaction with abilities was considered (β = .01, p > .05); suggesting that satisfaction with abilities mediates the relationship between disability and increased depression among older adults with mobility disability. This model accounted for 28% of the variance in depression. No significant effects were observed for any of the covariates (ps > .05). These results underscore the importance of assessing individual's perceptions of decline along with measures of physical decline, as it is the former which appears to influence depressive symptoms in cross-sectional analysis.

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C-095

TRAJECTORY OF QUALITY OF LIFE FOLLOWING HYSTERECTOMY

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Hysterectomy is the 2nd most common major surgery among women of reproductive age. Although research has examined clinical outcomes, little is known about quality of life (QOL) changes post-hysterectomy. To address this issue, we conducted a systematic quantitative analysis of hysterectomy-related QOL. A Medline search (1990–2009) identified 198 articles, of which 177 were eliminated for the following reasons: not English, not hysterectomy, no quantitative, prospective measurement of QOL. We focused on the 21 articles that utilized the generic SF-36 instrument and were able to obtain adequate summary data from 5 subsamples. The SF-36 produces two summary scores, a physical composite score (PCS) and a mental composite score (MCS). Data from 280 women were aggregated, after converting all available values to norm-based scores (M=50, SD=10). From pre-surgery (T0), up 1 month post-hysterectomy (T1), and up to 6 months post-hysterectomy (T2), we found a trend towards expected change in self-reported physical function (F(2,6)=4.6, p=0.06) and statistically significant improvement in overall mental function (F(2,6)=6.8, p=0.03) following the procedure. Interestingly, mean values of PCS and MCS were below the normative means, across the assessment periods. These findings suggest that while there appears to be modest QOL benefit in the month after the procedure, QOL continues to improve during middle-term surgical recovery. Future research should examine factors affecting QOL across the recovery spectrum following hysterectomy, at longer post-surgical intervals. Additional data are necessary to determine whether specific indications for hysterectomy influence QOL changes post-operatively.

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C-096

FORGIVENESS AND PHYSICAL HEALTH IN ELDERLY ADULTS: A PROSPECTIVE STUDY

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Forgiveness and unforgiveness are often considered opposite ends of the same continuum. However, some have argued that unforgiveness represents a unique construct that is comprised of a host of negative emotions directed toward a transgressor. These negative emotions include but are not limited to resentment, vengeance, anger, distrust, etc. Unforgiveness has been shown to be related to poor health conditions, but few, if any, of these studies have demonstrated a prospective relationship. The purpose of the present study was to examine unforgiveness and its relation to the development of poor health status using longitudinal data.

Data are from a nationwide survey of 1016 elderly adults age 66 years and older who participated in an original interview and a three year follow up. Assessments include an unforgiveness measure and self-reported physical health.

Path analysis using a cross-lagged model was conducted to examine the reciprocal effects of forgiveness and self-reported physical health. The overall fit of the model was good (Chi square = .031, p = .861). With respect to the individual parameters of interest, it was found that both forgiveness and health at time 1 predicted forgiveness and health at time 2, respectively. Cross-lagged effects showed that while health at time 1 did not predict forgiveness at time 2, forgiveness at time 1 did predict health at time 2 (B=-.077, p < .05).

To our knowledge this is one of the first studies to document the prospective relationship between forgiveness and physical health. Though investigators have long suspected, while using cross-sectional methods, that the forgiveness-health relationship could be bi-directional or spurious, our findings do not support this thinking. Forgiveness predicts changes in health status. Not the other way around. Given this initial evidence of a potential protective effect of forgiveness on health, replications should be done to confirm these results and if verified, these findings should be used to inform and support psycho-spiritual intervention efforts in health and medicine.

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C-098

MOOD AS A PREDICTOR OF SLEEP DISTURBANCE IN ADOLESCENTS WITH CHRONIC PAIN

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Sleep problems such as short duration and poor quality are reported in 34–53% of adolescents with chronic pain. The relationship between pain and sleep is bidirectional; disrupted sleep can worsen pain and decrease functioning. Negative mood and greater depressive symptoms are also associated with poorer sleep quality. Previous research on sleep, pain, and mood in children has been limited by the use of subjective sleep measures, single pain conditions, and the lack of healthy controls. This study used prospective diary reports (via electronic PDA) and objective sleep assessment (actigraphy) to compare the relationship between mood and sleep in healthy adolescents versus adolescents with chronic pain. Actigraphy examines sleep-wake patterns by recording the presence or absence of movement. It was hypothesized that lower mood would be associated with more sleep problems that night, and poorer sleep associated with more negative mood the next day. Age, presence of chronic pain, and depressive symptoms were tested as covariates between mood and sleep. Participants (aged 12–18 years; 72% female) were recruited from either a pediatric pain clinic (n=36) or a healthy community sample (n=55). Participants completed a week-long diary of mood and sleep quality (scale 0–10) and actigraphic monitoring of sleep efficiency and duration. Retrospective reports of depressive symptoms (RCADS; CES-D) and pain intensity were also collected. Results indicated that compared to healthy controls, adolescents with chronic pain had more negative mood and depression, poorer sleep quality and efficiency, and shorter sleep duration (p<.01). Multivariate analyses revealed a bi-directional relationship between mood and sleep; mood predicted sleep quality that night, and sleep quality predicted mood the next day (p<.001). Presence of chronic pain (p<.01) and level of depressive symptoms (p<.001) were covariates between mood and sleep quality. Relationships between sleep efficiency and duration and mood, were not significant. Results suggest that mood and sleep may be important aspects of pain management for adolescents with chronic pain.

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C-099

PAIN IN CHILDREN: THE INFLUENCE OF PARENTAL PAIN BELIEFS AND RESPONSES ON CHILDREN'S FUNCTIONAL DISABILITY

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Chronic pain in children is a significant problem. Although it is important to consider family factors when developing and implementing treatments for children with chronic pain, there are few data on how parental factors influence children's pain. The aim of this study was to examine associations among parental beliefs of child's pain, parental pain coping responses, and parental perceptions of child functional disability. Parents of 50 children (8–17 years) who presented for biobehavioral pain treatment completed measures regarding their child's pain. Parents completed: 1) the Pain Beliefs Questionnaire, which measures beliefs about pain severity and beliefs about pain coping ability; 2) the Adult Responses to Children's Symptoms, which measures parental behaviors in response to their child's pain; and 3) the Functional Disability Inventory, which measures difficulty the child is having engaging in regular activities due to pain. Multiple regression analyses were conducted to examine associations among pain-related beliefs, responses, and functional disability. Parental beliefs about the ability to cope with pain predicted protective (Adjusted R2=0.2, Beta=-0.47, F(1, 38)= 10.7, p<.01) and minimization (Adjusted R2=0.10, Beta=-0.35, F(1, 40)=5.6, p<.05) parental pain responses, indicating that more positive beliefs were associated with less protective and less minimization parental responses. Protective and minimization parental responses also predicted functional disability (Adjusted R2= 0.197, F(2, 32)=4.9, p=0.01); increased protectiveness was associated with increased functional disability (Beta=0.28), but increased minimization was associated with less functional disability (Beta=-0.48). Parental pain beliefs and responses may influence functional disability in children with chronic pain in complex ways and may be important intervention targets.

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C-100

PAIN IN SOCIAL CONTEXT: PAIN AND FUNCTIONING OF RHEUMATOID ARTHRITIS PATIENTS BASED ON MARITAL STATUS AND MARITAL ADJUSTMENT

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Relationships may influence adjustment to chronic pain conditions like rheumatoid arthritis (RA). We examined how both marital status and marital adjustment were related to pain and disability in 255 adults with RA (mean age=55.3, SD = 12.1; 81.2% female; 67.5% Caucasian). Measures included: marital adjustment (Locke-Wallace Marital Adjustment Scale); disease severity (blinded physician ratings on a visual analog scale); pain (McGill Pain Questionnaire sensory and affective subscales); and physical and psychological disability (The Arthritis Impact Measurement Scales-2). After controlling for demographics and disease severity in ANCOVAs, unmarried participants (n=97) had higher sensory pain (p = .04), affective pain (p = .004), and psychological disability (p = .04)—but not disease severity or physical disability—than married participants (n = 158). Among married participants, better marital adjustment was correlated less pain and lower disability (p values < .05). Married participants were divided into distressed (n= 44) and non-distressed (n = 114) subgroups and compared with unmarried participants using ANCOVAs. When controlling for demographics and disease severity, non-distressed married participants had lower affective pain (p = .006) and psychological disability than unmarried participants (p = .02), but distressed married participants were similar to unmarrieds. These findings suggest that being married in itself may not be strongly associated with better pain and functioning in RA, but that being in a non-distressed marriage is linked with less pain and better functioning. Results of this study underscore the importance of considering not only marital status but also the degree of marital adjustment in RA and may inform clinical interventions in this population.

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Meritorious Student Poster
C-101

INITIAL DEVELOPMENT AND TESTING OF AN ELECTRONIC ASSESSMENT TOOL FOR PEDIATRIC PAIN

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Chronic pain is a common problem in children and adolescents, and much remains to be learned about how pain changes over time in response to treatments. Increasingly, electronic self-report methods have been used with children to evaluate changes in pain over time due to improved validity and accessibility. It remains unclear, however, how certain aspects of pain assessment, such as pain location, should be captured electronically in a way that would be sensitive to changes over time. To this end, the current study compared a paper-based "body outline" tool for measuring pain location used in prior studies to a new electronic tool designed to capture pain location in a more precise and standardized way. Method: Participants were 19 children aged 8–17 years presenting to a multidisciplinary pain management clinic. Participants completed both paper-based and electronic "body outline" tools to specify pain location and intensity, plus a semi-structured interview to assess acceptability of the electronic tool and feasibility for use as a daily process measure of pain. Results: Kappa agreement for pain location between the paper-based and electronic tools was moderate to substantial (.55-.79 by region), with the latter providing greater discrimination between pain locations. Participants agreed the electronic tool provided better specificity than the paper-based form (84.2%); 3 children (15.8%) requested more definition in certain regions (e.g., head, chest) associated with lower observed agreement. Participants stated that the electronic tool was easier to use (94.7%) and they would be willing to complete it daily (94.7%). Several participants spontaneously suggested ways the tool could help them communicate their pain to others and monitor changes over time. Discussion: This study established initial acceptability and feasibility of an electronic tool for pain assessment. Minor edits to the tool to increase specificity of recording pain in certain regions of the body are planned prior to piloting as a daily process measure.

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C-102

MEASURING FEAR AVOIDANCE AMONG YOUTH WITH CHRONIC PAIN

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Approximately one quarter of youth report chronic pain, often associated with prolonged pain-related disability. An emerging psychological construct associated with disability is pain-related fear. Heightened fear results in behavioral avoidance leading to greater disability; whereas confrontation results in reengagement with activities of daily living and resolution of symptoms. With no extant measures to assess this construct in youth, we developed the Pain Avoidance Questionnaire, child and parent report (PAQ-C; PAQ-P). After initial pilot testing with 20 families and a panel of 16 experts in pain treatment, the PAQ was administered to 149 youth with chronic pain and their parents at an initial multidisciplinary pain evaluation. After dropping four significantly skewed items and one item with an item-total correlation < .30, the resultant PAQ-C consisted of 32 items with mean total score 59.7 (SD=23.5) and with a Chronbach's alpha of .93 indicating very strong internal consistency. For criterion-related validity, higher fear of pain scores on the PAQ-C was associated with greater functional disability (FDI; r = .52), somatic symptoms (CSI; r = .57), anxiety symptoms (MASC; r = .55), and depressive symptoms (CDI; r = .62). For the PAQ-P, after dropping eight significantly skewed items and three item with an item-total correlation < .30, the resultant PAQ-P consisted of 27 items with mean total score 51.4 (SD=19.2) and with a Chronbach's alpha of .93 indicating very strong internal consistency. For criterion-related validity, higher fear of pain scores on the PAQ-P was associated with greater functional disability (FDI; r = .47), somatic symptoms (CSI; r = .53), anxiety symptoms (MASC; r = .41), depressive symptoms (CDI; r = .48), and more protective parental responses (ARCS; r = .50). Four-week test-retest reliability was .75 (PAQ-C) and .69 (PAQ-P). These results support the PAQ as a psychometrically sound measure and emphasize the important role of pain-related fear in relation to emotional distress and pain-related disability.

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C-103

ANGER, CATASTROPHIZING, AND SENSITIVITY TO PAIN IN FIBROMYALGIA PATIENTS

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There is a growing amount of evidence to support the idea that emotion and psychological processes do indeed play a role in how chronic pain patients experience pain. The way in which patients manage the emotion of anger seems to be of especial relevance to this concept. Research supports the notion that anger can be managed in one of two ways: 1) it can be suppressed (anger-in) or 2) it can be overtly expressed (anger-out). Both types of anger management have been linked to an increase in the intensity of pain that an individual with chronic pain may experience. Literature suggests that catastrophizing may be linked to an increase in pain intensity. However, virtually no work has evaluated the impact of anger and/or catastrophizing on pain sensitivity.

The present study utilized testing of the nociceptive flexion reflex (NFR) in Fibromyalgia (FMS) patients as an attempt to better understand the mechanisms underlying pain sensitivity in this population. Subjects were 36 women with FMS, mean age 47 years (SD = 11) and mean disease duration 12 years (SD=6). All subjects completed self-report measures including the Pain Catastrophizing Scale(PCS) and Speilberg Anger Expression Scale (AES) prior to NFR testing. Results indicated that "anger-out" was significantly correlated with lower NFR thresholds r=-0.39, p=0.02. Additionally, the correlation between pain catastrophizing and NFR thresholds approached significance r=-0.32, p=0.06. These results indicate that negative psychological states may indeed play a role in the level of pain sensitivity experienced by patients with FMS in addition to pain intensity. These findings have implications for both research and practice: research may now be able to control for these potential confounds when assessing pain sensitivity and central sensitization and better understanding the psychological correlates of pain sensitivity will lead to advances in treatment for FMS.

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C-104

THE ROLE OF CHRONIC PAIN ACCEPTANCE AND MINDFULNESS IN PATIENTS' PERCEIVED DISABILITY IN AN ONLINE SUPPORT GROUP SAMPLE

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Direct and indirect costs related to chronic pain (CP) conditions have become exorbitant. Targeting key predictors of positive medical and functional outcomes in CP patients is crucial. Patients' perceived disability (PD) is associated with negative outcomes in CP patients, including higher ratings of pain intensity and poorer medical, psychological, and functional outcomes. Mindfulness and Acceptance-based treatment approaches have recently shown promise in CP patient function and outcomes. We recruited CP patients via online CP support groups to complete an internet-based survey. Participants who completed at least the demographic portion of the survey were included and yielded a total sample (N = 148; Mean age=48, SD = 10.1) that was primarily female (85.1%), Caucasian (92%), Married/Partnered (68.9%), Insured (88.5%), and well-educated (Mean = 15.1 yrs, SD = 2.2), with a mean income of $44,228 (SD=$39,474). Years with CP was Mean = 16.8 (SD = 12.8) and pain intensity Mean=7.10/10 (SD = 1.7), with nearly half receiving disability and 20% indicating pain-related legal involvement. Backward multiple regression was conducted to ascertain the most salient predictors of sample participants' PD. Most salient predictors (R2 = .383, p < .001) were Pain Severity (β = .308, p = .016), CP Acceptance (β=-.402, p = .002), and Mindfulness (β = .355, p = .005). Our findings show that in spite of this sample's relatively high insurance and financial resources, PD ratings remain high, with 56.1–61.5% of respondents rating themselves as "Highly" or "Completely" disabled in multiple domains (Home Responsibilities, Recreation, Social Activity, and Occupation). Contrary to recent research, Mindfulness in our sample was positively associated with PD. Conversely, CP Acceptance was negatively associated with PD ratings. Findings suggest that interventions focused on Mindfulness and Acceptance may serve to effectively address PD and enhance function in CP patients.

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C-105

CHRONIC PAIN ACCEPTANCE AND PERCEIVED IMPORTANCE, SATISFACTION AND ACTION IN VALUED LIFE DOMAINS

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Rising costs of chronic pain (CP) treatment and management underscore the need for interventions that enhance patient outcomes. A focus on patient values and CP Acceptance in treatment has shown promise in medical, behavioral and functional outcomes. We recruited CP patients via online CP support groups. Participants who completed at least the demographic portion of the survey yielded a total sample (N=148; Mean age=48, SD=10.1) that was primarily female (85.1%), Caucasian (92%), Married/Partnered (68.9%), Insured (88.5%) and well-educated (Mean=15.1 yrs, SD = 2.2), with income Mean=$44,228 (SD=$39,474). Years with CP was Mean=16.8 (SD = 12.8) and pain intensity Mean=7.10/10 (SD=1.7. Participants completed the CP Acceptance and Valued Directions Questionnaires. A median split to form two CP Acceptance score groups [High versus Low] was conducted. Five value domains (Work/Education, Relationships, Spirituality/Citizenship, Leisure and Health) were derived from the Valued Directions questionnaire (VDQ). MANCOVA and ANCOVA analyses (controlling for effects of Age) were conducted to assess differences between High vs Low CP Acceptance groups among three scales for each of the VDQ domains - Importance, Satisfaction and Action. Notably, the High group rated Importance higher on the Relationship and Leisure domains (p's <.05). There were no group differences on Importance on other domains. The High CP Acceptance group consistently rated Satisfaction and Action higher across all domains (all p's <.001-.0001) than their Low CP Acceptance counterparts. Differences were most remarkable on the Satisfaction scale in Health and Leisure (p's<.0001) and the Action scale in the Leisure and Work/Education domains (p's<0001). Values clarification at the beginning of treatment may assist in behavioral goal setting. While patients may continue to embrace importance in valued life domains despite CP, the degree to which patients are satisfied and engage in value-consistent behaviors may be vary by degree of CP Acceptance.

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C-107

GENDER DIFFERENCES IN PHYSICAL ACTIVITY DURING YOUTH ORGANIZED SPORTS PRACTICES USING ACCELEROMETERS

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Youth sports are a primary source of physical activity for children, but the amount of activity during practices has not been quantified. Activity levels are likely to differ by sport, and they may differ by gender. This study objectively compared physical activity levels during organized soccer and softball/baseball practices using accelerometers. 203 members of community leagues, ages 7–14, (soccer: girls N=48, boys N=55; softball N=50, baseball N=50) were recruited. GT1M ActiGraph accelerometers were worn for an entire practice to objectively measure the intensity of activity every 10 seconds. Minutes of moderate-to-vigorous physical activity (MVPA) were computed and analyzed using 2x2 (sport X gender) ANOVA. Percent doing 30 or 60 min of MVPA was analyzed with chi square. Soccer players were more likely than baseball/softball players to spend at least 30 minutes in MVPA (96.1% vs. 66.0%, p < .001) and at least 60 minutes in MVPA (30.1% vs. 18.0%, p < .05) during practice. Soccer players spent more minutes in MVPA and a higher percent of practice time in MVPA than baseball/softball players (M=55.5 min vs. 41.2 min; M = 53.1% vs. 41.0%; p < .001). Across both sports, boys spent more minutes in MVPA and a higher percent of practice time in MVPA than girls (M=53.3 min vs. 43.3 min; M = 51.0% vs. 43.0%; p < .001). There was an interaction between type of sport and gender (p < .01), with no gender differences in soccer; but in baseball/softball, boys spent more minutes in MVPA (M=49.3 min vs. 33.1 min) and a higher percent of MVPA time in baseball/softball than girls (M = 47.4% vs. 34.6%; p < .001). Soccer players obtained substantially more MVPA than baseball/softball players during sports practices. During soccer practices, girls exercised at the same high level as boys; however baseball players were more active than softball players. Less than 1/3 of youth obtained the recommended 60 min/day of MVPA, so even organized youth sports players need additional opportunities for physical activity.

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C-108

RISK FACTORS FOR DECREASED PHYSICAL ACTIVITY IN WHITE, LATINO, AND ASIAN ADOLESCENTS IN CALIFORNIA

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Background: Regular physical activity (PA) has been associated with many health benefits. A dramatic decline in PA occurs during adolescence, especially in females, minorities, and disadvantaged youth.

Purpose: The purpose of this study is to examine the factors that contribute to decreased PA in White, Latino, and Asian adolescents, age 12 to 17 year old, in California.

Methods: Data from the 2005 California Health Interview Survey (n=3,006) were analyzed. Descriptive statistics and multiple logistic regressions were performed. Adolescents reported weight, height, gender, ethnicity, parent education attainment, household income, physical and sedentary activity, and general health status. Parent information regarding parent physical activity, acculturation level and body mass index (BMI) are also included in the study.

Results: Results suggest that gender and ethnic variations exist in factors contributing to decreased physical activity in California adolescents. The key factors associated with decreased PA included age, gender, ethnicity, SES, screen time, and parent education attainment. Females are 1.5 times as likely to report decreased levels of physical activity compared with males (p<.05). Asians were the least active and also reported the highest levels of sedentary activity. Adolescents with household incomes of < 199% of the federal poverty level (FPL) were 1.76 times more likely to have decreased PA compared to adolescents with household incomes >300% of the FPL(p <.05). Common risk factors related to decrease PA in this study sample include increased screen time and fair general health status. Increased screen time was found to be a risk factor for White and Asian females and Latino males. Low household income was only a factor in Whites while poor/fair general health status corresponded with low levels of PA except in Latinos. Parent BMI was a predictor of decreased PA in Asian females and Latino and Asian males.

Conclusions: Variations in factors contributing to decreased PA seem to exist among Latino, Asians and Whites. Culturally sensitive interventions that address the unique needs of an ethnically diverse adolescent population must be developed to improve their health behaviors.

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C-109

INCREASING PRESCHOOLERS' PHYSICAL ACTIVITY USING STRUCTURED PHYSICAL ACTIVITY BREAKS

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Incorporating structured physical activity (PA) breaks into recess and transition times is an inexpensive and effective technique to increase children's PA during school hours. However, this approach has not been studied for a preschool population. The purpose of this study was to determine the effectiveness of incorporating two 15-minute structured PA breaks that were designed to promote moderate-to-vigorous physical activity (MVPA) in preschool age children. Nine African American preschoolers (6 females and 3 males; mean age, 4.8 years) wore an Actical accelerometer on their waist attached with a secured strap during preschool hours(8 am - 4pm). Data were collected over four days: two days the children participated in their regular preschool schedule [indoor activities (3 hours), meals, nap and transitions (3 hours) and two outdoor play sessions (2 hours)] and two days in which two 15-minute activity breaks were incorporated during transition time from one indoor activity to the next. Order of the conditions was counter-balanced. The 15-minute breaks consisted of a: 3 minute introduction, 9 minutes of PA and a 4 minute cool down that was followed by transition to the next classroom activity. Accelerometers were initialized to save data in 15-seconds intervals to detect the preschoolers' PA level and accumulated steps. Cut points per 15 seconds were set at 715 for moderate PA and 1411 for vigorous PA. Results demonstrate that the preschoolers participated on average in 4 minutes of MVPA and accumulated 3554 steps during the regular preschool schedule. On days that the PA breaks were implemented, 11 minutes of MVPA and 4719 steps were achieved. Preschoolers accumulated significantly more MVPA and steps on days that incorporated structured PA breaks (p <.001). The PA breaks accounted for 70% of daily MVPA and 20% of daily step count, even though children engaged in free play for approximately 90 minutes per day. In conclusion, this sample of preschoolers engaged in inadequate amounts of MVPA, but the incorporation of structured PA breaks proved to be viable method for increasing preschoolers' MVPA.

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C-110

DO NEIGHBORHOOD ATTRIBUTES INFLUENCE TRANSTHEORETICAL MODEL CONSTRUCTS FOR PHYSICAL ACTIVITY?

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Social ecological models suggest that multiple levels of influences interact to impact physical activity (PA). Thus, this study examines how two neighborhood attributes are related to several intrapersonal Transtheoretical Model (TTM) constructs for PA, including self-efficacy, temptation (affect, competing demands), decisional balance (pros, cons), and processes of change (behavioral, experiential). A survey assessed each TTM construct, presence of neighborhood sidewalks (yes/no) and ratings of neighborhood pleasantness (dichotomized as high/low). Analyses were run separately for men (n=128) and women (n=266). Specifically, 2 (sidewalk presence) X 2 (neighborhood pleasantness) ANOVAs/MANOVAs using TTM constructs as the dependent variables were conducted. For men, two main effects emerged. First, men without sidewalks reported greater self-efficacy compared to those with sidewalks (p=0.008). Second, men reporting high neighborhood pleasantness reported greater use of behavioral processes of change compared to those reporting low neighborhood pleasantness (p=0.01). Additionally, a significant interaction emerged for affect temptation to not exercise such that, among men reporting high neighborhood pleasantness, those without sidewalks reported lower affect temptation compared to men with sidewalks (p=0.04). For women, two significant interactions emerged. First, among women with sidewalks, those reporting high neighborhood pleasantness had higher self-efficacy than those reporting low pleasantness (p=0.05). Second, among women with sidewalks, those with high neighborhood pleasantness reported greater pros than those reporting low pleasantness (p=0.03). In this study, the joint effects of multiple positive neighborhood attributes had a significant impact on women's self-efficacy and pros for PA, while the results for men were mixed. Few studies have examined the impact of environmental attributes on psychosocial constructs for PA, but future research will benefit from exploring and expanding possible moderating and mediating effects.

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C-111

POSITIVE ACTION FOR TODAY'S HEALTH: PERCEPTIONS OF SAFETY AND ACCESS IN UNDERSERVED AFRICAN AMERICANS

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Minority and low-income populations have among the highest obesity rates and lowest levels of physical activity (PA). This study reports on baseline data from the "Positive Action for Today's Heath" (PATH) randomized controlled trial. The PATH trial is evaluating the efficacy of an environmental intervention on improving access and safety for increasing PA and trail use in 3 underserved, African American communities. Baseline assessments were conducted and participants included 274 women and 165 men (mean age=51.2) who were primarily 45 years and older (69.0%), non-working (61.2%), not married (77.0%), with no children at home (63.3%), high school diploma or less (67.2%), and making less than $25,000 per year (62.4%). The majority were overweight or obese, with half the sample exceeding BMI of 30.0 kg/m^2. Focus group data suggested that lack of access to places for walking and safety concerns were barriers to PA in these communities. More specifically, men reported that having access to a walking place was the most important way to increase walking; women expressed wanting police support while walking on a neighborhood trail. Perceptions of access and safety were measured using subscales from the Neighborhood Environment Walkability Scale (Saelens et al 2003). On average, women (mean=2.656, range= 1–4) had significantly lower perceptions of neighborhood safety than men (mean=2.845, range= 1–4; t=-3.113, p<.01). However, there were no significant differences between the men (mean=2.364, range= 1–4) and women (mean=2.290, range= 1–4; t=-0.886, p=.376) on perceptions of having access to walking places. Both men and women reported having a lack of access to walking places. These data suggest that health disparities and perceptions of poor safety and access for walking persist in these underserved areas.

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C-112

OUTCOMES OF A MULTILEVEL WALKING INTERVENTION FOR VERY OLD ADULTS

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Background: Walking is an excellent form of exercise for older adults living in retirement communities, who are older, more frail, less active than community dwelling peers, and dependent on their facility environment for walking opportunities.
Purpose: To determine the outcomes of a novel 3-month walking intervention based on ecological models and social cognitive theory for older adults in retirement communities.
Participants: Participants (N=87, M age=84; 23% male) were from 4 retirement communities. Sites were randomized to receive a standard (step tracking, goal-setting, group meetings, educational materials) or an enhanced, multilevel (standard+biweekly phone counseling, site tailored walking route maps) walking intervention. Main outcomes were objectively measured pedometer steps and physical functioning (PF, using the Short Physical Performance Battery). Secondary outcomes included self-reported depression, activities of daily living, sedentary behavior, and intervention satisfaction. ANCOVA (with baseline scores, age, gender, and physical function as covariates) and paired t-tests examined between and within group changes and moderators.
Results: Pedometer steps/day improved overall (M pre-test=3641, M post-test= 4261; $p < .01$) with no differences by condition. There were no between or within group differences on other outcomes. PF moderated step count improvement (M improvement low PF = 184; M high PF=766; $p < .05$). There was no significant moderation by gender, age, weight status, or cognitive function, indicating that all of these groups were able to improve their step counts equally. 86% of participants were very or extremely satisfied with the intervention.
Conclusions: In this understudied and vulnerable population, step counts were improved by both walking interventions. The largest improvements were observed for those with higher physical function. However, even those with low physical function and of the oldest ages were able to walk more indicating that future studies in this population are warranted.

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C-113

MULTIPLE IMPUTATION APPROACH TO MEDIATION

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In order to establish mediation, one must show that the hypothesized mediator is changed by treatment and in turn causes a change in outcome. Standard methods rely on regression models which do not necessarily estimate causal effects without assumptions. These may be violated in behavioral trials in which the proposed mediator is an inherent characteristic/belief of the participant and not a behavior. The statistical literature on causal effects posits different ways in which mediation can be quantified. We focus on the descriptive direct effect (DDE) of treatment, which can be thought of as what is left of the treatment effect after removing the influence of the mediator. The DDE is well-defined when the mediator is a characteristic/belief of the participant, although it cannot be observed directly. Using baseline predictors of the mediator, we can estimate the DDE up to a sensitivity parameter. We can define the mediated effect as the difference between the total treatment effect and the DDE, or simply, the treatment effect that goes through the mediator. We illustrate this estimator using data from STRIDE, which was a randomized trial aimed at promoting physical activity adoption amongst previously sedentary adults. Participants were randomized to different treatment channels at baseline and physical activity data were collected after 12 months. Self-efficacy was assessed at baseline and 6 months. Results suggest that the DDE of randomization ranges from 40.6–45.2 (sd=18.9–21.0) as we vary the sensitivity parameter from 0–1. This suggests significant effects of treatment assignment on outcome that go around the mediator. The mediated effect ranges from 12.0–16.6 (sd=7.5–12.0) and thus we cannot conclude that an increase in self-efficacy from baseline to 6 months mediates the effect of treatment on physical activity outcome. Key advantages of this method are:(1) it does not rely on key assumptions made by Baron and Kenny that may be violated in cases such as STRIDE; (2) it allows for continuous or binary outcomes and (3) it is well-suited to the conceptualization in which the mediator is a characteristic/belief of the participant and not a behavior.

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Meritorious Student Poster

C-114

SOCIAL CONTEXT, INTRINSIC MOTIVATION, AND PHYSICAL ACTIVITY IN UNDERSERVED ADOLESCENTS: A MEDIATION ANALYSIS

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Previous research has shown that interventions to increase physical activity (PA) in adolescents, while statistically significant, have demonstrated only modest effects and have failed to identify mechanisms for change. Social Cognitive Theory (SCT) and Self-Determination Theory (SDT) identify social context and intrinsic motivation, respectively, as important factors to consider in understanding PA behavior. This study expands on previous research by examining intrinsic motivation as a mediator of the relationship between peer social support and moderate-to-vigorous PA (MVPA, 7-day accelerometry estimates) in underserved adolescents (low income, minorities). While SCT supports a relationship between peer social support and MVPA, SDT expands by suggesting the social contextual influences on behavior operate by increasing intrinsic motivation. In the current study, peer social support is hypothesized to positively effect intrinsic motivation (theoretically via positive social context) 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 social support and intrinsic 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; $\beta = 1.05$, se=0.48, T (1417) = 2.18, $p < .05$) were statistically significant. Results of the current study are the first to demonstrate that intrinsic motivation mediates the relationship been peer support and MVPA in underserved adolescents. While more research is needed to better understand the social conditions that influence intrinsic motivation results of the current study suggest that these factors should be the focus of future interventions in underserved populations.

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C-115

PSYCHOSOCIAL INTERVENTION MEDIATORS OF ADOLESCENT SEDENTARY BEHAVIOR

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Objective: A critical test of behavior change mediators is to examine hypothesized relationships in the context of a randomized controlled trial (RCT). In the current study, data from a RCT was used to examine the extent to which a health promotion intervention affected changes in psychosocial constructs and if so whether these in turn explained changes in adolescent sedentary behavior. Design: 878 adolescents (ages 11 - 15) recruited through primary care providers (age M=12.7 years, SD= 1.3; 58% white non-Hispanic) were randomized to either a multiple behavior change intervention (physical activity, sedentary behavior, dietary intake) or a sun protection comparison intervention. Main Outcome Measure: Self-reported sedentary behaviors (TV, computer, sitting talking on phone, sitting listening to music) at 0, 6 and 12 months. Results: Parallel process latent growth curve models (LGCM) found negative relationships between the growth trajectories of behavior change strategies (e.g., considering benefits, goal setting, self-monitoring) and self-efficacy and the growth trajectory of sedentary behavior (-.87, -.80, respectively, $p < .001$). As the growth trajectories for these psychosocial variables increased over time the growth trajectory for sedentary behavior decreased. Mediation analyses revealed that behavior change strategies and a self-efficacy mediated the relationship between the intervention and sedentary behavior. Conclusions: These findings suggest that the PACE intervention influenced changes in adolescent sedentary behavior primarily through its effect on behavior change strategies and self-efficacy. Family support and the pros and cons of change were not related to sedentary behavior over time.

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C-116

UTILITY OF THE ACTIVITY TRAIT AND THE THEORY OF PLANNED BEHAVIOR FOR EXPLAINING RESISTANCE EXERCISE PARTICIPATION

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Developing comprehensive explanatory models of resistance exercise (RE) behavior could help to design more effective interventions to combat the dismal RE participation rates reported by U.S. adults. Although the Theory of Planned Behavior (TPB) explains significant variability in both aerobic exercise and RE, the Activity Trait (ACT; propensity to live a fast paced life, busyness, fast talking, high energy), a sub-trait of the extroversion personality domain, has recently been found to be an independent predictor of exercise participation after controlling for TPB constructs. Inclusion of the ACT in the TPB may enhance the utility of this conceptual framework for explaining exercise participation. However, the extent to which the ACT may augment the TPB for explaining RE participation has yet to be adequately delineated. Consequently, the purpose of the present investigation was to examine the utility of adding the ACT to the TPB for explaining RE participation. Using a passive prospective design, a sample of 277 young adults (112 men and 165 women; M age = 21.68 years) completed assessments of the ACT and TPB constructs as well as a 2-week follow-up assessment of RE participation. Results of structural equation modeling analyses revealed that the ACT had a significant direct effect on RE (standardized effect; SE = .15) independent of intention and perceived behavioral control. ACT also had significant effects on subjective norm (SE = .25), affective attitudes (SE = .26), instrumental attitudes (SE = .19), and perceived behavioral control (SE = .34). These findings demonstrate that the ACT predicts RE participation independent of constructs of the TPB. Consequently, future RE promotion efforts may need to address specific aspects of personality, such as ACT, in the design and delivery of behavioral interventions.

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C-117

DISABILITY, STIGMA, AND PHYSICAL ACTIVITY IN CHILDREN

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Individuals with physical disabilities are often stigmatized and therefore may not gain full social acceptance (Goffman, 1963). Participation in physical activity is one strategy that has been shown to create a more favourable image of adults with a disability (Lindwall & Martin Ginis, 2006). Using the stereotype content model as a guiding framework, this study explored whether the stigma that able-bodied adults have towards children with a disability is reduced when the child is portrayed as being active. In a 2 (physical activity status) x 2 (ability status) study design, 178 university students rated a child described in one of four vignettes on 12 dimensions of perceived warmth and competence. Hypotheses were tested using a 2 (activity status) x 2 (ability status) MANOVA followed by post hoc ANOVA. Results revealed a main effect of ability status on warmth, (F (1,174)=32.81, $p < .001$) such that children with a disability were rated significantly higher in perceived warmth (M=33.23, SD=6.36) than able-bodied children (M = 27.79, SD=6.20), regardless of activity status. In addition, a significant interaction of ability and activity status on perceived competence was noted (F (1,174)=5.85, p = .017). This indicated that ratings of perceived competence were significantly higher for active children with a disability (M=35.11, SD=4.37) than for all other children (M<32.12, SD<5.25). These results demonstrate that physical activity should be explored as a possible way to mitigate the stigmatization towards children with a disability.

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C-118

ANTICIPATED AFFECT, GOAL CONFLICT, AND PRIORITIZATION OF EXERCISE

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Exercise self-regulation requires the commitment of time and energy, reflecting a prioritization of exercise goals to the possible exclusion of other goal pursuits. Such commitment may be influenced by the anticipated affective response to exercise. Objective: To manipulate anticipated affective response to a bout of exercise and assess commitment to exercise. Design: This study is a 2 (Anticipated Affect: Positive vs Negative) by 2 (Goal Prime: Mood vs Time Management) between-subjects randomized experiment. We hypothesize that expecting a positive affective response to exercise will lead to greater time commitment and prioritization of exercise goals, and less perceived goal conflict, depending on type of prime. Method: Subjects (N=98) were primed with mood or time management, then told they would complete a vigorous bout of exercise that typically leads to either positive or negative affect. We then assessed exercise goal prioritization and goal conflict. Upon learning of a delay, we measured how long subjects chose to wait to engage in exercise before leaving (i.e., their commitment). Results: Those in the positive affect condition expected to enjoy exercise more ($F_{1,94} = 11.50$, p = .001), and reported higher priority for exercise vs leisure time goals ($F_{1,93}$= 3.28, p = .07) than those in the negative affect condition. Compared to those primed with mood management, those primed with time management reported higher priority for exercise vs leisure time goals ($F_{1,93}$=4.28, p = .04), yet waited for a shorter time ($F_{1,94}$=3.36, p = .07). There was a significant interaction for perceived conflict ($F_{1,94}$=7.64, p = .007); those in the negative affect condition reported greater conflict than those in the positive affect condition, but only when primed with time management. Conclusions: Anticipated affect may influence goal conflict when time is a limited resource. Exercise may be perceived as conflicting less with other tasks when it is expected to lead to positive affect, potentially altering the perception of lack of time as a barrier. Supported by NIMH Grant F31-MH079636

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C-119

SYSTEMCHANGE: IMPROVING EXERCISE BY INCREASING FAMILY SOCIAL SUPPORT

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Social support is often hypothesized as a mediator in behavior change studies, however, little intervention research is able to show successful change in social support across time that translates into measurable changes in behavior. SystemCHANGE is an innovative new intervention that focuses on redesign of family routines as a mechanism to change lifestyle exercise. In an ongoing trial to test the effectiveness of SystemCHANGE as compared to a state-of-the-art cognitive behavioral intervention (CHANGE+) to improve lifestyle exercise in persons following a cardiac event, we sought to determine if social support was improved following the SystemCHANGE intervention and if this change in social support was associated with an increase in exercise.

In this prospective longitudinal study, 82 subjects (mean age=68; 85% male) were randomly assigned to one of the two intervention arms and followed for 6 months. Heart rate monitors worn during freeliving exercise were used to measure # hours exercised. The groups had equivalent baseline levels of family social support as measured by the Social Support for Exercise Scale (Sallis, et. al.,1987).

Findings indicate that at 6 months following the intervention, a significant difference in level of social support between the SystemCHANGE and the CHANGE+interventions groups exists (F=3.80, p=.03), with the SystemCHANGE group having greater social support. Also, in the SystemCHANGE group when controlling for gender, social support predicted exercise amount at 6 months (t = 2.64, p=.01), in contrast to the CHANGE+ group in which social support did not predict exercise (t=1.37, p=.19).

Understanding the mechanisms by which new interventions produce their effects is essential. The effectiveness of SystemCHANGE to maintain exercise for one year following a cardiac event is currently being tested in a large randomized clinical trial. Social support as a mediator will be fully assessed. The family systems approach to behavior change may be an effective way to improve lifestyle exercise.

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C-120

SOCIAL COGNITIVE CORRELATES OF PHYSICAL ACTIVITY: FINDINGS FROM A CROSS-SECTIONAL STUDY OF ADULTS WITH RELAPSING-REMITTING MULTIPLE SCLEROSIS

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There is substantial evidence that persons with multiple sclerosis (MS) are physically inactive and sedentary prompting the search for modifiable variables derived from established theories that act as correlates of physical activity. Such variables would presumably represent targets for interventions designed to promote change in physical activity behavior among persons with MS. The present study examined variables from social-cognitive theory as correlates of physical activity in persons with MS. We expected that self-efficacy would have both direct and indirect relationships with physical activity, and the indirect relationship would operate through outcome expectations, impediments, and goals. Participants were 218 individuals with relapsing-remitting MS (RRMS) who completed a battery of questionnaires that were delivered and returned through the United States postal service. The data were analyzed using covariance modeling with the maximum likelihood estimator in Mplus 3.0. Self-efficacy had statistically significant indirect effects on physical activity by way of impediments (indirect path coefficient = .09), goals (indirect path coefficient = .10), and outcome expectations via goals (indirect path coefficient = .10). This model explained 40% of the variance in self-reported levels of physical activity among those with RRMS. This cross-sectional study suggests that self-efficacy is indirectly associated with physical activity primarily by way of goals and impediments in persons with RRMS.

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C-121

CORRELATES OF DOMAIN-SPECIFIC PHYSICAL ACTIVITY AMONG LOW-INCOME LATINO WOMEN LIVING IN SAN DIEGO COUNTY

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Health disparities among Latinos can be reduced though physical activity (PA). Although research has examined theory-driven correlates of general PA, few studies has attempted to examine how correlates differ across different domains (e.g., occupational, transportation, household and leisure time), particularly Latinas. The purpose of this study was to examine the relative contribution of a set of theory-based correlates for understanding domain-specific PA among Latinas. A community sample of 77 Latinas (mean age= 36.1 ±9.5 yr; mean body mass index [BMI]=31.3 ±6.8) completed interviewer-assisted Spanish-language surveys measuring demographic and health status variables, barrier and task self-efficacy, social provisions, and perceived neighborhood walkability. Participants also completed the Spanish-language International PA Questionnaire (IPAQ; telephone, long form). Hierarchical multiple regression predicting domain-specific PA and sitting time revealed few significant relationships. Adjusting for all other correlates in the model, a neighborhood walkability index explained 10.4% of self-report walking behavior for transportation and recreation, 8.4% of total walking behavior, and 7.6% of moderate intensity leisure time PA. 18.8% of vigorous household activity was explained by BMI, and 15.1% of weekend sitting time was explained by the social provision of Guidance and Attachment. Overall, small amounts of variance were explained by theory-driven predictors, suggesting that domain-specific PA behavior may be influenced by factors not routinely measured and/or that measurement error may be confounding true findings. Further research should examine ecological correlates of domain specific PA among minority populations. Supported by a SIP 09-04 Cooperative Agreement (U48 DP000036-01S1) between the Centers for Disease Control and Prevention and the San Diego Prevention Research Center.

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C-122

EXPLORING THE MEDIATION EFFECT OF DEPRESSION ON THE RELATIONSHIP BETWEEN FUNCTIONAL STATUS AND QUALITY OF LIFE (QOL) AFTER TRAUMATIC BRAIN INJURY (TBI)

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Objectives: Traumatic Brain Injury (TBI) results in functional impairments, disability, and decreased quality of life. However, it is less clear whether and to what extent the association between functional status and QoL is mediated by other factors that often arise in conjunction with functional disturbance such as depression. The purpose of this study was to examine whether depression mediate the association between functional status and QoL after severe TBI.

Methods: This prospective study used longitudinal data collected from patient questionnaires and from medical records of subjects with severe TBI ($N=46$). In addition to demographic and injury related data, patient functional status was measured by GOS and DRS. Patient QoL was evaluated using the Modified Perceived QoL questionnaire, and depression measured by The Patient Health Questionnaire. Data was collected regarding 6 month and 12 month for functional status, depression and QoL respectively. The baseline QoL was recalled by patients after TBI. A mediation analysis was performed to examine whether depression mediates the association between functional status and QoL in patients 6 and 12 months after severe TBI while controlling for age, gender, injury severity and baseline QoL.

Results: After controlling for age, gender, injury severity and baseline QoL, we observed statistically significant interrelationship between functional status and QoL ($P<0.01$), between functional status and depression ($P<0.05$), between depression and QoL ($P<0.001$). The mediation analysis demonstrates that adding depression into the models significantly attenuated the association between functional status and QOL ($P<0.05$).

Conclusions: The results suggested that depression has a mediating relationship between functional status and QoL. Screening for depression and implementing interventions for reducing depression symptoms might be potential strategies for addressing this association.

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C-124

BIOBEHAVIORAL TRAJECTORY ACROSS THE POSTPARTUM

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The purpose of this study was to examine biobehavioral trajectories of postpartum depression, anxiety and fatigue across six months of the postpartum. Sixty healthy women were followed monthly in their homes, and completed health, stress, and mood questionnaires at each visit. A 15 mL blood sample was obtained. The blood was analyzed by stimulated whole blood culture and the supernatants at 48 hours were analyzed for a panel of 6 cytokines (IFN-gamma, Interleukin-2, Interleukin-4, Interleukin-10, Interleukin-6 and Tumor Necrosis Factor-alpha. Additional 24 hour cultures stimulated with lipopolysaccharide with added dexamathasone in a range of 1–6 to 10–10 were carried out, with the supernatants being analyzed for interleukin-6 (IL-6).

The results indicate that while dysphoric moods were low across the postpartum, all dysphoric moods decreased significantly from 1 week through 6 months. Fatigue increased from week 1 to reach the highest level at 1 month, and then decreased.

Almost all cytokines increased over time to peak at about 2 to 3 months followed by a steady decline. There were statistically significant relationships between dysphoric moods and several cytokines as well as correlations of moods with BMI and stress across the postpartum. In particular, TNF-alpha production was related to fatigue, depression, tension, stress, and BMI. All dysphoric moods were correlated with BMI and stress across the postpartum. In stimulated whole blood cultures with added dexamathasone IL-6 production was suppressed, except in cultures from depressed mothers, in which there was inhibition of IL-6 production.

These data suggest that increased BMI, stress and dysphoric moods are associated with elevations in TNF alpha, a proinflammatory cytokine. These relationships potentially could lead to pathophysiological outcomes. In addition, depression in the postpartum may be related to alterations in the hypothalamic-hypophyseal-adrenocortical axis. Lack of dexamathasone suppression in the whole blood cultures could indicate refractoriness of steroid receptors.

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C-125

THE EFFECTS OF SOCIAL SUPPORT ON BODY IMAGE DURING PREGNANCY

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Few studies have investigated whether social support is associated with body image during pregnancy. The current study examined whether different dimensions of social support (Social Support Questionnaire; Baker & Taylor, 1997) were associated with body image (Pregnancy and Weight Gain Attitude Scale; DiPietro et al., 2003) during pregnancy, controlling for education, ethnicity, and planned pregnancy status. Our sample was comprised of 57 predominantly low-income pregnant women who were between 10 and 24 weeks of gestation (77% with high school education or less, 65% Latina, 40% with a planned pregnancy, 56% living with the father of the baby). Chi-square analyses showed that Latina women were more likely to live with the father of the baby (χ^2=5.6, p<.05) and have partners who were involved with the pregnancy (χ^2=4.7, p=.05). Independent samples t-test analyses showed that women with planned pregnancies were more likely to have high spousal support (t=2.4, p<.05), and have a closer relationship with the baby's father (t=2.7, p<.01). Hierarchical regression analyses demonstrated that women with higher levels of overall social support had a more optimal body image (R^2=.20, p<.01), controlling for education, ethnicity, and planned pregnancy status. Results from this study help to further identify factors associated with pregnant women's body image and attitudes towards weight gain during pregnancy.

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C-126

THE EFFECTS OF OPTIMISM ON THE HEALTH BEHAVIORS OF PREGNANT WOMEN

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Few studies have examined the relationship of optimism on the health behaviors of pregnant women. The current study examined whether optimism (LOT-R, Scheier & Carver, 1985) was associated with exercise (number of minutes/week), nutrition (number of servings of high fat foods and number of servings of fruits and vegetables/week), and relaxation (number of minutes/week, types) behaviors before and during pregnancy, controlling for education. Our sample consisted of 57 pregnant women (54% completing a high school education or more, 51% high in optimism). Pearson correlation analyses revealed that lower levels of education were associated with higher optimism scores (r=-.40, p < .001). Independent samples t-test analyses showed that women high in optimism ate more high fat foods during pregnancy compared to women low in optimism (t = 2.4, p <.05). In addition, women who were high in optimism, relative to those who were low in optimism, engaged in relaxation behaviors less frequently during pregnancy compared to before they were pregnant (t = 2.5, p <.05). However, hierarchical regression analyses indicated that, controlling for level of education, women with higher levels of optimism utilized a larger variety of relaxation behaviors (massage=9%, meditation=7%, shower=7%) during pregnancy (R^2= .105, p = .05). While these findings show moderate relationships between optimism and health behaviors, additional research should be done to more completely investigate the effect of optimism on health behaviors before and during pregnancy, as well as their effect on postpartum health outcomes.

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C-128

MINORITY STRESS, PERSONALITY, SOCIAL FACTORS AND WELL-BEING AMONG SEXUAL MINORITY WOMEN

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This study adds to recent research on minority stressors due to sexual minority status predicting well-being. The current study measured external stressors (gay related events and hassles), and internal stressors (self-concealment, internalized homophobia, and perceived stress). Participants completed measures of depression, self-esteem, positive states of mind, and physical symptoms. Measures of social support, hardiness and locus of control were also completed. 395 lesbian and bisexual women from the New York City area completed anonymous mail surveys in 1996–1998. The women were on average 41 years of age (18–75 years), had 3 years of college education (24% had a high school education or less), and reported an average income between $30,000–39,000. Fifty-one percent were white, while 49% were from an ethnic/racial minority group (27% Black, 16% Latina, 1.5% Asian/Pacific Islander, and 8% other. Among this sample, greater perceived stress (p<.001), self-concealment (p<.01) and internalized homophobia (p<.01) predicted greater depressive symptoms. Higher satisfaction with social support (p<.01), and internal locus of control (p<.05) predicted less depressive symptoms (R Square=.334). Greater perceived stress (p<.001), internalized homophobia (p<.01), and self-concealment (p<.01) predicted more reported physical symptoms (R Square=.107). Lower perceived stress (p<.01), and internalized homophobia (p<.01) predicted greater positive states of mind. Higher hardiness scores (p<.05) and a more internal locus of control (p<.07) predicted increased positive states of mind (R Square=.206). More perceived stress (p<.01), self-concealment (p<.001), and internalized homophobia (p<.001) predicted lower self-esteem. Greater hardiness (p<.001), satisfaction with social support (p<.05), participation in support groups/organizations (p<.05) and internal locus of control (p<.01) predicted higher self-esteem (R Square=.381). These results indicate that both external and internal stressors, personality and social variables predicted various measures of well-being.

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C-129

MSM WHO ATTEND SEX PARTIES AND HAVE A HISTORY OF CHILDHOOD SEXUAL ABUSE ARE AT INCREASED RISK TO TRANSMIT OR ACQUIRE HIV

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Background: Between 8% and 25% of urban men who have sex with men (MSM) have met recent male sexual partners at private sex parties, and MSM with a history of childhood sexual abuse (CSA) are more likely to engage in behaviors placing them at risk for HIV. **Methods:** In November of 2008, formative research was conducted with MSM (N=40) who reported attending >1 sex parties in the past 12 months. Qualitative interviews and quantitative assessments were conducted. Analyses examined risk factors for HIV and emerging themes among participants with CSA compared to those with no history. **Results:** Participants had a mean age of 41 (SD=10), 47% were non-white, and 50% were HIV-infected. Overall, 35% of participants reported CSA and considered the experience abusive. MSM with CSA reported high levels of HIV risk behavior: over 50% engaged in serodiscordant unprotected anal sex with a mean number of 20 (SD=16) male sex partners (past 12 months), and 29% engaged in this behavior at the most recent sex party they attended. Participants who used stimulant drugs (AOR=7.02;p=0.01); experienced non-consensual sex as an adult (AOR=7.56;p=0.01); have a lifetime history of treatment for drug/alcohol abuse (AOR=9.69;p=0.002), report ever being incarcerated (AOR=4.06;p=0.05); and were HIV-infected (AOR=3.96;p=0.05) describe the subset of individuals who experienced CSA. Themes that emerged included: (1)substance use during sex as a major contributor to sexual risk (stimulant use, reported by 67%); (2)complex psychosocial histories which often included aspects of revictimization; (3) inconsistent condom use and disclosure of HIV/STD status; and (4)mixed feelings about HIV prevention activities in a sex party setting. **Conclusions:** MSM with CSA who attend sex parties represent a subset of men at high risk for HIV acquisition/transmission. Interventions addressing early and subsequent traumatic experiences, substance use and sexual risk may be warranted.

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SEXUAL BEHAVIOR AND PERCEPTIONS OF RISK IN COLLEGE STUDENTS

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When asked about risky sexual behaviors, people demonstrate an optimism bias, or a belief that peers of their same sexual orientation group are at greater risk for contracting HIV than themselves (Ferguson & Frankis, 2001). Self-identified heterosexual undergraduate student participants (N=196) completed an online survey to assess sexual risk behavior and between-group optimism bias. Participants were randomly assigned one of six sexual interaction vignettes and provided opinions about likelihood of and responsibility for sexual behavior risk. Both male (t(50)=4.46, p<.001) and female participants(t(141)=16.18, p<.001) provided significantly higher peer-oriented than self-oriented behavior risk scores. Participants also exhibited an optimism bias. Heterosexual male participants rated their own risk significantly lower (t(50)=11.54, p<.001) than they rated the average gay man's risk Heterosexual female participants rated their own risk significantly lower (t(141)=19.47, p<.001) than their ratings for the average lesbian. Participants responding to the gay male/high risk vignette perceived a greater likelihood of STI (F [5]=8.81, p < .001) and HIV (F [5]=8.81, p < .001) infection than those assigned to the other conditions. These same participants were also more likely to perceive the vignette's main character as being significantly more responsible for his actions if an STD (F [5]=3.449, p < .01) was contracted.

Those scoring higher on the homophobia scale did not provide higher ratings of behavior risk or responsibility for contracting HIV and/or STDs in the vignettes. Knowledge of HIV, higher levels of health anxiety, and the optimism bias did not moderate risky behavior, although overall knowledge of HIV was very low in this sample. Given that the hypothesized moderators of health anxiety and HIV knowledge did not predict risky sexual behaviors, future studies should focus on other potential motivational and cognitive variables hypothesized to be related to perceived risk and sexual behavior.

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C-131

PARTNER SUPPORT, SEXUAL DYSFUNCTION, AND SEXUAL SATISFACTION AMONG PEOPLE WITH MULTIPLE SCLEROSIS (MS)

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Introduction: Multiple sclerosis (MS) is associated with sexual dysfunction (SD) for both men and women. However, there is limited research on the impact of SD and partner support on sexual satisfaction (SS) among those with MS. In this study of 55 people diagnosed with MS, who participated in a randomized clinical trial of telephone psychotherapy for depression in MS (Mohr et al. 2005), we examined whether those reporting higher (vs. lower) negative social support from partners (NPS) (e.g., criticism, irritation, anger) would show a stronger link between SD and SS. We also examined whether higher levels (vs. lower) of reported positive partner social support (PPS) (e.g., reassurance, encouragement, listening) would buffer the relationship between SD and SS.

Methods: For these analyses, we examined participant data after completion of 16 weeks of psychotherapy. Participants completed standardized measures of social support (NPS and PPS subscales of the UCLA Social Support Measure), SD (Sexual functioning subscale from the Guy's Neurological Disability Scale), and SS (Schover Sexual Satisfaction Scale). Two multiple regressions were conducted, each with SS as the outcome. The first regression contained main effects of SD, NPS, and the interaction of SD X NPS. The second regression examined the main effects of SD, PPS and the interaction of SD X PPS. All analyses controlled for gender and age.

Results: Greater levels of SD (beta=0.41, p<.001) and NPS (beta=0.39, p<.001) were significantly associated with lower SS (Adj Rsq=0.37, p<.001). Similarly, greater SD (beta=0.45, p<.001) and lower PPS (beta=-.31, p<.01) were significantly associated with lower SS (Adj Rsq=0.32, p<.001). No significant interaction effects were found.

Discussion: The relationship between SD and SS did not vary as function of NPS or PPS. Our findings underscore the importance of not just focusing on the severity of MS-related sexual dysfunction, but also on the quality of exchanges in the couple's relationship.

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C-133

PREDICTORS OF ADHERENCE TO NICOTINE GUM AND COUNSELING AMONG AFRICAN AMERICAN LIGHT SMOKERS

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African Americans have low smoking cessation rates, yet no studies have examined treatment adherence in this group. The purpose of the current study was to determine the predictors of adherence to nicotine gum and counseling among African American light smokers (defined as smoking ≤10 cigarettes/day), and the effects of adherence on smoking cessation. Data was obtained from 755 African American light smokers enrolled in a 2 x 2 randomized, placebo-controlled smoking cessation trial of nicotine gum (2 mg versus placebo) and counseling (motivational interviewing versus health education) at a community-based clinic. Measures included demographic and health-related information, smoking behaviors, psychosocial variables, adherence to nicotine gum and counseling, and cotinine-verified 7-day abstinence from smoking. In the final regression model, being married or living with a partner (OR = 1.50, 95% CI = 1.05 to 2.15), higher body mass index (OR = 1.03, 95% CI = 1.003 to 1.05), quit attempts in the past year (OR = 1.05, 95% CI = 1.01 to 1.08), higher baseline exhaled carbon monoxide (OR = 1.03, 95% CI = 1.01 to 1.05), and higher perceived stress (OR = 1.11, 95% CI = 1.02 to 1.20) increased the likelihood of adherence to nicotine gum, while being employed significantly reduced the odds of adherence to nicotine gum (OR= 0.58, 95 % CI=0.41 to 0.83). Predictors of adherence to counseling were being a high school graduate (OR = 1.58, 95% CI = 1.02 to 2.44) and longer years of smoking history (OR = 1.02, 95% CI =1.01 to 1.04). Individual factors may influence adherence to nicotine gum and counseling. Improving psychological interventions and promoting adherence to nicotine replacement and counseling may increase overall smoking cessation success.

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C-134

ETHNICITY AND STRESS AS PREDICTORS OF ADOLESCENT SMOKING

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Previous research has shown that African American teens are much less likely to smoke than Caucasian teens, but the prevalence of smoking among African American adults is nearly equal that of Caucasian adults. These patterns in smoking prevalence suggest that African Americans may increase their uptake of tobacco later in life. One variable that may contribute to this increase in smoking among young African American adults is stress. The purpose of this study was to explore the rates of stress as well as the association of stress with smoking among African American vs. Caucasian youth. We examined teens as they were transitioning out of high school, an experience that might be particularly stressful.

Participants were 3,049 high school students recruited for the Memphis Health Project, a ten year longitudinal study of smoking. The study began when students were in the 7th grade; these data were gathered when most students were in the 12th grade. At this point, the students averaged 17.9 years of age, with 60.8% female and 83.2% African American.

Participants reported their current smoking status as either smoker or nonsmoker. In addition, students rated their level of life stress on a four-point Likert scale ranging from "hardly often" (0) to "very often" (3). High scores represented greater stress.

Our results demonstrated that African American students reported less perceived stress than their Caucasian counterparts, (M= 1.29, M= 2.01, respectively). A logistic regression predicting smoking revealed a significant interaction between race and perceived stress. Follow-ups revealed that for each unit of increase in life stress, African Americans were 1.38 times more likely to smoke. In contrast, stress was unrelated to smoking status for Caucasians. These findings suggest that stress has a significantly greater effect on African American youth than Caucasians. Smoking prevention programs geared toward African American adolescents should include social support and build coping mechanisms during this critically important time.

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C-135

BAMBOO WATER PIPE AND CIGARETTE USE IN RURAL GUANGDONG, CHINA

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Introduction: China is the world's largest tobacco producer and consumer. Most tobacco studies in China either focused only on cigarette smoking or failed to distinguish cigarettes from other tobacco products. A missing aspect from previous research is the diversity of tobacco product, and its regional and cultural references. In southern China (e.g. Guangdong, Guangxi), bamboo water pipe (BWP) is widely used; however, no study has examined the use of BWP.

Methods: In 2009, a random sample (n=288)was selected from 10 rural villages in Guangdong, China. Cantonese-speaking, trained interviewers asked questions (quantitative and qualitative)in tobacco use, social environment, and demographic characteristics. Quantitative data analyses included descriptive statistics, t-tests, Mann-Whitney U tests, and chi-square tests. Qualitative data analyses identified themes from the transcribed interviews.

Results: The ever-smoking prevalence was 64% among males, and 0.7% among females. Almost 80% of the smokers used BWP, with an average of 24 grams of tobacco leaves per day. Only 20% used cigarettes, with an average of 9 cigarettes per day. "Inexpensiveness", "custom/tradition", and "less harm to health" were identified as the main reasons why smokers preferred BWP to cigarettes. Preliminary data analyses suggested that BWP smokers were older than cigarette smokers (50.2 vs 33.1 years, p=0.001), had less formal education (8.5 vs. 12.0 years, p<0.001), and spent less on smoking (18.4 vs. 234.7 yuan/month, p< 0.001). Although most males smoke, 95% of them acknowledged the harm of smoking, 90% would never wanted their children to smoke.

Conclusion: The use of BWP is prevalent in rural Guangdong, due to its low cost, cultural references, and the "perceived" low health hazards. The alarming smoking rate in rural Guangdong warrants thorough understanding of BWP and population who used BWP. Laboratory research is also needed to confirm the health hazards of BWP to the smokers, and to non-smokers who are exposed.

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C-136

SMOKERS HELPING SMOKERS: DEVELOPMENT OF A MESSAGE DATABASE TO HELP CURRENT SMOKERS QUIT

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BACKGROUND: Message databases for computer-tailored interventions are developed using behavioral principles and current evidence. However, current smokers may relate more to messages by a peer. Our goal was to collect and evaluate messages from experienced quitters. METHODS: Varying readiness to quit, age, and gender, we developed eight online scenarios. With Google Ads, we recruited smokers with a prior quit history to respond to a brief demographical survey and four scenarios. The scenarios solicited advice that the experienced quitter (in their own words) would give someone currently quitting. Message prompts included: "On {Phillip's} quit day he can___." A qualitative coding system of frequently observed themes was developed. Themes were not mutually exclusive, with multiple themes coded per comment. Two independent raters (Coley and Williams) with experience in tobacco control reviewed the messages to identify themes and met to adjudicate any discrepancies. RESULTS: Thirty-nine experienced quitters from across the US responded: 13 males and 26 females between 19–50 years (79%) and white (82%) with 32 current smokers who had previously tried to quit and 7 ex-smokers. In all 2,886 messages were generated (average codes per message = 1.2, SD 0.68). Example messages included: "It helped a lot to set up milestones like I won't smoke while I do this one thing." Common themes of advice for smokers not ready to quit and those ready to quit, respectively, included: attitudes and expectations (ex: harmful to others) (38%, 16%), improvements in quality of life (ex: more money) (37%, 23%), behavioral strategies (ex: avoid) (26%, 58%), and seeking help (ex: talk to MD) (18%, 20%). CONCLUSIONS: Experienced quitters' provided advice that was frequently consistent with evidence-based smoking cessation strategies. These messages will be used in a tailored smoking cessation system currently being evaluated. NIH Support: R01CA12901

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C-137

CLINICALLY SIGNIFICANT CHANGE IN DEPRESSED MOOD DURING SMOKING CESSATION

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Depressed mood has been shown to hinder smoking cessation and abstinence. Less well studied is the development of depression following cessation using Clinically Significant Change (CSC) criteria. We explored increases in depressed mood among quitters in a smoking cessation trial using CSC, which occurs if individual patients experience statistically reliable change and this change is associated with a crossover from a dysfunctional to a functional population, or vice versa. The threshold for reliable change is calculated as 1.96 times the standard error of change. Standard error of change is calculated as √(2(Scale SD√1-Scale reliability))^2. We applied these methods to the CESD and reliable change was calculated to be 12.6 points and a score of 23 was used as the cut-off point as past studies have indicated scores of ≥23 are indicative of probable depression. Quitters (N=57, 84% Female, M Age=33.8, M Cigs/day=12.6) were biochemically confirmed abstinent at one or more time points through 12 months post-treatment. Change in depressed mood was assessed in the interval prior to report of abstinence (Interval 1) and after quitting (Interval 2). 0% (0/57) of quitters experienced CSC in depression in Interval 1 while 14.3% (7/49) experienced CSC in Interval 2 (p<.01). Those who maintained abstinence during Interval 2 where not significantly more likely to become more depressed than those who relapsed during Interval 2 (5/29, 17.24% vs. 2/20, 10.00%). Results suggest that only a minority of patients experience clinically significant increases in depressed mood following cessation. The rate of CSC in CESD scores matches the rate of development of depression reported by Tsoh et al (2000) who used a self-report diagnostic measure, suggesting that CSC on the CESD may be a useful proxy measure for development of depression. The finding that more clinically significant increases occurred in Interval 2 than interval 1 suggests that monitoring and management of mood may be useful for several months following cessation. Funded by NHLBI R0162165 B. Borrelli.

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C-138

TOBACCO USE AND CESSATION AMONG RETURNING COMBAT VETERANS: A MIXED METHODS STUDY

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US military service members' tobacco use has increased over the past 8 years, reversing the prior trend of reduced smoking in the military. Almost 45% of US service members deployed to Iraq and Afghanistan smoke–double the rate of other Americans. Although there is considerable evidence that military personnel and veterans are interested in tobacco use cessation, little is known about their reasons for quitting, preferences and perceived barriers to effective tobacco cessation treatment. To answer these questions, we conducted a mixed-methods study and solicited specific recommendations for tailoring cessation services. We conducted exploratory analysis of 6 focus groups and individual surveys (n=27) with recently discharged veterans currently smoking or successfully quit (> 3 mos.).

No differences between groups were noted (smokers vs. quitters) for age or smoking history. However, current smokers reported higher anxiety sensitivity (M=69.3; SD=35.3) compared with quitters (M=33.0; SD=26.7), [t=-2.5, (24), p=.01]. Content analysis of focus group data revealed that military personnel integrated smokeless tobacco use during deployment because of work with explosives, night patrols, or lack of access to cigarettes. Military personnel cited stress management, justification for taking a break and social aspects of smoking with others as reasons for smoking during deployment. Reasons to quit included social pressure, concern for health, impact of secondhand smoke on family members and not wanting to be dependent or "weak". Recommendations for program improvements included innovative incentives to quit, personalized treatment with telephone follow-up, caring providers, peer support, and making treatment available for family or other household members. Tailoring of engagement strategies to provide access to effective tobacco use cessation treatment is essential to the long term health of our newest veterans.

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C-139

DEVELOPMENT OF THE SMOKING-RELATED GUILT SCALE

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Awareness of tobacco-related health risks may lead to smoking-related guilt among tobacco users. *Situational* guilt results from specific acts of transgression, prompting regret, remorse, and desire to make reparations; *chronic* guilt is theoretically akin to shame, involving self-loathing, humiliation, and perceived failure. Previous studies suggest that situational guilt (SG) is associated with increased positive health behavior, while chronic shame (CS) may be correlated with negative health behavior. The Smoking Related Guilt Scale (SRGS) was developed to measure SG and CS secondary to cigarette smoking. First, content validity of 48 potential items was assessed via expert ratings. Second, a pilot SRGS (15 SG and 15 CS items retained after expert review) was administered to 90 current and former smokers. Exploratory factor analysis (EFA) with principal axis factoring and varimax rotation facilitated item reduction and investigated the theoretical two-factor structure. Other psychometric analyses assessed internal consistency and construct validity (using demographics, smoking history, and depressive symptoms). Participants were primarily female (91%), racially diverse (49% African American), and low-income (70%) current smokers (88%), with mean age 33 ($SD=8$). EFA yielded an 11-item scale with a two-factor solution accounting for 69% of variance. All factor loadings were $\geq .74$ on the expected SG (6 items) and CS (5 items) factors. Internal consistency of each subscale was high ($\alpha=.93$ and $.83$, respectively). Construct validity analyses detected no significant associations between either subscale and demographics or CES-D scores. The SRGS is designed to assess two types of smoking-related guilt which may influence health behaviors differently: situational guilt and chronic shame. Exploration of associations between situational guilt, chronic shame, and smoking cessation outcomes could guide development of interventions appropriate for those experiencing smoking-related guilt. Each SRGS subscale exhibits strong internal consistency and preliminary construct validity. Further psychometric evaluation is ongoing with a larger, more heterogeneous sample.

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C-140

USING MARKET RESEARCH TO UNDERSTAND LIFESTYLE CHARACTERISTICS AND HEALTH BEHAVIORS AMONG COLLEGE STUDENTS

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Marketing campaigns, such as those developed by the tobacco industry, are based on market research, which defines segments of a population by assessing psychographic characteristics (i.e., attitudes, interests). In two studies, we used a similar approach to define market segments of college smokers, examined differences in frequency of their health behaviors (i.e., smoking, drinking, binge drinking, exercise, fat intake), and qualitatively assess differences in attidues regarding lifestyle, smoking, and other health behaviors among the segments. In Study 1, 2,265 undergraduate students aged 18–25 years completed a 108-item online survey in Fall, 2008 assessing demographics, health behavior variables, and psychographic characteristics using survey items adapted from tobacco industry documents. Among the 753 students reporting past 30-day smoking, cluster analysis was conducted using 21 psychographic questions and identified three market segments—Stoic Individualists, Responsible Traditionalists, and Thrill-Seeking Socializers. Market segment membership was related to differences in reported frequency of alcohol use ($p<.05$), binge drinking ($p<.001$), and limiting dietary fat intake ($p<.001$), but not smoking or exercising. In Study 2, we conducted twelve focus groups which were homogenous in terms of gender and market segment. The segments differed in their reactions regarding lifestyle characteristics, motives for smoking, attitudes about smoking and smoking policies, and engagement in other health-related behaviors such as drinking, exercising, and nutrition. Thus, market research may be useful in identifying qualitatively different subgroups of young adults and might inform the development of tailored interventions and health campaigns targeting college students.

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C-141

THE ROLE OF SELF-EFFICACY ON TREATMENT OUTCOMES IN A SMOKING CESSATION PHARMACOTHERAPY TRIAL

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Self-efficacy (SE) is regarded as a pivotal component for behavior change and has been shown to predict smoking cessation and relapse. However, there is a lack of research on the relationship of SE with outcomes of smoking cessation pharmacotherapy trials. The current study aimed to address this issue by examining SE, treatment retention, and relapse rates in a 12-week, double-blinded, randomized study of the opioid antagonist naltrexone (NTX) vs placebo (PLA), both with counseling and nicotine patches. Participants were $N=300$ adult smokers (154 NTX; 146 PLA). SE ratings were obtained by asking the participant to rate on a 10-pt scale, “how confident are you that you will be smoke free?” during each of six study visits, up to one month post quit date. Retention was dichotomized as either completer ($n=232$; completed treatment up to 10 sessions) or drop out ($n=68$; did not complete treatment), and quit rates were assessed at end of treatment and verified by expired air carbon monoxide tests. The raw data for SE ratings were significantly skewed ($mean=8.5$, $mode=10$) and transformed for analyses. Entering last SE, drug, sex, race, and nicotine dependence level in a regression analysis indicated that lower SE ratings significantly predicted lack of retention ($p<0.001$) and greater smoking relapse ($p<0.0001$). While SE significantly increased over the first month of the study ($p<0.001$), these ratings were only moderately higher in the NTX group compared to PLA ($p<0.09$). In sum, low levels of SE were related to subsequent drop-out and smoking relapse, but SE was only modestly associated with medication condition. The results support the role of SE in smoking cessation treatment outcomes, but it remains unclear whether pharmacotherapy options, such as naltrexone, affect cessation via increasing confidence.

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C-142

A PILOT OF AN INTEGRATED SAFETY/SMOKING CESSATION INTERVENTION FOR SMALL MANUFACTURING BUSINESSES

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Although the prevalence of smoking has declined in all occupation groups, it remains high in blue-collar workers. Blue-collar workers are also likely to be exposed to occupational hazards and many work in small businesses that have limited resources to provide either health promotion or occupational health and safety programs. This pilot project was a preliminary evaluation of an integrated occupational safety and smoking cessation program for small manufacturing businesses. Goals were to develop an effective program that was feasible for implementation by a county public health department and that worked through the companies' existing safety committees. The program was implemented in two small (i.e., 30 and 62 employees) manufacturing businesses over a 6-month period. A baseline survey of all employees assessed smoking rates and perceived safety hazards. The intervention included working with safety committees to address safety issues; making employees aware of their insurance benefits for smoking cessation treatment; encouraging smokers to use community smoking cessation resources; providing sample nicotine replacement products (NRT); and working with safety committees to develop employee break activities incompatible with smoking. Evaluation consisted of baseline and follow-up surveys of employees and focus groups conducted after the final survey. Baseline smoking rates were 36% and 19% at the two worksites; most smokers had never sought treatment. Smoking cessation kick-off events were well-attended and many employees took sample packets of NRT products. Two (9%) of the 22 baseline smokers still employed at follow-up reported having quit smoking on the follow-up survey. Of those continuing to smoke, about half reported trying medications for smoking cessation and five (25%) reported talking to a doctor about quitting during the study period. The results suggest that this brief intervention motivates smokers in small manufacturing businesses to try to quit. The next step is a full trial.

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EFFECTS OF COLLEGE CLIMATE ON STUDENTS' BINGE DRINKING: HIERARCHICAL GENERALIZED LINEAR MODEL

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Background: Few studies have investigated the effect of college-level contextual factors on students' binge drinking. Most previous studies focused on the effect of individuals' characteristics on their binge drinking.
Purpose: This study tested the effect of college-level contextual factors on students' binge drinking.
Methods: The 2006 National College Health Assessment data collected from 76,542 students in 113 US 4-year colleges were analyzed using the Hox 5-step hierarchical random effects logistic regression models.
Results: Of the 76,542 students, 64% were female, 76% were White, 5% were Black, and 9% were affiliated with Greek organizations. Their mean age was 20.9 years (SD = 2.4). A total of 39% of the sample reported engaging in binge drinking at least once within the last 2 weeks. College-level variables, such as percentage of students with Greek affiliation and aggregated perception of cigarette use, significantly predicted students' binge drinking above and beyond student-level predictors. An intra-class correlation was 0.10 in the null model, indicating that 10% of students' binge drinking could be explained by differences among colleges. Significant cross-level interactions were found between college-level variables and student-level variables. For example, Black students and non-Black students had a similar level of binge drinking at a college with a low level of perceived college cigarette use, but, at colleges with a high level of perceived college cigarette use, non-Blacks were more likely to binge drink than Blacks.
Conclusions: In order to reduce binge drinking in college, the findings underscore the need for active intervention within the college climate that addresses drinking.

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C-145

STAGE-SPECIFIC PSYCHOSOCIAL CORRELATES OF ADOLESCENT ALCOHOL USE: VARIATIONS BY GENDER

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AIM: to examine associations between psychosocial factors and two stages of alcohol use: experimentation and current use.
DESIGN: Secondary analysis of cross-sectional survey data from a nationally-representative sample of US 10th graders who participated in the 2005/6 Health Behavior in School-aged Children study (n=1442).
PREDICTORS: Personality (Life satisfaction; academic achievement), environmental (mothers and fathers' knowledge of adolescents' activities; school climate), and behavioral (aggression; bullying) correlates of alcohol use.
OUTCOME MEASURE: Alcohol experimentation and current use.
ANALYSIS: Planned backwards block stepwise multinomial regression, run separately by gender.
FINDINGS: Our results show that experimental and current alcohol use are negatively associated with correlates from the personality and environment systems, and positively associated with correlates from the behavior system. Stronger associations for current rather than experimental users were observed for most, but not all correlates. Finally, while the behavior, perceived environment and personality systems were significant correlates of alcohol experimentation and current use among boys, only the perceived environment was a significant correlate of alcohol experimentation and current use among girls. Among all psychosocial correlates that were investigated, mothers' knowledge emerged as the sole protective factor against current alcohol use for boys and girls and fathers' knowledge as the sole protective factor that was negatively associated with alcohol use across stages for girls.
CONCLUSION: Our results indicate that interventions promoting protective environmental factors such as mothers and fathers' knowledge of adolescents' activities are likely to produce the greatest public health impact because of their effect across gender and stage of use.

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VALIDITY OF SELF-REPORT AMONG CHRONICALLY HOMELESS INDIVIDUALS WITH ALCOHOL PROBLEMS

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Accurate information regarding publicly funded service utilization is key to evaluation of public health interventions. However, no studies to date have evaluated validity of self-reported service utilization among homeless individuals with severe alcohol problems. This study filled this gap in the literature by comparing self-report data with county utilization records in this population. Participants (N=134) were chronically homeless individuals with severe alcohol problems who participated in a cost-effectiveness trial of a housing first program (see Larimer et al. 2009). Baseline questionnaires assessed psychiatric symptomatology, alcohol use, physical health, and service utilization in the past 30 days. Self-reported utilization of a local sobering center, hospital and county jail services were compared to county utilization records for the same timeframe. Self-report corresponded to county utilization records for use of sobering center (82%), hospital (78%), and county jail facilities (87%). However, Kappa coefficients indicated below-adequate category-specific agreement (.27<_ < .59). Bivariate, nonparametric correlations tested associations between hypothesized correlates and discrepancies in self-reported and county utilization data. Although self-reported alcohol use and consequences did not consistently predict over- or under-reporting of utilization, abstinent days were positively associated with overreporting of jail and sobering center visits (ps<.03). Self-reported visits to hospitals, medical detox/sobering center, and jail were associated with discrepancies on their corresponding measures (ps<.05). Greater self-reported psychiatric symptomatology was associated with discrepancies in reporting jail and hospital visits. Chronically homeless individuals with severe alcohol problems were able to provide information about their use of public services, with limited accuracy.

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C-147

NON-MEDICAL USE OF PRESCRIPTION DRUGS, DRUGS OF ABUSE, AND SEXUAL RISK BEHAVIOR IN YOUNG ADULTS

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Data from the CDC show increasing rates of non-medical use of prescription drugs (without a physician's prescription) among U.S. young adults. The present study examined the non-medical use of prescription drugs, the use of traditional recreational drugs, and sexual risk behavior in young adult college students (N= 435). Overall, 36% of participants reported non-medical use of at least one prescription medication during their lifetime. The most commonly used type of drug was pain medication (e.g., Vicodin) 33%, followed by medication to enhance attention (e.g., Ritalin) 15%, anxiolytics (e.g., Xanax) 14.7%, and sedatives (e.g., Ambien) 8%. Individuals who reported non-medical use of prescription drugs were significantly more likely to use alcohol, marijuana, ecstasy, methamphetamine, and cocaine, relative to individuals who did not report non-medical use of prescription drugs (ps <.05). Forty-three percent of individuals who reported non-medical use of prescription drugs indicated that they had combined this use with the use of alcohol and 21% indicated that they had combined this use with the use of a traditional drug of abuse. Non-medical use of prescription drugs was also associated with sexual risk behavior. Individuals who reported non-medical use of prescription drugs reported more sex partners in the previous 3 months (M = 1.29, SD = 1.44) than individuals who did not report non-medical use of prescription drugs(M=0.89, SD = 1.75), Z (Mann-Whitney)=5.71, p < .001. Similarly, individuals reporting non-medical use of prescription drugs reported more acts of unprotected vaginal or anal sex in the previous 3 months (M = 13.1, SD = 21.5) than individuals not using these drugs (M=5.5, SD = 14.0), Z (Mann-Whitney)= 5.93, p < .001. Young adults are at risk for medical complications resulting from combining prescription medication use with the use of alcohol or street drugs. They may also be at risk for complications of sexual risk behavior, including unplanned pregnancy and exposure to HIV and other STIs

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C-148

THERAPEUTIC ALLIANCE AND ITS INFLUENCE ON SERVICES AND OUTCOMES FOR CONSUMERS RECEIVING METHADONE TREATMENT

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Richmond Behavioral Health Authority, RIchmond, VA.

Opiate addiction is a major public health concern that negatively impacts the user, their families and the larger community. Methadone treatment is an evidence-based medication-assisted therapy for opioid dependence that allows consumers to function normally by reducing or eliminating drug cravings. Methadone clinics provide controlled environments for medication distribution, counseling and support services for consumers. Therapeutic (or working) alliance (TA) is the collaborative relationship between the treatment provider and the consumer to achieve treatment goals, and is an important factor influencing treatment outcomes. Length of services (LOS) in addiction treatment has consistently been related to positive treatment and life outcomes. This study examined TA and LOS in treatment as predictors of consumer functioning in methadone clinics. Data was collected from 700+ consumers receiving treatment for substance use disorders, as part of a larger study of organizational factors in treatment programs in the Southeastern United States. Surveys included a modified version of the Working Alliance Inventory (WAI) with subscales measuring task (belief that consumer and provider agree on the needed treatment plan), goal (consumer and provider are working together to achieve agreed upon goals), and bond (perceptions of trust and confidence in the provider). Surveys included a consumer satisfaction scale to assess self-perceived functioning in various domains, and a measure of how long consumers had been receiving services. Regression analyses of 544 methadone consumers suggest that WAI bond was the only TA subscale significantly associated with LOS in treatment. LOS was not shown to significantly impact functioning; however WAI bond, task and goal were all positively related to functioning. These findings highlight the importance of TA, particularly “bond” on consumer outcomes, and have implications for staff training on basic counseling skills that promote positive interactions and relationships between providers and consumers.

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C-149

EXAMINING THE EFFECT OF BEHAVIORAL ACTIVATION ON SUBSTANCE ABUSE TREATMENT RETENTION

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Depression is prevalent among substance users and has significant clinical implications, including substance abuse treatment dropout. Few depression interventions have been developed to meet the needs of depressed, low-income substance users. One approach that has been shown to be useful in this context is behavioral activation (BA); Daughters et al. (2008) adapted BA to meet the specific needs of inner-city substance users with depression, and in a preliminary pilot study for this treatment [Life Enhancement Treatment for Substance Use (LET’S ACT)], LET’S ACT was associated with a significant reduction in depressive symptoms and a significant increase in reinforcement. Several extensions of this study are necessary, including a contact time-matched control treatment and examination of the effect of LET’S ACT on substance use outcomes. The current study compared LET’S ACT to Supportive Counseling (SC) and examined the effect of treatment on substance abuse treatment retention in a sample of 58 low-income substance users with clinically significant depressive symptoms (BDI $\geq$ 12 or diagnosis of MDD) who were receiving residential substance abuse treatment in Washington, DC. Participants were assessed at baseline (week 0), post-treatment (week 4) and at a 2-week follow up (week 6). Intent-to-treat logistic regression analyses revealed that LET’S ACT significantly predicted dropout from residential treatment (OR = 11.74, CI = .009-.805, p < .05); 24% (n=7) of individuals in SC dropped out of residential treatment and only 0.03% (n = 1) in LET’S ACT dropped out. Further, cox proportional hazards survival analyses indicated that SC was significantly associated with a shorter number of days to treatment dropout (hazards ratio = 10.49, CI = 1.27–86.86, p < .05). These findings provide initial evidence for the effect of LET’S ACT in reducing substance abuse treatment dropout, further suggesting the utility in treating depression as a means to also improve substance use outcomes.

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C-151

PERCEIVED BARRIERS AS PROSPECTIVE PREDICTORS OF ADHERENCE AND CLINICAL OUTCOMES AMONG PEDIATRIC TRANSPLANT RECIPIENTS

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The Parent and Adolescent Medication Barriers Scales (Simons & Blount, 2007) are two factor analytically derived, multidimensional screening tools for examining barriers to medication adherence. Nonadherence in pediatric organ transplant is prevalent and can result in negative health outcomes such as medical complications, rejection, allograft loss, and death. The current study sought to longitudinally investigate associations between barriers endorsed at the original assessment and medical adherence and clinical outcomes 18 months later. Both overall subscales scores and individual, face valid items were examined in relation to outcomes. Of the 82 adolescent recipients (ages 11–20) in the initial cohort, 66 families participated in the follow-up. Rejection episodes, hospitalizations, and patient death were most strongly associated with parent and adolescent Ingestion Issues subscale scores (r = .25, .26, and .26 respectively) and specific items such as not liking the taste of the medication, believing the medication has too many side effects, and having a hard time swallowing the medication. Among adolescent reports, higher Disease Frustration/Adolescent Issues subscale scores and items (e.g., not wanting to take the medication at school, being tired of living with a medical condition) were associated with taking doses late and erratic immunosuppressant drug levels (r = .32 and .29 respectively for subscale scores). Additionally, parent reported higher Regimen Adaptation/Cognitive Issues subscale scores and items (e.g., adolescent forgetfulness or lack of organization) were associated with missed doses of medication (r = .33 for subscale score). Perceived barriers to adherence are central to efforts to ameliorate adherence difficulties and related health complications. The PMBS and AMBS demonstrate prospective strength and specific items provide a means of identifying needed targets for intervention.

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C-152

RACIAL DISPARITIES IN KIDNEY TRANSPLANT: BEYOND MEDICAL FACTORS

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End-stage kidney disease (ESKD) is more common in African Americans (AAs) than European Americans (EAs). AAs also wait longer to receive a kidney transplant (KT) for this disease; and are less likely to receive the optimal treatment, a living donor KT. Reasons for race disparities are poorly understood. This longitudinal study examined how cultural factors (e.g., perceived discrimination, medical mistrust), psychosocial factors (e.g., anxiety, depression), and KT knowledge contributed to race disparities in KT.

Patients being evaluated for KT completed telephone interviews after their first transplant clinic appointment, and again after they were accepted or found ineligible for KT. At baseline AA (n=25) and EA (n=79) patients were demographically similar, although AAs had lower incomes (t=2.4, p<.05). AAs reported experiencing significantly more healthcare discrimination, perceived more overall healthcare racism, had higher levels of medical mistrust, lower trust in their physician, greater family loyalty, and more religious objections to KT than EAs (t-tests range = 1.9 to 5.8, all ps<.05). AAs took significantly longer to complete transplant evaluation than EAs (t=2.1, p<.05). This difference appeared to be accounted for by other factors: linear regression indicated that more experience of healthcare discrimination, higher perceptions of healthcare racism, lower KT knowledge, more depression, and greater trust in their physician predicted longer time to complete evaluation (adjusted R2=0.3, p<.001). Logistic regression indicated that higher rates of medical mistrust was the only significant predictor of participants who had a living donor (OR=3.2, 95% CI=1.3, 8.3).

Cultural and psychosocial factors associated with race contribute to disparities in the duration of KT evaluation. Transplant teams must pay particular attention to such factors in KT candidates in order to help ensure that AAs are not disadvantaged in proceeding through the transplantation process.

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C-154

SELF-MANAGEMENT INTERVENTIONS FOR VETERANS WITH HEPATITIS C

Erik J. Groessl, PhD,[1,2] Kim Weingart, MA,[1] Allen Gifford, MD,[3] Steven Asch, MD[4] and Samuel Ho, MD[1,2]

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Chronic hepatitis C (HCV) affects millions of people in the US, and VA patients are disproportionately affected. Antiviral treatments are available for HCV but have side effects, are not offered to everyone, and are successful less than half the time. Self-management interventions are one option for improving the health-related quality of life of HCV-infected individuals. We present data on the efficacy of a self-management intervention.
132 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 either a 6-week self-management workshop or an information-only intervention. The six 2-hour self-management sessions were co-led by a peer-leader and a health care professional. The intervention is based on cognitive-behavioral principles and was adapted from an existing self-management framework that has been efficacious with other chronic diseases. HCV-specific modules were added. Outcomes including generic and disease-specific HRQOL, HCV knowledge, self-efficacy, depression, energy, and health distress were measured at baseline and again 6 weeks later. Data were analyzed using repeated measures ANOVA.
When compared to the information-only group, participants attending the self-management workshop improved more on HCV knowledge (F(1,129) = 20.4, p<.001), HCV self-efficacy (F(1,130)=6.6, p=.011), and SF-36 energy/vitality (F(1,130)=4.3, p=.040). Similar trends were found for SF-36 physical functioning (p=.055), SF-36 pain (p=.073), depression (p = .093), health distress (p=.055), and QOL-VAS (p =.105).
Participants attending the Hepatitis C Self-Management Program had better outcomes than the comparison group in a number of different areas. Longer term outcomes are being collected and results on additional outcomes such as health care utilization and antiviral treatment are forthcoming. Plans for implementing the intervention in other VA and community settings are being developed.

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Saturday
April 10, 2010

Poster D 8:30 AM–10:00 AM D-001

UNDERSTANDING REASONS FOR MISSED ENDOSCOPY APPOINTMENTS IN THE SAFETY-NET

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Objective: Colonoscopy screening can reduce colorectal cancer (CRC) incidence and mortality. However, 10 to 15% of patients do not attend their scheduled endoscopy appointment, such missed appointments are more common in clinics serving low-income or uninsured patients, the very patients are at increased risk for late stage diagnosis. We sought to describe reasons for non-attendance in a “safety-net” endoscopy clinic. Our goal was to identify areas for an intervention to improve attendance at scheduled appointments.
Method: Over several months, attempts were made to contact all patients who “missed” their appointment. Participants (N=75) who provided verbal consent answered a brief telephone survey that included open-ended questions about reasons for missing. Nonresponse was due mostly to invalid phone numbers. A text analysis was conducted on the responses to open-ended questions.
Results: The most common explanations for non-attendance were forgetting, lack of transportation/not having someone to accompany them, personal health issues such as illness, and difficulties with the preparation. When asked what the clinic could have done, respondents most often asked for help with transportation, appointment reminders, reminders/assistance with preparation, cost assistance, or help with work/family care issues. Few patients said that they had not wanted the appointment.
Discussion: Nonattendance results in a missed opportunity for cancer prevention and early detection. This is especially important in underserved populations. While missed appointments are often anecdotally attributed to non-compliant patients, our data indicate logistical barriers and the need for a reminder system. Our study is limited by the use of a convenience sample and selection bias, however it adds to a scarce literature on nonattendance for cancer screening. We will use the findings to inform the development of an intervention.

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D-002

BARRIERS TO THE SURVIVORSHIP TRANSITION IN BREAST CANCER PATIENTS: A STRUCTURAL ANALYSIS

Jennifer Hydeman, PhD, Michael Zevon, PhD, Denise Mercurio-Riley, MS, Elizabeth Swigar, BA, Joanne Janicki, AA and Tracey O'Connor, MD

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While the breast cancer patient's transition from active treatment to survivorship is an important milestone, it is also a difficult adjustment for many patients, with pressures to return to "pre-diagnosis" functioning in relationships, work, and social activities. We examined this issue in a pilot study using a multivariate methodology in order to both identify issues women felt were important to this transition, and evaluate their perceived preparation to manage these challenges. We conducted 2 focus groups (n=12) and asked women more than 6 months post-treatment to identify issues they felt inadequately prepared for as they transitioned to survivorship status. Participants identified 61 issues that were then sorted into themes and rated in reference to their importance and how prepared they felt to deal with the issue using 5-point unipolar Likert scales. These were analyzed using multidimensional scaling and cluster analysis in order to identify the structure underlying the patient-identified barriers. This analysis resulted in a 7 cluster solution documenting a lack of preparation in the following domains: treatment-related effects, complementary treatment resources, future concerns, transition-specific issues, management of social anxiety, and the management of physical and emotional impacts. Strikingly, while all 7 domains were rated as very important to the survivorship transition (mean importance rating=3.7), participants rated themselves as ill-prepared to manage these concerns (mean preparedness rating=2.4). Participants failed to rate themselves as even moderately prepared for any of the identified domains. Overall, our findings identify domains critical to the transition to survivorship, and document that women entering the post-treatment phase feel unprepared to deal with the range of concerns they face. Our results also identify empirically-based content for the development of interventions to enhance the ability of breast cancer patients to successfully negotiate the critical survivorship transition and regain a sense of normalcy in their lives.

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D-003

HEALTH BEHAVIOR AFTER CANCER: ARE SURVIVORS DOING ENOUGH?

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Health-related behaviors after cancer diagnosis can improve quality of life and reduce risk of second cancers or cancer recurrence. The purpose of this report is to examine the prevalence of physical activity (PA), fruit and vegetable consumption (5-A-Day), alcohol consumption, smoking, and cancer screening behaviors in a cohort of Non-Hispanic White (NHW) and Hispanic breast cancer cases and controls in the Southwestern U.S. A total of 437 breast cancer cases (293 NHW/144 Hispanic) and 424 controls (273 NHW/151 Hispanic) completed a computer aided telephone interview (CATI) that included the lifestyle behavior and cancer screening questions from the Behavioral Risk Factor Surveillance System (BRFSS, 2007 version). Prevalence of current health-related behaviors was compared to American Cancer Society guidelines for cancer prevention and control. Only a minority of cancer survivors were meeting the 5-A-Day (10%) or PA (36%) recommendations. 63% of cases and 65% of controls consumed 1 or less drinks per day, and 83% of cases and 76% of controls were non-smokers. After adjusting for age, marital status, education, and Body Mass Index, there were no significant differences between cases and controls. Only 7% of cancer survivors and 9% of controls were meeting all recommendations. Ethnic differences in health-related behaviors related to diet and exercise were noted. Few cancer survivors or controls are meeting the PA or 5-A-Day recommendations. Given that cancer survivors are at increased risk for a second diagnosis and chronic co-morbidities, doing as well as the general population in meeting these guidelines is not good enough. Interventions to build on the potentially "teachable moment" of a cancer diagnosis are warranted.

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D-004

PARTNER'S EMPOWERED: A COUPLE-BASED INTERVENTION FOR NEWLY DIAGNOSED CANCER

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A cancer diagnosis affects the person diagnosed as well as the partner and their relationship. How a couple copes with this challenge affects their relationship and each member individually. Despite this, few interventions have been developed to address couple level challenges associated with a cancer diagnosis.

Couples with newly-diagnosed cancer (n=77) were enrolled in a 6 session couple-based CBT intervention. Dyads were assessed pre and post intervention. Outcome measures included relationship satisfaction for both patient and partner, and patient quality of life. Relationship satisfaction was examined as a moderator.

Within-group effect sizes examined pre to post intervention changes. For patients in dissatisfied relationships, medium to large effect sizes were observed on relationship satisfaction (d = .67) and quality of life (d = .29 to 1.01). Partners in dissatisfied relationships were also more satisfied with their relationship post-intervention (d = .53). Patients in satisfied relationships showed smaller improvements in quality of life (d = .18) and no change in relationship satisfaction (d = .05). Partners reporting relationship satisfaction at pretest declined in satisfaction at posttest (d=-.43), but remained in the satisfied range.

This couple-based intervention showed promise in improving individual as well as relationship functioning for cancer patients and relationship satisfaction for their partners. Future research is needed to examine this intervention in the context of a randomized study controlling for the effects of time as well as expanding outcome variables to include partner functioning.

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D-005

PHYSICAL ACTIVITY AND SURVIVAL AFTER METASTATIC BREAST CANCER DIAGNOSIS

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Recent research suggests that physical activity may decrease the risk of death among women diagnosed with stage I to III breast cancer. However, this relationship has not been examined among patients diagnosed with stage IV breast cancer. We conducted a retrospective observational study of 125 women diagnosed with metastatic breast cancer (n=125), who were recruited for a larger study of supportive-expressive group therapy. Physical activity was assessed prior to women's random assignment to treatment condition. Moderate, hard, and very hard activity categories were given a corresponding metabolic equivalent task (MET) rating. They were followed for at least two years or until death. Women who were more physically active had significantly greater survival rates compared to less active women (hazard ratio=0.911, 95% CI =0.86, 0.97, p=0.0031). Women who spent an extra hour per day engaging in moderate activity rather than light activity experienced a 2.5 MET increase (1.5 METs to 4.0 METs), resulting in a hazard ratio of 0.78. This relationship was statistically significant in a secondary analysis controlling for other variables associated with survival in women with Stage IV breast cancer (Karnofsky score, cortisol slope, estrogen receptor status, and disease free interval). Thus, an extra hour a day of moderate activity predicted a 22% decrease in mortality risk over time. These results suggest that women with Stage IV breast cancer need not engage in strenuous exercise; rather, one hour of moderate physical activity per day, such as shopping for groceries, gardening, or yoga may contribute to a significant improvement in survival. Further research should try to replicate these results for women with Stage IV breast cancer and examine potential mechanisms.

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D-006

PRETREATMENT SEXUAL DYSFUNCTION AND ITS RELATIONSHIP TO QUALITY OF LIFE IN NEWLY DIAGNOSED GYNECOLOGIC CANCER PATIENTS

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Sexual dysfunction is often associated with treatment for gynecologic cancer and its impact on survivors' quality of life is well-documented. The extent to which sexual dysfunction may exist prior to treatment is not known, however, as most studies have lacked a pretreatment assessment of sexual function. To address this limitation the present study examined the prevalence of sexual dysfunction and its relationship to quality of life before treatment in 143 newly diagnosed gynecologic cancer patients. Participants completed the Memorial Symptom Assessment Scale-Short Form (MSAS-SF), Female Sexual Function Inventory (FSFI) and Medical Outcomes Study-Short Form (SF-36). Mean age of participants was 55 years (SD=12.9) and 76% had cervical or endometrial cancer. Seventy percent were in a committed relationship. Thirty-three percent of participants reported moderate to severe problems with sexual interest or activity on the MSAS-SF. Sexual problems were associated with younger age and being in a relationship (p values < .05) but not cancer type, menopausal status, race, education or income (p values > .05). Compared to women with no reported sexual problems, women with problems reported less satisfaction with their overall sexual life (p < .05) on the FSFI and worse physical and mental health quality of life (p values < .05) on the SF-36 even after controlling for differences in age and relationship status. These findings suggest that a significant number of gynecologic cancer patients begin treatment with preexisting sexual problems that may adversely affect their sexual satisfaction and quality of life. Treatment with radiotherapy or chemotherapy is likely to make such problems worse. Thus, education and counseling related to sexual dysfunction should begin at diagnosis and continue throughout treatment to facilitate realistic expectations and increase compliance with therapies to treat sexual dysfunction. In addition to addressing treatment factors that may perpetuate sexual dysfunction successful interventions will target those factors that precipitate dysfunction in these women.

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D-007

THE INFLUENCE OF POLARITY THERAPY, MASSAGE, PHYSICAL ACTIVITY, AND AGE ON FATIGUE IN BREAST CANCER PATIENTS DURING RADIATION THERAPY

Marquita Watkins, None, Charles Heckler, PhD, Lisa K. Sprod, PhD, Joseph Roscoe, PhD, Gary R. Morrow, PhD and Karen Mustian, PhD

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Cancer and its treatments cause cancer-related fatigue (CRF). Research has shown that younger patients report a higher prevalence and severity of CRF compared to older patients; level of physical activity (PA) is significantly and indirectly correlated with level of CRF and that Polarity Therapy (PTH) may be an effective intervention for improving CRF. PTH and massage (MAS) both elicit a relaxation response that may be responsible for improvements in CRF. PTH is an integrative medical therapy that uses light touch without tissue manipulation, whereas MAS involves tissue manipulation. This 3-arm pilot study compared the influence of PTH, MAS and standard care on CRF, while controlling for age and level of PA, at baseline and week (wk) 1, 2, and 3. Randomly assigned breast cancer (BC) patients (N=45; mean age=52) received standard radiation plus 3 weekly treatments of PTH or MAS (75 min/session) or no additional treatments (control). ANCOVAs, with baseline level of CRF as the independent variable, showed a statistical trend toward differences between groups in mean level of CRF at wk 2 (p=.10). Follow-up comparisons suggest that MAS participants showed a significantly lower level of CRF (p<0.05) while PTH participants showed a statistical trend toward lower CRF (p<0.10) compared to controls. Age was not a confounder. ANCOVAs suggest that change in PA may be a confounder at wk 2 (p <0.10). PTH and MAS show promise as possible CAM treatments for CRF with a positive effect achieved at wk 2. Age does not appear to affect the influence of PTH or MAS on CRF but change in PA may. Further studies are needed with a larger study sample to confirm these findings and to examine the use of these therapies throughout the entire radiation treatment time period. Future research is also needed among cancer patients with a wider variety of diagnoses and during different types of treatment as well as post-treatment. Funded by: NCCAM grant 5R21AT2531, NCI Grant 1R25CA102618, NCI K07CA120025.

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D-008

ETHNIC, RACIAL AND CULTURAL IDENTITY AND PERCEPTIONS ABOUT BRCA GENETIC TESTING AMONG AT-RISK WOMEN OF AFRICAN DESCENT

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Due to disparities in the use of genetic services, there has been growing interest in examining beliefs and attitudes related to genetic testing for breast and/or ovarian cancer risk within women of African descent. Yet,to date, few studies have addressed critical within-group cultural variations among this minority group and their influence on such beliefs and attitudes. We examined ethnic, racial, and cultural identity and their influence on perceived benefits and barriers related to BRCA genetic testing for cancer risk among 160 women of African descent (49% self-identified African American, 39% Black-West Indian/Caribbean, 2% Black-African, 4% Black-Multiethnic and 6% Black-Other, including Black-Hispanic) who met genetic risk criteria and were participating in a larger longitudinal study including the opportunity for free genetic counseling and testing in New York City. In multivariate analyses, several ethnic identity measures had a largely positive relationship to perceived benefits about BRCA genetic testing for cancer risk, the exception being ethnic search, which was positively associated to cons/disadvantages (including family-related cons) related to BRCA genetic testing. Racial identity (measured by centrality) was significantly associated with confidentiality concerns, while cultural identity (measured by Africentrism) was not associated with any perceived benefits and barriers related to BRCA genetic testing for cancer risk.

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D-009

ASSOCIATION OF AFRICAN AMERICANS' BELIEFS ABOUT DISPARITIES IN LUNG CANCER AND WILLINGNESS TO PARTICIPATE IN CLINICAL GENETICS RESEARCH

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It has been suggested that African Americans (AAs) may be reluctant to participate in genetics research due to fears that this research might be used to justify health disparities. Public discourse that offers genetics as an explanation of health disparities occurs in a socio-political context and the interpretation of these messages may affect AAs willingness to participate in genetics research. To this end, we assessed reactions to explanations (i.e., environment, genetics, menthol cigarettes, race-related stress) for lung cancer disparities among AAs who were current or never smokers and identified as "relatives" by patients with lung cancer. We examined whether these reactions were associated with willingness to participate in genetics research. Participants completed a telephone survey assessing reactions (i.e., believability, fairness, worry) to explanations for lung cancer disparities. Data are reported for 67 AAs ages 18 to 55 years. Majority was female (70%), current smokers (57%), and patients' biological relatives (70%). While environment was the most believable explanation (M=5.6 ± 1.6; Scale 1–7), genetics was considered as both a believable and fair explanation (M=5.2 ± 1.5 and M=5.3 ± 1.6, respectively). Participants indicated a high level of willingness to participate in genetics research (M=4.1 ± 1.0; Scale 1–5). Endorsements of genetics as a believable and fair explanation and endorsements of environment as a believable explanation for disparities were all positively associated with willingness to participate. These results suggest that strategies to encourage AAs participation in genetics research would do well to inform potential participants of how their involvement might be used to better understand important environmental factors that affect health disparities.

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D-010

POPULATION-BASED RECRUITMENT FOR AN ONLINE SOCIAL-NETWORKING INTERVENTION TO TREAT CANCER-RELATED DISTRESS

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PURPOSE: A number of barriers can make it more difficult for cancer survivors with significant psychological distress to access psychosocial services that could be of benefit. Communication about available resources is one such barrier, and we sought to evaluate interest in an online social-networking intervention using a population-based approach.
METHODS: Using mail and telephone strategies, repeated efforts were made to reach each of 538 cancer survivors from a cancer registry. Basic patient-related data (age, gender, primary cancer) were available from the registry for a subset of 442 individuals.
RESULTS: Of the 538 registry-listed patients, 193 (36%) were reached by study personnel. After receiving information about the intervention, 63 (33%) of those contacted were interested enough to undergo screening to determine study eligibility. Interest in participation was not associated with patient gender (OR = 1.04), age (OR = 1.00), or primary cancer type. Fifty-four (86%) of those screened were eligible to participate. Among eligible survivors, neither gender or cancer type was associated with deciding to join an online group. Older survivors (OR=0.96, p = .004) were less likely to join, and those with greater distress were more likely to join (OR = 1.50, p = .03).
DISCUSSION: Previous studies have shown gender and cancer type to be linked with decisions to utilize psychosocial services. Our results suggest that communication barriers may play a role in such associations. Population-based efforts to link cancer survivors with psychosocial resources are likely to be effective in overcoming existing barriers to care.

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D-011

FEASIBILITY OF TABLET PC VS INTERNET RECRUITMENT IN AN ADULT RURAL PRIMARY CARE POPULATION

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Rural persons aged 50 and older are an important but difficult group to access for colon cancer screening. The Healthy Living Kansas (HLK) program promotes colon cancer screening among rural Kansans. This study assessed the feasibility of using in-office tablet PCs vs. an internet-based HLK colon cancer assessment. Two groups of medical students recruited patients from 24 rural primary care offices. In one group, each of 8 students recruited patients face-to-face using tablet PCs loaded with the HLK assessment while 16 additional students conducted medical chart reviews to collect patient contact information. Patients identified by the second group were later invited by mailed letter to complete the assessment via the HLK website.
Preliminary findings indicate internet-based users are more likely to be ineligible participants screened out by the HLK program than tablet PC users (34/77 vs. 5/163, p<0.0001). In subsequent break down comparisons, internet-based users showed more exclusion due to being high risk (15/77 vs. 0/163, p<0.0001) or to being up-to-date (17/77 vs. 0/163, p<0.0001), but the difference in age ineligibility was not significant (2/77 vs. 5/163, p=1.00). Exploratory analysis using the classification tree model indicated that, compared to tablet PC users, internet users tend to be younger (51% vs. 25% with age <55, p=0.003), and may be more likely female (61% vs. 54%) and more likely college educated (85% vs. 69%) although neither achieved statistical significance. All aforementioned comparisons were conducted by the Fisher's exact test.
Although recruitment to HLK is in progress, preliminary results indicate that use of internet assessments for studies or educational outreach may be feasible in rural primary care but may capture a specific population segment. This finding is important due to the difficulty, expense, and time involved in placing staff in rural primary care for ancillary projects.

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D-012

EXAMINING THE EFFECT OF A CULTURAL VIDEO ON LATINO WOMEN'S BREAST CANCER SCREENING KNOWLEDGE

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A video that contained breast cancer (BC) screening information was developed in the context of Latino culturally-shared beliefs about the illness and the video's message was framed according to entertainment-education principles. The purpose of this study was to examine the effect of this cultural video and to investigate what components in this video influenced change in participants' knowledge.
Research questions 1) compared to an educational video and to a control group, did the cultural video caused significant differences in BC screening knowledge? and 2) what entertainment-education factors in the cultural video might be associated with BC screening knowledge differences between the pre- and posttest?
Participants were recruited at community-based events and health fairs and assigned to a cultural video, an educational video, and the control group. Exploratory Factor Analysis (EFA) was conducted to generate subscales from the two surveys that were administered. The first survey tested BC screening knowledge with pre and posttest of group interventions. The second survey tested how participants were cognitively involved in the cultural video. One way repeated-measure ANOVA was utilized to analyze the difference in time and groups. A multiple regression model was used to investigate what factors in the cultural video might affect the treatment effect.
The result indicated that 1) there was a significant difference between the observed pre- to posttest changes of the cultural video versus those observed for the educational video group, and of the cultural video changes versus the control group changes. 2) a multiple regression analysis indicated that three factors of participants' cognitive involvement with the cultural video were not significantly associated with the difference in participants' BC screening knowledge after watching the cultural video.

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D-013

DEVELOPMENT AND IMPLEMENTATION OF A CANCER STROOP TASK TO ASSESS BIASED COGNITIVE PROCESSING IN COUPLES COPING WITH HEAD AND NECK CANCER (HNC)

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Given the stigmatizing and debilitating nature of HNC and its treatment, patients are at risk of developing trauma symptoms such as cognitive interference that can increase their risk for distress. Patients often process their cancer experience with their partners, but their partners may themselves be distressed. In addition, most measures of cognitive interference employ a self-report format making them susceptible to self-presentation and defensive biases. We developed a cancer Stroop task (CST) to assess implicit cognitions in HNC patients and their partners. To generate the pool of stimulus items, 21 patients and 17 partners wrote down as many words they could think of related to HNC. Words were rated by experts based on category relevance and emotional valence. Twenty cancer words with inter-rater reliabilities >.80 comprised the final list. The computerized CST was administered using E-Prime as part of an observational spousal support study. 28 patients (86% male) and their spouses engaged in problem-solving discussions about cancer and non-cancer related topics in the lab. Discussion order was counter-balanced. The CST was administered after each discussion. Participants were instructed to color-name each stimulus word while ignoring word meaning. Slower responses to emotionally salient (cancer) vs. neutral words reflect their power to automatically capture attention and become intrusive. Overall, patients had slower reaction times than partners (p<.001) regardless of word type. Patients had faster and partners had slower reaction times to the cancer-words after discussing the cancer-related topic; however, this interaction was only marginally significant (p<.07). Findings suggest that the CST is a promising measure of cognitive interference. Our next step in this ongoing study is to validate this measure against self-report cognitive processing measures using a larger sample.

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D-014

ASSESSING THE ABILITY OF TERMINALLY ILL CANCER PATIENTS TO MAKE END OF LIFE TREATMENT DECISIONS

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Providers, patients and families struggle with the many medical decisions that confront terminally ill patients. Debates exist as to how decision-making capacity should be evaluated, where and who should be responsible for the evaluation process, and how much capacity is needed for competent decision-making. Despite the importance of these issues, virtually no research has focused on the decision making abilities of terminally ill individuals, who are often confronted with many significant decisions (e.g., decisions to terminate curative treatments or initiate hospice services, forgo life-sustaining interventions, and in some jurisdictions, end one's life). This pilot study applied a standardized approach to assessing decision making capacity with regard to two different, and common end of life decisions: whether to accept or reject artificial nutrition and hydration and renal dialysis. To date, 12 terminally ill cancer patients (5 female, 7 male) admitted to a palliative care facility for end-of-life care were administered a version of the MacArthur Competence Tool, Treatment version (MacCAT-T) describing either a artificial hydration or nutrition or renal dialysis decision. Additional measures included the Mini-Mental State Exam (MMSE) and the Hospital Anxiety and Depression scale (HADS). Although most of the participants had intact cognitive functioning (based on the MMSE), all participants demonstrated significant impairment in one or more domains of decision making (understanding, appreciation, and reasoning). The implications of these findings are discussed with regard to both the clinical assessment of decision making capacity as well as the burgeoning research literature focused on competence to make end-of-life treatment decisions.

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D-015

HOME SMOKING RESTRICTIONS AND EXPOSURE TO SECONDHAND SMOKE AMONG CHILDREN WITH CANCER

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Purpose: Children with cancer are at increased risk for adverse health effects if exposed to secondhand smoke (SHS) which primarily occurs in the home. This study examines smoking restrictions in the households of children being treated for cancer, child exposure outcomes in homes with different smoking restrictions, and determines factors that influence adoption of home smoking bans.

Methods: Household smoking bans were assessed by parent report on the rules about smoking in the home. The number of cigarettes to which the child was directly exposed in the home during a 7 day period was reported by parents. Urine samples were collected from children and levels of cotinine, a metabolite of nicotine and biomarker of recent SHS exposure, were analyzed.

Results: Data are available for 135 families of a child treated for cancer, <17 years of age (Mdn=7.6 years), at least one month from diagnosis (Mdn=3.0 months), who lived with at least one smoker who exposed the child to SHS. The parent sample was 77% female, 80% white, 58% married, 70% smokers and 50% were of low socioeconomic status. About 43% of families reported a strict smoking ban (no smoking allowed); 36.3% reported partial smoking bans (limited smoking restrictions) and 20.7% reported no smoking restrictions in the home. Children from homes with strict bans had significantly lower median cotinine levels (2.1 ng/ml) than those from homes with partial (6.6 ng/ml) or no bans [8.7 ng/ml; (Kruskal Wallis-test, p=.002)]. There was also significantly less parent-reported exposure for children who lived in homes with strict smoking bans compared to those with partial or no bans (p<.001; Kruskal-Wallis test). Regression models showed parent marital status (being married), older parent age (>25 years) and younger patient age best predicted those families who adopted strict home smoking bans.

Conclusion: Strict smoking bans were associated with significantly lower child cotinine levels. Interventions that attempt to reduce exposure by establishing smoke-free homes are warranted in this population.

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D-016

HPV VACCINE ACCEPTANCE AMONG RURAL, ROCKY MOUNTAIN REGION WOMEN

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Human papillomavirus (HPV) is the most common sexually transmitted infection in the United States and is the leading cause of cervical cancer. The introduction of the HPV vaccine presents women with a new way to prevent HPV infection. However, vaccination rates are thought to be low since the HPV vaccine was approved for dispersal in 2006. The proposed study aimed to examine the HPV vaccination knowledge and behaviors of University of Wyoming women using both the Health Belief Model and the Transtheoretical Model of Change as organizing frameworks. Eight-three unvaccinated women were administered the Wyoming Prophylactic Vaccination Survey (WPVS) to assess their level of HPV knowledge and factors that may influence their decision to vaccinate. Results indicate that the women had an insufficient understanding of HPV. In multiple linear regression, Cues to Action was the only variable to predict intent to receive the HPV vaccine. Moreover, women who were influenced by Cues to Action were twice as likely to intend to receive the HPV vaccine in the next 30 days (contemplators) versus in the next 6 months (pre-contemplators). Additional results suggest that participants had a higher level of perceived susceptibility to HPV at post-test than at pre-test. Specifically, the results suggest that the study may have unintentionally served as an intervention. Similar to previous studies, women possessed inaccurate knowledge of HPV and possible sequelae, however, this study advances our understanding of rural, frontier-state women's prophylactic vaccination decision-making, a population that had yet to be studied.

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D-017

TO VACCINATE OR NOT? HEALTHCARE PROVIDERS AND THE HPV VACCINE

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Background: Gardasil® is a breakthrough vaccine for human papillomavirus (HPV) thought to cause most cervical cancer, FDA approved for pre-adolescent, adolescent and young adult females. Recent reports show wide variation in immunization rates from state to state and considerable controversy about its use. Insufficient attention has been paid to attitudes and behaviors of health care professionals who are ultimately responsible for prescribing the vaccine. The present study expands on previous research by investigating several types of health care providers' current beliefs and practices after FDA approval and wide distribution. *Method and Sample:* Open-ended interviews were conducted with nine health care providers, including both MDs and APRNs, and family practice, ob-gyn and pediatric practices. The semi-structured interviews explored major topics such as personal practices and opinions, perceptions of patients and guardians, and opinions on controversial issues. Major themes and ideas were identified through qualitative analysis. *Results:* Providers' attitudes and behaviors are relatively uniform across professional category and patient population. Every provider currently supports and administers the vaccine and is willing to administer it beginning at age nine. Patients' present and expectable sexual practices and overall demographics of their patient population influenced the degree of intent to administer. Some providers expressed a desire to vaccinate outside FDA recommendations to include boys and older females. Evidence-based research and experience with treating cervical cancer were cited as the main reasons for supporting the vaccine. Mandates were the only topic to receive varying opinions. *Discussion:* Providers indicated widespread acceptance and usage within current FDA approved ages, some to expanding to other populations, with little variation across disciplines or practices. This is somewhat different from previous research, but most of that research was conducted prior to full FDA approval and clinical experience with the vaccine.

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D-018

CLUSTER SUBTYPES WITHIN THE PRECONTEMPLATION STAGE OF CHANGE FOR SUN PROTECTION BEHAVIOR

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Objective: The goal of this study is to identify replicable cluster subtypes within the Precontemplation stage of change for sun protection. Method: Secondary data analysis of baseline data from a sample of participants in a home-based expert system intervention was performed. Three random samples were selected from participants in the Precontemplation stage (N= 570). Cluster analyses were performed using the scales of Pros, Cons and Self-Efficacy. Interpretability of replicated pattern, pseudo F test, and scree plots were used to determine the number of clusters. Results: A four-cluster solution replicated across subsamples. Significant differences between clusters on the nine Processes of Change, and on behavioral measures were found. Discussion: Cluster solutions replicated patterns found for other behaviors, demonstrating long-term predictability and providing basis for tailored interventions.

D-019

CANCER SCREENING AS A PERCEIVED OBLIGATION: AN INVESTIGATION OF SCREENER ATTITUDES

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Although some cancer screening (CS) modalities (e.g., mammography) are recommended for population-based screening programs, other procedures (e. g., ovarian ultrasound) are investigational and only recommended for use in research studies. Despite potential benefits, there is considerable evidence that CS—both recommended and investigational—is not always beneficial, particularly for those who are unlikely to develop or be significantly harmed by certain cancers. CS may also pose risks, including psychological distress from false-positive results and morbidity from consequent medical procedures. Research suggests that participants may not fully appreciate the risks and benefits associated with CS procedures, leading some to conclude that CS whenever available is “obligatory” and that failure to screen is “irresponsible” (Schwartz, et al., 2004).

To explore perceptions of CS as an obligation, 215 women enrolled in an investigational ovarian screening program were interviewed and asked if they participated because "failure to screen when it is available is irresponsible." It was hypothesized that those who believed that screening was obligatory (n= 72) would differ from their counterparts (n=143) with regards to psychosocial and demographic characteristics. Results indicated that those who described screening as obligatory had significantly higher scores on measures of trait worry, trait anxiety, state anxiety, depression, and intolerance of uncertainty (p’s < .05; d’s = .31-.46). However, participants did not differ in terms of years of education, numeracy, or information seeking coping style. These results suggest that beliefs regarding CS as obligatory may be more strongly associated with dispositional anxiety than education and coping styles, and may explain why some individuals seek screening outside of recommended guidelines. Future research is needed to explore how perceiving CS as an obligation is related to anxiety and making informed decisions about participation in CS.

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D-020

ASSOCIATION OF THREAT AND COPING APPRAISAL TO EXERCISE IN BREAST CANCER SURVIVORS

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A growing body of research suggests the health benefits of exercise for cancer survivors. Health behavior theories can help identify variables that can be incorporated into intervention strategies to increase exercise. This study examined the extent to which Protection Motivation Theory variables of threat appraisal and coping appraisal accounted for differences in exercise in cancer patients who recently completed treatment. We hypothesized that higher rates of exercise would be related to higher threat appraisals for cancer recurrence and higher coping appraisals for reducing risk of recurrence by exercising. A sample of 147 early-stage breast cancer patients (mean age=59 years) who completed surgery, chemotherapy, and/or radiotherapy between 6–24 months previously (mean = 11 mo) completed measures of exercise for the past week, threat appraisal (perceived risk and severity of a potential cancer recurrence), and coping appraisal (perceived response efficacy and self-efficacy to perform exercise recommendations to reduce recurrence risk). Basic demographic and clinical information was also collected. Higher reported exercise was related to lower body mass index ($p < .01$), higher exercise response efficacy ($p < .05$), and higher exercise self-efficacy ($p < .001$). There were also trends for younger patients ($p = .06$) and for those with less time since diagnosis ($p = .06$) to exercise more. There were no relationships of exercise to perceived risk or perceived severity of a potential cancer recurrence (ps > .07). Hierarchical regression analysis showed that response efficacy of following exercise recommendations and self-efficacy to exercise each accounted for a significant increase in the amount of variance in exercise beyond demographic and clinical variables ($p < .001$). These findings show that exercise in breast cancer survivors is related to coping appraisal, but not threat appraisal. Future research should test whether altering coping appraisal affects exercise habits in cancer patients.

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D-021

TIME PERSPECTIVE AND INTENTIONS TO PARTICIPATE IN COLORECTAL CANCER SCREENING

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This study used a novel, step-wise, information-dissemination strategy to assess how time perspective moderates the impact of information about colorectal cancer (CRC) screening. Adults in the screening age range (n=331; age range=45–59 yrs) were randomized to three conditions manipulating the time before the test (unspecified, immediately, 3 months)and were then exposed to a series of eight statements introducing the test. After each statement participants rated their intention to participate in screening.

There was a significant change in intention ratings over the eight statements, $F(7,324) = 20.43$, $p < .0001$). Planned step-wise comparisons highlighted that explaining the need to deal with fecal matter (Mean Difference=-.17, $p < .001$) and to repeat the procedure three times (Mean Difference=-.20, $p <.01$) was associated with significant decline in intention. There was a marginally significant effect of temporal distance on intentions across the eight conditions $F(2, 324) = 2.58$, $p = .078$, indicating that people considering CRC screening in the near future are significantly less likely to intend to do it than people considering it in the more distant future (Mean difference -.40, $p < .05$). There was also a main effect by future orientation, showing that across all eight conditions, low future orientation was associated with lower intention to complete the test, $F(1,324) = 14.41$, $p < .001$). We found an interaction between temporal distance and future orientation at the final decision stage, $F(2,324)=3.74$, $p <.05$), with participants high in future orientation being more motivated to do the test in the delayed than the immediate condition (Mean Difference = .84, $p < .05$), while participants low in future orientation showed the opposite (albeit non-significant) trend (Mean Difference= -.38, $p =.52$).

The findings of this study highlight the importance of supplementing patient materials with information that matches individual preferences for short vs. long term benefits and reviewing test options (such as Fecal Immunochemical tests which significantly reduce the burden associated with fecal sampling).

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D-022

UNDERUSE OF NEEDED CARE, CANCER-RELATED MORTALITY SALIENCE AND ASSOCIATED FACTORS: U.S. PREVALENCE ESTIMATES FROM A NATIONALLY REPRESENTATIVE SURVEY

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Background: There is a limited understanding of the prevalence of underuse of care through avoidance of physicians at a U.S. population level and little known about associated sociodemographic and psychological factors.
Objectives: This study examined the prevalence of and factors associated with physician avoidance within the U.S. population. In addition to assessing factors such as sociodemographic variables, one potentially important psychological factor is Cancer Related Mortality Salience (CRMS), the mental association of cancer with death.
Methods: Cross-sectional analysis of data from the 2007–08 administration of the Health Information National Trends Survey (n=7,674), a nationally-representative survey of the U.S. population. The survey assessed self-reported avoidance of physicians, health-related perceptions and attitudes including CRMS, and sociodemographic factors. Descriptive, univariate, and multivariate analyses were conducted to explore the prevalence and relationships among these factors.
Results: More than one third (36%) of respondents reported that they avoid their physicians and a little less than two-thirds of respondents (61.6%) had high CRMS, reporting that they perceive cancer as a death sentence. Those who perceive cancer as a death sentence had significantly higher odds (1.44; confidence interval 1.24, 1.66) of reporting that they avoid their physicians, even after controlling for sociodemographic variables.
Conclusions: A significant proportion of the population avoids seeing their physician, and physician avoidance is associated with sociodemographic characteristics and psychological factors including CRMS. These findings suggest the need for future research and interventions to educate the public about the importance of seeing physicians and to change the publics' perceptions of cancer as a death sentence.

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D-023

PREDICTORS OF ADHERENCE TO A SIX-MONTH YOGA INTERVENTION AMONG BREAST CANCER SURVIVORS

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BACKGROUND: There is increasing interest in yoga for weight management and improved well-being among cancer survivors, yet little is known about adherence to yoga among breast cancer survivors. The purposes of this study were to (a) describe adherence of breast cancer survivors to home-based and supervised components of a 6-month yoga intervention and (b) identify demographic, psychological, health-related, and geographic predictors of adherence. METHODS: Sixty-three post-treatment breast cancer survivors were randomized to an intervention group (n=32) or to receive the same intervention after a 6-month delay (wait-list control, n=31). The intervention consisted of Viniyoga, a gentle style of Hatha yoga. Participants were asked to attend one 75-minute class per week at the study site and to perform 3–4 home-based sessions per week (15–30 min. each) using a DVD. Adherence was monitored using sign-in sheets, daily logs, and telephone calls. Predictors were assessed at baseline by questionnaire and analyzed using bivariate tests followed by multivariate regression.
RESULTS: Women in the immediate yoga group attended 19.6±13.0 yoga classes and completed 55.8±32.8 home-based sessions. Adherence was non-significantly lower in the wait-list control group (14.2±10.4 classes, 44.6±38.0 home sessions). Among the full sample, the number of classes attended was greater among those employed outside the home and those with a lower BMI ($p<=.02$). More frequent home-based yoga was predicted by higher yoga self-efficacy and greater time since diagnosis (both $p<.001$).
CONCLUSIONS: Adherence to a regular, long-term yoga practice is feasible among breast cancer survivors. Certain women, including those who have low self-efficacy for yoga or who are obese, may benefit from additional instructor support. Adherence may also be improved by ensuring that class times are convenient to both working and non-working women.

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D-024

PATTERNS OF EMPLOYMENT AFTER CANCER: RESULTS FROM A LONGITUDINAL STUDY

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INTRODUCTION: Few longitudinal studies have been conducted to characterize the long-term impact of cancer on employment. The current study used 6 waves (1992, 1994, 1996, 1998, 2000, 2002) of the Health and Retirement Study to compare patterns of employment over time between cancer survivors and non-cancer controls. We examined overall differences in employment and differences in employment by educational attainment.
METHODS: Employment status was compared between 989 cancer survivors who were cancer free in 1992 but developed cancer from 1994–2002 and 9,997 non-cancer controls. Generalized Estimation Equations were used to compute the odds of employment between survivors and controls as a function of time since diagnosis. Models were adjusted for age, gender, education, and assessment year.
RESULTS: In the waves before a cancer diagnosis was reported, cancer survivors and non-cancer controls had similar odds of employment. Beginning at the first wave a cancer diagnosis was reported, cancer survivors had a lower odds of employment relative to non-cancer controls (OR=0.61; CI= .52-.73). The relative odds of employment among survivors plateaued at 2 years (OR=0.67; CI= .54-.83) and 4 years (OR=0.65; CI= .49-.87) after diagnosis and then decreased (OR=0.34; CI=.23-.51) 6 years after diagnosis. The relative odds of employment among cancer survivors differed by education. At each wave after a cancer diagnosis was reported, the relative odds of employment was higher among cancer survivors with ≥ 12 years of education compared to survivors with <12 years of education ($p < .02$).
CONCLUSIONS: Cancer has a long term impact on the employment status of survivors. Cancer survivors with lower educational attainment were particularly vulnerable to not working after their diagnosis.

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D-025

EFFECTS OF DISTRESS TOLERANCE AND SPIRITUALITY ON TREATMENT PERCEPTION OF CANCER SURVIVORS FROM RURAL AND URBAN AREAS

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Cancer patients have been shown to possess higher vulnerability for negative mental health factors (i.e. depression, anxiety). These factors have been linked to decreased distress tolerance (DT). However, little is known about the influence of DT on cancer survivors' worry for disease recurrence, treatment complications, and treatment satisfaction, as well as factors contributing to DT levels. The present study aims to assess the impact of various resources and affective components onto DT, and how DT influences cancer treatment beliefs. Particularly, the study focused on examining effects' variation according to area of residence (rural versus urban).
Adult cancer survivors (n=693) from the CANCER-CARE Longitudinal Study were examined. Structural Equation Modeling path analyses explored the relationship of the above psychological constructs testing according to area of residence. Overall model fit was good, $\chi2(92) = 205.27$, $p<.001$, CFI=0.962, SRMR =.068. Preliminary results showed that greater spirituality significantly predicted decreased worry of cancer recurrence ($\beta=-.26$; $\beta=-.20$),decreased worry for treatment complications ($\beta=-.21$, $\beta=-.23$), increased overall support ($\beta=.51$; $\beta=.37$), and increased positive affect ($\beta=.11$; $\beta=.10$). Greater overall support predicted greater positive attitude ($\beta=.94$; $\beta=.89$) and greater positive affect ($\beta=.41$; $\beta=.32$). Among the rural group, spirituality negatively predicted DT ($\beta=-.394$), and DT positively predicted positive affect ($\beta=.17$). Among the urban group, increased DT predicted increased worry for cancer reccurrence ($\beta=.13$); increased access to treatment predicted greater treatment satisfaction ($\beta=.16$); and greater treatment satisfaction predicted lower levels of worry for treatment complications ($\beta=-.11$). Differences in psychological pathways affecting treatment perception among rural and urban cancer survivors may have implications on healthcare utilization.

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D-026

THE IMPACT OF EMPLOYMENT CHANGE ON PERCEIVED QUALITY OF LIFE IN HSCT PATIENTS

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A significant portion of those who undergo HSCT experience physical and cognitive changes that effect daily functioning. This includes, but is not limited to their ability to work. For patients employed pre-transplant, employment post-transplant can be perceived by the patient as an indicator of a return to “normalcy.” The purpose of this qualitative study is to explore how changes in employment status impact a patient’s perceived quality of life. Qualitative interviews were conducted with 38 HSCT survivors one or more years post-transplant (average age=44). Interviews were transcribed, coded and analyzed using Content Analysis. Post-transplant, 19% were unemployed, 43% returned to work, and 38% were retired. Of the retired group (N=14), 43% retired before expected after becoming ill. 25% of those who returned to work (N=16), did so on a part-time basis. Employed and retired patients both recognized work as a powerful social mechanism: providing a social network and allowing patients to feel useful by contributing to society and their families. Part-time workers expressed joy at being able to socialize once more with their co-workers, while lamenting their inability to return to full-time status. Patients who retired before expected, expressed increased social isolation and difficulty in leaving the working world. These patients also reported difficulties integrating their new unemployed status into their personal narratives. Further research can investigate the usefulness of psycho-educational interventions to address social isolation and adjustment to life after work for patients who are unemployed or are waiting to transition back to work.

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D-027

EMOTIONAL SUPPORT COPING STRATEGIES MODERATE THE RELATIONSHIP BETWEEN PERCEIVED SOCIAL SUPPORT AND LONG-TERM FUNCTIONAL WELL BEING IN PROSTATE CANCER SURVIVORS

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Social support (SS) has been demonstrated to be an important predictor of multiple domains of well-being after cancer treatment. Functional well being (FWB) is of particular importance as a measure of the individual’s ability to complete normal daily activities such as work and sleep. This study examined the relationship between SS and FWB prospectively among ethnically diverse men treated for localized Prostate Cancer (PC). Participants had an average age of 65 years (N=174), were educated for an average of 13 years, and had a median income of $36,500 (SD=$50,960). The ethnic composition was 41.5% non-Hispanic White, 16.9% African American, and 41.5% Hispanic. Men in the sample received either radical prostatectomy or radiation treatment for localized PC an average of 10 months prior to participation. Demographic and medical variables, as well as emotional support coping (ESC) items from the COPE were all assessed at baseline. The Enriched Social Support Inventory (ESSI) and the functional well being subscale of the Functional Assessment of Cancer Therapy-General (FACT-G) were assessed at baseline and at a 15 month follow-up. After controlling for baseline FWB, medical variables, socio-economic status and marital status; greater perceived SS significantly predicted greater FWB at a 15-month follow-up ($\beta=.245$, $p<.01$). Subsequent analyses demonstrated that ESC strategies moderated this relationship such that SS predicted long term FWB only for men reporting above average use of ESC. Results suggest that availability and use of perceived SS predicts FWB and that such an association is more salient for men who resort to ESC as a coping strategy. Future studies should address use of ESC and its relation to overall adjustment to PC treatment.

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D-028

LONGITUDINAL EFFECTS OF RELATIONSHIP TYPE AND SOCIAL SUPPORT ON CANCER CAREGIVERS’ QUALITY OF LIFE: WHO BENEFITS MOST IN THE LONG RUN?

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Caregivers of cancer survivors experience high levels of mental and physical burden. Social support (SS) has been shown to buffer such burden. Yet, little attention has been given to how the caregiver’s relationship to the care recipient and the source of SS influence their quality of life (QOL). Caregivers were nominated by cancer survivors to participate in a longitudinal, nationwide QOL survey that included assessments 2 (T1) and 5 years (T2) after the cancer survivors’ diagnosis. Complete data were provided by 379 caregivers (61% female; mean age 59 years; relationship to care recipient: 71% spouse, 15% adult offspring, 14% other). Perceived availability of SS (Multidimensional Scale of Perceived Social Support) from family, friends, and a significant other, and QOL (mental and physical functioning, MOS SF-36) were assessed at both time points. Multivariate general linear modeling analyses revealed that after controlling for caregivers’ perceived SS and QOL at T1, caregivers’ relationship to the cancer survivor significantly predicted their physical functioning at T2 ($p<.01$). Adult offspring caregivers reported better long-term physical functioning than spousal or other caregivers. Significant interactions emerged between relationship type and source of SS on caregivers’ QOL at T2. Adult offspring caregivers who received support from their family members at T2 had better mental ($p<.001$) and physical ($p<.01$) functioning; however, this was not the case for spousal or other caregivers. On the contrary, adult offspring caregivers who received less support from their friends at T2 reported higher levels of mental functioning ($p<.05$). These findings suggest that unique contributions of SS to the long-term QOL of caregivers are based on the source of support, mainly from family and friends. Adult offspring caregivers of cancer survivors are encouraged to seek support from other family members, which will help alleviate their mental and physical stress in the long run.

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D-029

CAREGIVER STRESS AND DEPRESSION IN THE CONTEXT OF ADVANCED CANCER

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BACKGROUND: Caregiver stress and depression has been extensively studied, however a paucity of research exists regarding caregiving in the context of advanced cancer. The aims of this study were to: (1) assess the rates of depressive symptoms and stress in caregivers, and (2) examine the association between caregiver stress and depression on patient outcomes.

PATIENT AND METHODS: A total of 52 caregivers of patients diagnosed with hepatobiliary carcinoma were interviewed at the time of diagnosis of their loved one's cancer and at 2 months. The Center for Epidemiological Studies (CES-D) and the Caregiver Quality of Life Questionnaire-Cancer was administered to assess depressive symptoms and caregiver stress, respectively. Patient outcomes included the CES-D and the Functional Assessment of Cancer Therapy-Hepatobiliary.

RESULTS: At the time of diagnosis of their loved one's canceer, 39% of caregivers reported a CES-D score in the clinical range. A significant change from baseline to 2-months follow-up was observed on CES-D scores [F(1,26)=4.32, p=0.05] with a decrease of depressive symptoms at 2-months follow-up (33% of patients in the clinical range). Caregiver depression at baseline was significantly associated with higher levels of stress at diagnosis [F(1,33)=15.5, p=0.001] and 2-months follow-up [F(1,25)=5.3, p=0.03]. Caregiver depression and stress was associated with poorer patient outcomes, however the associations were not found to be significant.

CONCLUSION: The development of psychosocial interventions for patient diagnosed with advanced cancer, and their family caregivers, is warranted.

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D-030

RESPONSE SHIFT IN FATIGUE IN WOMEN UNDERGOING CHEMOTHERAPY FOR GYNECOLOGIC CANCER

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PURPOSE: During cancer treatment patients may undergo a response shift, or a recalibration of one's internal scale, because fatigue that was appraised as severe pre-treatment seems less severe after the rigors of treatment. Response shift may thus cause longitudinal increases in fatigue to appear less severe, compromising internal validity. Several studies have documented response shift in fatigue in cancer patients, but few have examined response shift specifically in response to chemotherapy. To address this issue, the current study examined response shift in fatigue in gynecologic cancer patients undergoing chemotherapy. METHODS: Participants were 57 women (mean age=63, range 33–87) diagnosed with gynecologic cancer and scheduled to begin chemotherapy. Participants were assessed the week before their first infusion (T1) and third infusion (T2). Current fatigue was assessed at both time points with the FSI and SF-36 Vitality subscale. At T2, patients were also asked to provide retrospective renewed judgments (i.e., Then Tests) regarding their fatigue and vitality at T1. RESULTS: There were significant differences in T1 and Then Tests of FSI Most Fatigue and SF-36 Vitality, indicating a significant response shift ($ps<.05$). Patients who reported decreased fatigue and greater vitality during treatment were most likely to show a significant response shift ($ps<.01$). No significant changes were observed between current fatigue and vitality assessed at T1 and T2 ($ps>.66$). CONCLUSIONS: Data suggest that response shift in fatigue occurs in gynecologic cancer patients undergoing chemotherapy, with patients reporting decreased fatigue and increased vitality most likely to display a response shift. These findings support additional research to model the effects of response shift on perceptions of fatigue during chemotherapy.

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D-031

SEEKING AND FOUND MEANING: ASSOCIATIONS WITH HEALTH OUTCOMES AMONG BREAST CANCER SURVIVORS

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Meaning-making processes and their associations with health outcomes have been the subject of growing attention among health investigators. Several writers have distinguished between efforts to derive meaning via making sense of a stressful experience vs. finding benefits in it. Other conceptual models have discriminated between searching for meaning vs. found meaning. These different dimensions of illness-specific meaning may not always contribute to favorable adjustment; in particular, a protracted emphasis on searching for meaning, among survivors who have transitioned beyond the treatment phase, may sometimes reflect counterproductive rumination rather than constructive processing.

This prospective study evaluated each of these theoretically-distinct dimensions of meaning in illness (i.e., seeking sense and benefits, found sense and benefits) among 73 breast cancer survivors. We are not aware of previous studies that have examined each of these dimensions concurrently. Median time since diagnosis was 24.0 months, and most women had completed treatment except for hormonal therapy. Meaning indices were obtained via written narratives, which were coded on each dimension by 2 independent raters. Health outcomes were evaluated 4 months later.

As expected at this phase of survivorship, seeking benefits at baseline predicted worse outcomes at follow-up with respect to BSI emotional distress (β= .38, p< .01), and FACT physical well-being (β= .-25, p< .05), functional well-being (β=-.24, p< .05), emotional well-being (β=-.38, p< .01), and social well-being (β=-.30, p< .05), after controlling for significant medical and demographic covariates. In contrast, found sense predicted more favorable social (β= .24, p< .05) and marginally better emotional (β= .23, p= .052) well-being. Results suggest that discrete facets of meaning may have different health implications, and highlight the possibility of negative as well as positive effects.

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D-032

META-ANALYSIS OF FEMALE CHILDHOOD CANCER SURVIVORSHIP: PREDICTORS OF OUTCOME

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It is estimated that 1 in 900 people ages 15–44 years in the US is a childhood cancer survivor; 80% of children diagnosed with cancer in 1990 will survive into adulthood. Long-term/late effects of cancer in cardiac, endocrine, neurological, renal and pulmonary systems, potential fertility complications, and an increased risk of second malignancies have been observed. Due to sex-linked biological factors and the consequent increased incidence of risk, women have unique concerns. No systematic review has yet been conducted of long-term effects of treatment for childhood cancer among females.

The aims of this paper are to;(1) describe recent rigorous comparative cohort studies of female childhood cancer survivors; (2) compare female childhood cancer survivors on treatment effects by location and type of cancer, age of disease onset, and the type of treatment; (3) determine which study characteristics explain observed variations in treatment effects; (4) examine the implications of the findings for individuals, cancer center, school, and family system interactions.

We conducted a systematic review, using Hedges g, of cohort studies of childhood cancer survivors (age 20 and younger) that were published between 1993–2008, using Medline, CINAHL, PSYCINFO, dissertation abstracts, and hand searches. Inter-rater reliability among the three independent reviewers was high (>.95).

The most common treatment-related effects among female survivors of cancer were; osteoporosis, breast cancer, hypothyroidism and thyroid nodules, disrupted menarche and menopause, infertility, premature births, low weight and still-born babies. Cranial, cranial-spinal, and/or chest radiation, increased the risk of late-term effects. Similarly, a high prevalence of ovarian failure has been observed in a subset of survivors.

The implications for the design of intervention programs for individuals, families, and cancer center/school programs–that are rare in the U.S.–are described.

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D-034

AMBIVALENCE AND CARDIOVASCULAR FUNCTION: EXAMINING AMBULATORY BLOOD PRESSURE AND MARITAL QUALITY

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For most adults, marriage is one of their most important social relationships and prior research suggests that married adults are at lower risk for cardiovascular morbidity and mortality. Research has also indicated that being married, per se is not universally beneficial, but rather, the quality of the relationship is important (Holt-Lunstad et al., 2008). Such work has documented relationships that differ in their underlying positive and negative substrates (Birmingham et al., 2009). For instance, some close relationships are characterized by high levels of both positivity and negativity (ambivalence) which may be a significant source of stress (Holt-Lunstad et al., 2003). Couples with ambivalent relationships may not experience the same cardiovascular-protective benefits of marriage. Thus, one aim of this study was to examine the roles of relationship quality on daily ambulatory blood pressure (ABP), an independent predictor of cardiovascular health (Pickering, Shimbo, & Haas, 2006). We hypothesized that relationships perceived as more ambivalent would result in higher individual daily ABP.

We examined ABP during the day and evening among 94 married couples aged 18 to 63 (M=29.4). For our primary analyses we used Proc Mixed and as such, analyses directly modeled the interdependence of husbands' and wives' data and ABP measurements over time. We first examined potential covariates and replicated prior work indicating factors such as posture and activity level influence on ambulatory SBP and DBP (p's<.05). Statistically controlling for these covariates, however, revealed a significant effect of relationship quality on systolic blood pressure (SBP) (p=.001) and diastolic blood pressure (DBP) (p=.01) such that those individuals who viewed their relationship as more ambivalent had higher SBP and DBP during daily life. These findings suggest that individuals may not benefit from the positivity that exists in ambivalent marriages and may negatively influence long-term health.

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D-035

SOCIAL COMPETENCE AND CARDIOVASCULAR ACTIVITY DURING ANTICIPATION OF SOCIAL STRESS

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Studies of cardiovascular reactivity have documented the especially provocative nature of social stressors while other research has suggested that social competence may diminish such reactions. Periodic fluctuations in heart-rate, quantified as Respiratory Sinus Arrythmia (RSA), have been suggested to be a marker of emotion regulatory processes and have been linked to social competence in children. The present study evaluated the relation of RSA to social competence during a task in which people anticipated a highly stressful interpersonal task: the Favorable Impressions test. Eighty undergraduate students completed the Interpersonal Competence Questionnaire (ICQ), a validated measure of social competence. After a resting baseline, they observed videos of people undergoing a test in which they tried to make a favorable impression on an unresponsive confederate. The videos depicted highly anxious participants, as evaluated by behavioral coding. Participants were then led to believe they would go through the same task and were given six minutes to prepare themselves. Continuous EKG recordings were taken through all phases. Power spectral analyses measured power in the RSA band. Analysis of variance revealed that anticipation of social stress was associated with increased vagal tone and that participants high in social competence showed higher RSA during stress anticipation. To the extent that RSA indexes processes involved in emotion regulation, the findings suggest a mechanism through which social competence may influence cardiovascular health.

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D-036

TO SUPERSIZE OR NOT TO SUPERSIZE: AN EXPLORATION OF MULTIPLE HEALTH BEHAVIOR CHANGE

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Four chronic conditions (heart disease, cancer, stroke, and diabetes) that result from engagement in multiple health risk behaviors are among the ten leading causes of death in the United States for males and females. As a result, some health professionals suggest that multiple health behavior change (MHBC) interventions may be more beneficial than single health behavior change interventions in reducing the mortality rates and health care costs related to these conditions. The present investigator aims to determine if three health behaviors (diet, exercise, and stress management) that affect one's risk of developing the aforementioned chronic conditions are positively related to each other. The researcher will explore if individuals move through the Transtheoretical Model's stages of change for these three behaviors in the same direction over time.

The present study was a part of a larger longitudinal study. The sample consisted of 389 participants (239 females and 130 males) from a public mid-sized, Midwestern university. The measures included demographic questions and the stage of change algorithms for exercise, high fat food avoidance, fruit & vegetable intake, salt intake, and stress management.

Chi square tests of independence determined that exercise stage of change (SOC) was distributed differently at T1 than high fat SOC and stress management SOC. Fat SOC was distributed differently at T2 than stress management SOC and exercise SOC. Changes in stress management SOC were related to changes in salt SOC. Changes in salt SOC were related to changes in fat SOC. The results of this study are important because they indicate that if MHBC interventions that target diet, exercise, and stress management are likely to be successful. Interventions for these behaviors could reduce people's risk of developing chronic conditions and health care costs in the United States.

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D-037

THE ROLE OF SUBJECTIVE PERCEPTIONS OF REACTIVITY IN STRESS REGULATION

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Emotions are thought to influence stress regulation by serving as a dynamic interface between cognitive and physiological states of arousal, and awareness of internal and external states is thought to be involved in the regulatory cascade. The purpose of this study was to examine the role of accuracy in subjective perceptions in the regulatory process. 89 college students (51% male, 49% female; age 18–46, M=22) completed the Social Competence Interview (Ewart et al., 2006), a well-validated laboratory stress task. Systolic blood pressure (SBP) was recorded and participants provided stressfulness ratings. Subjective accuracy was operationalized as standardized difference scores between stress ratings and stress reactivity (i.e., SBP). SBP recovery (i.e., last 3 minutes of SBP recovery - baseline SBP) was the dependent variable. Absolute values of accuracy scores did not predict SBP recovery. However, when directionality (i.e., higher or lower stress ratings relative to SBP reactivity) was considered, a significant association was found (r=.381, p<.001) such that higher subjective stress relative to arousal was associated with better SBP recovery, and lower subjective stress relative to arousal was associated with prolonged arousal. Analysis of Variance revealed a significant main effect of accuracy type (accuracy score tertiles) on SBP recovery [F(2, 86)=7.98, p=.001]; individuals who reported similar or greater stress relative to arousal (i.e., accurate reporters and over-reporters) recovered more effectively than individuals who reported lower stress relative to arousal (i.e., under-reporters) (p=.026 and p=.001, respectively). These results suggest that congruence between subjective and objective stress is important for effective recovery. Accurate reporters and over-reporters were more likely to return to baseline arousal during the recovery period. Importantly, underestimating stressfulness relative to actual reactivity appears to prolong recovery. These findings suggest that awareness of stressful physiological states is important for effective stress regulation.

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D-039

ASSOCIATION OF SPECIFIC CLINICALLY-RATED SYMPTOMS OF DEPRESSION TO ADHERENCE IN POORLY-CONTROLLED TYPE 2 DIABETICS

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Background: Diabetes is a serious public health concern, affecting 23.6 million Americans. Depression is twice as prevalent among type 2 diabetics relative to the general population and is associated with poorer adherence to self-care behaviors. Although inadequate adherence to self-care behaviors is associated with worse health outcomes, little is known about the impact of specific depressive symptoms on adherence. **Method:** 26 men and 29 women (N=55, M age=56.4) with poorly controlled type 2 diabetes ($\text{HbA1c} \geq 7\%$) who met criteria for a clinical diagnosis of depression were rated for depression severity using the Montgomery Asberg Depression Rating Scale (MADRS). Participants also rated their adherence to the following behaviors in the past month: taking diabetes medications, monitoring blood glucose levels, eating healthfully, and exercising. **Results:** Total depression scores on the MADRS (M=25.9) were significantly associated with medication adherence (r =-.35, p<.01). *Inner tension* (r=-.42, p=.001), *concentration difficulties* (r=-.29, p<.05), and *suicidal thoughts* (r=-.27, p<.05) were the only specific depressive symptoms associated with medication adherence. Depression was not associated with reported ability to monitor blood glucose levels, eat healthfully, or exercise. **Conclusion:** Although *sadness* (*apparent* and *reported*) was the most severe depressive symptom in this sample, only *inner tension*, *concentration difficulties*, and *suicidal thoughts* were independently associated with decreased medication adherence. These symptoms may confer a particular vulnerability to decreased medication adherence through anxiety-related avoidance, inability to concentrate and thus remember medication doses, and/or a decreased motivation for well-being and self-care. Accordingly, an intervention targeting the anxious features of depression, suicidal thoughts, and concentration difficulties may improve diabetes medication adherence and ultimately glycemic control.

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D-040

A PILOT STUDY OF DEPRESSIVE SYMPTOMS AND WEIGHT CONCERNS THE 1ST YEAR POST DIAGNOSIS (DX) IN TYPE 1 DIABETES (T1D) TEENS AND CAREGIVER

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Depression/weight concerns are prevalent among T1D patients. Most studies are cross-sectional and use adult samples. We assessed depressive symptoms, weight concerns and dieting behaviors of 11 newly DX T1D teens (6F, 6W, 11-16y, X BMI-Z @ DX=-.72 ±1.5, 6mos.= -.09±1.2, 12mos.= -.9±1.3) and caregiver (82%F) using the Child Depression Inventory (CDI), Beck Depression Inventory-II (BDI), and Youth Risk Behavior Survey (YRBS). Teens answered YRBS questions about themselves and caregivers about teens. Assessments were <7 days after DX, at 6&12mos. postDX. We hypothesized that depressive symptoms would change over time, that weight concerns/dieting behavior would be associated with depression, and that teen/parent adjustment would be associated. No teen CDI scores were clinically significant. Three caregiver BDI scores were clinically significant at DX. At DX, 6 & 12mos 64,82&91% respectively, of teens wanted to stay the same or lose weight. CDI decreased significantly from 6 to 12mos and from DX to 12mos (ps<.02). BDI scores decreased significantly from DX to 6mos and from DX to 12mos (ps<.04). There were no significant associations between teen/caregiver changes in depressive symptoms over time. The only YRBS response associated with depressive symptoms was teens' and caregivers' perception of teen's weight. Decrease in depression was less for the caregiver (ps<.03) and for the teen (p<.05) the heavier the teen was perceived to be over time by the caregiver and teen. In a sample of newly DX teens with T1D, depressive symptoms were not clinically significant during the 1st year of TX, but decreases in symptoms were related to perception of weight status over time: larger size was associated with less decrease in depression. This relationship held for both teens and parents. Preliminary results suggest that valuing small size may be at odds with weight gained during the first year of TX. Our results have potential implications for how diabetes care is implemented from time of DX.

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D-041

FAMILY INFLUENCES ON SELF-MANAGEMENT AMONG FUNCTIONALLY INDEPENDENT ADULTS WITH DIABETES OR HEART FAILURE: DO FAMILY MEMBERS HINDER AS MUCH AS THEY HELP?

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Objectives: Among functionally independent patients with diabetes or heart failure, we examined family member support and family-related barriers to self-care. We then identified patient characteristics associated with family support and family barriers and how each was associated with self-management adherence.

Methods: Cross-sectional survey of 439 patients with diabetes or heart failure (74% response rate).

Results: 75% of respondents reported supportive family involvement in self-care, however 25% reported frequent family-related barriers to self-care. Women reported family support less often (64% vs. 77%) and family barriers to self-care more often (30% vs. 21%) than men. 78% of respondents reported involved family members nagged or criticized them about illness care. In multivariate models, low health literacy, partnered status, and higher family function were associated with higher family support levels, while female gender, older age, higher education, and more depression symptoms were associated with family barriers to self-care. Family barriers were associated with lower disease care self-efficacy ($p<.0.01$), and both barriers and family support were associated with patients' self-management adherence (both $p<0.05$).

Discussion: Family members are highly involved in the self-care of these higher-functioning patients. Interventions should help patients with chronic illness overcome family barriers to self-care and help families use positive and effective support techniques.

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D-042

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

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Background: Recent studies indicate that some domains of cognitive performance decline with aging in older adulthood, and that chronic diseases may play a role in that decline. This study investigates the effects of diabetes on three domains of cognitive performance (both levels and rates of change) in middle-aged and older adults in the United States. Methods: We used five waves of data from the longitudinal and nationally representative Health and Retirement Study (1998–2006) on samples of more than 16,000 men and women to estimate how prevalent diabetes by 1998 and incident diabetes 1998–2006, versus no diabetes diagnosis by 2006, are linked to these domains of cognitive performance, net of sociodemographic, physical and mental health, and health behavior correlates of cognitive aging. We investigated these processes using latent curve analysis models. Results: The results indicate that diabetes effects cognitive aging in midlife and older adulthood. In particular, we found 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 test scores, that is, they are associated with lower test scores at baseline. Further, both diabetes prevalence and incidence steepen the decline in delayed word recall over the eight year time frame. Conclusions: Diabetes—both prevalent and incident—negatively impacts cognitive aging. The results of this and related studies support the growing call to reverse the troubling epidemic in diabetes and its associated comorbidities, including cognitive decline, and may inform the development of health policy interventions.

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D-043

PREDICTORS OF SELF-EFFICACY IN PATIENTS WITH SCHIZOPHRENIA AND DIABETES

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Background: People with schizophrenia are about twice as likely to develop type 2 diabetes mellitus (DM) as the general population. Risk for DM further increases with age. Optimal diabetes management requires a careful balance between nutrition, physical activity, and sometimes medications-a task that may be particularly challenging for people with schizophrenia. Social cognitive theory posits that self-efficacy, or confidence, for engaging in healthy behavior is a pre-requisite for behavior change. Few, if any, studies, however, have examined diabetes-related self-efficacy in patients with schizophrenia. Even fewer have examined self-efficacy in older patients. Therefore, the purpose of this study was to identify predictors of diabetes-related self-efficacy in this population. Method: Baseline data for 64 middle-aged and older patients with schizophrenia or schizoaffective disorders and comorbid diabetes completed an assessment battery consisting of demographics, psychiatric symptoms, cognitive functioning, social support, diabetes knowledge, and self-efficacy. Data were first examined via correlation and t-tests where appropriate. Those variables that were significantly correlated with self-efficacy were then entered into a linear regression analysis. Alpha was set to $p<.05$. All results were two-tailed. Results: Self-efficacy correlated with years of education ($r=0.36$, $p<0.01$), ethnicity (t (62), $p<0.05$), support received ($r=0.40$, $p<0.01$), and understanding diabetes management ($r=0.52$, $p<0.001$). The linear regression model was significant ($F=8.00$, $p<0.001$). Understanding diabetes management was the only significant predictor of diabetes-related self-efficacy ($t=3.17$, $p<0.01$). Conclusion: Understanding diabetes management procedures seems essential for developing self-efficacy to manage living with diabetes. Diabetes educators should address what patients with schizophrenia feel like they know to improve confidence in diabetes management.

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D-044

PSYCHOSOCIAL DIFFERENCES IN TYPE 1 AND TYPE 2 DIABETES: THE SELF-AS-DOER

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Inadequate glycemic control and noncompliance with diabetes self-care behaviors (SCBs) can lead to serious complications. SCBs are vital for individuals with Type 1 (T1DM) or Type 2 (T2DM) diabetes. While research demonstrates that psychosocial factors such as self-efficacy, social support, outcome expectancies, and a newer self-as-doer (SAD) construct (which focuses on behavioral enactment resulting from illness identity) are related to the overall frequency of SCB for both T1DM and T2DM patients (Author,2008; Sigurdardottir,2005), little research has explored the differences between T1DM and T2DM in relation to these factors. Available research suggests differences between these groups in the aforementioned constructs (Lange & Piette,2006; Plontnikoff,et al.,2008), but has not investigated differences in relation to the SAD. Consequently, the present study examines the differences of the SAD construct between persons with T1DM and T2DM.

371 persons with T1DM (N=207) or T2DM (N=187) diabetes, ages 18–84, completed self-report measures examining psychosocial influences on diabetes SCB management. A t-test was calculated to examine the difference in the degree of SAD reported between T1DM and T2DM. Additionally, two hierarchical linear regressions were computed to determine if the SAD would predict SCBs above and beyond self-efficacy, self-determinism, illness identity, locus of control and outcome expectancies. Results demonstrate that persons with T1DM (M=3.40, SD=.55) reported significantly higher degrees of SAD than did persons with T2DM (M=3.18, SD=.52, t(293)=3.35,p=.001). Furthermore, SAD significantly predicts SCB above and beyond all included factors for T1DM (ΔR2 = .12, F (1,129)=30.78, p<.01), but not for T2DM (ΔR2 = .009, ΔF(1,40)=.84, p=.37).

Findings suggest that persons with T1DM are more likely to see themselves as the 'doer' of their SCBs, thereby influencing the frequency of SCBs and improving overall health. Furthermore, results may allow clinicians to target and tailor intervention strategies on particular variables to improve SCBs based on diabetes type.

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D-045

DO BASELINE PSYCHOSOCIAL AND SOCIAL ENVIRONMENTAL SUPPORT FACTORS PREDICT DIABETES SELF-MANAGEMENT OUTCOMES?

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The objective of this research was to determine the ability of patient psychosocial and social-environmental indicators to predict baseline levels of diabetes self-management, and to document the associations between these self-management behaviors and diabetes control. Baseline data from a type 2 diabetes self-management randomized controlled trial were used. Participants (N=463; 50% female; 67% white; 21% Latino) averaged 60 years of age, had elevated body mass index (BMI) (M=34.8 kg/m2), and mean hemoglobin A1c of 8.1%. Data included (a) health behaviors (e.g., dietary patterns, physical activity, medication taking), (b) psychosocial (i.e., self-efficacy and problem solving) and environmental support variables, and (c) biologic outcomes (e.g., total cholesterol/HDL radio, hemoglobin A1c).

Hierarchical multiple regression analyses demonstrated that behavior-specific self-efficacy, problem solving, and social-ecological factors explained significant variance in medication adherence (R2 = .20), healthful eating (R2 = .25), and physical activity (R2 = .23). Interactions between patient and social environmental variables were non-significant. While the self-management variables contributed significant incremental variance beyond that explained by demographic factors for three of the five clinical indicators, the pattern of relationships was inconsistent. Specifically, only healthful eating contributed to explained variance in BMI (β=-.17, p = .0003) and self-rated health status (β = .25, p < .0001); and only medication adherence contributed significantly to lipid ratio (β=-.20, p = .0001) and HbA1c (β=-.21, p < .0001). This evidence suggests the importance of diabetes self-management interventions that focus on enhancement of self-efficacy, problem-solving and social environmental support in order to maximize the likelihood of behavior change and subsequent diabetes control.

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D-047

DOCS, BLOOD, GERMS, & DISEASE FEARS: SALIENT MEDICAL ANXIETIES AND THEIR STABILITY OVER TIME

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Medical anxiety has often been seen as being the subset or variant of another type of situational phobia, most often blood/injection/injury (BII) phobia (e.g., Kleinknecht, Kleinknecht, & Thorndike, 1997); such a perspective views virtually all medical anxiety as emanating from phobic concerns about a narrow class of stimuli such that even the anxiety elicited by situations far removed from the anxiety provoking stimuli is related to a fear of blood being drawn or sustaining an injury (via a surgical procedure for example). However, seeing all anxiety arising from the healthcare context as an expression of a specific phobic focus seems to underestimate the broad field of healthcare experience. Our research during the development and validation of the Medical Anxieties Scale (MAS; Pegg, 2009) indicates that medical anxiety is more rightly viewed in the plural sense as medical anxieties. The expression of anxiety in the healthcare context can be viewed as a spectrum spanning from avoidance of a panic provoking class of stimuli to a general sensation of fear that may predispose the individual to avoid or delay healthcare transactions (such as seeking out treatment for a health concern or maintaining required treatment for an on-going healthcare concern). Facets of the healthcare experience that evoke anxiety appear to have varying levels of complexity; at the simplest level is anxiety related to a specific class of stimuli and which are, from a psychometric standpoint, relatively unidimensional; at a more complex level is anxiety emanating from a broader though interrelated group of stimuli and situations - such as anxiety related to an imagined doctor's office visit - and which are psychometrically multifactorial.

Beyond determining the plural and multifactorial nature of medical anxieties, our research suggests that medical anxieties are largely trait-like in consistency over intervals of up to eight weeks, with blood/injection/injury anxiety being the most stable over time and anxiety related to the broader medical examination context being the least stable.

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D-048

TEXT-MESSAGING AND DRIVING: EPIDEMIOLOGICAL DATA AND IMPLICATIONS FOR PREVENTION

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Cell phones are used by nearly all American college students. They offer tremendous convenience but also pose risk. One well-known risk is driving while talking on the phone (Strayer & Drew, 2004). Another recently publicized risk, thought to be considerably more dangerous, is text-messaging while driving (Hosking et al, 2007). Interventions to reduce text-messaging while driving should be prioritized, but require knowledge, now sparse, concerning how often individuals text-message, and how often they text-message while driving. The current study asked 94 college students (M = 21.3 years, SD=4.5; 68% female; 56% White) to answer a questionnaire concerning text-messaging practices.

Participants used cell phones frequently. They spent an average of 118.1 minutes using cell phones on weekdays and 142.3 minutes on weekend days. Much of that time was spent text messaging. Participants sent an average of 65.0 texts per weekday and 98.7 per weekend day. Furthermore, participants readily admitted text-messaging while driving, reporting an average of 3.3 driving trips per day during which they text-messaged.

Correlations between cell phone usage and self-reported driving behavior found the amount of time participants used a cell phone, both on weekdays and weekend days, was positively related to self-reported motor vehicle crashes over the past 5 years (r (92) = .23, p < .05 and r (92) = .36, p < .01, respectively). Text-messaging was not significantly correlated with driving safety.

Results support previous research that using cell phones while driving is dangerous. Results also suggest college students text-message, and text-message while driving, with great frequency. Theory-driven interventions designed to reduce texting while driving among college students are needed. (Note: This research is ongoing, and we expect to have data from a larger sample (N = 150) to report at the conference.)

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D-049

MULTIPLE HEALTH BEHAVIOR CHANGE INTERVENTIONS: BENEFITS AND CHALLENGES

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The major chronic diseases are caused by multiple risk behaviors, yet the science of multiple health behavior change (MHBC) is at an early stage, and factors that facilitate or impede scientists' involvement in this area are unknown. The benefits and challenges of MHBC interventions were investigated to strengthen researchers' commitment and prepare them for challenges. Members of the Society of Behavioral Medicine's MHBC Special Interest Group developed a survey. The measure consisted of 24 benefit and 31 challenges items rated from "not important" (coded 1) to "extremely important" (coded 5) and averaged into two scales: Cronbach alphas = .93 (benefits) and .95 (challenges). A web-survey was emailed to listservs for SBM's MHBC, Physical Activity, Evidence-Based Behavioral Medicine, Obesity, and Cancer SIGS, and to researchers identified as publishing on MHBC. Completion could be anonymous. The sample (N=69) was 83% female; 88% Caucasian; 94% held a doctoral degree; 64% were psychologists, 24% were in public health. Most respondents (83%) engaged in MHBC research or practice; 43% were MHBC SIG members. Nearly all the benefit items (92%), but only one challenge item, were rated by a majority of respondents as very to extremely important. Those engaged in MHBC work rated the total benefits (M=3.81, SD=.48) significantly higher than those focused on single behavior change (M=3.46, SD=.78), F(1,69)=4.21, p<.05. The two groups did not differ in ratings of challenges. In paired samples t-tests, the benefits were rated significantly higher than the challenges. The finding was specific to respondents engaged in MHBC research: t(57)=7.50, p<.001. It appears that individuals focused solely on single behaviors do not fully appreciate the benefits that impress MHBC researchers; it is not that there are substantial barriers holding them back. The benefits of MHBC interventions need to be emphasized more broadly to advance this research area.

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D-050

SELF-COMPASSION, BURNOUT, AND THE ACADEMIC IMPACT OF STUDENT HEALTH CONCERNS

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Elucidating the health concerns impeding academic success for graduate health sciences students and their potential interactions with burnout and measures of self-compassion will assist institutions of higher education in developing effective support strategies and structures for students as they complete their training to become leaders in health care.

To determine which health concerns negatively impact graduate health science students' academic success, and explore the interaction of these concerns with burnout and selected measures of self-compassion (self-judgment, self-kindness, isolation, common humanity), the authors administered the National College Health Assessment (NCHA), four subscales of the Self-Compassion Scale (SCS), and a single-item measure of burnout to all students enrolled at a single medical center during March 2009. High rates of burnout may negatively impact students' ability to remain in the field or to deliver quality care during professional practice. Self-compassion is related to psychological resilience and overall well-being.

Consistent with our previously published data, eight health concerns, seven of them psychosocial, emerged as significant impediments (p <.05) to academic performance: depression, anxiety, stress, relationship difficulties, sleep difficulties, internet use and concerns about a troubled friend/family member. Further analyses demonstrate a relationship between experiencing these concerns and level of burnout. Exploration of relationships among the health concerns impeding academic performance and the SCS subscales revealed significant associations (p <.05) among five of the seven health concerns and Isolation.

When we reduce health-related barriers to learning, we support learning, thereby preparing health sciences students to be effective practitioners, educators, and public health leaders. If we create learning environments in which we identify and support students-at-risk in ways that promote not only academics, but also enhance social support and increase self-compassion, we enhance student well-being and resilience.

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D-052

WHAT HAPPENS AFTER IPV SCREENING? OPPORTUNITIES FOR HEALTH CARE PROVIDER INTERVENTION WITH SURVIVORS OF INTIMATE PARTNER VIOLENCE

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Intimate partner violence (IPV) affects millions of women and is associated with high rates of medical care utilization, not just for injuries but for a host of medical conditions. Although many survivors of IPV are seen in health care settings, and screening for IPV is widely recommended, there has been limited attention to the development, implementation and evaluation of interventions that can be offered to women who report experiencing IPV. Low income, urban women who are living with IPV and those who are also HIV positive are especially vulnerable women in need of effective IPV interventions. This presentation seeks to: 1) describe how a theory based needs assessment was conducted; and 2) an intervention was developed and pilot tested for meeting the needs of these women.

Qualitative and quantative interviews were conducted and guided by Prochaska and DiClemente's Transtheoretical Model (TTM). We developed and tested the TTM's utility for understanding women's coping strategies for staying safe and their stage of readiness to end their abusive relationship. We evaluated measures of decisional balance and self efficacy to evaluate the appropriateness of this model for understanding IPV survivor's needs with 96 women recruited from women's health care settings including HIV treatment clinics. And, finally we developed and pilot tested a stage based, 6 session advocate counseling program for helping women make informed decisions about coping with or ending their abusive relationships. The pilot test (with 12 abused women) yielded promising results in terms of women's reported quality of life and experience of violence.

Health care providers who screen for IPV and/or who provide women's health care can utilize the results of this body of research to implement clinic based programs to better serve the needs of their female IPV survivors.

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D-053

"I'D RATHER DIE THAN GO BACK FOR CARE:" STIGMA FROM THE MEDICAL COMMUNITY AMONG HIV-INFECTED PERUVIAN WOMEN

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Across the globe, HIV-related stigma continues to be a powerful barrier to testing, disclosure, and treatment. In Peru, the HIV epidemic has been concentrated historically in men who have sex with men, but the prevalence of HIV-infection has been rapidly increasing among heterosexual women. The present study explored HIV-infected women's experiences with stigma from the medical community in Lima, Peru.

Fourteen HIV-infected women who resided in Lima and its nearby communities were recruited from a large cross sectional study to participate in a qualitative, face-to-face interview. A purposive sample of women from diverse socioeconomic backgrounds, of varying ages, and at various stages of HIV disease (e.g., women on and off antiretrovirals) was selected for inclusion. The data was analyzed using a thematic analysis framework and then a content analysis was performed for the a priori theme of stigma. We defined stigma as "A negative event that occurred and perceptions of differential treatment based on HIV-infected status." We focused on enacted stigma which includes overt acts of discrimination, including violence, discrimination, and ostracism.

Results indicated that women experienced high levels of enacted stigma from the medical community. Health care service utilization continues to be a challenge faced by many living with HIV/AIDS and was addressed as a major issue by the participants in this study. Experiences of maltreatment from the medical community were common among the participants, making access to needed treatment unattainable and undesired.

HIV/AIDS continues to be a seen as a disease afflicting the "immoral" sections of society, namely the homosexuals, injection drug users and sex workers. This is among the first studies to examine, HIV-infected, heterosexual women's experiences with HIV-related stigma in Lima, Peru. Reccommendations for the medical community and stigma reduction approaches are discussed.

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D-054

EMOTIONAL FACTORS ASSOCIATED WITH EARLY ADOLESCENT ORAL SEX

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Oral sex poses risk of STDs, and the earlier teens become sexually active, the greater their risk tends to be throughout their lives. Data suggest that emotion regulation may be related to engaging in sex, but little is known about this relationship in early adolescents, particularly those at risk due to emotional/behavioral problems.

Data were collected during baseline assessments of an after school HIV prevention project for 7th graders (average age 12.65 years) identified by school staff as at-risk for emotional/behavioral problems. Questionnaires regarding affect regulation and sexual behavior were administered using laptop computers. 139 adolescents (51% female; 45% Caucasian) participated.

12% (17/139) of participants reported having ever given or received oral sex. Those endorsing oral sex were asked "Think back to the last time you had oral sex. How much do you think your feelings made you have oral sex?" On a 5-point scale, 11 of 17 endorsed a rating of 3 or higher ("somewhat," "quite a bit," or "extremely"). However, on the Toronto Alexithymia Scale, those who had engaged in oral sex reported greater difficulty identifying their feelings (t(132)=3.01, p=.003) and describing their feelings (t(135)=2.23, p=.027) than peers who had not. They also were rated by teachers as having greater dysregulation on the Emotion Regulation Checklist (t(128)=1.76, p=.081); there were no significant differences in parent ratings or adolescent self-reports of affect regulation.

Most early adolescents who reported oral sex indicated that emotions influenced their decision-making. At the same time, they perceived poorer affective abilities relative to their peers, and a trend toward these differences was observed by teachers. These data support the notion that risk behavior may be related to deficits in emotion processing that interrupt decision making. Understanding factors associated with early adolescent engagement in oral sex is critical to prevention efforts, and interventions targeting affect regulation skills may be useful for teens.

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D-055

AN EVALUATION OF INTERACTIVE INTERNET MODULES ON TREATMENT OUTCOMES

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Recently, technology has allowed for automated internet-based programs that are more interactive in nature and can provide an individually tailored HIV prevention intervention using algorithms. This unique aspect of interactive features was utilized in the Wyoming Rural AIDS Prevention Project. The purpose of this research is to explore whether the specific responses given by participants affected intervention outcomes. The intervention outcomes included: self-efficacy to practice safe sex, knowledge about STDs and HIV, outcome expectancies, and willingness to practice safe sex. Individual responses to interactive components (bar scripts and internet scripts) were recorded and analyzed using correlational, Chi-Square, and ANOVA analyses. Participants who responded that they would most likely have condoms at home as a safe sex habit significantly increased their knowledge scores at post-test, r = .267, p = .016. ANOVAs also revealed that individuals who would be the most disappointed about not receiving sex when visiting a bar had significantly lower outcome expectancies than other individuals, F (5, 283) = 2.579, p = .027. Future prevention programs may consider addressing and targeting "at-risk" interactive responses.

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D-056

NON-MEDICAL USE OF PRESCRIPTION DRUGS, RECREATIONAL SUBSTANCE USE, AND SEXUAL RISK BEHAVIOR IN MEN WHO HAVE SEX WITH MEN

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Recent studies have shown increasing rates of the non-medical use of prescription drugs (without a physician's prescription) among young adults. Few studies have examined the non-medical use of prescription drugs in gay and bisexual men, a group at heightened risk for both problematic substance use and HIV. The present study examined the non-medical use of prescription drugs, the use of traditional recreational drugs, and sexual risk behavior in gay and bisexual men attending a gay pride celebration (N=350). Overall, 38% of participants reported non-medical use of at least one prescription medication during their lifetime. The most common types of drugs used were pain medications (35%), followed by sedatives (17%), anxiolytics (17%) and stimulants (15%). Individuals who reported non-medical use of prescription drugs were significantly more likely to use marijuana, ecstasy, poppers, methamphetamine, cocaine, ketamine, GHB, heroin, and rophynol, relative to individuals who did not report non-medical use of prescription drugs (ps <.05). Non-medical use of prescription drugs was also associated with sexual risk behavior. Sexually-active individuals who reported non-medical use of prescription drugs reported more sex partners in the previous 3 months (M=5.1, SD=11.7) than individuals who did not report non-medical use of prescription drugs (M=3.2, SD=8.9), Z (Mann-Whitney) =3.42, p < .01. Similarly, individuals reporting non-medical use of prescription drugs reported more acts of unprotected anal sex in the previous 3 months (M=9.9, SD=21.5) than individuals not using these drugs (M=4.5, SD=18.1), Z (Mann-Whitney)=4.36, p < .001. MSM who use prescription drugs without a doctor's prescription may be at heightened risk for HIV.

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D-057

DIFFERENCES IN SEXUAL TRANSMISSION RISK BEHAVIORS BY HIV SEROSTATUS AMONG MEN WHO HAVE SEX WITH MEN ATTENDING SEX PARTIES IN MASSACHUSETTS

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Background: Men who have sex with men (MSM) represent the highest risk group for HIV infection in the US. Between 8%-25% of MSM report meeting recent male sex partners at a private sex party, yet little is known about risk factors among this subset of men.

Methods: Between November-December 2008, formative research was conducted with MSM (N=40) who self-reported attending one or more sex parties in Massachusetts in the past 12 months. Analyses of qualitative interviews and quantitative assessments examined sexual risk behaviors by HIV serostatus.

Results: 25% of participants (mean age 41 years; 47% non-white; 50% HIV-infected) reported unprotected anal sex with at least one serodiscordant male sex partner at the last sex party they attended. Compared to HIV-negative men, HIV-infected men were more likely to report: serodiscordant unprotected receptive anal sex; history of one or more sexually transmitted infections; depressive symptoms; and substance abuse treatment history (all p<0.05). Salient themes from qualitative interviews with HIV-infected MSM: reasons for attending sex parties included "escape from reality", ability to socialize, and access to sex and drugs; disclosure of HIV status was uncommon; drugs and/or alcohol were often used at sex parties, particularly stimulants (40% crack cocaine and 25% crystal methamphetamine); it was perceived that HIV prevention discussions would "ruin the mood" and that efforts should be conducted outside of the sex party environment.

Conclusion: Differences were observed in risk behavior by HIV serostatus among MSM attending sex parties in Massachusetts. These data provide initial evidence that the structure and content of HIV prevention interventions for this at-risk group may need to vary by HIV serostatus.

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D-058

ASSOCIATIONS BETWEEN DIFFERENT TYPES OF CHILDHOOD MALTREATMENT AND ADULT SEXUAL RISK BEHAVIOR

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Numerous studies have documented an association between childhood abuse, particularly sexual abuse, and adult sexual risk behavior. Children often experience multiple types of abuse, yet few studies have investigated the independent and interactive effects of different types of child abuse on adult sexual risk behavior. Women attending a public STD clinic ($N=339$; 66% African American) completed a computerized survey assessing childhood maltreatment (physical abuse, psychological abuse, sexual abuse, and neglect) and current sexual behavior (number of episodes of unprotected sex in the past 3 months; number of sexual partners, lifetime and past 3 months). Seventy-five percent of the sample ($n = 254$) reported at least one type of childhood abuse; 53% ($n = 178$) reported multiple types of childhood abuse. The four types of abuse were significantly correlated (tetrachoric correlation range=0.24–0.72). In univariate analyses, having more partners in the past 3 months was associated with physical abuse, $t=-2.84$, $p < .01$, psychological abuse, $t=-2.04$, $p < .05$, and neglect, $t=-2.32$, $p < .05$. Having a greater number of lifetime number of partners was associated with physical abuse, $t=-3.14$, $p < .01$; psychological abuse, $t=-3.14$, $p < .01$, neglect, $t=-2.68$, $p < .01$, and sexual abuse, $t=-5.76$, $p < .0001$. The number of episodes of unprotected sex was unrelated to childhood abuse. In multivariate analyses, none of the abuse variables independently predicted number of partners in the past 3 months; child sexual abuse was the only independent predictor of the number of lifetime partners, $F(1, 338) = 25.06$, $p < .0001$. Among participants reporting at least one type of child abuse, experiencing multiple types of abuse was associated with more sexual partners in the past 3 months, $F(1, 252)=6.12$, $p < .05$. Thus, both child sexual abuse and experiencing multiple forms of abuse may be important in predicting adult sexual risk behavior. Sexual health assessments should include an assessment of patients' childhood maltreatment histories.

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D-059

IMPACT OF STIGMA AND OTHER PSYCHOSOCIAL FACTORS ON HEALTHCARE ACCESS AND UTILIZATION AMONG HOSPITALIZED HIV-INFECTED PATIENTS IN WASHINGTON, DC

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Since the advent of HAART, patients who consistently use HIV primary care services have exhibited dramatic decreases in morbidity and mortality. Unfortunately, many with HIV fail to connect with or sustain primary healthcare. Whether due to failure to be diagnosed early or failure to access or adhere to treatment, unmanaged infection increasingly compromises the immune system, which, in turn, results in susceptibility to opportunistic infection and malignancy.

As of 2007, 3% of residents in the District of Columbia (DC) had HIV/AIDS, a rate 3 times higher than the CDC definition of a generalized epidemic (DC DOH, 2008). Hospitalized HIV-infected patients represent a particularly vulnerable population. Because barriers to primary care are not well defined in DC's HIV population, this study explored patient attributes relevant to healthcare access and utilization. One-on-one interviews were conducted ($N = 15$) to elicit patient perceptions and knowledge of HIV and treatment, stigma, and reasons for and against seeking healthcare.

Qualitative analysis revealed that major barriers to primary care for HIV before and after diagnosis include denial and avoidance, and depression and poor coping, respectively. Although health insurance and knowledge about services maximized individuals' care utilization, these did not outweigh personal motivation to overcome and persist in the face of obstacles. Government systems are particularly burdensome and often discouraged people from pursuing needed support. Comorbidity due to other chronic diseases, lack of stable housing, and substance use also impeded effective care utilization.

Although participants did not report overt discrimination within the healthcare system, HIV stigma deterred some people from verifying their serostatus at the outset. Stigma was an implicit backdrop throughout many of the experiences patients described.

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D-061

WHAT IS IT ABOUT THE FRUIT? FRUIT AND FRUIT FIBERS AS PREDICTORS OF WEIGHT LOSS AMONG THE OVERWEIGHT

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Objective: Previous research (Schroder, in press) suggests fruit consumption to be the strongest predictor of weight loss after controlling for variables such as age, gender, and daily macronutrient consumption. The present study sought to explore which properties of fruit contribute to weight loss in participants.

Method: The study consisted of 77 obese participants completing a dietary intervention. Pre-intervention nutrition was evaluated through an 8-day written food diary which was then entered into nutritional software (Nutrigenie). Post-intervention nutrition information was obtained from participants' nutrition files sent via email. Weight and BMI were assessed at pre-intervention and at 3- and 6-month follow-ups. Fruit consumption was segregated into type, servings, and fiber content.

Results: Fruit fibers ($r=-.326$ to $-.357$, $ps<.005$) and total fruit consumption ($r=-.354$ to $-.434$, $ps<.002$) were strong predictors of weight and BMI in both cross-sectional and longitudinal analyses. Other dietary fibers were unrelated to these outcomes. Multiple hierarchical regression analyses were performed controlling for age, gender, and macronutrients (composite score of kcal, total fat, carbohydrate, and protein consumed). Fruit fiber content and total fruit consumed were added in the third and fourth step of the hierarchical regressions. Fruit fibers explained up to 9% incremental variance ($\Delta R^2=.053$ - $.091$) in both weight and BMI in cross-sectional and longitudinal analyses. Total fruit consumption explained 4–7% of the variance after controlling for fruit fibers ($\Delta R^2=.042$ - $.073$). Further, changes in fruit fiber consumption explained additional 6.5% of the variance in weight loss and BMI reduction during the first three months of the trial ($\Delta R^2=.067$ and $.064$). Total fruit intake did not contribute further to the prediction of weight loss ($\Delta R^2=.033$, ns).

Conclusion: The results suggest that fibers contained in fruits are the main ingredient responsible for the unique effects of fruit consumption on weight and weight loss among overweight/obese persons.

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D-062

INVESTIGATING SCHOOL FOOD ENVIRONMENTS: POINT-OF-SALE MARKETING TO YOUTH AT FAST FOOD RESTAURANTS

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Research suggests that the food environments surrounding U.S. public elementary and secondary schools are likely to contain a high density of fast food restaurants. Additionally, children who attend schools that are proximal to fast food restaurants are more likely to be obese. Thus, an important issue is not only the density of restaurants near schools, but also the point-of-sale marketing used to attract young consumers. Although debates surrounding targeted food advertising on television have been prominent, less attention has been directed to the amount and nature of marketing in school food environments. We used GIS to identify fast food restaurants that were proximal (400m) ($N=17$) and non-proximal ($N=14$) to public elementary schools in the borough of Manhattan, New York City, and conducted street-level observation of a set of previously identified marketing tactics, including advertising directed at children, ads at child eye-level, playgrounds, birthday hosting, dollar menus, and special promotions. In addition, photos were taken to record the nature of the various ads and promotions. Although differences did not reach statistical significance for the modest sample, marketing was more prevalent at proximal restaurants. While many of the fast food restaurants observed were multinational chains with coordinated promotional campaigns, some non-multinational fast food restaurants utilized targeted marketing such as after-school special discounts. It is estimated that banning fast food ads on TV could reduce the number of overweight children by as much as 18%. Research is needed on whether a similar approach to in-store ads could have similar effects on children's food decisions.

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D-063

GREATER COMMUNITY ENGAGEMENT IS ASSOCIATED WITH FRUIT/VEGETABLE INTAKE AND PHYSICAL ACTIVITY IN ADOLESCENTS

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A school-based survey examined the association of community engagement with dietary behaviors, physical activity and sedentary behaviors. We also tested whether these effects were mediated by self-efficacy for eating healthy and being physically active. The research was conducted in public schools in the Bronx, NY in grades 7–10. The sample (N=851) was 45% female, 77% Hispanic, 9% Black, and 14% other race/ethnicity; 82% were US born. Mean age was 14.9±1.05 years. Criterion measures were intake of fruit/vegetables (FV), and frequencies of vigorous exercise and time spent watching TV/videos or playing video/computer games. Community engagement was measured with a 13 item scale that included after school activities such as participating is a sport team, cultural organization, youth club or internships (α=0.77). Community participation was significantly correlated with FV (r = .20, p < .001) and physical activity (r = .24, p<0.001), but no association was found with sedentary behavior or body mass index. Self-efficacy measures were correlated with FV (r = .16, p < .001) and physical activity (r = .46, p < .001). Community engagement was significantly correlated with self-efficacy for eating healthy and being physically active (r = .16 and .24, respectively). Using linear regression, after controlling for age, gender, maternal education, adolescents with greater community engagement had higher FV intake (β = .46, p < .001) and were more physically active (β = .08, p < .001). Self-efficacy mediated the effect of community engagement on physical activity, but no mediation effect was observed for FV intake. These findings highlight the need for programs that encourage adolescents to participate in a variety of activities to improve health behaviors.

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D-064

AN EMPIRICAL INVESTIGATION OF DIETING EXPERIENCES AND EXPECTATIONS: THE RELATIONSHIP BETWEEN FALSE HOPE AND WEIGHT CYCLING

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Given the high rates of overweight and obesity, it appears that diet failure is commonplace. The False Hope Syndrome suggests that unrealistic expectations of dieting and weight loss are key constructs in the prediction of behavioral failure. Such expectations include outcome expectations for thinness and dieting process expectations. Using the False Hope Syndrome as a cognitive-behavioral theoretical framework, this study: assessed the relationship among thinness outcome and dieting process expectations and weight cycling history, and examined the distribution of expectations for weight loss and weight cycling across age and gender. Measures of thinness and dieting expectations, weight cycling history, and a basic demographic form were completed by an online questionnaire. The study sample (N=214) was recruited via workplace e-mail and intranet distributions in the Midwestern United States. Expectations of thinness were correlated with: weight cycling experience (r=.527; p=.01), the number of lifetime weight cycles of 20 lbs. or more (r=.200; p=.01), and the number of previous diet attempts (r=.301; p=.01). Females (n=116, M=189.5, SD=51.1) had higher expectations of thinness than males (n=98, M=173.9, SD=50.0; p=.05). Dieting process expectations were higher in males (M=7.55, SD=1.72) than in females (M=6.92, SD=1.50, p=.005). Expectations were similar across age. BMI was similar between genders and across age. Thirty-five percent of the sample reported currently dieting, a percentage which did not differ statistically between genders. Expectancy-focused interventions may affect weight cycling behavior and the experience of the False Hope Syndrome. Even though weight status was found to be similar between the genders, thinness and dieting expectations were not, suggesting that males and females experience dieting and weight control differently. Interventions designed to mediate dieting and thinness expectations should be gender specifically tailored.

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D-066

REVISITING THE REVISED MASTER QUESTIONNAIRE: PSYCHOLOGICAL ASSESSMENT AND OUTCOME PREDICTION IN BARIATRIC SURGERY CANDIDATES

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The Revised Master Questionnaire (MQR) is an obesity assessment instrument that measures Stimulus control, Motivation, Hopelessness, Physical attribution, and Energy balance knowledge. Despite its potential relevance to bariatric surgery, the MQR has never been evaluated as a tool in the psychological assessment of bariatric surgery candidates. Moreover, its' original design as a predictor of behavioral weight loss suggests that it may be useful in predicting postsurgical weight loss. We examined the psychometric properties and clinical/predictive utility of the MQR with bariatric surgery candidates (n=212;BMI M=45;age M=42) presenting for evaluation in an urban medical center. Internal consistency reliability analyses and exploratory factor analysis (principal components analysis with varimax rotation) were performed and the results compared with the original sample of behavioral weight loss patients. Correlational and hierarchical regression analyses were used to evaluate the predictive utility of MQR scales in postsurgical weight loss. Based on the original analysis, we hypothesized that after covarying demographic predictors of outcome, Motivation and Energy balance knowledge would significantly predict weight loss at one year. Alpha coefficients (.68-.76) and mean interitem correlations (.15-.21) were largely acceptable and similar to the original sample. Factor analyses supported the consistency of the underlying factor structure with bariatric surgery candidates. Normative data suggest that this sample of bariatric surgery candidates had higher (more adaptive) scores than the original behavioral weight loss sample. As hypothesized, Motivation was significantly correlated with change in BMI at one year (r=.32, p<.01), however Energy balance knowledge was not. Hierarchical regression analysis revealed that age (r^2=.15, p=.001) and Motivation ($r^2\Delta$=.10, p=.03) predicted reduction in BMI at one year. Our findings support the clinical and predictive utility of the MQR in the psychological assessment of bariatric surgery candidates.

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D-067

BRAIN-DERIVED NEUROTROPHIC FACTOR AND METABOLIC SYNDROME IN OVERWEIGHT AND OBESE CHILDREN

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Brain-derived neurotrophic factor (BDNF) has been shown to increase with exercise in adults. However, BDNF has been positively related to fatness, insulin resistance, glucose and triglycerides, and is higher in patients with type 2 diabetes than healthy controls.

This study examined these relationships in a sample of 163 sedentary, overweight and obese children (mean age 9.3 ± 1.0 yr, BMI z-score = 2.1 ± 0.4, body fat=40±6, treadmill time=458 ± 199 sec, BDNF=64±48 pg/ml). Children underwent dual-energy x-ray absorptiometry, MRI, a maximal treadmill challenge, and fasting venipuncture; BDNF was measured in plasma and metabolic factors in serum. Children were then randomly assigned to either a control condition or 13 ± 1.6 weeks of aerobic exercise training (average heart rate during classes = 166±8 bpm) at a low or high dose (20 or 40 min/day, respectively). Measurements were repeated at post-test.

BDNF was correlated positively with body fat (r = .17, p < .05) and negatively with fitness (r=-.19, p = .01). BDNF was not related to glucose or insulin metabolism, visceral fat, or lipid profile. BDNF showed a linear increase due to exercise training (p = .02 for trend; changes of -9, -1, 8 in control, low, and high dose groups, respectively) that was unaffected by the inclusion of covariates (race, gender, study cohort).

The cross-sectional relationships and response to intervention in these children are consistent with prior research in adults, though some relationships with diabetes risk factors were not detectable in this younger, healthier sample. However, the fact that a growth factor that increases with exercise training would be positively related to other health risks known to be reduced with training is paradoxical. This may be explained by peripheral compensation for low brain levels of BDNF in sedentary, unfit individuals.

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D-068

OBESITY PREVENTION FOR AFRICAN-AMERICAN ADOLESCENTS: UNDERSTANDING BARRIERS & FACILITATORS TO ADHERENCE

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Despite the prevalence of obesity in African-American adolescents and the popularity of family-based approaches, little is known about characteristics influencing adherence to such programs.

A collective case study approach was utilized to gather detailed ecological data (including focus groups, direct observation, participant observation, and photographic recording) from individuals enrolled in a multidisciplinary, family-based obesity prevention program offered through a large urban medical center. Purposeful maximal sampling identified 5 families with diverse family structures and SES. Identification criteria include African-American race, presence of ≥ 1 adolescent 10–60lbs overweight, presence of ≥1 family member agreeable to treatment, and program enrollment ≥3 months. Atlas.ti was used to organize the text, audio, and visual data, investigator memos, and findings.

Cross-case theme analysis has identified barriers and facilitators to treatment engagement. Themes that emerged most frequently as barriers include marginalization/stigmatization, financial concerns, fluctuating motivation, and time constraints. Many participants believed the dietary choices encouraged by the program went against social norms and, thus, felt shame and isolation when engaging in the recommended dietary behaviors. Many participants also agreed that involving family members in treatment encouraged healthful diet and regular physical activity and was protective against limited support encountered outside the family. Participant report and investigator observation suggest environmental and community structures, regardless of family SES, do not support many of the recommended programmatic changes.

Findings suggest engaging family members in treatment may buffer against the negative effects of limited extra-family support and promote adherence to recommended diet and activity strategies. Findings also highlight the importance of assessing local norms and environmental supports for weight management regardless of SES prior to prescribing behavioral change.

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D-069

METHODOLOGICAL ISSUES IN MEASURING NEIGHBORHOOD-LEVEL EXPOSURES

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Researchers have increasingly investigated the presence of unhealthy exposures in the built environment and the absence of health-promoting ones. We assessed two oft-noted methodological concerns in this literature. First, basic Euclidean (straight distance radius) analyses may not assess exposure as accurately as via street networks. Second, available data sources for neighborhood resources may be dated, resulting in inaccurate characterizations of environmental exposures. The aims of the present study were to: 1) Investigate the congruence between street network and Euclidean measurements of the spatial relationship between public elementary schools and fast food restaurants in New York City; and 2) Investigate the congruence between restaurant listings derived from public databases and what was present at street level. Schools were obtained from Department of Education databases (2004–2005), and restaurants from the Department of Health restaurant inspection website (2006). For N=913 schools, we used GIS to identify those that had at least one fast food restaurant in close proximity (400m—a distance purportedly walkable in 5 minutes), measured alternately with Euclidean radii and street networks. Next, researchers equipped with pedometers and stopwatches measured the walking time and distance between a random selection of schools (N =45) and fast food restaurants that fell within the Euclidean buffer. Changes in store tenancy were recorded. Aim 1: We found that Euclidean measurements overestimated exposure to fast food (n=483 schools) compared to street network measurements (n=225 schools). On average, walking time fell within commonly assumed metrics (Mean pedometer steps=543, SD=264; Mean walking time to restaurant=4:59, SD=2:14), but for several schools, it exceeded 5 minutes. Aim 2: 79% of restaurants identified from public listings were present at street level. Of those no longer present, 25% (N=3) were new fast food outlets; others were a mix of retail goods and services. Our findings have implications for research utilizing GIS to investigate health in urban environments.

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D-070

A LONGITUDINAL ANALYSIS OF QUALITY OF LIFE AND PHYSICAL ACTIVITY AMONG OVERWEIGHT AND OBESE CHILDREN AND ADOLESCENTS

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Introduction: Overweight and obese children are at risk for a number of physical health consequences. In addition, studies describing poorer quality of life in overweight and obese children have appeared repeatedly in the literature. This finding has lead some researchers to hypothesize that low physical activity among overweight and obese children contributes to poorer quality of life. The present study will advance the literature by examining the directional link between QOL and physical activity in the context of a pediatric weight-management intervention. Method: Ninety-six overweight or obese children (7–18 years old; M = 11.6 years, SD = 2.6) were randomized to receive either a 10-session family-based behavioral intervention for weight loss or a 3-session self-guided control condition. Participants completed self-report measures of physical activity and QOL before and after treatment. A cross-lag regression panel design was conducted such that each variable at time one was regressed onto every other variable at time two while controlling for the dependent variable at time one. Because treatment was delivered between the measurement occasions, separate analyses were conducted for treatment and control groups. Results: Physical activity at time one significantly predicted physical QOL at time two in the treatment condition while controlling for physical QOL at time one ($R^2 = .079$, $F[2,32] =15.4$, $p < .001$). The parallel test in the control condition was nonsignificant. No other associations reached significance. Discussion: The observed findings suggest that children who have a greater propensity for physically activity at the outset of a weight-management intervention may experience greater improvements in physical quality of life than their inactive counterparts. One potential explanation for this finding is that children who are more comfortable with physical activity at the beginning of treatment are more willing to increase their physical activity which in turn provides QOL benefits.

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D-071

WEB-BASED INTERVENTION FOR OVERWEIGHT CHILDREN: A PILOT STUDY

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The purpose of this study was to develop an interactive web program for weight loss in 8–12 year-old children. A website was developed using concepts from existing effective family-based behavioral programs, and input from focus groups of overweight children, their parents, and pediatricians. The site consists of information about obesity and healthy lifestyles, assessment of dietary and physical activity (PA) habits, interactive dietary and physical activity games, instruction in goal-setting, and self-monitoring of goals. Children select one dietary goal and one physical activity goal, and a daily step goal with pedometers. Feasibility and pilot testing over a four week period is currently ongoing; 24 children will participate. To date, usage data is available on the first nine children and three of these have completed a post assessment. Five children did not utilize the website frequently, with a mean of 5 log-ins for the month; the other four utilized the website more frequently, with a mean of 12 log-ins, including 19 days of tracking food and PA goals. For the three children completing the post assessment to date, one (with 16 log-ins) reported reduced fast food consumption, an increase in moderate physical activity, and a reduction in sedentary behavior over the one month period; BMI was slighly reduced by 0.2 units. Another (with 12 log-ins) reported increased vegetable intake, and decreases in sweetened beverages and high caloric density snacking, and lost 4.6 pounds over the one month trial, with a BMI reduction of 0.7 units. The third participant (12 log-ins) reported increased fruit intake, decreased sweetened beverage intake, reduced screen time, and increased vigorous PA, with a BMI reduction of 0.9 units. Consumer satisfaction of the program was rated as very high. These prelimninary findings suggest that children who utilize the web program make healthful behavioral changes.

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D-072

DIFFERENCES ACROSS PHYSICAL ACTIVITY, DIETARY HABITS AND WEIGHT IN WOMEN OF COLOR

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Women of color are vulnerable to obesity and related behaviors. The Health Is Power project aimed to increase physical activity (PA) and improve dietary habits (DH) among community dwelling, healthy African American (AA) and Hispanic or Latina (HL) women. Women (N=262 AA, N=148 HL) completed interviewer administered questionnaires, take home questionnaires, and objective anthropometric measurements. PA was measured using the International Physical Activity Questionnaire (IPAQ) long form, the weekly log Check And Line Questionnaire (CALQ) and accelerometry. DH were measured using 24-hour recall screeners and weekly vegetable and fruit (VF) logs. Women (M=44.4 yrs) were obese (M=34.0 kg/m^2), sedentary (M=19.4 MVPA accelerometry min/day) and ate few VFs (M=2.8 servings/day; M=30.5% kcals from fat/day). IPAQ leisure time PA (p<.001) and accelerometry (p<.01) were associated with CALQ MVPA min/day. Screener VF servings were associated with weekly log of vegetables (p<.05) and fruit (p<.001). Simultaneous 2 (ethnicity) X 3 (weight status) MANCOVAs, adjusted for age, showed that AA women reported less PA, but demonstrated more PA by accelerometry compared to HL women (ps<0.05). Obese women demonstrated more PA compared to normal or overweight women (p<0.05). AA women tended to report about equal levels of PA across weight categories while HL normal weight women reported higher levels of moderate intensity PA on the IPAQ compared to HL obese women (interaction, p<.01). No differences were found for reporting of DH. Instruments measuring similar constructs appear to overlap, suggesting some level of validity. However, AA women tend to report PA differently compared to HL women, regardless of weight status, suggesting cultural bias in instruments and pointing to a need for multiple forms of measurement of health behaviors. Supported by NIH 1R01CA109403.

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D-073

FATHERS' ROLES IN NUTRITION AND PHYSICAL ACTIVITY (PA) FOR VERY YOUNG CHILDREN

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Parents have a strong influence over their children's food and PA habits. This influence is pervasive in very young children when parents are usually the gatekeepers to food and PA. Little attention has been given to the role of dads regarding nutrition and PA in children's lives as compared to moms. In order to better understand the role of fathers, we conducted semi-structured interviews and focus groups with 20 dads (21–42yrs. X=32y, BMI 23-43 X=30±5.1, 15% HS, 20% some Col., 35% 4 yrs. Col., 30%>Col., 25% Black) of toddlers <2 yrs. regarding attitudes, behaviors, and intentions concerning their role in nutrition and PA in their child's life. BMI was measured. Dads completed the Knowledge, Beliefs, and Intentions Questionnaire—Caregiver (KBIQ-C) which assesses attitudes, beliefs and behavioral intentions about adult/child nutrition and weight. The two most cited factors needed for a healthy child were a balanced diet and PA. Dads predominantly believed their role was to offer encouragement and praise for healthy living choices and to provide opportunities for PA. The majority perceived mom to be in charge of all food and activity decisions. 37% of dads expressed a desire to act as a role model for PA. 75% strongly agreed that being active with their kids taught children to be active, however 50% believed that kids learn to be active on their own (KBIQ-C). 95% were confident they could help their children lead a healthy lifestyle, yet 40% did not know when fruits and vegetables should be started in a young child's diet. 55% believed it was appropriate to give a child sweet foods at or before 1yr. Only 1 dad expressed concern about his child's weight. Overall, dads had positive intentions to help their children be healthy and to model good behaviors. However, most had inaccurate information concerning nutrition for their kids. While a majority felt influential in teaching their kids to be active, only half deemed it necessary. Our results describe dad's perceived role in promoting healthy living in young children and bring attention to the need to educate fathers about good nutrition practices.

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Meritorious Student Poster
D-074

IMPROVEMENTS IN LDL CHOLESTEROL ASSOCIATED WITH LIFESTYLE INTERVENTION TREATMENT FOR OBESITY

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Elevated levels of low-density lipoprotein (LDL) cholesterol serve as a significant risk factor for coronary heart disease. Participants who succeed in lifestyle intervention treatment for obesity often achieve beneficial reductions in LDL cholesterol levels; however, it remains unclear to what extent weight loss versus changes in dietary intake contributes to these reductions. This study evaluated the contributions of weight loss and changes in dietary intake in 203 obese (mean body mass index=36.75) middle-aged women (mean age=59.74) to improvements in LDL cholesterol over the span of a 24-week lifestyle intervention treatment for obesity. From pre- to post-treatment, participants on average lost (mean±SD) -10.13±5.13 kg and showed reductions in total fat intake (-28.61 ± 28.99 g), saturated fat intake (-8.59±8.08 g) and dietary cholesterol intake (-59.25±97.92 mg). Participants experienced a -4.35 ± 26.52 mg/dl reduction in LDL cholesterol. Results of a hierarchical regression showed that changes in saturated fat and total fat intake did not contribute significantly to improvements in LDL cholesterol (ρ = .088). Adding dietary cholesterol intake did not improve the model (ρ =. 182). When weight change was added, the model became significant (R^2 = .05, ρ = .025). Results showed that weight change was the only variable that contributed significantly to improvements in LDL cholesterol (β = .18, ρ = .012), and that none of the dietary intake variables contributed above and beyond weight change (all ρs > .05). These findings suggest that in the context of obesity treatment, weight loss, rather than changes in saturated fat, total fat, or dietary cholesterol intake, serves as the primary factor associated with reductions in LDL cholesterol.

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D-075

THE RELATIONSHIP OF HOPE TO DRINKING, SMOKING, EXERCISE, AND FAT INTAKE AMONG COLLEGE STUDENTS

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Hope is defined as the ability to set challenging goals and exercise the appropriate agency (i.e., motivation and self-efficacy) and pathways (i.e., strategic thinking) in order to reach goals. High hope has been shown to be related to promoting and maintaining good health and preventing, detecting, and treating illness. This study examines the relationship of hope to health behaviors, specifically alcohol use, binge drinking, smoking, physical activity, and diet (i.e., limiting fat), among college students. We contacted 8,834 undergraduate students at a two-year college and a four-year university in October, 2008, with 2,700 completing the 108-item online survey (30.6% response rate). Our current analyses focused on the 2,265 undergraduate students aged 18–25. Higher hope was related to being older (r=0.05, p=0.03), being female (39.05±5.91 vs. 38.44±6.26, p=0.02), and being non-Hispanic White (39.01±5.88 vs. 37.61±6.86, p<0.001), but not to highest parental education. After controlling for age, gender, ethnicity, and highest parental education, higher hope was related to fewer days in the past 30 days for drinking any alcohol (F(5,2229)=30.70, p=0.004), fewer days drinking five or more drinks on one occasion (F(5, 2227)=30.59, p<0.001), fewer days of smoking (even a puff; F(5, 2228)=7.58, p=0.003), more days engaging in at least 20 minutes of physical activity (F(5, 2232)=21.54, p<0.001), and more days limiting dietary fat (F(5, 2227)=23.15.70, p<0.001). Furthermore, hope was related to greater confidence and motivation to engage in healthy behaviors (limiting drinking, quitting smoking, limiting dietary fat, and exercising). Given that hope is an important factor related to engaging in healthy behaviors, using hope as a framework for intervening may be effective in improving health risk profiles of college students.

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D-076

PERCEIVED STRESS AND HEALTH-RELATED QUALITY OF LIFE AMONG WEIGHT-LOSS STUDY PARTICIPANTS

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Relationships between perceived stress and health related quality of life (HRQoL) have been reported. We examined relationships between stress, HRQoL and weight change among overweight and obese adults in a weight loss study. Methods: This secondary analysis used the SF-36 measure of HRQoL, the Perceived Stress Scale (PSS) and weight measurements at baseline and 6 months in the SMART Trial, a clinical trial of behavioral weight loss treatment. Spearman's Rank Correlation Coefficients were calculated between the PSS, SF-36, and weight change from baseline to 6 months. Results: Participants (N=210) were mostly female (84.8%), White (78.6%), employed full-time (82.9%), and obese (76.2%, median BMI=33.0 kg/m^2), with a median age=49 years. At baseline and 6 months, higher PSS scores were correlated with lower scores for all SF-36 components (all ps<.01) except the Physical Component Summary (PCS). From baseline to 6 months, decreases in PSS scores were correlated with increases in all SF-36 components (all ps <.03) except the Physical Functioning scale and the PCS. Neither baseline nor 6 month PSS scores were correlated with weight change at 6 months; however, improvements in PSS scores were correlated with weight loss (p=.03). Baseline SF-36 scores did not predict weight loss, but at 6 months the General Health (p<.01), Vitality (p<.01), and Mental Health (p=.03) scales and the Mental Component Summary (p=.03) were positively correlated with weight loss. Increases from baseline to 6 months in the Physical Function (p<.01), General Health (p<.01), and Vitality (p<.01) scales and the PCS (p<.04) were related to weight loss. Conclusions: Perceived stress was associated with HRQoL. Baseline levels of perceived stress and HRQoL did not predict weight loss in this sample; however, improvements in perceived stress and HRQoL were associated with weight loss. These findings suggest that improving participants' weight loss outcomes could improve their HRQoL and perceived stress.

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D-077

ARE YOU SURE YOU WANT TO EAT THAT?: IS SOCIAL SUPPORT A MEDIATOR OF THE RELATIONSHIP BETWEEN BMI AND WEIGHT STIGMA AMONG COLLEGE FEMALES?

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Whereas negative weight-related comments and actions of others are related to poor mental health, such as body dissatisfaction, and exercise-avoidance motivation, reports of social support from others have been found to positively influence a person's physical and mental health.

A sample was 120 female students from a mid-sized university (78% Caucasian). Their ages ranged from 18–22. The average BMI of the participants was 24.09 (SD=4.34, range 16.50 to 38.70). The online survey was hosted on the secure, encrypted website. Participants completed a questionnaire measuring mental health, social support, weight bias, diet and exercise habits, and diet and exercise-avoidance motivation.

A number of structural equation models were hypothesized. The primary model of interest was one that hypothesized that social support would mediate the relationship between body mass index and weight stigma. At a bivariate level, the constructs of interest were significantly related (p<.05). The model testing the relationship between the IV (BMI) and the DV (weight stigma) fit the data well, chi-square (5)=3.35, p=.65, CFI>.99, TLI>.99, RMSEA<.05. The models testing the relationship between the mediator (social support) and the DV, and the relationship between the IV and the mediator, also fit the data adequately. The final model testing social support's meditational role between BMI and weight stigma, fit the data globally, CFI=.95, TLI=.93, but the parameter estimates indicated that social support was no longer significantly related to weight stigma.

Consistent with previous research, the results indicated that as BMI increased perceived social support (from a variety of sources) was lower. Similar to other studies with college females, as BMI increased perceptions of weight stigma also increased. While BMI, social support, and weight stigma were all related in college females, social support did not mediate the relationship between BMI and weight stigma. Alternative models and implications will be discussed.

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D-078

THE MEDITATIONAL EFFECTS OF PARENTAL ATTACHMENT STYLES ON FOOD CONSUMPTION IN PARENT/CHILD DYADS

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BACKGROUND: Parenting styles are known to exert a notable influence on their children's adoption of healthy eating habits. Secure vs. insecure attachment styles develop when caregivers answer in a consistent vs. inconsistent or absent manner to their children's proximity-seeking bids. Attachment styles are internalized and follow into adulthood, with securely vs. insecure attached individuals being better at reaching goals, exploring novel stimuli and, adopting healthier lifestyles, i.e. eating 5 fruit and vegetable portions per day. Because attachment styles can be seen as children's internalizations of parental behaviors which in turn influence not only their healthy eating habits but also their ability to maintain them in the face of adversity together with an intrinsic need to seek novelty and be curious, this study examines the impact of parental attachment styles in explaining their children's food consumption.

METHOD: 77 parent/child dyads filled out an online questionnaire separately (Mage children=10.11; Mage parent=41.05). Attachment style, vegetable, high caloric meal (HCM) and snacks (HCS) consumption were measured. In order to study the meditational effect of attachment style on parents' and children's vegetable, HCM and HCS intake, the 3-step meditational approach was used.

RESULTS: Parental consumption of vegetables, HCM and HCS significantly predicted children's consumption of vegetables, HCM and HCS (Path c), ps < .0001. Parental intake of HCM and HCS significantly predicted their attachment style, (Path a), ps < .05, but not their vegetable consumption, p > .05. Lastly when controlling for parental attachment style, parental HCM and HCS consumption significantly predicted children's HCM and HCS consumption, respectively, ps < .0001, (Sobel test HCS=-0.85, p=0.39; Sobel test HCM = 1.31, p=0.19). This indicates that although parental attachment style explains children HCM and HCS consumption, it only partially mediates this relationship.

CONCLUSION: Parental attachment style is an important variable, albeit not the only one, explaining children's high caloric intake.

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D-079

DOES COPING MEDIATE THE RELATIONSHIP BETWEEN WEIGHT STIGMA AND DEPRESSION?

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Introduction: Overweight and obese individuals experience prejudice and discrimination as a result of their weight. Weight stigma is associated with psychological consequences(e.g., depression). The manner in which individuals cope with stressors, such as weight stigma, can impact physical and psychological well being. The present study examined whether coping with stigmatizing experiences mediated the relationship between weight stigma and depression. The investigation also examined whether gender moderated the relationship between certain coping styles(e.g., positive self-talk or avoidance) and depression.

Methods:Fifty-five overweight and obese (weight: M= 232.2 lbs, SD=49.8; BMI: M=37.2, SD=6.7) weight loss treatment seeking adults participated. Participants were primarily Caucasian (87.3%), female (79.6%), had at least a baccalaureate degree (85.5%), and were married or living with a partner (69.1%). Measures included the Stigmatizing Situations Inventory and select subscales of the Coping Response Survey (Myers & Rosen, 1999), and the Center for Epidemiological Studies- Depression Scale (CES-D; Radloff, 1977).

Results: Greater stigmatizing experiences and coping were significantly related to greater depression. Adaptive and maladaptive coping significantly mediated the relationship between weight stigma and depression. Surprisingly, greater adaptive coping was positively related to depression. Gender did not moderate the relationship between coping style and depression.

Discussion: The unanticipated relationship between adaptive coping and depression may be a function of individual differences in coping effectiveness, the influence of depression on the recall of stigmatizing experiences, or other variables not examined in this study. Given the pervasiveness of anti-fat attitudes and the prevalence of weight-based discrimination, identifying factors that can mitigate consequences of stigma is needed. Understanding the conditions under which coping in response to weight stigma is adaptive or maladaptive in promoting psychological well-being is an important area of future study.

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D-081

PSYCHOMETRIC PROPERTIES OF TWO ABBREVIATED VERSIONS OF THE SOURCES OF OCCUPATIONAL STRESS (SOOS) SCALE: THE SOOS-33 AND THE SOOS-14

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Emergency response personnel work in a unique environment characterized by recurrent sleep disturbances, constant high alert, high levels of danger and trauma, and organizational conflict; however, traditional occupational stress questionnaires (e.g., Occupational Stress Inventory; Osipow & Spokane, 1983) fail to capture these unique job-related stressors. To address this problem, Beaton and Murphy (1993) developed the Sources of Occupational Stress (SOOS) scale, a 57-item self-report measure designed to assess the full range of occupational stressors faced by emergency responders. While the value of the SOOS is unquestioned, several significant issues have limited its utility, including (a) its factor structure, (b) the presence of unassigned items, (c) the presence of multiple two-item subscales, and (d) its overall length. The objective of the present research was to develop and evaluate two abbreviated versions of the SOOS—known as the SOOS-33 and the SOOS-14—in a sample of 246 emergency responders from metropolitan areas across the United States. The SOOS-33 exhibited excellent internal consistency (α = .96) and good construct validity, whereas the SOOS-14 exhibited adequate internal consistency (α = .79) and good construct validity. In addition, the factor structure of the SOOS-33 marks a substantial improvement over the original version of the SOOS. While additional studies are needed to replicate these results, the findings from the present research suggest that both the SOOS-33 and the SOOS-14 are reliable and valid measures of occupational stress among emergency responders.

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D-082

WHEN AN ORGANIZATIONAL MEMBER OFFENDS YOU: FORGIVENESS, WORKING RELATIONSHIP AND EMPLOYEE WELL-BEING

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Conflicts in the workplace are daily phenomena and have negative consequences on working relationships and employee well-being. Forgiveness, as a constructive conflict-management strategy, has potentially recuperative power to facilitate work collaboration, enhance employee health and heal job attitudes injured by a workplace offense. Forgiveness is conceptualized as having intra- and interpersonal components. The former are envisaged as intrapsychic processes that transform strong negative emotions and cognitions into more neutral or perhaps even positive ones, while the latter are seen as attempts at reconciliation, referring to a victim's tendency to express goodwill towards an offender. Because forgiveness in previous research has been scored as a composite of intra- and interpersonal dimensions, the present study has sought to examine the differential effects of intrapersonal and interpersonal forgiveness (i.e., attempt at reconciliation) on working relationships and employee well-being. A valid sample of 189 working adults in Taiwan was administered a battery of measures of forgiveness toward a workplace offender, working relationships between the perpetrator of an offence and the victim, and the victim's metal health, physical health and job satisfaction. Results indicated that both intrapersonal forgiveness and the attempt at reconciliation have a positive impact on working relationships (β=.18, $p<.05$; β=.39, $p<.001$, respectively). Intrapersonal forgiveness can also enhance employee mental health (β=.28, $p<.01$), physical health (β=.22, $p<.05$) and job satisfaction (β=.42, $p<.001$), while the attempt at reconciliation has no significant influence upon employee well-being. Furthermore, a duplicate study with a valid sample of 624 Taiwanese working adults showed consistent results. These findings imply that even though reconciliation can repair broken relationships at work, it is intrapsychic dimension of forgiveness that heals the harm done by workplace offenses.

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D-084

ATTRIBUTIONS ABOUT CAUSE OF ILLNESS IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Patients' beliefs about the causes of their illness have been associated with emotional adjustment and behavioral outcomes in several medical conditions; however, few studies have examined illness attributions among patients with COPD. In the current study, patterns of patients' causal attributions for COPD were identified and examined in relation to several psychological and behavioral outcomes. Three-hundred and ninety-four patients (59% >65 years old; 46% female) with COPD and >10 pack year history of smoking completed the Illness Perception Questionnaire- Revised (IPQ-R) and measures of mood (Hospital Anxiety and Depression Scale [HADS]), health-related quality of life (St. George's Respiratory Questionnaire [SGRQ]), dyspnea (MRC Dyspnea Scale), current exercise (Physical Activity Scale for the Elderly [PASE]), current smoking, and history of COPD exacerbations within the past year. A factor analysis using principal axis factoring yielded four individual items (i.e., smoking, heredity, pollution and "my own behavior") and one large factor including all other IPQ-R items (e.g., health behaviors, emotional factors, and medical history). Causal attributions on the large IPQ-R factor were associated with symptoms of anxiety ($r=.33$, $p<.001$), depressive symptoms ($r=.31$, $p<.001$), and quality of life ($r=.28$, $p<.001$). Patients who attributed the cause of their COPD to health behaviors and emotional factors were more likely to have poorer emotional adjustment and report more significant impact of their COPD on their quality of life. We found one large factor on the IPQ-R with several unique items in contrast with previous research that has derived a multi-scale IPQ-R structure. This difference may be due to the importance of smoking, environmental exposure, and heredity in the development of COPD. Taken together, findings suggest that patients' attributions about the cause of COPD are important for adjustment. Additional work is needed to develop more specific measures to assess attributions in COPD.

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D-085

CULTURE, POSITIVE EMOTIONS, AND DEPRESSION SYMPTOMATOLOGY: THE MEDIATING ROLE OF EMOTIONS IN THE STRESS PATHWAY AMONG EUROPEAN AMERICANS AND ASIANS

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Evidence from mostly European American samples in the past ten years suggests that positive emotions may protect against stress and depression. However, the mediating effect of positive emotions on depression may be stronger among European Americans than Asian immigrants. While maximizing positive emotions is at the core of North American cultural contexts, pure pleasantness appears to be undesirable in many Asian contexts. What is less understood is whether positive emotions mediate stress and depression among Asians, including Asian Americans. Ethnicity, which may be associated with cultural patterns of responding to daily stressors, may be predictive of models of emotion. In a sample of over 600 college students, we predicted greater mediation of stress and depression symptoms by positive emotions among European Americans, compared with US-born and foreign-born Asians. European American (N=330; 66% female) and Asian (N = 303; 69% female; 147 US-born) college students completed an hour-long survey. Measures included a scale of perceived stress (Cohen, Kamarck, & Memelstein, 1983), positive and negative emotions (PANAS-X; Watson & Clark, 1994), and symptoms of depression (CES-D; Radloff, 1977). As predicted, positive emotions mediated the effect of stress on depression symptomatology among European Americans, but not among US-born or foreign-born Asians. Negative emotions mediated stress and depression among European Americans and Asians. These findings may suggest the need to examine cultural-specific models of positive emotions, stress, and mental health.

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D-086

INVESTIGATING THE RELATIONSHIP BETWEEN SUPPORT FOR PARENTS AND RECOVERY FROM TRAUMATIC BRAIN INJURY IN CHILDREN

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Objective: Because traumatic brain injuries (TBI) can cause lasting cognitive, physical, and psychosocial deficits, this study aims to identify specific kinds of support for parents that can facilitate recovery from TBI in children. In doing so, this study attempts to shed light on potential targeted interventions that could be implemented to help children recover from TBI.
Methods: Questionnaires and semi-structured interviews were used to collect quantitative and qualitative data about the types of support that parents received after their child suffered a TBI, and about their child's extent of recovery. Parents were recruited through relevant organizations in the southeastern United States. Quantitative and qualitative analyses were used to examine the association between different types of support and recovery success in children with TBI.
Results: Preliminary results based on qualitative data suggest three themes regarding the relationship between specific types of support and parent wellbeing. First, support that addresses parents' practical needs after a child's injury appears to be extremely important to parents and to how they are able to deal with the injury. Second, although parents consistently report the need for information after their child's injury, they also indicate that information is best delivered at a time when parents can assimilate it—generally with less detail in the immediate aftermath, followed by greater detail as soon as the parents are ready for it. Finally, parents who view caring for their child as a team effort tend to have a more positive outlook on their child's recovery process and their child's future.
Conclusion: This study demonstrates the importance of effective communication after a child experiences a TBI and underscores the need for caregivers to be actively involved in the recovery process. Hospitals and trauma centers should be prepared to offer families extensive information about TBI at multiple points during the recovery process, and need to guide parents to resources that can help reduce stress as their child recovers.

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Citation Poster
D-087

EXECUTIVE FUNCTIONS AND SOCIAL FUNCTIONING IN CHILDREN AND ADOLESCENTS WITH SPINA BIFIDA

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Spina bifida (SB) is a relatively common congenital birth defect that results in complications such as paralyzed lower extremities, urinary and bowel incontinence, and hydrocephalus. Children with SB tend to have difficulties with executive functioning (Brewer, Fletcher, Hiscock, & Davidson, 2001), and executive functions are expected to play a significant role in the degree to which a child is able to navigate social interactions and maintain friendships (Bellanti & Bierman, 2000). This study examined associations between executive functions and social functioning in children with SB. One hundred and twenty-eight children and adolescents with SB (mean age = 11.21 years) participated. Children completed questionnaires and were administered tests of executive functioning, while parents completed questionnaires regarding children's executive and social functioning.
Children with SB fell within the Low Average range of intellectual functioning (WASI FSIQ=86.5, SD = 20.3), as expected. Tests of attention, auditory multi-tasking, and planning fell within the Low Average to Mildly Impaired ranges. Children with more severe lesion levels showed greater impairment across all areas of executive functioning.
Regression analyses examined executive functions as predictors of social outcomes above and beyond demographic and medical factors such as age, SES, IQ, and spinal lesion level. Higher sustained attention abilities on the TEA-Ch predicted higher social self-efficacy, R2 = .14, F(4,84)=3.60, $p < .01$, and greater mother-reported social competence, R2 = .14, F(3,78)=4.08, $p < .01$. Higher planning and attention abilities on the CAS predicted having a greater number of friends, R2 = .30, F(5,738)=6.16, $p < .01$, and spending more time with friends, R2 = .19, F(3,84)=6.50, $p < .01$. Parent report indicated that poorer functioning across several domains of the BRIEF was significantly correlated with poorer social skills and social quality of life (rs ranged from -.21 to -.41, ps < .05). Clinical implications for working with youth with SB will be discussed.

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D-088

DECREASED CORTISOL INCORPORATION INTO HAIR IN GENERALIZED ANXIETY DISORDER

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Background: Despite a high lifetime prevalence of generalized anxiety disorder (GAD), empirical research on the neuroendocrine changes underlying this disorder has been limited. While some previous results have suggested a general hypercortisolism in GAD, the interpretation of these findings is difficult since cortisol has mostly been assessed over relatively short time periods using point samples via saliva or blood collection. The current study examines cortisol levels in GAD patients by using hair measurements, a method assumed to provide a retrospective index of cortisol secretion over the previous three to six months.
Methods: Cortisol in hair was determined in 15 GAD patients and in 15 age- and gender-matched controls. Participants further collected six saliva samples (on awakening, +30min, 12:00, 16:00, 20:00hrs, at bedtime) on two consecutive days to obtain measures of the cortisol awakening response (CAR) and the diurnal cortisol profile. In addition, pathological worries and chronic stress were assessed via questionnaires.
Results: Univariate analysis of variance showed lower (50–60%) cortisol levels in the first and the second 3cm hair segments of GAD patients compared to those of controls (both 'p's < .01). An inverse relationship was found between the measure of pathological worries and hair cortisol (r=-.42; $p < .05$). No significant differences in the CAR or the diurnal cortisol profile were seen between GAD patients and controls.
Conclusions: The current findings tentatively suggest that GAD is associated with hypocortisolism. If corroborated by future research, our data highlight the important qualities of cortisol measurement in hair as a retrospective index of long-term cortisol secretion and as a potential diagnostic tool for psychiatric disorders associated with hypo- or hypercortisolism.

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D-089

DEVELOPMENT OF A SCALE TO ASSESS COMMUNICATION IN SPANISH PHYSICIAN-PATIENT INTERACTIONS

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Background: Increasing numbers of medical patients speak English as a second language. There have been few attempts to measure and describe the quality of communication between Spanish-speaking patients and their physicians. The goal of the present study was to develop a rating scale to describe the communication process in Spanish-language physician-patient interactions.
Method: A detailed 45-item rating instrument was developed following a literature search and communication with bilingual research assistants. A large data set of 2,196 audio-taped physician-patient interactions included 155 interactions in which Spanish was spoken by the physician and/or the patient. These interactions were rated by five bilingual raters using the newly-developed scale. Reliability and validity of the scale were assessed.
Results: The physician spoke some Spanish to the patient in 136 of 155 interactions. On average, over the course of the interactions, 84.23% of the physicians' speech was in Spanish. More time spent speaking Spanish by physicians was associated with greater patient perceptions of decision-making (r = .18), patients' perceptions of more information giving by physicians (r =.24), more patient mentions of cultural concerns (r = .19), greater physician awareness of patients' cultural health practices (r = .25), less frustration with patients' communication (r = .31), greater connectedness with patients (r= .30), better understanding of the patients' reason for the visit (r= .22), and less difficulty getting patients' medication history (r = .24) (all correlations $p < .05$).
Conclusion: Communication and patient satisfaction were enhanced when physicians communicated with patients in their primary language. Preliminary efforts at validating this scale to assess communication in Spanish-language physician-patient interactions were promising. Findings from use of this scale may have future applications for training physicians in cultural competence.

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D-090

DO BEHAVIORAL RISK FACTORS AND GENETIC CAUSAL BELIEFS DIMINISH INTEREST IN SEEKING INFORMATION ABOUT HEALTH HABITS?

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Increased presence of commercial multiplex genetic tests has raised concerns that the public may give precedence to genetics as a contributor to disease causation over behavioral/environmental factors, thus decreasing motivation for health behavior change. As part of the Multiplex Initiative, a baseline telephone survey of 1959 healthy adults aged 25–40 assessed a broad array of self-reported health behaviors and perceived causes of eight common health conditions. We predicted that: 1) the number of behavioral risk factors would be positively associated with favoring genetics v. behavioral explanations of disease causation, and 2) having more behavioral risk factors and causal beliefs favoring genetics would be negatively associated with the importance placed on information about how health habits impact disease risk. Multivariate models were tested separately for diabetes, lung, colon, and skin cancers, heart disease, hypercholesterolemia, hypertension, and osteoporosis. Behavioral risk factors were prevalent (e.g., 25% smokers, 22% risky drinkers), causal beliefs favored behavior over genetics (.42 on 0–1 scale), and interest in behaviorally-based health information was moderately high (5.8 on 7-point scale). As predicted, those with more behavioral risk factors were more likely to favor genetic explanations and had less interest in information about how health habits impact disease risk (p<.05). However, beliefs favoring genetic over behavioral causation were not associated with interest in behavioral health information. Less interest in health habits as a contributor to disease among those at greatest behavioral risk warrants exploration. It is possible that these individuals feel sufficiently informed. However, the causal beliefs endorsed by those needing behavioral risk reduction suggest that information about gene-environment influences might increase engagement with information about behavioral effects on disease.

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Citation Poster
D-091

GAINING PERSPECTIVE: MESSAGE FRAME IMPACTS VIEWER ATTENTION TO AND RECALL OF FRAMED PRINT ADVERTISEMENTS

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Framing messages to emphasis the benefits of adopting (gain-framed messages) or the costs of failing to adopt (loss-framed messages) a target behavior is a common approach to constructing health messages. According to the framing postulates of prospect theory, risk adverse health behaviors (i.e., preventive behaviors such as healthy eating and physical activity) are best persuaded by gain-framed messages. The mechanism underlying this gain-framed advantage is unclear. One possibility is that gain-framed messages are consistent with recipients' risk perceptions of the behavior; this congruency leads to focused and thorough cognitive processing of the message. To test this hypothesis, this study examined how framed messages impact viewer attention to and cognitive processing of osteoporosis prevention print ads. Attention was measured with eye tracking technology, which calculated participants' number of fixations and dwell time. Cognitive processing was assessed through a textual masked-recall exercise. Sixty women, with a mean age of 21.25+2.61 yrs, viewed the same 36 ads; however, the message frame was randomly rotated across participants resulting in each participant viewing 12 gain-, 12 loss-, and 12 neutral-framed ads. One-way repeated measures analyses of variance revealed that message frame significantly impacted viewers' number of fixations, F(2,118)=8.18, p<.01, η^2=.12, dwell time, F(2,118)=9.84, p<.01, η^2=.14, and masked-recall of the message, F(2,118)=22.28, p<.01, η^2=.27. Viewers' number of fixations, dwell time, and recall of gain-framed osteoporosis prevention ads was significantly higher than loss- or neutral-framed ads, ps<.01. Moreover, recall of gain- and neutral-framed messages was positively correlated with number of fixations and dwell time, rs>.27, p<.02. Participants who attended to the gain- and neutral-framed messages more thoroughly had greater accuracy in recalling the message. The study findings suggest attention and cognitive processing are potential mechanisms underlying the impact of gain-framed messages, useful for encouraging preventive health behaviors.

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D-092

POSITIVE AFFECT AND SOCIAL ENGAGEMENT AFTER STROKE

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OBJECTIVE: Examine the association between positive affect and social engagement post-stroke in adults aged 55 or older.
DESIGN: A prospective cohort design using information from the Stroke Recovery in Underserved Populations database.
SETTING: Information was collected at discharge and at a 3-month follow-up in patients admitted to in-patient medical rehabilitation facility for stroke.
PARTICIPANTS: Persons aged 55 or older with first-time stroke (n=599) and admitted to one of eleven in-patient medical rehabilitation facilities across the United States.
MEASUREMENTS: Primary measures included a summary positive affect scale and a social engagement instrument measuring two domains: participation in home activities and participation in community activities.
RESULTS: The mean age was 71.6 years, 50.4% were women, and 56.8% were married. Results of cumulative logit models showed each one point increase in positive affect was significantly associates with a 17% odds of being in a higher social engagement level (OR: 1.17, 95% CI 1.10, 1.25) after adjusting for demographics, clinical characteristics, and negative affect. Other factors associated with higher social engagement levels were race/ethnicity, length of hospital stay, and function.
CONCLUSION: High positive affect at discharge from in-patient medical rehabilitation was associated with higher levels of social engagement three months post discharge. The observed and significant inverse gradient of association between higher positive affect and higher levels of social engagement adds to accumulating evidence that positive affect is associated with beneficial physical and psychological outcomes.

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D-093

FACTORS ASSOCIATED WITH POOR NEUROPSYCHOLOGICAL OUTCOMES FOLLOWING ANEURYSMAL SUBARACHNOID HEMORRHAGE

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Aneurysmal subarachnoid hemorrhage (aSAH) survivors experience neuropsychological (NP) impairment significantly limiting their ability to resume previously held roles. Previous reports of NP impairment with aSAH do not provide domain specific data. Such data could identify deficits amenable to intervention. This analysis used data from an ongoing prospective, longitudinal study (R01 NR004339) to identify factors associated with persons scoring below normative values on NP measures at 3 months after insult. Inclusion criteria were: 1) age 21–75; 2) diagnosis of aSAH via cerebral angiogram; and 3) Hunt & Hess (HH) grade > 2 and/or a Fisher score > 1. Exclusion criteria were: 1) pre-existing chronic neurological disease, or 2) traumatic brain injury, mycotic aneurysm, or arteriovenous malformation. Twelve domains of NP function were assessed in-person by a master's prepared psychologist. Poor outcomes were defined as scores greater than two standard deviations below published normative values. Sample includes data from 192 subjects; the majority were female (72%, n=138) and Caucasian (88%, n=168). Fisher exact tests were used to evaluate associations between sociodemographic and NP outcomes. Logistic regression models were used to test potential predictors of persons scoring below normative values. Age, education status, and depressive symptoms were associated with scoring below normative values on tests of language (p =0.04), visuo-spatial ability (p=0.03), psychomotor speed (p<0.01), and mental outcomes (p=0.05). After adjusting for age, education status, and depressive symptoms, and HH > 2 (worse initial presentation) significantly predicted lower language outcomes (p <0.01); higher premorbid intelligence scores predicted better global cognitive function (p<0.01) and visuo-spatial ability (p=0.04). Data suggest subgroups of persons at risk for NP impairments 3 months after initial hemorrhage; data which is vital to targeting early interventions to those at risk.

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D-094

A SYMPTOM-FOCUSED COPING SKILLS TRAINING PROGRAM FOR ADOLESCENTS WITH INFLAMMATORY BOWEL DISEASE

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The current study involved the development and evaluation of a skills-based, psychological intervention for adolescent females with Inflammatory Bowel Disease (IBD) and their parents. Research has shown children and adolescents with IBD to have higher levels of psychological problems than healthy peers (Macker, Sisson, & Crandall, 2004). Further, life stress can exacerbate gastrointestinal symptoms, continuing the cycle of stress and symptomology (Cunningham & Banez, 2006). Additionally, literature supports the importance of parental behaviors in the reduction of children’s symptoms (Chambers, 2003; Craig & Riddell, 2003), justifying the inclusion of parents in such treatments. There have to date been few studies focused on psychosocial and symptom-focused interventions for adolescents with IBD. This study was a non-randomized clinical trial utilizing a wait-list control. Thirteen and eleven adolescents and one parent made up the treatment and control groups respectively for a total of 24 parent-child dyads. Each adolescent and her parent attended a one-day intervention utilizing a biopsychosocial treatment model for teaching disease coping skills (e.g., thought restructuring, problem solving), pain management, relaxation techniques, and communication. Parents additionally received training in setting limits. The treatment day was followed by 6 weeks of web-based intervention where participants completed homework assignments and engaged in weekly group chat sessions to reinforce skill usage. Following treatment, significant improvements were found in adolescents’ somatic symptoms, adaptive coping strategies, and irrationally negative thoughts related to pain. Parents reported improved reactions to their daughter’s physical symptoms. Patients clearly benefitted from this treatment, and the convenient, web-based structure of the treatment proved effective. These findings support the use of cognitive-behaviorally focused psychosocial interventions for adolescent patients with IBD.

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D-095

PEDIATRIC DEPRESSION, ANXIETY AND ANGER: ALL FOR ONE OR ONE FOR ALL?

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BACKGROUND: Despite different clinical manifestations, self-reported depression, anxiety, and anger have been difficult to differentiate empirically in children. This study aims to evaluate the dimensionality of these three symptoms
METHODS: Neuro-QOL is a 5-year, NINDS-funded project to develop clinically relevant and psychometrically robust assessment tools for clinical neurology researchers. As part of that project, 513 children aged 12–17 (mean age=15; 50% male, 85% White; 98% attending school), recruited by an internet panel company, completed a pediatric emotional health (pedsEH) item bank. The PedsEH consists of 46 items, developed via literature review, focus groups and individual interviews, and assesses depression (19 items), anxiety (19 items), and anger (8 items). Cases were randomly divided in half: one for exploratory factor analysis (EFA) with PROMAX rotation and the other for confirmatory factor analysis (CFA), including a bi-factor analysis (a special case of CFA) where the general factor is defined as EH and local factors are depression, anxiety and anger.
RESULTS: One item was removed from the bank due to low item-total correlation (0.12). EFA results, based on scree plot and factor loadings suggested a single dominant factor, explaining 32.2% variance among the remaining 45 items. After PROMAX rotation, all items had loadings >0.3 on the first three factors and inter-factor correlations ranged from 0.63–0.68. Unidimensionality among these items was confirmed by a 1-factor CFA model (CFI=0.92). These findings were replicated using a 3-factor CFA and bi-factor analysis which showed greater loadings on a general factor (>0.3) compared to the the local depression, anxiety, and anger factors (CFI=0.95).
CONCLUSIONS: Despite different clinical manifestations, self-reported depression, anxiety and anger as measured by the NeuroQOL PedsEH are unidimensional. Further validation in clinical populations will help determine how to better appreciate this general negative affect as it relates to pediatric neurology research.

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D-096

BALANCE, GAIT, AND MOTOR IMPAIRMENT AMONG PATIENTS IN VARIOUS STAGES OF PARKINSON’S DISEASE

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Patients with Parkinson’s disease (PD) typically suffer from a broad range of symptoms, including functional impairment, which become more pronounced as the disease advances. Few studies have investigated important clinical characteristics associated with advancing stages of Parkinson’s disease. This study examined such characteristics related to balance, gait, and motor function in patients in various stages of PD. Sixty-four idiopathic PD patients were classified on the basis of the Hoehn and Yahr scheme into mild (n=26), moderate (n=22), and severe (n=16) stages, and assessed in laboratory and clinical outcome measures of balance (Sensory Organization Test [SOT], Limits of Stability [LOS]), gait (spatial and temporal gait parameters), and motor function (the motor subscale of UPDRS). Statistical analyses of the data indicate poorer performance of the outcomes for those in advanced stages. Compared to those in early stages, patients in late stages (3–4) show deteriorated performance on the balance measures of SOT (somatosensory) and LOS (maximum excursion, movement velocity, and directional control), spatial-temporal gait measures of stride length (cm) and velocity (cm/sec), and motor impairment ($ps<0.05$). Patients in advanced stages also show greater likelihood of falling. Collectively, these data suggest greater risks for functional impairment specifically associated with advancing stages of PD but which may be amenable to intervention - either by drug treatment or by rehabilitation techniques.

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D-097

INNOVATING PREVENTION FROM RESEARCH TO PRACTICE: THE CARES MOBILE SAFETY CENTER

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Behavior change experts are challenged to implement interventions that effectively disseminate proven prevention strategies. CARES is a “house on wheels” that educates visitors about injuries and prevention strategies, and disseminates low-cost products. Research support allowed us to study and compare CARES’ ability to disseminate products and information (2004–2008) at a medical practice versus community venues. Methods. Implementation data were collected through in-depth interviews with CARES staff and partners. Surveys of parents and analysis of operations data described the uptake of CARES. These data allowed us to garner support for operating CARES as a community service for three years (2008 - 2010). Operations data collected between 1/2008–6/2009 will be compared to CARES utilization during its research phase. Results. Partners expressed their support, and described CARES as a valued addition to clinical services. However, only 28% of patients reported being referred to CARES during their visit suggesting limited uptake by clinicians. Clinic staff cited time as the main barrier to promoting CARES during patient encounters and offered suggestions to better engage the staff. Despite these challenges, almost 1,000 people visited CARES during the 119 days CARES was at the clinic. Visitors reported high levels of satisfaction (98% reported they would refer a friend), purchased 259 products, and 235 received a car seat service. Between 1/2008–6/2009, CARES attended 89 community events and interacted with more than 8000 visitors. Qualitative and quantitative differences emerged between our research and community service phases that will be explored in more detail. Conclusions. CARES is a promising vehicle for disseminating injury prevention information and products which flexibly transitioned from a research project to a community service. This work explores important issues at play during research and practice that may impact an intervention’s reach and impact.

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D-099

IMPACT OF COMORBID SUBSTANCE USE DISORDER ON PAIN FUNCTIONING: 12-MONTH FOLLOW-UP EVALUATION

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The goal of this study was to examine the impact of comorbid substance use disorder (SUD) on pain functioning and 12-month treatment outcomes among primary care patients with chronic pain.

Patients with chronic pain were recruited from primary care clinics to participate in a randomized trial of collaborative care to improve pain-related functioning. Participants completed validated measures of pain intensity, pain functioning, alcohol and substance use, and other psychiatric variables at baseline and at 12-months.

At baseline, 81 of 401 participants (20%) had a prior SUD diagnosis. Compared to chronic pain patients without SUD, those with SUD had poorer pain functioning ($p=0.02$), but did not report differences in pain intensity ($p=0.44$). Chronic pain patients with comorbid SUD also had poorer quality of life and more severe symptoms of posttraumatic stress disorder (PTSD) and depression (all p-values<0.05). Logistic regression analyses, stratified by intervention status, were conducted to examine whether SUD status was associated with clinically significant change over 12 months in pain-related functioning (30% reduction in Roland Morris Disability Questionnaire Score) after controlling for demographic, disease-related, and psychiatric variables. The overall model was not significant in the collaborative intervention group. However, the model was significant in the treatment as usual group and participants with a SUD history were significantly less likely to show improvements in pain functioning (OR=0.30, 95% CI=0.10–0.87) at 12 months.

Chronic pain patients with comorbid SUD were more likely to have poorer pain functioning, more severe PTSD and depressive symptomatology, report poorer quality of life at baseline, and among those receiving treatment as usual, were 70% less likely to have a clinically significant improvement in pain functioning 12-months post-baseline. These results suggest providers should assess for history of SUD among chronic pain patients and consider alternative treatment strategies, as this population may be less responsive to traditional interventions.

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D-100

AGE AS A FACTOR IN OUTCOME OF CHRONIC PAIN REHABILITATION

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Efficacy of comprehensive chronic pain rehabilitation programs(CPRP)has been well documented,but age as a factor for success in CPRP has not been well studied. This study examined the relationship between age and the outcome variables of improvement in pain severity(0–10 scale),mood(as measured by the DASS)and function (as measured by the Pain Disability Index)in a group of patients who participated in a 3–4 week CPRP. The treatment outcomes of 531 consecutive patients treated in the Cleveland Clinic CPRP from 01/07- 05/09 were included in this study. Subjects ranged in age from 19–92 years old. 65% were female. Patients across all ages showed significant improvement in pain intensity, normalization of mood and function. There were no differences in ratings of pain severity, depression, or anxiety at admission. On admission, older patients reported higher levels of perceived disability, but lower levels of stress when compared to the other age groups. At discharge, older patients continued to report significantly higher levels of perceived disability and lower levels of stress, even after controlling for admission levels. It was concluded that older patients can benefit for comprehensive pain rehabilitation, although it might be expected that, while their level of function improves from admission, the improvement may not be as great as that for younger patients. Kee, at al in 1998 reported at that although the programs that they surveyed did not selectively exclude older adults from treatment, other admission criteria such as the presence of co-morbid conditions often lead to their exclusion from treatment. Multiple co-morbid conditions are the norm in our program, and patients are not excluded from admission when they are present. As the population ages, pain, disability from pain, and the cost of treatment will become and even greater problems. This study has demonstrated that CPRP is efficacious in the older patient; and this approach has been shown by others to be cost effective.

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D-101

IMPACT OF LIFE STRESS AND COMPETENCE ON BLOOD PRESSURE REACTIVITY TO LABORATORY ACUTE STRESSORS IN ADOLESCENTS AND YOUNG ADULTS WITH AND WITHOUT A CHILDHOOD HISTORY OF CHRONIC ABDOMINAL PAIN

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Empirical evidence links chronic abdominal pain (CAP) to a context of frequent life event stressors. Life stress has been associated with increased autonomic responses to experimental stress both in healthy individuals and in clinical populations. We hypothesized that, compared to Well controls, the relation between current life stress and blood pressure would be greater for adolescents and young adults with a childhood history of CAP, particularly those with lower levels of current perceived competence.

As part of an ongoing prospective study, adolescents and adults (ages 12–32 years) with a childhood history of CAP ($n = 114$; 60.5% female) and Well controls ($N=64$, 60.9% female) completed the Life Events Questionnaire (LEQ) and the global, social, and scholastic competence subscales of Harter's Self-perception Profile for Adults (SPPA). The Social Competence Interview (SCI) and a mental arithmetic task were administered as acute laboratory stressors. Systolic and diastolic blood pressures were assessed at baseline, during, and immediately following each laboratory task.

Controlling for baseline diastolic blood pressure, multiple regression analyses yielded significant three-way interactions between CAP status, life stress, and competence (global competence: $\beta = .245$, $p = .005$; social competence: $\beta = .266$, $p = .018$; and scholastic competence: $\beta = .360$, $p = .009$) on diastolic but not systolic blood pressure following mental arithmetic. Multiple regression analysis for the SCI yielded a significant interaction between life stress, gender, and social competence ($\beta = .114$, $p = .050$) on diastolic blood pressure reactivity.

Study results suggest that life stress may blunt diastolic blood pressure reactivity to acute mental stress for those with a history of CAP depending on the level of perceived self-competence. Similarly females, particularly those with low social competence, may be vulnerable to blunted diastolic blood pressure reactivity to acute social stress at higher levels of background life stress.

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D-102

AGE AS A PREDICTOR OF CHANGE IN STRESS-RELATED GROWTH: FINDING FROM THE DAVIS LONGITUDINAL STUDY

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Stress can have adverse effects on health, but it can also have positive effects, called stress-related growth (SRG; Park, 2009). SRG is characterized by positive changes in values, mastery, coping skills, spirituality, and resources such as social support (Tedeschi & Calhoun, 2004). Whether or not SRG increases or decreases with age is unclear, as both negative and positive correlations found (Linley & Joseph, 2004).

Two waves of data from the Davis Longitudinal study (Aldwin & Parker, 1994) (T1=1996, T2=2001) were used to predict changes in SRG in a sample of 621 young and middle-aged college alumni (M age=44.36, SD=7.11), of whom 45.97% were male. Drawing on a deviation amplification model of stress-related change over time, we examined whether age and SRG at T1, assessed as a latent variable, predicted stressfulness and the duration of the stressor at T2, and positive and negative coping T2 as well as changes in SRG.

The SEM yielded a good fit, $\chi2(73) = 177.257$, $p < .001$, CFI = .954, RMSEA = .050, and SRMR = .048. Chronic stress predicted more positive coping, which in turn was related to increases in SRG. While age was unrelated to SRG at T1, it had indirect effects at T2, mediated through both the duration of the stressor and positive coping, both of which had positive effects on change in SRG. Thus, age may be positively associated with SRG, through older adults facing more chronic stress and employing more positive coping.

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D-103

EMOTIONAL CORRELATES OF EXPERIMENTAL PAIN: PREDICTING TOLERANCE AND THRESHOLD

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While research has consistently shown that negative affect is associated with increased pain sensitivity, bidirectional affective valence is only one component of emotion. The influence of emotional arousal has been relatively ignored in the pain literature. This study investigated how high and low emotional arousal, along with naturally occurring mood (positive and negative), predicts responses to electrical stimulation pain, which closely mimics naturally occurring pain fiber activation. Participants were 86 undergraduate females (mean age 19.2 years; 81.4% Caucasian). Current mood was assessed using modified versions of the Profile of Mood States (POMS) and Positive and Negative Affect Schedule-Expanded Form. Anxiety was assessed with the Beck Anxiety Inventory (BAI) and the Frid, a measure of experimental pain expectations. Pain threshold was the point at which participants first perceived stimulation as painful, and tolerance was the point at which they could no longer tolerate stimulation. Pain intensity and unpleasantness were measured using visual analog scales. Pain was not found to be associated with age, ethnicity, BMI, current medications, or medical conditions. Multiple linear regressions revealed that BAI (t=-2.48, p<.05) and low arousal state (i.e., bored, dull (t=-2.75, p<.01) were the strongest predictors of pain threshold, with higher anxiety and lower emotional arousal relating to decreased pain threshold. In addition, higher Frid-experimental anxiety predicted decreased pain tolerance (t=-2.77, p<.01). The strongest predictors of self-reported pain intensity and worst pain were the Frid-situational stress subscale (t=2.11, p<.05) and POMS-fear subscale (t =-2.71, p<.01), respectively, with greater situational stress and increased fear being related to increased pain intensity. Consistent with the existing literature, results suggest that naturally occurring negative mood predicts responses to electrical stimulation pain. Interestingly, general deactivation was associated with decreased pain threshold, indicating that low emotional arousal may also lead to increased pain perception.

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D-104

ADULT ATTACHMENT PREDICTS TRAIT AND STATE CATASTROPHIZING IN WOMEN WITH CHRONIC PAIN

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Adult attachment has been proposed as a diathesis that predisposes individuals to particular responses to pain (Meredith et al., 2008). Pain catastrophizing, a maladaptive response to pain, has been found to be higher in individuals with insecure compared to secure attachment in cross-sectional data (Meredith et al., 2005, Ciechanowski, et al., 2003). To date, no one has examined differences by attachment in the day-to-day relation between pain and catastrophizing. We hypothesized that insecure attachment would predict higher average pain and catastrophizing and a stronger positive relation between daily pain and catastrophizing.

Participants, 210 women with Osteoarthritis (89), Fibromyalgia (42), or both (79), ranked four paragraphs that described attachment styles: Dismissing (55), Secure (102), Preoccupied (15), and Fearful (38) (Relationship Questionnaire; Bartholomew & Horowitz, 1991). The women completed up to 30 days of diaries that measured average pain on a 0–100 scale and pain catastrophizing with two items from the Vanderbilt Multidimensional Pain Coping Inventory (Smith et al., 1997).

ANOVA analyses showed that the groups did not differ significantly in average pain F(3,206) = 1.51, p = .21 but did differ in average catastrophizing F(3,206) = 2.65, p = .05. Contrasts revealed that secure women (M = 2.01) reported lower catastrophizing compared to fearful women (M = 2.39). Multi-level modeling results showed that attachment moderated the relation between daily pain and catastrophizing such that dismissing women had a smaller positive relation between pain and catastrophizing compared to secure and fearful women.

Women with some types of insecure attachment are similar to secure women in average catastrophizing and in increases in catastrophizing on high pain days. Fearful women had highest levels of trait catastrophizing and dismissing women had blunted increases in catastrophizing in context of pain. Findings underscore importance of examining within-person processes and hold implications for developmentally- and socially-informed clinical interventions.

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D-105

EXAMINING THE IMPACT OF DAILY FLUCTUATION IN PAIN AND NEGATIVE AFFECT ON PAIN INTERFERENCE IN EUROPEAN- AND AFRICAN-AMERICANS

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The current study examined if there were race differences (e.g. African American (AA) and European American (EA)) in the extent to which day-to-day fluctuations in bodily pain and negative affect were associated with pain interference. The investigation was part of a larger study where participants completed 8 testing sessions over a 3 week period. The sample consisted of 144 elders (35% African-American, 65% Caucasian) with a mean age of 73 (range=61 - 91). Multilevel Modeling (MLM) was used to assess race differences in the coupling effect of bodily pain and interference of pain as well as bodily pain and negative affect. Results revealed that daily pain interference was marked by significant within-person variability (47%) relative to between-person (53%). Furthermore, significant variability was found for the experience of bodily pain (within-person=40%; between-person=60%) and negative affect (within-person=37%; between-person= 63%). Results from the MLM revealed a significant interaction, [Race X Bodily Pain X Negative Affect ($\gamma31$ = .04, t = 2.30, p < .05)], for reported pain interference. The simple slopes were estimated for both AAs and EAs at two levels (i.e. +/-1 SD from mean Negative Affect). For EAs, analyses indicated that regardless to level of negative affect, pain interference was significantly lower on occasions when bodily pain was low. A similar relationship was found for AAs, but only on occasions when negative affect was high. Surprisingly, the trend was not found for AA who on occasions had low daily negative affect; where the simple slope was relatively flat suggesting that those AAs who on occasions reported low negative affect, level of bodily pain was not associated with pain interference. Discussion focuses on the rationale as to why the impact of daily bodily pain and negative affect on pain interference is different between African- and European-Americans.

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HIGH VERSES LOW CHRONIC PAIN ACCEPTANCE AND DAILY ACTIVITY LEVELS IN AN ONLINE SUPPORT GROUP SAMPLE

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Chronic pain (CP) is a major health care concern that greatly affects all aspects of a patient's life. Decreasing activity avoidance and enhancing patient function, including increasing activity levels, are primary CP treatment objectives. Decreasing Experiential Avoidance (EA) and increasing CP Acceptance in CP patients have been associated with positive functional outcomes. We recruited CP patients via online support groups to complete an internet-based survey. Participants who completed at least the demographic portion of the survey yielded a sample (N=148; M age=48; SD 10.1) that was primarily female (85.1%), Caucasian (92%), Married/Partnered (68.9%), Insured (88.5%), and with nearly half receiving disability. Participants were well-educated (M=15.1 yrs; SD 2.2), with a mean income of $44,228 (SD=$39,474). Years with CP was M=16.8 (SD=12.8) and pain severity M=7.1/10 (SD=1.7). Participants completed the CP Acceptance Questionnaire (CPAQ), Acceptance and Action Questionnaire (AAQ) and Multidimensional Pain Inventory (MPI). A median split in MPI Activity subscale scores (household chores, outdoor work, activities away from home, social activities) was conducted to form High (Hi) vs Low (Lo) activity groups. MANCOVA (controlling for effects of Age) was conducted to assess differences between Hi vs Lo activity groups. Overall differences were observed between groups [F (4,90)5.53,p<.01, partial Eta2=.197]. The Hi activity group was lower on Pain Severity ratings [F(1,93)5.79, p=.012], but higher on both CPAQ subscales [Willingness - F(1,93)5.78, p=.027 and Engagement - F(1,93)17.91, p<.001]. Contrary to our hypothesis that the Hi group would have lower EA, the groups did not differ on AAQ scores. Sample participants with higher CP Acceptance may be more intent on “getting on with their lives” and daily activities despite their pain. While unclear whether lower pain severity is simply more conducive to higher activity or vice versa, a CP Acceptance treatment focus may foster better patient functional outcomes.

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DIFFERENCES IN MINUTES AND INTENSITY OF CHILDREN'S PHYSICAL ACTIVITY BETWEEN SOCCER AND BASEBALL PRACTICES

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Physical activity guidelines for children are to engage in at least 60 minutes of moderate to vigorous activity every day. Participating in sports is a common way for children to meet these guidelines. We evaluated minutes and intensity of children's physical activity patterns during soccer and baseball practices. Children ages 7–14 were recruited from a local soccer league (boys N=55; girls N=48) and baseball league (boys N=50; girls N = 50). Minutes of activity and percent of practice time in each intensity level were calculated using accelerometry. Practice times did not differ between sports and ranged from 35 to 217 minutes. Independent samples t-tests were conducted to investigate differences in each activity level between sports. Factorial ANOVAs (sport by age) were conducted to investigate difference in MVPA. Children in soccer spent fewer minutes and less percent of practice time in light (M = 20.4min vs. 29.9min; M = 27.7% vs. 30.0%; $p < .001$) and moderate (M = 25.9min vs. 30.5min; M = 24.8% vs. 29.9%; $p < .05$) activity and more minutes and percent of practice time in vigorous activity (M = 29.6min vs. 10.7min; M = 28.3% vs. 11.1%; $p < .001$) than children in baseball. There were no differences between sports for sedentary activity (M = 29.4min vs. 30.6min; M = 27.7% vs. 30.0%). Children in soccer spent more minutes and more percent of practice time in MVPA than children in baseball (M=55.5min vs. 41.2min; M = 53.1% and 41.0%; $p < .001$). Children ages 7–10 spent more minutes and more percent of practice time in MVPA than children ages 11–14 (M =52.0min vs. 41.1min; M = 50.0% vs. 41.9%; $p < .001$). These results indicate that children in soccer may participate in more vigorous activity than children in baseball and children may engage in less activity during sports practice as they reach adolescence. This research served to describe differences in minutes and intensity of physical activity in children's sports and may be useful in identifying ways to promote physical activity in this area.

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D-109

FEASIBILITY AND ACCEPTABILITY OF USING PEDOMETERS AS AN INTERVENTION TOOL FOR LATINAS

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In the U.S., Latinas report high rates of inactivity and related chronic illnesses and are in need of intervention. Self monitoring of physical activity (PA) behavior is a key component of most interventions, often using pedometers. These small, low-cost devices record the individual's number of steps and have become a widely adopted intervention tool. The current study examined the feasibility and acceptability of using pedometers to self monitor PA in this underserved population. Participants represent a sub-sample (N=43) from a randomized clinical trial (NCT00724165; N=93) who received pedometers to encourage self monitoring of PA behavior, with instructions to log use and mail completed logs back to the research center each month for six months. The parent study tested the efficacy of a 6-month culturally and linguistically adapted PA intervention for Latinas. Data were collected from the pedometer logs and post-intervention consumer satisfaction surveys. The sample consisted of sedentary Latinas who returned at least 1 monthly log. Participants returned approximately 5 of 6 logs they were asked to complete, and reported wearing pedometers an average of 14 days per month. Total pedometer use over the 6-month program was associated with increases in self-reported PA (7-Day PAR) post-intervention. Specifically, a 7-day and 14-day increase in pedometer use (over 6 months) was associated with 11 (sd=0.782, p=.059) and 21 minute (sd=0.782, p=.059) increases in PA at 6 months, respectively. Of the 37 participants who completed consumer satisfaction questionnaires, 90% reported wearing the pedometers, 76% rated them as "helpful," and 59% described wearing it "often." Most participants (97%) found the pedometer logs easy to use. These findings have implications for PA interventions targeting Latina participants; specifically, pedometers can be a low-cost and useful tool for encouraging self-monitoring in this high-risk group.

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ACHIEVING THE 10,000 DAILY STEPS GOAL IN OLDER ADULTS: ASSOCIATIONS WITH PERCEIVED AND OBJECTIVE ENVIRONMENTAL ATTRIBUTES AND INDIVIDUAL FACTORS

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Research has demonstrated that achieving 10,000 daily steps is associated with important health outcomes and congruous with public health recommendations for physical activity. The extent to which the built environment, perceptions of that environment, and individual factors differ among older adults who attain 10,000 daily steps remains to be determined. 128 older women were asked to wear an Actigraph accelerometer for 7 days to assess daily step counts and completed the Neighborhood Environment Walkability Scale (NEWS). The physical environment was assessed using Geographic Information Systems, which calculated the number of schools, active recreation areas, parks, walking paths, and exercise facilities within 1 kilometer of each participant's residence. Physical activity was dichotomized as those who did (n=35) and did not (n=93) attain the goal of 10,000 steps averaged over the duration of wear. Multivariate Analysis of Variance was used to examine the degree to which these groups differed on the 9 NEWS subscales, demographics, individual physical environment characteristics, function, self-efficacy, and social support. Participants who met the 10,000 steps per day goal were younger ($p < .05$), had significantly more walking paths ($p < .05$) within 1 kilometer of their home, and reported significantly greater street connectivity ($p < .05$) and pedestrian and traffic safety ($p < .05$). These individuals also reported significantly fewer functional limitations ($p < .05$), higher self-efficacy ($p < .05$), and significantly greater levels of overall physical activity ($p < .05$). These results suggest that meeting the 10,000 daily steps goal is a challenge for many older adults, and is influenced by physical settings, perceptions of environmental supports, and individual perceptions of capabilities.

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RELATIONS BETWEEN CRIME, PERCEIVED SAFETY AND PHYSICAL ACTIVITY AMONG SPANISH SPEAKING LATINAS ENROLLED IN A PHYSICAL ACTIVITY INTERVENTION

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Several variables of the built and social environment influence physical activity behaviors. Specifically, perceived safety is a known barrier to regular physical activity. Little is known regarding the influence of perceived safety and crime on physical activity levels of populations residing in urban areas that are often subject to high crime. The purpose of this study was to evaluate associations between perceived safety, actual crime and physical activity in 87 Spanish speaking Latina women residing in urban settings and enrolled in a 6 month physical activity intervention. We analyzed behavioral data from Seamos Activas, a 6 month randomized trial aimed at promoting physical activity adoption among previously sedentary Latina women. Geographic Information Systems (GIS) data analysis was used to match home addresses collected at time of enrollment and municipal/district crime data to participant survey data. Specifically, questions on perceived physical activity environment (e.g., crime, safety, traffic, aesthetics, etc.) and minutes of moderate-intensity physical activity (7 Day PAR) were recorded at baseline and at 6 months. Results suggest that those who reported crime in their neighborhood had significantly higher levels of violent and total crime compared to those that did not report crime. The average crime rate in areas where participants reported presence of street lights and other people exercising was lower than areas in which they were not reported to be present. Neither perceived safety nor actual crime, however, was associated with physical activity at either time point. These results suggest that Spanish speaking Latinas living in areas of higher crime are aware of the crime, especially violent crime, and areas of high crime are perceived to be less supportive of physical activity. Future interventions conducted in populations residing in high crime areas should address crime and safety related barriers to physical activity.

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WALK SCORE AS A MODERATOR OF THE ASSOCIATION BETWEEN PERCEIVED ENVIRONMENT AND PHYSICAL ACTIVITY

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Research suggests that physical activity is a product of both the individual and the environment in which the individual lives/works. Environment can be quantified both objectively (based on physical address) and subjectively (based on self-reported perceptions). An objective measure of environment is Walk ScoreTM, a publicly available website that calculates neighborhood walkability of a given address. Values range from 0–100, where a higher number indicates a more walkable neighborhood. Scores are grouped into categories that range from 0–24 or "car-dependent" to 90–100 or "walkers-paradise". The purpose of this study was to determine whether Walk Score served as a moderator of the perceived environment-physical activity behavior relationship. We analyzed data from Step into Motion (SIM), a 12 month randomized trial aimed at promoting physical activity adoption among previously sedentary adults. Our analysis focused on 241 participants who provided employment status and home addresses at baseline. Some participants also reported their work addresses. Perceived neighborhood scores and minutes of at least moderate intensity physical activity were recorded. An average Walk ScoreTM was estimated for each participant as a weighted average of home and work Walk ScoresTM. Regression models suggested that the average Walk ScoreTM was a moderator of the association between perceived neighborhood and physical activity at 12 months, when controlling for baseline physical activity and treatment assignment. Specifically, among those who live/work in "car-dependent" neighborhoods, higher values of baseline perceived neighborhood is associated with less weekly physical activity minutes at 12 months. However, among those who live/work in a "walkers paradise", higher baseline perceived neighborhood is associated with more weekly physical activity minutes at 12 months. Results suggest the effect of perceived neighborhood on physical activity adoption depends on the walkability of the participant's neighborhood.

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D-113

PHYSICAL ACTIVITY AND PHYSICAL FITNESS IN THE AFFECTIVE RESPONSE TO EXERCISE AMONG ADOLESCENTS

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Consistent with research using the hedonic theory to examine physical activity (PA) participation, adolescents who report more positive affective responses to an exercise task are more physically active. This association might be explained by higher fitness levels among more active adolescents, leading them to be more tolerant of physiological cues from physical exertion, or by greater levels of habitual PA that provide them with more familiarity with exercise-induced sensations. To test these alternative hypotheses, we examined whether adolescents' habitual PA would have a greater influence on affective responses to exercise than their cardiovascular fitness.

Adolescents (N = 185; 55% male, *M*age = 14.8) self-reported their sports participation (SP) over the past year, and a fitness test determined ventilatory threshold (VT) and VO2peak. Affect was reported before, during, and after two exercise tasks (one above and one below the VT) on separate occasions. Multilevel models showed that higher levels of SP predicted more positive affect during and after moderate- (F (1,554)=6.84, $p < .01$) but not hard-intensity (p =.39) exercise. In contrast, VO2peak was not associated with affective responses to either moderate (p =.54) or hard (p =.83) exercise. Furthermore, SP, but not VO2peak, was associated with more positive baseline affect before moderate and hard exercise.

The finding that sports participation predicted affective responses to moderate-intensity exercise, whereas fitness level did not, supports the hypothesis that the more positive affective response to exercise among more active adolescents is in part a function of behavioral experience, and not of cardiovascular fitness. Consistent with research demonstrating that exercise above the VT evokes near-universal negative affect, sports participation did not predict affective responses to hard-intensity exercise. Future research should investigate whether these cross-sectional findings can be replicated in a prospective design to further examine the relationship between sports participation and affective responses to exercise.

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D-114

ASSESSING LEISURE-TIME PHYSICAL ACTIVITY IN YOUNG ADULTS WITH THE GODIN LEISURE-TIME EXERCISE QUESTIONNAIRE: NORMATIVE VALUES, GENDER DIFFERENCES, AND NON-RESPONSE ERROR

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Objectives: Self-report assessment of leisure-time physical activity (LTPA) using the Godin Leisure-Time Exercise Questionnaire (GLTEQ; Godin & Shepard, 1985) has become commonplace in population health studies. Despite its popularity, limited attention has been afforded to population norms or prevalence of non-response errors (NRE) in research using the GLTEQ. The objectives of this study were to (a) provide normative values for GLTEQ scores in a sample of young adults, and (b) document NRE issues evident in GLTEQ responses in this cohort.

Method: Data were collected from a purposive sample of young adults enrolled in Canadian post-secondary institutions (N = 2714). Participants provided self-report estimates on a single occasion of age, height, weight, gender, and LTPA using the GLTEQ's Leisure Score Index (GLTEQ-LSI). Participants ranged in age from 18 to 24 (M = 20.44 years; SD = 1.44 years) with 71.90% of the sample reporting body mass index values between 18.00 and 24.90 kg/m2 (M = 23.44 kg/m2; SD=3.14 kg/m2).

Results: Males (M=55.06; SD = 24.66) reported more LTPA compared to females (M=51.21; SD = 23.42) based on the observed GLTEQ-LSI's (t(2463)=4.32, p < .01, Cohen's d=0.18). Greater NRE's were evident for the mild (13.64%) compared to the moderate (9.17%) or strenuous (6.27%) GLTEQ responses, with females (6.49%) displaying greater NRE for the strenuous GLTEQ item than males (4.92%). Inspection of z-scores across GLTEQ responses indicated extreme scores for males (0.98–2.40%) and females (0.80–1.43%).

Conclusions: Overall, it appears that the GLTEQ is sensitive enough to capture subtle differences in LTPA between young male and female adults. It remains unclear if the pattern of NRE's or extreme scores is a function of GLTEQ item interpretation across gender or a sample anomaly that could obfuscate subgroup comparisons and warrants further research.

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CHARACTERIZING HABIT IN THE PHYSICAL ACTIVITY DOMAIN: INTEGRATION WITH INTENTION TEMPORAL STABILITY AND ACTION CONTROL

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Most leading behavioral theories suggest that the proximal construct predicting behavioral action is the intention to act or a related behavioral goal which represents motivation and the conscious plan to enact behaviour. Some theorists, however, have suggested that some components of behaviour may contain habitual automaticity (lack of awareness). The purpose of this study was to explore the characterization of a validated habit construct in predicting physical activity with the theory of planned behaviour (TPB). The study extended prior research by a) including a measure of temporal intention stability in the regression equation, which is generally considered the best measure of intention strength, and b) unpacking the intention x behavior x habit relationship. Participants were 153 undergraduate students who completed the habit measure (self-report index of habit strength) and measures of the TPB at time 1 followed by measures of intention and behavior (Godin Leisure Time Questionnaire) two weeks later. Results using regression analysis demonstrated that habit explained 5% additional variance in behaviour after accounting for the TPB, temporal stability of intention and its interaction with intention. Follow-up analyses showed considerable asymmetry in the three-way relationship between intention, behavior and habit, where high habit participants were composed primarily of intenders (i.e., intended to be active at public health guideline values) who engaged in regular physical activity (70%, n = 28) and low habit participants were inactive nonintenders (i.e., did not intend to be active at public health guideline values and were subsequently not active; 69%, n = 25). The results support the notion that some properties of physical activity may have an automatic component and that habits may be important to physical activity action control.

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Citation Poster
D-116

DOMAIN-SPECIFIC PHYSICAL ACTIVITY AND SELF-REPORT BIAS AMONG LOW-INCOME LATINO WOMEN LIVING IN SAN DIEGO COUNTY

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Recent data suggest that only 20–30% of Latino women (Latinas) participate in adequate amounts of physical activity (PA). However, a limitation of previous research has been the tendency to classify Latinas as 'inactive' based on levels of leisure time PA (LTPA) which may not adequately reflect their overall PA habits. The purposes of this study were to (a) evaluate how different domains of PA contribute to overall levels of PA among low-income Latinas, (b) assess the validity of self-reported PA, and (c) examine potential moderators of self-report bias in PA. A community sample of 105 Latinas (mean age=35.9±9.0 yr; mean body mass index [BMI]=31.6±7.2) completed the Spanish-language International Physical Activity Questionnaire (IPAQ; telephone, long form) and wore an Actigraph accelerometer for seven days. Results suggested that 72% of participants met national recommendations for PA using IPAQ data, but only 20% met recommendations when measured by accelerometer. When accelerometer-based bouts of MPA lasting >10 min were included, 0% met the recommendations. Ninety-six percent of IPAQ-reported moderate intensity PA (MPA) was accrued during household activities (median = 1140 MET minutes per week; Interquartile Range, IQ = 2373), with only 4% accrued as LTPA. However, the majority of correlations between IPAQ-reported PA and accelerometer-based PA were low and non-significant. Regression analyses revealed age, household income, and acculturation to moderate self-report bias in physical activity. Combined, these data suggest that it is important to measure household activity of Latinas, and that more research is needed to understand self reports of PA in Latinas. Supported by a SIP 09-04 Cooperative Agreement (U48 DP000036-01S1) between the Centers for Disease Control and Prevention (CDC) and the San Diego Prevention Research Center.

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THE EFFECTS OF GUIDED EXERCISE IMAGERY ON OLDER ADULTS WHO HAVE A FEAR OF FALLING

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Fear of falling (FOF) is a major health care concern within the elderly population. The main purpose of this study was to examine the effects of a six-week intervention that used Guided Relaxation and Exercise Imagery (GREI) techniques on lowering FOF rates among community dwelling adults aged 60 and above. A total of 184 older adults (mean age=73.2) participated in a series of mobility and FOF measures. Participants were divided into four groups: two placebo control groups (PCG) and two intervention groups (IG). The intervention groups received instructions to use an audio CD containing a GREI program for 10 minutes a day, two times a week for six weeks. The control group received an audio CD that contained two relaxation tracks and were instructed to listen to music of their choice for five minutes after listening to a relaxation track. Through simple paired t-test and ANCOVA analysis, results revealed that the GREI CD had significant effects in reducing FOF (78%) and significantly increasing exercise imagery rates, efficacy in falls related activities, perceived exercise levels, and reducing time in a mobility test. There was also a significant reduction in FOF (20%) and significant increases in exercise imagery rates, efficacy, confidence, and a mobility test for participants who had a FOF pre test and were in PCG. However, participants who were in PCG and did not have a FOF during pre test did not have significant differences in any of the tests except for a significant increase in falls efficacy. Overall, this study revealed that using a GREI CD for six weeks helped decrease levels of FOF for older adults aged 60 and above. GREI was also effective in increasing falls related efficacy, exercise imagery, and perceived exercise levels. In conclusion, GREI can be used for long term use, anywhere, anytime, and without any costs or physical skills required. Further exploration of GREI and its effects on psychological variables related to fear of falling and falls may substantiate its effectiveness as a fear of falling intervention.

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DO SYMPTOMS OF FATIGUE AND DEPRESSION CORRELATE WITH PHYSICAL ACTIVITY BY WAY OF SELF-EFFICACY IN ADULTS WITH RELAPSING-REMITTING MULTIPLE SCLEROSIS?

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We recently identified symptoms of fatigue and depression as correlates of physical activity among adults with relapsing-remitting multiple sclerosis (RRMS). Based on social-cognitive theory (SCT), those symptoms likely represent sources of efficacy information, and thereby indirect correlates of physical activity by way of self-efficacy. This study examined the specific symptoms of fatigue and depression as cross-sectional correlates of physical activity by way of self-efficacy in persons with RRMS. We expected that symptoms of fatigue and depression would be inversely associated with physical activity, and that the associations would be accounted for by self-efficacy. The sample included 269 individuals with a definite diagnosis of RRMS who completed a battery of questionnaires and then wore an accelerometer for 7 days. The data were analyzed using covariance modeling in Mplus. The primary model ($\chi2 = 7.58$, df=6, p = .27, SRMR = .02, CFI = .99) demonstrated that self-efficacy accounts for the paths between symptoms of fatigue (indirect path coefficient=−.13) and depression (indirect path coefficient = −.08) and physical activity. This model explained 17% of the variance in self-efficacy and 27% of the variance in physical activity among those with RRMS. Our findings provide support for an indirect association between symptoms of fatigue and depression and physical activity by way of self-efficacy in RRMS. Perhaps the management of those symptoms represents a relevant avenue for promoting physical activity behavior in persons with RRMS that is consistent with SCT.

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CLUSTER ANALYSIS WITHIN THE MAINTENANCE STAGE: PROFILES PREDICTING RELAPSE FROM REGULAR EXERCISE

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Individuals in the Maintenance (M) stage are often considered not "at risk" for relapse and may be excluded from effectiveness trials of behavior change programs. Recent data indicate that only approximately 60% of those in M for exercise at baseline remained in M at 24 months. The aim of this study was to determine if profiles existed within M that could be used to identify relapse risk and to refine tailoring of Transtheoretical Model (TTM)-based interventions. A sample of 11,672 individuals in M at baseline who had Time 2 data (63.4% male; mean age=44.75 (9.25); mean BMI=26 (4.61)) were drawn from a sample who participated in an online, TTM-based exercise program administered by their employer. The sample was randomly split and cluster analysis was conducted on standardized subscale scores for pros, cons, and confidence in each half using Ward's method. Multiple indicators (i.e., cubic clustering criterion, pseudo F and t2) suggested 3–5 clusters. Based on the elevation, shape, scatter, replication, and interpretability of the clusters, a four cluster solution was retained. The four profiles were labeled based on relative subscale scores: Most Protected (29%); Most Negative (5%); Least Positive (10%); and Least Confident (56%). ANOVAs indicated that the profiles differed significantly on use of the four processes of change assessed in M: Counter-Conditioning (CC); Helping Relationships (HR); Stimulus Control (SC); and Self-Liberation (SL) (all p<.01; $\eta2$=.03-.16) with Most Protected using CC and SL more than those in other profiles and using SC and HR more than Least Confident or Least Positive. Individuals in the Least Confident profile used CC and SL less than others (all p<.01). A cross-tab indicated that cluster membership predicted relapse to Action or pre-action stages (X2(6)=262.41, p<.01). Among Most Protected, 7.5% relapsed, whereas among Least Confident the relapse rate was 19.5%. Relapse rates among Least Positive and Most Negative were 13.4% and 13.6%, respectively. Implications for dynamically tailoring interventions will be discussed.

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D-120

PHYSICAL ACTIVITY AS AN INFLUENCE OF CHANGE IN SELF EFFICACY AND COGNITIVE PERFORMANCE IN OLDER ADULTS

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Self efficacy has been identified as an important predictor of an array of health behaviors including cognitive performance. However, little research exists examining the effect of changes in health behavior on self efficacy for cognitive performance. The purpose of this study was to examine this relationship in a sample of older adults ($N=98$; M age=66.08) who participated in a 12 month exercise intervention. Prior to and post intervention all participants completed a dual task paradigm to assess executive performance, measures of self-efficacy for cognitive performance accuracy, and a graded exercise test to assess physical fitness. After pre testing, participants were randomized into one of two groups, an aerobic walking group or flexibility and toning group. Repeated measures ANOVA revealed significant changes for all individuals in the intervention for dual task reaction time, $F(1,95)=19.123$, $p<.001$, and self efficacy both pre, $F(1,98)=40.277$, $p<.001$, and post task, $F(1,92)=3.732$, $p=.05$, from month 0 to 12. Results also showed a time, $F(1,98)= 11.822$, $p<.01$, and time X group interaction, $F(1,98)=6.396$, $p<.05$, for changes in VO2. The walking group experienced a greater increase in VO2 over the course of the 12 months. Hierarchical linear regression indicated that age ($\beta=.222$), change in pre dual task self efficacy ($\beta=-.227$), change in VO2 ($\beta=-.222$) were significant predictors of change in dual task error over the course of the 12 month regardless of intervention group. Thus, increases in fitness and self-efficacy are associated with a decreased number of errors made on a complex cognitive task. These findings suggest that changes in positive health behaviors such as physical activity, influence confidence for cognitive performance, as well as actual performance on a challenging task. Whether such changes in cognitive function and self efficacy are associated with changes in particular aspects of brain structure and function remains to be determined.

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EFFECTS OF INTRINSIC MOTIVATION AND ADIPOSITY ON PHYSICAL ACTIVITY IN UNDERSERVED ADOLESCENTS

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Self Determination Theory (SDT; Deci & Ryan, 2000) provides an established framework for understanding moderate-to-vigorous physical activity (MVPA) behavior in adolescents. SDT suggests that intrinsically-motivated behavior changes will be sustained longer than those driven by extrinsic factors. However, it is unclear how intrinsically-driven behavior may vary as a function of adiposity. Although Ingledew and Sullivan (2002) found that body mass index (BMI) negatively predicted intrinsic motivation for exercise in adolescent females, little is known about how BMI and intrinsic motivation may interact in understanding MVPA in youth. The present study expands on previous research by examining whether BMI moderates the effects of intrinsic motivation on MVPA in underserved adolescents (low income, minorities). It was hypothesized that there would be a significant intrinsic motivation by BMI interaction, such that intrinsic motivation would be a stronger predictor of MVPA for those with lower vs. greater adiposity. Participants ($n = 1{,}014$; 57% girls; 73.9% African American, Age = 11.36±0.62) were enrolled in the Active by Choice Today (ACT) Trial (Wilson et al., 2008). Baseline data included BMI, levels of MVPA (7-day accelerometry estimates), and self-reported intrinsic motivation for MVPA (Exercise Self Regulation Questionnaire; Ryan & Connell, 1989). As expected, the interaction between intrinsic motivation and BMI, controlling for sex, was significant ($B4=-0.57$ s.e.= 0.26, $t =2.19$, $p < .05$). High intrinsic motivation was positively associated with MVPA more strongly in adolescents with lower (vs. higher) adiposity levels. For adolescents with low intrinsic motivation, adiposity levels were not differentially associated with MVPA. These findings suggest that for underserved adolescents, the relationship between intrinsic motivation and MVPA may be conditional on adiposity level. Thus, future interventions may need to target psychosocial predictors of MVPA, such as intrinsic motivation, differently depending on adolescent weight status.

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PERCEIVED STRESS AND OBESOGENIC BEHAVIOR IN WORKING ADULTS

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Perceived stress has been associated with obesogenic behaviors related to energy imbalance. These include consumption of higher fat diets and less time spent in physical activity. However, few epidemiological studies have assessed the relationship of dietary or physical activity behavior and stress resulting from everyday stressors. The objective of this study was to examine whether cross-sectional associations between stress, dietary and physical activity behaviors, and BMI exist among healthy working adults randomized to participation in Promoting Activity and Changes in Eating (PACE), a dietary and physical activity intervention to reduce obesity. Baseline information on perceived stress, BMI, diet and physical activity behaviors was collected from 632 employees within 34 participating worksites. A general linear mixed-model analysis was conducted to determine the association between perceived stress, BMI, physical activity and dietary behaviors adjusting for age, sex, race, and education (as fixed effects) and worksite random effects. Higher stress was associated with lower Godin free-time physical activity score ($P=0.005$) and frequency of sweat-inducing activity ($P=0.020$). Higher stress was also associated with lower self-efficacy to increase physical activity level ($P=0.028$) and monitor eating choices ($P=0.009$). While higher stress was not associated with television viewing, more stress was associated with higher frequency of eating while doing other activities ($P=0.001$). Fruit and vegetable, fast food, and soft drink consumption were not found to be associated with stress. A mechanism independent of these behaviors linking stress with BMI was also not evidenced. These findings provide some insight into the role of everyday stress and obesogenic behavior.

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THE INFLUENCE OF PHYSICAL ACTIVITY AND SELF-ESTEEM ON BODY IMAGE IN FIRST YEAR COLLEGE STUDENTS

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Previous research has found a relationship between physical activity and body image and have hypothesized that self-esteem may be one mechanism through which physical activity may influence body image. This study wanted to determine if this was indeed the case. 391 college students (144 male, 247 female) completed surveys concerning their physical activity habits, self-esteem (Rosenberg, 1965), and body image via physical appearance trait anxiety (Reed et al., 1991) at two different times; at the beginning and at the end of the first year of college. Panel analyses were used to test hypothesized models. An initial model tested indirect associations between physical activity, BMI and body image, operating through self-esteem. This model assessed this pattern of relationships at baseline and among changes over one year, and provided a good fit to the data ($\chi 2 = 41.70$, $df = 17$, $p <. 05$, RMSEA [90% CI] = .059 [.04-.08], CFI = .97, SRMR = .07); however, the hypothesized paths from physical activity ($\beta = .09$, $p = .12$) and BMI ($\beta = .07$, $p = .16$) to self-esteem were not significant at baseline or over time. An alternative model in which direct paths were specified from physical activity, BMI, and self-esteem to body image was tested in an effort to identify a more parsimonious model. This model provided an excellent fit to the data ($\chi 2 = 17.38$, $df = 15$, $p = .30$, RMSEA [90% CI] = .02 [.00-.05], CFI = .99, SRMR = .02). At baseline, students with greater physical activity ($\beta=-.12$, $p = .01$), higher self-esteem ($\beta=-.42$, $p < .01$) and lower BMI ($\beta = .19$, $p < .01$) had better body image. Over time, changes in physical activity ($\beta=-.10$, $p < .05$) and changes in self-esteem ($\beta =-.09$, $p < .05$) were significantly associated with changes in body image. No significant associations were found with changes in BMI. Although our data do not support a moderating effect of self-esteem, these results suggest that physical activity, BMI, and self-esteem are significantly associated with body image in college students.

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DIAGNOSIS THREAT AND COGNITIVE PERFORMANCE DURING PREGNANCY

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It's a common belief that, during pregnancy, women's cognitive abilities decrease, as noted in the popular pregnancy preparation book "What to Expect When You're Expecting" (Eisenberg et al, 1996). When pregnant women are asked, 82% report perceiving changes in their cognitive ability during pregnancy (Parsons et al., 1991). However, the objective results testing this belief are inconclusive (Buckalter et al., 1999; DeGroot et al, 2006; Keenan et al., 1998; Sharp et al., 1993, Casey et al., 1999; Christensen et al., 1999; Mc Dowall et al., 2000). One possible cause for the inconsistent findings is stereotype threat. It's possible that pregnant women underperform on cognitive tasks not because of neurophysiological changes but instead due to the negative expectations about pregnant women's cognition that are part of pregnancy stereotypes. The purpose of the study is to investigate whether stereotype threat could be related to changes in cognition during pregnancy, rather than testing differences in cognition during pregnancy. Investigating this topic is paramount in the way pregnancy is talked about and perceived as well as the implications on the inconclusive nature of the empirical results. Women in their 2nd and 3rd trimester will be randomly assigned to negative expectancy and control groups and administered a battery of neuropsychological tests. It is expected that women primed to negative expectations about cognition in pregnancy will perform more poorly on Word List Learning and Semantic Fluency tasks than women not exposed to negative expectations. To test this, 2 independent T-tests will be run on Word List Learning and Semantic Fluency scores. It is also expected that women exposed to the negative stereotype will self-report more cognitive impairment than women who are not primed to the stereotype.

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EFFECTS OF MARITAL QUALITY AND PARENTING STRESS ON CHILD TEMPERAMENT

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Few studies have conducted prospective studies on the effects of marital quality and parenting stress on child temperament. The current study examined whether marital quality (Dyadic Adjustment Scale) and parenting stress (Parenting Stress Index) during pregnancy, and at 6 and 12 months postpartum was associated with child temperament (Infant and Child Characteristic Questionnaire) at 6 and 18 months of age, controlling for child gender. Our sample consisted of 58 pregnant, low-income women receiving prenatal care from a public-sector hospital (average age = 24 years, 70% Spanish speaking, average years of education = 11 years). Independent samples t-test analyses demonstrated that mothers of girls reported higher levels of parental stress than mothers of boys ($t = 2.5$, $p < .05$). Hierarchial regression analyses revealed that: (1) women who reported greater levels of marital cohesion at 12 months postpartum rated their child as being more difficult at 18 months postpartum ($R^2 = 0.19$, $p < .01$); (2) women who reported greater levels of parenting stress at 12 months postpartum rated their child as being less sociable at 18 months postpartum ($R^2 = 0.16$, $p < .05$); and (3) women who reported greater levels of parent-child dysfunctional interaction at 12 months rated their child as being less adaptable at 18 months postpartum ($R^2 = 0.16$, $p < .05$). These findings suggest that more research is needed on the effects of marital quality on child temperament. Furthermore, future studies should examine the effect of psychosocial interventions on parenting stress and subsequent child temperament.

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EFFECTS OF RESILIENCE AND BENEFIT FINDING ON THE HEALTH BEHAVIORS OF LOW INCOME PREGNANT WOMEN

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Recent studies have found resilience (one's ability to successfully cope with major challenges or change) and benefit finding (one's ability to see the positive aspects of challenging life events) to be related to positive health outcomes, yet very few studies have examined the impact of these personality traits on the health behaviors (exercise and nutrition) of pregnant women. The current study examined whether resilience (Resilience Scale; Wagnild et al., 1993) and benefit finding (Benefit Finding scale; Carver & Antoni, 2004) were associated with the exercise (number of minutes of moderate intensity activity per week) and nutrition (number of servings of fruits and vegetables and high fat foods per week) behaviors of 57 low income pregnant women (mean age = 26±6 years; 60% annual income less than $15,000; 40% first time mothers) prior to and during pregnancy. Hierarchical regression analyses indicated that, controlling for parity status, women with higher levels of resilience exercised more during pregnancy ($R^2 = .08$, $p = .05$) and ate more fruits and vegetables prior to pregnancy ($R^2 = .11$, $p = .05$). However, women with higher levels of resilience ($R^2 = .11$, $p < .05$) and benefit finding ($R^2 = .21$, $p < .01$), consumed more high fat foods during pregnancy. These findings indicate that although resilience may increase exercise behaviors during pregnancy, further research is needed to examine the effects of resilience and benefit finding on eating patterns. Future studies should also examine the effects of both resilience and benefit finding on maternal and infant health outcomes.

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WOMEN'S VERBAL SEXUAL COERCION EXPERIENCES AND RISKY SEXUAL BEHAVIOR

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Sexual assault history (SAH) and alcohol consumption are risk factors for sexual behavior related to HIV/STIs. Verbal sexual coercion (VSC), i.e., psychological pressure resulting in unwanted sexual intercourse, can increase women's risk for HIV/STIs. At least 20% of college women report lifetime VSC experience. We examined the relation between VSC and risky sexual behavior by comparing women with no SAH to women with only a VSC history. We hypothesized that women with a VSC history would report riskier sexual behavior and more substance use than women with no VSC history.

Community women (n=141; M=24 yrs, SD=4) were in a larger study using genital measures to evaluate alcohol and sexual arousal effects on risky sexual decision-making and were excluded from this study if they had SAH other than VSC. Remaining women were categorized as having (n=41) or not having VSC history (n=100). Participants completed questionnaires regarding sexual behavior, condom use, sex-related alcohol expectancies, and substance use during sex.

As hypothesized, a MANOVA revealed that women with VSC history reported more risky sexual behaviors than women with no VSC history including more sexual partners, more frequent sex, and more frequent unprotected sex. Despite no differences in alcohol and marijuana use, women with VSC history reported stronger sex-related alcohol expectancies and more sexual activity after combined alcohol and marijuana use and marijuana use only.

These results are limited due to their retrospective nature and volunteer bias in studies involving vaginal measures of arousal. However, they suggest a relation between VSC and risky sexual behavior. VSC should be considered in HIV/STI prevention programs to educate and train women about how to resist VSC. Programs should also address training women how to cope with VSC to prevent future risky sexual behavior. Future investigations of post-assault sequelae should include VSC to gain a more thorough understanding of VSC's effects.

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INFLUENCES ON ACCEPTABILITY OF TOPICAL MICROBICIDES IN COLLEGE STUDENTS

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Objective: Topical microbicides (TMs), which are currently in development, are a female controlled method of sexually transmitted infection (STIs) prevention. Due to physical properties of TMs (i.e., excess lubrication), use will likely be noticed by partners; thus, men may play a role in TM acceptability and usage. This study aimed to examine variables associated with TM acceptability for pregnancy and STI prevention in both males and females. Methods: College students (18 to 25 years) completed a survey on demographic, sexual, and relationship characteristics, as well as the Perceptions of Microbicides. Results: Participants (198 females and 125 males) completed the questionnaire (mean age = 22.62 years). The sample was primarily Caucasian (60%) and Hispanic (22%). Most participants (74%) stated their partner would impact TM use, but fewer (49%) stated they would encourage use. Although most participants felt their partner would impact TM use, females were also more likely than males to report their partner "would not care" about TM use, $\chi 2=16.72$, $p=.002$. Overall, 80% would likely use TMs to prevent STIs and 80% would use TMs to prevent pregnancy. Using a backwards elimination strategy, significant predictors of both use for STI prevention and use for pregnancy prevention were retained in the final model at the $p < .05$ level. Relationship status, health beliefs about TMs, and comfort using TMs remained in the final model predicting use for STIs, and feelings regarding getting an STI, partner's encouragement of TM use, partner's influence on TM use, comparison to condoms, and pleasure associate with TM use stayed in the final model to predict use for pregnancy. Conclusion: Perceptions of TMs by both males and females may influence TM use within a relationship. Therefore, it may be beneficial to develop programs that target both males and females individually and as a couple.

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COLLEGE MEN'S KNOWLEDGE OF VAGINAL DOUCHING

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Purpose: This study examined college men's knowledge of female vaginal douching and discussions they have had with individuals about douching. Methods: Participants in the study completed a 45 question survey on douching exposure, knowledge, and attitudes. Results: Eighty-nine participants (mean age=27.2 years) completed the survey. The sample was 63% Caucasian, 22% Hispanic, 7% Asian, 5% Indian/Middle Eastern, and 3% African-American. Sixty-two percent of participants reported exposure to douching, mostly through television advertisements (49%), seeing the product at home (38%), a conversation about douching (38%), or class (25%). Forty-one percent of the sample knew someone who douches, often a spouse or girlfriend (53%), friend (52%), or mother (47%). Forty-two percent of the sample stated they would want their significant other to douche, and 56% said that women in general should douche. Most of the sample (83%) stated they would be willing to discuss douching, and 39% of the men reported having had a discussion about douching, mostly with either a girlfriend or spouse (42%) or a friend (30%). Many men felt douching would help with cleanliness (50%) or vaginal odor (25%), but only 3% discouraged it. Men also reported not discussing douching because they would not know what to say (46%), it was not their place to discuss it (45%), their spouse or significant other did not want to hear about it from them (36%), or they would be uncomfortable with the subject (34%). Men willing to discuss douching were more likely to discourage douching for their partner than encourage it, $\chi 2=8.616$, $p<.05$. However, men who knew someone who douched were more likely to think that women should douche than men who did not, $\chi 2=10.527$, $p<.05$. Conclusions: Although douching is considered a women's health issue, men may have an influence on female douching and hygiene. However, males may have limited knowledge of and exposure to douching. Given the negative health effects of douching, efforts to educate men about douching or encourage women to talk with partners about douching are needed so that women decrease douching behavior.

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ARE SEXUAL SATISFACTION AND SEXUAL DISTRESS INDEPENDENT CONSTRUCTS?

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Sexual satisfaction and sexual distress are common outcomes in studies of sexual health, but confusion remains as to if and how the two constructs are related. While many researchers conceptualize satisfaction and distress as polar opposites with a lack of satisfaction indicating high distress and vise versa, there is a growing movement to view satisfaction and distress as relatively independent factors and measure them accordingly. However, we are aware of no studies that have empirically tested the relationship between satisfaction and distress. Our goal was to assess the level of independence between satisfaction and distress by exploring the relationships between these two constructs and sexual/relational functioning and the degree to which they covary over time. 131 women being treated for sexual dysfunction filled out questionnaires regarding sexual/relational functioning and sexual satisfaction/distress pre and post-treatment. We conducted t-tests of correlation coefficients to determine if satisfaction and distress were differentially related to sexual and relational functioning and linear regression analyses to measure their covariation over the course of treatment. Sexual satisfaction and sexual distress were differentially related to sexual and relational functioning. However, changes in satisfaction were significant predictors of changes in sexual distress. Our results suggest that sexual satisfaction and sexual distress may be independent constructs in that the two are differentially related to sexual and relational functioning. However, changes in satisfaction coincided with similar changes in distress, implying that the two factors may respond similarly to treatment. These findings suggest that, while sexual satisfaction and sexual distress are closely related aspects of sexual well-being, they can and should be conceptualized and measured as distinct constructs.

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ADHERENCE TO VARENICLINE AS A PREDICTOR OF SMOKING CESSATION IN THE COMPASS TRIAL

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Patient adherence to smoking cessation medications can impact their effectiveness. It is important to understand the extent to which prescribed cessation medications are actually taken by smokers in real world settings, and how this influences smoking cessation outcomes. We report on adherence to a standard 12-week varenicline regimen that was mailed to all smokers who set quit dates in the COMPASS trial. Smokers (N=1202) were randomized to receive one of 3 delivery modes of cessation counseling (Phone, Web, Integrated Phone/Web) and all received varenicline. We previously reported high cessation rates (33%) but no significant differences across study arms at 6 months. The purpose of this paper is to describe the relation between self-reported adherence and smoking abstinence (ITT 7-day PPA) at 6 months. Telephone surveys included 4 adherence indices; total number of days varenicline was taken over the course of treatment (M=63.1, SD=33.4), proportion of varenicline taken 7 days prior to (M =92.5%, SD=23.5%) and 7 days following (M=91.5%, SD=22.3%) the quit date, and the Morisky Adherence Scale at 21 days (M=0.8, SD=0.8]) and 12 weeks post quit (M=1.0, SD=1.0). The odds of being a non-smoker at 6-month follow-up were significantly greater for participants who reported taking more days of varenicline (OR=1.8 [95% CI 1.58–2.11] p<.0001), and for those who reported taking higher proportions of varenicline prior to (OR=1.8 [95% CI 1.01–3.31] p<.05) and immediately following (OR= 2.6 [95% CI 1.36–5.15] p<.01) their quit date. Odds of being a non-smoker were greater for those with less adherence problems reported on the Morisky at 21 days (OR= 0.76 [95% CI 0.64–0.89] p<.01), but not at 12 weeks (OR=0.92, p=NS). Future research should focus on ways to increase adherence to smoking cessation medications, particularly early in the quitting process.

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EFFECTS OF CULTURALLY SPECIFIC SMOKING CESSATION MESSAGES AMONG LOW-INCOME AFRICAN AMERICANS: AN ANALOGUE STUDY

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Previous research has highlighted the importance of cultural relevance in health risk communications, including tobacco interventions. This study tested the influence of message content and culturally specific framing in a sample of adult smokers. In a 2 x 2 factorial experiment, 243 African American smokers (mean = 19 cigarettes/day) recruited from the community (55% female; mean age=43 years) were randomly assigned to one of four conditions: culturally specific smoking messages; standard smoking messages; culturally specific exercise/ weight messages; or standard exercise/weight messages. The primary outcome measures were theoretical antecedents to behavior change, including risk perceptions (general, personal, and culturally specific), readiness to quit smoking, and smoking-related knowledge.

We hypothesized that irrespective of cultural specificity, the smoking messages would produce greater risk perceptions, readiness to quit, and smoking-related knowledge compared to the control conditions (i.e., the exercise/weight messages). We also expected to find a message content x message framing interaction effect, such that participants in the culturally specific smoking messages condition would demonstrate greater risk perceptions, readiness to quit, and smoking-related knowledge compared to each of the other conditions.

The results showed that the smoking messages produced greater culturally specific risk perceptions, readiness to quit smoking, and smoking-related knowledge. The culturally specific messages produced greater personal risk perceptions and intentions to quit. Culturally specific risk perceptions were most affected by culturally specific smoking messages. Findings supported the roles of message content and culturally specific framing in the efficacy of brief written interventions for smoking cessation in this population. Future research is needed to examine the influence of these constructs on behavior change.

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DEVELOPING A CULTURALLY SENSITIVE COMMERCIAL TOBACCO CESSATION INTERVENTION FOR AMERICAN INDIAN COLLEGE STUDENTS

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Introduction. American Indians and Alaska Natives have higher rates of tobacco use than any other ethnic group in the United States, yet no interventions have been developed for tribal college students. The purpose of this pilot study was to assess the acceptability, feasability, and initial effects of an intervention designed to help tribal college students reduce commercial tobacco use. Methods. Peer Leaders (n =5) were recruited from a tribal college in Montana and trained on leadership activities, addiction process of commercial tobacco, and medicinal use of tobacco. Tribal college student smokers (n=25) were then recruited to participate in the study. The intervention consisted of four group meetings with peer leaders and two individual meetings with a peer leader. Study participants were assigned to one of two conditions, treatment or waitlist control. Students in the treatment condition (n=15) participated in the three month intervention and follow up assessments at three months. Students in the waitlist condition (n=10) participated in assessments only and received the treatment outside the context of this study. Results. Findings from students participating in the intervention suggest the intervention was highly feasible and acceptable and prompted quit attempts and reduction. Of the 13 out of 15 who completed treatment assessments, all (13 of 13) made a concerted effort to quit smoking, one quit successfully, and most (12 of 13) reduced the amount they smoked. The overall mean reduction of cigarettes smoked in a 30-day period was 64 cigarettes, which represents a 3-pack reduction. Similar changes among students in the wait list control condition, along with a high level of interaction between members of the treatment and comparison groups, suggest that the wait list group design is not appropriate for the tribal college context. Plans for strengthening the intervention, including incorporation of the state quit line and enhanced cultural experiences will be discussed.

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USE OF SOCIAL NETWORKING SITES BY PREGNANT SMOKERS

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Pregnant women are an important target for smoking cessation intervention. A number of negative health outcomes for unborn and young children are associated with smoking while pregnant and postpartum, and smoking prevalence among pregnant women remains alarmingly high. Emerging internet technologies (i.e., social networking sites) represent a potentially useful tool for reaching and engaging pregnant smokers in smoking cessation efforts. The aim of the current study was to describe the internet presence of pregnant smokers on social networking sites, in order to better understand who these women are, and how they interact with this new form of media. We conducted an environmental scan of the content on social networking sites targeting pregnant women, including pregnant smokers. Key findings from the scan included an abundance of posts containing misinformation regarding smoking risks, and widespread confusion about cessation methods. In addition, pregnant smokers who requested help in online communities were frequently met with unsupportive comments and personal attacks by nonsmokers. Finally, there was a consistent presence across social networking sites of a subgroup of pregnant smokers who were highly resistant to quitting, represented by forums with names like “Yes! I smoke!!” and “Smoking Mommies”. On one popular social networking site, these users made up the largest number of users in any one group related to smoking, with 1,333 members and growing. The content of the discussions in these forums portrayed smoking during pregnancy as a “choice” and a “right”. The results of this analysis suggest that pregnant smokers have a meaningful presence on social networking sites, and are engaging in active dialogue around smoking. The findings also highlight key opportunities for intervention among pregnant smokers using these sites. Efforts should be made to minimize misinformation about smoking cessation and actively create a supportive environment for pregnant women trying to quit. Furthermore, targeted strategies are needed to engage the subgroup of pregnant women who are committed to continuing their smoking.

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D-138

THE SUBJECTIVE IMPORTANCE OF SMOKING SURVEY (SIMS)

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The personal, subjective importance of cigarette smoking to a smoker has implications for understanding difficulty quitting smoking and characterizing inveterate smokers. A new survey to assess this understudied dimension of smoking, the Subjective Importance of Smoking Survey (SIMS), assesses personal facets of smoking such as, “Being a smoker is important to me” and “Holding a cigarette makes me feel like I’m in control”, and “I cannot see myself not smoking”.

Participants were 103 smokers, (Mean age=30.39, SD=8.13; 66% Male; 90% White; years smoking Mean=12.73, SD=6.88) taking part in a single session, laboratory-based study investigating the effect of cigarette advertising on beliefs of harm exposure. As part of the procedures, participants completed 17 SIMS items (6-point scale) along with demographics, alcohol use, nicotine dependence (ND), need for cognition (NC), and other psychosocial variables.

Analysis of item response distributions and an exploratory factor analysis (EFA) eliminated 3 items with predominantly extreme responses, and 3 items loading highly on several factors. The result was a 2-factor 11-item measure with one factor representing a self/identity and the second representing a soother function of smoking. We next conducted exploratory structural equation modeling (ESEM), a hybrid method of EFA and SEM, which like EFA permits items to load on all factors but like SEM also allows testing the effects of covariates on factors, and model fit. We used Mplus 5.2 software for the ESEM analysis.

The two-factor ESEM model fit the data well, $\chi 2(40,n=93)$ =50.10, p=.13, CFI=.96, RMSEA=.05, WRMR=.72. Being male (p=.02), and ND (p=.01) were positively, whereas NC (p=.04) was negatively associated with a higher score on the self/identity factor. Regarding the soother factor, being male (p=.01), ND (p=.02), discomfort around non-smokers (p=.05), and alcohol use (p=.02) were positively, whereas NC (p<.0001) was negatively associated with higher scores on the soother factor.

This was the first study to assess the factor structure and construct validity of a new survey assessing the subjective importance of smoking.

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PILOT STUDY OF SMOKELESS TOBACCO CESSATION TREATMENT USING NICOTINE LOZENGES AND ASSISTED SELF-HELP

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Interventions that use self-help materials and counseling calls have been shown to reduce ST use rates, and are easily disseminated. However, the effectiveness of incorporating pharmacotherapy into these interventions has not been evaluated. Our pilot study represents the first investigation to evaluate compliance with and efficacy of mailed nicotine replacement therapy (NRT) for ST users. We describe the results of a clinical pilot study in which 60 ST users who received self-help plus telephone support were randomized to receive either 12 weeks of the 4-mg nicotine lozenge or placebo lozenges delivered through the mail. At the end of the medication phase, 63% of subjects in the nicotine lozenge group were using lozenges compared with 43% in placebo group. Except for the in-person baseline assessment which was conducted for safety, our approach models a telephone quitline with mailed NRT. Results confirmed that a ST cessation treatment protocol that combined mailed nicotine lozenges and an assisted self-help intervention was both feasible and safe. Lozenge use, treatment adherence, and protocol completion were comparable to clinical trials with more intensive (in-person) contact. Results must be viewed in the context that the pilot study was underpowered to detect group differences in outcome. Accordingly, no statistically significant differences were observed between the two groups at either 12 weeks (end-of-medication) or 6 months. At 12 weeks, the self-reported 7-day point prevalence all tobacco abstinence rate was 47% in the nicotine lozenge group compared to 37% in placebo (p=.43). Prolonged ST abstinence was 43% vs. 37% (p=.60). At 6 months, the self-reported point prevalence all tobacco abstinence rate was 30% in the nicotine lozenge group and 47% in placebo (p=.30) and prolonged ST abstinence rates were 27% and 38% (p=.41), respectively. The use of nicotine lozenge significantly decreased withdrawal symptoms. Results discuss to strengthen the efficacy of low intensity self-help ST cessation intervention using NRT.

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SMOKING-RELATED OUTCOME EXPECTANCIES AMONG LOWER SOCIOECONOMIC STATUS SMOKERS

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Smoking-related outcome expectancies are key constructs underlying smoking motivation and behavior. They have typically been measured with self-report questionnaires, though recent investigations (Hendricks & Brandon, 2005, 2008) have made use of sentence completion methodology to assess smokers' expectancies for cigarette use. The aim of the current study was to explore smoking-related outcome expectancies among a sample of lower socioeconomic status smokers via a sentence completion task. Lower socioeconomic status smokers are of particular interest as evidence suggests that the population of cigarette users is becoming increasingly less educated and of lower income. Participants (N = 159) completed the sentence, "Smoking makes one _____." with as many words as possible within 30 seconds. Participants' responses were then grouped into seven distinct semantic categories. The most common responses provided by participants concerned negative consequences, followed by negative reinforcement, positive consequences, arousal, addiction, social enhancement, and weight control. These results suggest that lower socioeconomic status smokers hold smoking-related outcome expectancies that differ from those of higher socioeconomic cigarette users. Public health and clinical interventions may thus require modification to best target the changing population of tobacco users. These and other implications are discussed.

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INITIAL SMOKING REACTIONS IN ADOLESCENTS DO NOT PREDICT CESSATION SUCCESS

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Experimentation with tobacco during adolescence greatly increases the risk of smoking in adulthood. The majority of adult smokers report initial use of tobacco during childhood and teen years (Riley et al., 1996). Previous research has shown that self-reports of positive initial reactions to smoking have predicted future smoking (McGhee & Stanton, 1993), In addition, dependant smokers have been found to report initial pleasurable reactions to tobacco (Pomerleau, Pomerleau Namenek, & Marks, 1999). However, no previous research has explored the relations between initial reactions and subsequent smoking cessation. The purpose of this study is to determine if positive initial reactions to tobacco among adolescents predict difficulty in quitting smoking four years later.

The participants in this study were drawn from the Memphis Health Project, a longitudinal study of the correlates of smoking in a biracial sample. At baseline, 6,967 seventh grade students from urban schools comprised the sample. Of the students, 39.7 % were male. Most (81.9%) were, African American, with another 17.4% Caucasian and .7% classified as other. The students completed confidentially administered surveys beginning in the 1993–1994 school year and annually for 10 years thereafter. Initial reactions and smoking were self-reported.

Logistic regression was used to assess the relation between initial reactions to smoking (i.e., dizziness, feeling high, feeling sick, or feeling relaxed) and quit attempts four years later for periods of 24 hours, 1 week, 1 month. In addition, the relation between initial symptoms and self-reported successful cessation was explored. Results indicated that teens who reported an initial reaction of feeling relaxed were 2.23 times more likely to have quit smoking for 24 hours in the previous 12 months (as reported four years after initial survey) than teens who did not report feeling relaxed as an initial reaction ($p < .05$, CI: 1.11–4.47). There were no other significant relationships between initial reactions and any length of quit attempts or successful cessation, $p > .05$.

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D-142

THE ROLE OF MOTIVATION TO QUIT ON SMOKING-RELATED OUTCOMES IN A MOTIVATIONAL INTERVIEWING-BASED INTERVENTION FOR COLLEGE STUDENTS

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Although college student smoking rates are high and motivation to quit is low, there have been few studies testing interventions to reduce smoking. The Greek Health Project was a group randomized trial designed to test a Motivational Interviewing-based smoking cessation intervention (relative to a dietary focused control) for members of sororities and fraternities at a large Midwestern university. Participants were recruited regardless of readiness/interest in quitting. The purpose of this study was to explore the role of initial motivation on cessation related outcomes at the end of the treatment phase (week 10). This sample consisted of 325 smokers (56.6% male, mean age=19.5). The baseline motivation/readiness to quit measures included a single item 10-point motivation ruler, the Contemplation Ladder, and a dichotomous measure derived from the Stage of Change questionnaire (Precontemplation vs. Contemplation/Preparation). End of treatment measures used were number of quit attempts and number of days smoked in the past 30 days. Bivariate correlations revealed that all 3 motivation measures correlated significantly and positively with number of attempts to quit (all r's = .18) but were not related to days smoked. However, regression analyses that examined potential interactions between treatment and each baseline motivation measure revealed significant treatment interactions with the Contemplation Ladder and Stage of Change in the prediction of number of days smoked (β=-.43, p = .03 and β=-.49, p = .006, respectively) such that the association between motivation to quit and days smoked was diminished in the treatment group relative to the control group. These results suggest that although baseline motivation is predictive of attempts to quit, Motivational Interviewing may be helpful in diminishing the impact of low motivation on the frequency of smoking in college students.

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D-144

"HAIR CORTISOL ANALYSIS: APPLICATION OF A NEW TOOL IN ALCOHOLIC PATIENTS DURING ACUTE DETOXIFICATION AND DURING ABSTINENCE"

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Background:
Studies using saliva, serum, or urine analysis for cortisol demonstrate that chronic alcoholics present with elevated cortisol levels both during active drinking and withdrawal. Normalization of cortisol levels occur after about seven days of abstinence. The aim of the present study was to determine whether these cortisol alterations in the course of alcoholism and abstinence are also apparent in hair cortisol analysis, a method which allows for retrospective ascertainment of cortisol levels over periods of up to six months. For this, hair strands were taken scalp-near and cut into 3-cm segments, which based on an average hair growth rate of 1 cm per month, represents hair grown over the past 3 months for the scalp-near segment.
Methods: Hair strands were obtained in 23 alcohol-dependent individuals during acute withdrawal (4 to 12 days post withdrawal- indicating cortisol release during active drinking), in 25 long-term abstinent alcoholics (at least 14 weeks post withdrawal), and in 20 age- and gender-matched healthy controls. Additionally, self-report measures on demographic and medical history information, depressive symptoms, trait-anxiety, and perceived stress were obtained.
Results: Univariate ANOVA with post-hoc comparisons indicated that alcohol-dependent individuals during acute alcohol withdrawal showed increased hair cortisol concentrations by threefold compared to abstinent individuals and controls (both p<.01). Self-report measures indicated no difference between patients during acute withdrawal and abstinent alcoholics (all p>.05) but between alcoholics and controls (p<.01).
Conclusions: Our hair cortisol results are consistent with previous findings of hypercortisolemic states in alcoholics and normalization of cortisol levels in the course of abstinence. These data further support the importance of the new tool of hair cortisol measurement allowing for retrospective ascertainment of cortisol release over longer periods of time.

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D-145

TRAUMA, EMOTIONAL FOCUSED COPING AND SELF-ESTEEM IN GAY MEN AND LESBIANS

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Trauma is linked to psychosocial difficulties such as anger, anxiety, and depression (Friedberg et al., 2005). Coping strategies can be either problem-or-emotion focused (EF;Folkman & Lazarus, 1985). EF coping strategies are often used in situations beyond the control of the individual (Lane et al., 2002). An additional distinction that is often made in the coping literature is between active and avoidant coping strategies (AC). AC may lead people into activities (substance use) or mental states (withdrawal) that keep them from directly addressing stressful events (MacArthur et al., 1998). We hypothesize that gay men and lesbians (GL) who deal with trauma through EF coping will report lower self-esteem (SE).
We used a cross-sectional, correlational design to explore the relationship between trauma, EF, and SE in 100 GL (45% female, 5% Transgendered, 50% lesbian, 62% European American). Participants completed the Brief Cope Scale (BCS: Carver, 1997), Rosenberg Self Esteem Scale (RSES: Rosenberg, 1965), and Trauma History Questionnaire (Green, 1996). We used three coping subscales from the BCS: self blame (SB), substance-use and behavioral disengagement (BD). Our model consisted of trauma and coping strategies as predictor variables and SE as the outcome variable. Hierarchical regression analyses revealed that trauma (β=.24,t=2.71,p<.01), SB (β=.31,t=3.27,p<.01) and BD (β=.31,t=3.30,p<.01) accounted for 38% (adj. R2=.38,f=8.50,p<.001) of variance in SE. However, substance-use was not significance.
Our findings demonstrate that GL who experience traumatic stressors and use EF coping styles report better self-esteem. Contrary to our hypothesis, our findings suggest that trauma and its resolution through EF coping may be associated with improved SE. Perhaps experiences of specific traumas (e.g. discrimination) gay and lesbian populations provide opportunities for improving SE by overcoming the trauma successfully. GL who manage stigma through EF may shift control over the experience to themselves, reinforcing self-efficacy and SE.

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D-146

LIFETIME ALCOHOL ABUSE PREVALENCE: ROLE OF CHILDHOOD AND ADULT RELIGION

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Religion has been shown to be a protective factor against alcohol use in national surveys (Michalak, et al, 2007). However, little is known about the relationship among stressors, childhood and adult religious variables, and lifetime prevalence of alcohol abuse among diverse ethnic groups. Additionally, there is little information about the link among childhood and adult religiousness and lifetime alcohol abuse (LAA).
Method: The National Co-morbidity Survey -Replication (NCS-R), a large and ethnically diverse epidemiological study was used to examine the role of religion on LAA prevalence. The NCS-R uses a probability sample for the United States. We used logistic regression with survey weights to assess the extent to which the following factors affected LAA: 1) demographics, 2) childhood adversity, 3) parental substance abuse, 4) childhood and adult religious variables.
Results: 4153 respondents with complete alcohol and religion data were included. Of these individuals, 15% had a diagnosed LAA disorder (N=643). Males were most likely to have LAA (OR=4.18;p<.001), as did those under the age of 65 (OR=2.34–3.14;p<.001). No differences emerged by race, or education level. Middle income levels ($35–75,000) had increased LAA (OR=1.54;p<.01) compared to higher income. Married/Cohabitating was a protective factor (OR= .57; p<.001). Childhood adversity impacted LAA including maternal (OR=3.10; p<.001) and paternal (OR=2.19;p<.001) substance abuse, and being undersupervised when young (OR=1.79;p<.001). After adjusting for these variables, religious variables showed a significant impact on LAA including frequency of church attendance (OR=.56;p<.001), and an interaction variable (childhood religiosity x religion guides decisions) emerged (OR=.58;p<.01).
Conclusions: Adult and childhood religious variables impact prevalence of alcohol abuse even after adjusting for demographics and childhood adversity. Future research could identify the extent to which different aspects of religion/spirituality impact LAA among diverse ethnic groups.

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D-147

WORKING TO PREDICT POSITIVE SOCIAL CONNECTIONS & OPTIMISM/FUTURE FOCUS AMONG CHRONIC PUBLIC INEBRIATES

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Background: Chronic public inebriates (CPIs) lead hard lives frequently marked by multiple failed attempts at sobriety. In Seattle, seventy-five beds have been made available, with support services, to those CPIs whose use of treatment, sobering services, & the criminal justice system is most costly to the public. Aims: Determine which Brief Symptom Index (BSI) constructs - Interpersonal Sensitivity (IS), Depression (D), Anxiety (A), Hostility (H), & Paranoid Ideation (PI) - predict positive social Connections (SC) & Optimism/Future Focus (OF) in this population. Methods: 134 (94% male, mean age 48, 52% white, 38% AA) newly housed or waitlisted individuals completed select inventories of the BSI. Three novel items assessing care by or about someone else loaded onto a SC measure (Chronbach's Alpha = .780) & five new items querying self care & future optimism created a novel OF measure (Chronbach's Alpha = .814). Results: Univariate regressions indicate D (Beta=.156, p=.084), & A (Beta=.233, p=.009) predicted SC; only A was significant in a stepwise multivariate regression (R2 change=.054, p=.009). OF was inversely related to IS (Beta=-.202, p=.028), D (Beta=-.271, p=.003), H (Beta=-.314, p=.000), & PI (Beta=-.192, p=.038); stepwise regression indicates H alone best predicts OF (R2 change=.099, p=.001). Discussion: The current study established internal consistency of two new scales to assess social connection & optimism/future focus in this population, dimensions thought to correlate with better outcomes. Attempts to predict these constructs via BSI subscales suggests addressing anxiety & hostility may be helpful, but neither of these ultimately explained more than 10% of the DV. Additional analyses exploring predictors of SC & OF, verifying their reliability & relevance to outcomes, & the relationship of A to SC among CPIs will be beneficial.

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POST-BARIATRIC SURGERY PATIENTS VERSUS CONTROLS IN SUBSTANCE ABUSE TREATMENT

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Evidence from our laboratory demonstrates high rates of substance abuse treatment admissions among individuals who have had bariatric surgery (see Ivezaj et al. SBM 2010 abstract submission). For a considerable proportion, onset of heavy use began at some point after the bariatric surgery (see Wiedemann et al. SBM 2010 abstract submission), suggesting that substance abuse risk factors are poorly understood and not adequately addressed pre-surgery. We hypothesized that post-bariatric patients may differ considerably from non-bariatric patients on important substance abuse treatment considerations. Chart review data of 54 post-bariatric substance abuse treatment admissions were compared with that of 54 controls, randomly drawn from a database of all admissions, but matched on age, gender, and time of admission. Each group included 38 females and 16 males, with a mean age of 44.6±9.1 years. As expected, BMI was significantly higher for the bariatric group (30.7 vs. 24.9 for controls, *p*<.05). Bariatric patients were less likely to be current smokers (50.9% vs. 72% current smokers, *p*<.05). Self-reported alcohol consumption per day was converted to minimum and maximum number of standard drinks per day. Bariatric patients reported a higher minimum number of drinks per day (13.1 vs 9.3 drinks per day, *p*<.05), and this was more pronounced among those with alcohol dependence (15.8 vs. 11.1 minimum drinks per day, *p*<.05; 19.2 vs. 15.0 maximum drinks per day, *p*<.05). There was a trend for alcohol dependent bariatric patients to report a later age of onset of heavy alcohol use (33 vs. 27.5 years, *p*=.055). This more rapid escalation to heavier use might be due to alcohol serving as a stronger reinforcer among the bariatric population, which could heighten risk for substance abuse and complicate the efforts of bariatric patients to achieve and maintain sobriety.

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ALCOHOL DEPENDENCE AND COMORBID PSYCHIATRIC DISORDERS: DOES SOCIAL SUPPORT PLAY A ROLE?

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Social support has been found to have an effect on the etiology and natural history of alcohol misuse and although theoretical paradigms of psychiatric conditions suggest a role of (lack of) social support in the course of these disorders, little attention has been paid to the relationship of social support with psychiatric comorbidities in alcohol dependence. This study investigates the relationship of social support with the severity of alcohol misuse and the number of co-occurring psychiatric disorders in a clinical sample of alcohol dependent patients. Fifty-seven patients (mean age=45.5 years, SD = 10.1) were recruited from a local community alcohol service and completed a brief version of the Perceived Social Support from Family and Friends Scales and the Alcohol Use Disorders Identification Test. Clinical diagnoses of psychiatric disorders were made by conducting the MINI International Neuropsychiatric Interview. Results showed that perceived social support was inversely correlated with the number of psychiatric diagnoses in these patients. Major depression (55%) and high suicidality (60%), panic disorder (43%), generalized anxiety disorder (36%) and social phobia (23%) were found to be the most prevalent comorbid disorders. The inverse relationship of perceived social support from family with the severity of alcohol misuse did not reach the conventional level of statistical significance (r=-.24, p = .08); however, greater number of psychiatric comorbidities was significantly associated with the severity of alcohol misuse, replicating previous findings in this area. These findings should be interpreted with caution as the correlations are bidirectional. Nevertheless, these results hold prognostic implications for alcohol treatment as patients seeking treatment for alcohol problems are less likely to recover if they have one or more psychiatric comorbidities. More attention should therefore be paid to the development of effective social support interventions to complement treatment interventions in order to address psychiatric comorbidities and alcohol problem in this population.

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D-150

GIST-BASED CONCEPTIONS OF RISK IN ADOLESCENT ALCOHOL CONSUMPTION: A FUZZY-TRACE THEORY APPROACH

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According to fuzzy-trace theory, health-related decisions are increasingly made using intuition that relies on salient gist as adolescents move into adulthood. In contrast, risk-taking adolescents are predicted to make finer grained (i.e. verbatim) distinctions. Research confirmed this for sexual risk taking; those who endorsed cruder absolute principles were less sexually active than those who endorsed finer relative principles.

We extended this to alcohol consumption in adolescence by comparing the endorsement of 2 ways of thinking about risk. We asked whether they endorsed: "'No risk is better than some risk"(absolute) and "Less risk is better than more risk"(relative). They endorsed 0, 1 or both items. We predicted those who endorse the absolute principle drink less than those who endorse the relative principle.

Participants were 807 high-school students in Arizona, Texas and New York. Mean age was 15.98; 45% was Caucasian, 16% Hispanic, 28% African American; and 11% "other." Students participated in interventions aimed at reducing sexual risk taking and completed questionnaires at pre-intervention, post-intervention, 3, 6 and 12 months; they rated their alcohol consumption over the past 6 months on a 5-point Likert scale from "never" to "almost every day."

Multiple regression analyses at all time points had these variables as predictors: age, ethnicity, gender, intervention, absolute and relative endorsement. Alcohol consumption was the criterion. At post-test, 6 and 12 months, endorsing the relative principle predicted increased drinking, whereas endorsing the absolute predicted decreased drinking. African Americans reported significantly less alcohol consumption.

Consistent with theory, results suggest that adolescents who see risk as an all-or-none categorical distinction drink less than those who make finer distinctions. Gist processing is theorized to operate prospectively guiding health decisions; those who see risks qualitatively, retrieve basic values and combine these in a non-compensatory way are less likely to take unhealthy risks.

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PSYCHOSOCIAL PREDICTORS OF OPPOSITION TO TRANSITION TO ADULT CARE IN ADOLESCENT RENAL TRANSPLANT RECIPIENTS

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Pediatric transplant patients are living longer due to improved allograft survival. As a result, these patients are maturing into young adults who enter adult healthcare systems. The transition of care from pediatric to adult care providers is a growing focus, and it remains unclear why some adolescents transition more smoothly than others. Participants included 58 renal transplant recipients ages 14–21 who were taking part in a transition-focused clinic. Teens reported on medication adherence, opposition to transition, regimen responsibility, and psychological functioning.

Associations among adolescent opposition to transition, demographic and medical factors, self-reported medication adherence, and psychological functioning were examined using correlational analyses. Opposition to transition was not significantly related to age, renal function, or self reported adherence. Opposition to transition was significantly related to decreased teen medication regimen responsibility (r=-.30, p=.021), poorer psychological functioning (r=-.28, p=.028), and living with more than one parent or guardian (r=.29, p=.022). Using a hierarchical regression model, teen medication regimen responsibility accounted for 10.3% of the variance in opposition to transition, with psychological functioning and multiple care providers adding significant 6.7% and 9.2% increments, respectively. Taken together, these psychosocial factors accounted for 26.3% of the variance in teen opposition to transition.

Overall, teens who took greater responsibility for their medication taking, reported greater levels of psychological adjustment, and lived with a single care provider reported significantly less opposition to transitioning care. The data suggest that transition programming aimed at increasing adolescent healthcare responsibility, decreasing parental over-involvement in medication taking, and encouraging psychological well-being are important to ensure successful transition to adult focused care.

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GENDER, ETHNICITY & ORGAN DONATION

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Understanding the factors that influence the procurement coordinator (PC) and the family at the time of organ donation may be one way to increase the rate of donation. Using an analogue format, this study examined the interpersonal behavior of PCs and simulated families during the donation request process. Interpersonal processes were assessed using behavioral ratings by independent observers using the Impact Message Inventory (IMI), the Participatory Style of Physician Scale (PSPS), and the Siminoff Communication Content and Affect Program (SCCAP). Three-way ANOVAs were conducted in order to evaluate the effects of gender of PC, ethnicity of PC, and ethnicity of family (scenario 1 depicted a Caucasian family, scenario 2 depicted an African-American family) on the interactional variables. There was a significant PC gender×scenario (scn) interaction effect on IMI Affiliation, such that male PCs were viewed (rated) as being much more affiliative in scn 1 than scn 2 and females slightly less affiliative in scn 1 vs. 2, $F(1,25)=6.65$, $p<.02$. There was a significant PC gender×ethnicity interaction effect on IMI Control, such that African American (AA) females were viewed as far more controlling than AA males, whereas there was no difference between Caucasian (C) males and females, $F(1, 25)=4.68$, $p<.04$. There was also a significant PC gender×ethnicity interaction effect on the Shared Decision Making subscale of the PSPS, $F(1,25)=5.83$, $p<.02$. Across scenarios and all interactions, AA female PCs were viewed as engaging in less shared decision making than AA males, whereas C female PCs were viewed as engaging in slightly more shared decision making than AA females. There was a significant PC ethnicity×scn interaction effect on the Positive Affect scale of the SCCAP, such that AA PCs were viewed as expressing more positive affect in scn 2 than scn 1, whereas C PCs were viewed as expressing less positive affect in scn 2 than scn 1, $F(1, 25)=5.52$, $p<.03$. Implications for the field of organ donation and the training of procurement coordinators are discussed.

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D-155

IMPACT OF MASCULINITY, NORMS, AND LOCATION CONTEXT ON COLLEGE MEN'S INFLUENZA VACCINATION COGNITIONS

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College males get the seasonal influenza vaccine at lower rates than females (Weinstein, et al., 2007). Prior research has demonstrated that high levels of masculinity and perceptions that a behavior is non-normative among other males are associated with less engagement in health behaviors among men (Mahalik, Burns, & Syzdek, 2007). We hypothesized that lower masculinity, viewing vaccination as normative, and being in an alternative medical setting would enhance men's intention to vaccinate.

Male college students ($N = 123$) filled out a questionnaire assessing masculinity and past influenza vaccination behavior (T1). They were then randomly assigned to complete T2 at either the campus health center or the campus gym and to read that vaccination behavior was normative (60%) or non-normative (20%) among their male peers. Perceived vulnerability (PV) of seasonal influenza, images (prototypes) of vaccinators, and intention to receive the flu vaccine were assessed.

Regression analyses revealed that men higher in masculinity and those at the gym reported lower PV ($\beta=-.25$; $\beta = .28$; $ps < .02$). A significant 3-way (Norm by Location by Masculinity) interaction revealed that men in the health center/normative condition reported the lowest PV if they scored higher on masculinity and reported the highest PV if they scored lower on masculinity ($\beta=-1.79$, $p = .01$).

A similar pattern was demonstrated on favorability ratings for images. A significant 3-way interaction ($\beta=-1.76$, $p = .04$) revealed that participants in the health center/normative condition rated the image of the typical male who gets the vaccine most favorably if they were lower on masculinity.

A significant 2-way (Norm by Location) interaction was found for intentions to vaccinate ($\beta=-.25$, $p = .04$). Specifically, males in the health center/normative condition reported the lowest intentions and males in the health center/non-normative condition reported the highest intentions. These findings demonstrate the need to consider masculinity, norms, and location when promoting vaccination behavior among men.

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Saturday
April 10, 2010
9:45 AM-11:15 AM

Paper Session 19 9:45 AM-10:03 AM 4000

UPTAKE OF ACTION SCHOOLS! BC- WHICH ESSENTIAL COMPONENTS OF THE WHOLE SCHOOL PHYSICAL ACTIVITY MODEL ARE TEACHERS IMPLEMENTING?

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Action Schools! BC (AS! BC) is a comprehensive school health initiative that utilizes a socio-ecological approach to provide children with healthier opportunities for physical activity (PA) at school in British Columbia (BC). The efficacy of the model was first tested in 2003 and it is now implemented in 76% of schools in BC. The degree of uptake at the teacher level has not been previously assessed. Therefore, the purpose of this study was to: 1) determine the extent to which grades 4 to 7 teachers are implementing the model, 2) determine which components of the model teachers are implementing and 3) examine the extent to which users and non-users used physical activity support materials, resources, and activities and provided unstructured PA in the classroom (action breaks). We surveyed a random sample of elementary schools, who received training for AS! BC in BC (N=133; 38% response rate (RR)). A total of 589 teachers completed the on-line survey (72% RR). We used standard univariate statistics (alpha <0.01) to examine the data (mixed-model analyses in progress). More than 65% of teachers delivered the AS! BC model; 25% of those delivered the model weekly for more than 3 months (maintenance). Current users (used AS! BC at least once a month) utilized more PA materials, resources, and equipment in the classroom and incorporated significantly more physical activity breaks ($p < 0.01$) than non-users. Current users were more likely than previous users to modify AS! BC resources to suit their needs ($p<0.01$). Approximately, 38% of non-users were planning to use the AS! BC resources to meet new provincial Daily PA guidelines. AS! BC is a feasible means for teachers to provide PA opportunities for students and to meet the daily PA requirements in BC schools.

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Paper Session 19 10:03 AM-10:21 AM 4001

ADOPTION OF AN EVIDENCE-BASED PHYSICAL ACTIVITY PROGRAM

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There is an increasing emphasis on the use of evidence-based health behavior programs to be implemented into practice, but little is known about organizational and sector level decision-making regarding whether to adopt or not adopt these programs. We recently completed a case-control study of adoption of Active Living Every Day (ALED), a lifestyle physical activity program. Diffusion of Innovations Theory constructs were used to predict program adoption. A total of 801 organizations ($n=154$ cases; $n=319$ controls with contact; and, $n=328$ controls without contact) were invited to complete an online survey (response rate=57.6%). Higher response rates occurred in educational (70%) and government organizations (69%) compared with fitness centers (50%) and private consultants (49%) ($p=0.02$). Only 89 of 364 controls said they had ever heard of ALED despite repeated marketing by the publisher. There were differences in factors leading to adoption for cases compared with controls. Wilcoxon Rank Sum tests found that cases ranked the following factors as more of a positive influence than controls: 1) clients would benefit from the program ($p<0.001$); 2) the program matched with the organization mission or goals ($p=0.005$); 3) facilitator training prepared the staff ($p=0.014$); 4) ease of implementation ($p=0.028$); 5) staff was able to learn the program ($p=0.009$). Cost of the program to the organization was also perceived differently, with cases ranking cost more neutrally than controls who considered cost a more negative program feature ($p=0.015$). We conclude that marketing of an evidence based lifestyle physical activity program may need to better target organizational mission and goals which differ by sector and highlight benefits to clients and training of staff.

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Paper Session 19 10:21 AM-10:39 AM 4002

TEACHER UPTAKE AND IMPLEMENTATION OF A SCHOOL-BASED HEALTHY EATING INITIATIVE: A CASE STUDY OF ACTION SCHOOLS! BC HEALTHY EATING (AS! BC HE) IN BRITISH COLUMBIA - CANADA

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Action Schools! BC is a whole school framework for action that aims to facilitate more physical activity and healthy eating (HE) opportunities for more children in elementary school. In 2006 the HE component was piloted and then based on the results of the pilot disseminated in fall 2008. We used a concurrent nested mixed methods design (on-line survey and focus groups) to explore teacher implementation and the factors that influenced implementation by early adopters. At the beginning of school year 2008, a total of 88 schools had already received training (Grades 4–7) and were using the model. Of the 88 schools (early adopters), a total of 39 schools agreed to participate in our uptake study (44% response rate) and 168 teachers completed our on-line survey (71% response rate). Seven schools, representing a range of geographic locations and school types, were purposively sampled for focus groups. Preliminary analysis showed 37% of surveyed teachers self-identified as non-users, 43% as users, and 20% as previous users of the AS! BC materials. Forty-eight percent reported changing how they approached HE in their curriculum and 41% increasing the amount of time devoted to HE because of AS! BC. Fifty percent were not AS! BC HE trained, although their school had previously held training. Preliminary univariate analysis indicated that current users utilized more HE resources, equipment and curriculum activities than non-users ($p<.01$). Focus groups highlighted school champions, access to AS! BC support and resources and funding (for food and equipment) as critical implementation facilitators.

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Paper Session 19 10:39 AM-10:57 AM 4003

PROMOTING SUSTAINABLE COMMUNITY CHANGE IN SUPPORT OF OLDER ADULT PHYSICAL ACTIVITY: EVALUATION FINDINGS FROM THE SOUTHEAST SEATTLE SENIOR PHYSICAL ACTIVITY NETWORK (SESPAN)

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Researchers have identified as effective and worthy of broader dissemination a variety of intervention strategies to promote physical activity among older adults. This presentation will report results of a community-organizing approach to disseminating evidence-based interventions in a sustainable way: the Southeast Seattle Senior Physical Activity Network (SESPAN). SESPAN was implemented in Southeast Seattle, a group of multicultural neighborhoods extending eight miles southeast of downtown Seattle, with a population of 56,469 in 2000, with 12% (7,041) aged 65 and older. The SESPAN strategy involved organizing and networking to: (1) make connections between two or more community organizations to create new senior physical activity programs; and (2) build coalitions of community groups and organizations to assist in making larger-scale environmental and policy changes to increase senior physical activity. The SESPAN evaluation used an uncontrolled prospective design focusing on sustainable community changes, including new or modified programs, policies, and practices. SESPAN led to the creation of 16 ongoing exercise classes and walking groups serving 200 older adults in previously underserved Southeast Seattle communities. In addition, the project's health coalition is sustaining current activities and generating new programs and environmental changes. The success of the SESPAN community-organizing approach depended on identifying and involving champions who worked in partner organizations and provided support and resources for implementing programs. Communities interested in implementing health promotion approaches similar to SESPAN must consider whether the opportunities for reach and sustainability justify the cost of the effort required to bring them about.

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Meritorious Student Paper

Paper Session 19 10:57 AM-11:15 AM 4004

EVIDENCE-BASED PRINCIPLES AND ADAPTATIONS TO A COMMUNITY PHYSICAL ACTIVITY PROGRAM: PERCEPTIONS OF COMMUNITY HEALTH PROFESSIONALS

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Program adaptations that reduce fidelity to treatment protocol are thought to reduce the effectiveness of evidence-based interventions, however it has been proposed by Rogers and others that adaptations which adhere to the evidence-based principles could improve outcomes. The purpose of this qualitative study was to determine the degree to which a group of community health professionals (Cooperative Extension Agents; CEAs) could articulate the underlying evidence-based principles of a group dynamics-based physical activity (PA) program and suggest adaptations that did not contradict those principles. Ninety-nine percent of the eligible CEAs ($n=96$; all women; >90% Caucasian; age between 40 & 50 years) completed an open-ended survey that assessed understanding of underlying principles and proposed program adaptations. Responses were reduced to meaning units which were organized into categories and then to higher order themes. Of the 223 meaning units agents identified as factors that lead to the increase of PA, 164 responses referred to group concepts that aligned directly with the underlying evidence-based principles (e.g., group cohesion, team goals). The remaining meaning units reflected aspects that were related to the benefits of specific program features (e.g., positive feedback regarding newsletters), compatibility with participant lifestyles, and advertising. Seventy-six meaning units were coded from suggested adaptations: ensure the program was dynamic and materials were 'fresh' ($n=23$), improve delivery tools such as electronic tracking of group PA ($n=22$), maintenance of positive aspects such as the ease of delivery and program t-shirts ($n=11$), and minor logistical adaptations ($n=20$). The results indicate that CEAs were able to communicate the underlying evidence-based principles of a group-dynamics PA program and to make adaptations that did not violate those principles. Thus, intervention support materials should outline evidence-based principles and encourage fidelity to those principles when considering adaptations.

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Citation Paper

Paper Session 20 9:45 AM-10:03 AM 4005

THE 3W PROGRAM: RESULTS FROM A TWO-YEAR WORKSITE OBESITY CONTROL PROGRAM FOR HOTEL EMPLOYEES

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Physical inactivity and obesity increase absenteeism and worker compensation claims, raise medical care costs, and increase short-term disability. Work, Weight, and Wellness (3W) is a worksite obesity control program involving 12,000 employees in 30 hotels in Hawaii. The 3W Program randomly assigned these hotels to one of two study conditions. Employees at all hotels participated in baseline, one-year, and two-year assessments that included assessments of height, weight, waist circumference, diet, physical activity, and psychosocial factors. Employees at control hotels received a minimal intervention that included the annual assessments and a one-time personalized recommendation on improving their health at the time of the assessment. Employees at intervention hotels received a high intensity intervention that included a 24-month program of environmental interventions (e.g., posters, food labels, newsletters, contests) and weight management group sessions. Ethnicity of employees was 41% Filipino, 34% other Asian (Japanese, Chinese), 13% Pacific Islander, 8% white, and 3% other. Baseline BMI level was 25.6±5.0 kg/m2 for females, and 27.4± 4.7 kg/m2 for males,. After two years, obese (BMI >30) and overweight (BMI = 25–30) employees at intervention hotels reduced both BMI ($p<.05$) and waist/height ratio ($p=.01$) compared to control hotels in an analysis that adjusted for group randomization. The intervention-to-control comparison for overall 2-year BMI change was 0.5 BMI units for males and 0.3 units for females. BMI reductions were strongly associated with race ($p<.0001$) with Filipinos and other Asian groups achieving the greatest weight change. The fact that this trial found positive effects of our intervention is noteworthy as this was a field based effectiveness trial.

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Paper Session 20 10:03 AM-10:21 AM 4006

IS PROGRESSION THROUGH THE STAGES OF CHANGE FOR DIET AND EXERCISE ASSOCIATED WITH WEIGHT LOSS IN ETHNIC MINORITIES? RESULTS FROM HAWAII'S WORK, WEIGHT, AND WELLNESS (3W) PROJECT

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The Work, Weight, and Wellness (3W) Project randomly assigned 30 hotels to one of two health promotion interventions or "levels". Level 1 hotels received feedback on health status and a one-time recommendation about improving their health. Level 2 hotels' intervention was based on socio-ecological model. Workers received feedback plus a weight management intervention that combined environmental and individually-based strategies to control weight,and to increase leisure-time physical activity as well as fruit/vegetable intake. A majority of the workers (88%) were ethnic minorities (Asian or Pacific Islanders), with a mean age of 45 yrs. Their hotel jobs included: Housekeeping (37%), Food Services (20%), Front Desk (19%), Management (15%), and Maintenance (9%). Baseline BMI level was 25.63± 5.02 kg/m2 for females, and 27.43±4.74 kg/m2 for males. Mean one-year changes in BMI for overweight (BMI > 25) employees were linked to shifts in the Stages of Change (SOC). The mean BMI change for those who regressed in their physical activity SOC (N=62, mean BMI change = .41 ± .89) was significantly higher compared to BMI change in workers who progressed to a higher SOC (N=40, mean change BMI=- 0.05 ± 1, $p < .05$), with the latter workers losing weight over the year. BMI change in workers who regressed in their SOC for fruits/vegetables (N=54, mean BMI change = .57 ± 1) was significantly higher compared to that seen for workers who progressed to a higher SOC (N=64, mean change BMI=- 0.33 ± 1, $p < .0001$),with the latter workers losing weight over the year. Workers who remained in their same SOC over the year had no change in their mean BMI. A positive progression through the SOC for lifestyle factors was significantly associated with changes in BMI over the course of a one-year worksite weight control study. Future analyses will test differences between the two intervention levels as well as differences by gender and race/ethnicity.

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Paper Session 20 10:21 AM-10:39 AM 4007

WEIGHT LOSS AND SELF-REGULATORY EATING EFFICACY IN OLDER ADULTS: THE COOPERATIVE LIFESTYLE INTERVENTION PROGRAM

W. Jack Rejeski, PhD,[1,2] Shannon L. Mihalko, PhD,[1,2] Walter T. Ambrosius, PhD,[2] Lucille B. Bearon, PhD,[3] Jill E. Gaukstern, MS,[1] Jacquelyn W. McClelland, PhD[3] and Michael G. Perri, PhD[4]

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Obesity is a serious chronic health condition for older adults and it is well-established that self-regulation is an important facet of eating behavior. Among older adults in the Cooperative Lifestyle Intervention Program (CLIP), we evaluated the effects of a group mediated cognitive-behavioral weight loss intervention (diet+exercise: D+E) on self-regulatory eating self-efficacy (the Weight Efficacy Life-Style Questionnaire—WEL) as compared to exercise (E) only or a successful aging education control (C) group. CLIP is an NHLBI-funded community-based trial with Cooperative Extension Centers in North Carolina. It involves 288 older adults (172 women and 89 men) with a mean (SD) age of 67.05y (4.81) that have evidence of mobility disability and either cardiovascular disease or the metabolic syndrome. In the current study, we evaluated 6-month group differences in the WEL controlling for gender, baseline WEL scores, county, and study wave. In addition, we evaluated whether change in the WEL was related to weight loss at 6-months and to several weight loss behaviors. The results yielded a significant treatment effect, F (2,249) = 15.11, $p<.0001$, partial eta2 = 0.10, demonstrating that WEL scores improved only in the D+E group as compared to E or C. Additionally, participants that reported greater improvement in WEL scores lost more weight from baseline to the 6-month follow-up [F (1,83) = 15.45, $p=0.0002$, partial eta 2 = 0.16] and had better compliance with the completion of dietary logs [F (1,80)=6.55, $p=0.0123$, partial eta2 =0.08]. These data illustrate the value of a community-based, group-mediated intervention for weight loss on the promotion of self-regulatory behaviors and subsequent weight loss among older adults with chronic disease.
Trial Registration: NCT00119795

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Paper Session 20 10:39 AM-10:57 AM 4008

OBESITY REDUCTION BLACK INTERVENTION TRIAL (ORBIT): PARTICIPATION AND EFFORT ARE REQUIRED FOR SUCCESSFUL WEIGHT LOSS

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This study examined psychological factors involved in successful weight loss among women enrolled in an intensive 18 month randomized weight loss trial for obese African American women. The Obesity Reduction Black Intervention Trial (ORBIT) was designed to be intensive and included exercise classes, education, and support in nutrition and healthy eating. For this sub-study, we tracked attendance and also examined retrospective ratings of focus and effort on exercise and weight loss goals, hypothesizing that increased attendance and greater focus and effort would be associated with increased weight loss. Participants were asked to rate their efforts to: 1) stay focused on and 2) try hard at the goals of eating a low fat diet, exercising 30 minutes a day, and weight loss and maintenance.

Participants included a subset of the women enrolled in the trial: 39 obese African American women between age 30 to 65 years, who were enrolled in the intervention arm of cohort 2. The mean age was 46.5 years old. These women had an average BMI of 39.1 kg/m2 at the beginning of the program. Throughout the initial 12 month period, classes were offered twice weekly and then once weekly in months 13–15. Mean attendance for first 6 months was 57.5%, and last 12 months was 30.2%. The mean weight change at 18 months was -3.40 kg. In a regression model predicting percentage of body weight change, there was a significant interaction such that attendance was moderated by goal focus/effort—weight loss was more likely to occur when high attendance was combined with high effort and trying. (Standardized interaction term, Beta=-2.74, t=-2.72, $p < .01$).

Exceptional effort is essential for weight loss. Losing weight is very difficult, and simply attending exercise classes is not sufficient. These data suggest that participation, combined with focused effort is required for successful weight loss. Future interventions should include specific strategies that enhance focus and effort for weight control.

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Paper Session 20 10:57 AM-11:15 AM 4009

EFFECT OF A 16-WEEK WEB-BASED INTERVENTION ON WEIGHT AND BMI IN POST PARTUM MOTHERS: IMOM A RCT

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Weight gained during pregnancy is often difficult to lose and contributes to increasing obesity. The current study evaluated a 16-week web-based intervention on weight and BMI in 161 women. Participants were 8 weeks to 12 months post partum, mean age 31.2 years, 62% non White, 95% overweight or obese at baseline. Women were randomly assigned to the intervention (n=81) or a wait-list control condition (n=80) and assessed at baseline, 16 weeks (post intervention) and 8 months. Post test results are reported. The intervention included weekly web-based content and behavior change strategies designed to create an energy deficit. Recommendations were tailored to breastfeeding status. Participants monitored steps per day, received monthly phone calls from a "health counselor" and reported and received feedback on their behavioral progress. Missing data at post-test (17%) were imputed by carrying baseline values forward. Mixed model repeated measures parameter estimates were calculated for BMI and body weight showing a statistically significant group x time interaction effect, indicating the web group had a -.46 BMI unit additional decrease compared to the control group at the posttest (p = .021). For body weight there was also a significant group x time interaction indicating the web intervention resulted in an additional -1.21 kg change compared to the control condition (p = .020). The standardized effect size of d = .36 is a small to medium effect using Cohen's guidelines. In terms of practical significance, 67.5% of control participants lost less weight than the average person in the web group. Twenty one percent (17) women in the web group lost at least 5% of baseline bodyweight compared to 13.8% (11) women in the control group, but this difference did not reach statistical significance ($X_{(1)}^2 = 1.47$, p = .226). These findings suggest the low cost iMom intervention resulted in short-term weight loss for post partum mothers, a group at high risk for weight gain.

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Paper Session 21 9:45 AM-10:03 AM 4010

ACCEPTANCE AND COMMITMENT THERAPY AND COGNITIVE-BEHAVIORAL THERAPY FOR CHRONIC PAIN

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The authors randomly assigned 114 patients with chronic pain to a 6-week treatment as usual period (TAU) followed by 8 group sessions of Acceptance and Commitment Therapy (ACT) or Cognitive-Behavioral Therapy (CBT). Patients were recruited from San Diego VA and UCSD clinics and through advertisements. The patients had experienced pain for an average of 15 years; most (58.7%) had tried more than four different types of treatments (e.g., medications, physical therapy, chiropractic, surgery). Of the almost one-third (31.6%) who had undergone surgery, most (55.6%) had had more than one procedure. Only 28.1% were employed.

All patients remained stable on other pain and mood treatments over the course of the study. After the TAU period, 99 patients began treatment and 85 patients completed; all analyses were performed on an intent-to-treat basis with the full sample. There were no significant differences in improvement between the treatment conditions on any variable. ACT patients did not improve on any measures over the TAU period but improved on pain interference, depression, pain-related anxiety, and physical health-related quality of life during treatment. CBT patients improved significantly over the TAU period on pain interference and pain severity; they improved on pain interference, pain severity, depression, pain-related anxiety, and mental health-related quality of life following treatment. Neither group improved on physical activity. Although there were no differences in attrition between the groups, ACT patients who completed treatment reported significantly higher levels of satisfaction.

In this large-scale, randomized comparison of ACT and CBT in a sample of patients with treatment-resistant chronic pain, we found evidence for comparable efficacy between the treatments and greater satisfaction associated with ACT. These findings suggest that ACT is an effective and acceptable intervention for patients with chronic pain.

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Citation Paper
Paper Session 21 10:03 AM-10:21 AM 4011

THE LIVING WELL WITH RA PROGRAM: A RANDOMIZED CONTROLLED TRIAL OF A PSYCHOTHERAPEUTIC INTERVENTION TO REDUCE RHEUMATOID ARTHRITIS (RA) DISEASE ACTIVITY

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Psychotherapeutic interventions are effective adjuncts to pharmacotherapy of RA in improving depression and pain. However, few have impacted RA disease activity and joint inflammation. We used an Internal Family Systems (IFS)-based intervention that employs affect regulation and active mindfulness and is tailored to a patient's RA symptoms to investigate its impact on disease activity and physical function.

Methods: Patients were randomized to either an intervention group, attending group and individual biweekly sessions, or to an RA education control group. Physical function (SF12, MHAQ) and mental health status (self-efficacy, MDHAQ) were assessed by questionnaire. The study included a blinded MD joint count, arthritis activity assessment and CRP (for calculation of the Disease Activity Score, DAS28CRP). The effect of the intervention at 3 months was assessed with linear regression analyses adjusted for baseline status and history of depression.

Results: Of 857 eligible RA participants, 78 enrolled (intervention=38,control =40). Their mean age was 57 yrs (SD13), 91% were female with a disease duration of 16 yrs (SD11). At followup, intervention subjects compared with controls had improvement in tender(β=-9.4,p<0.0001) and swollen joint counts(β=-7.6,p<0.0001), as well as blinded MD assessment(β=-3.6, p< 0.0001). Physical function and bodily pain scores of the SF12 improved(PF β=14.9,p=0.01, BP β=17.2,p=0.02) as did their disease activity(DASCRP, β=-1.2,p=0.01). The intervention group reported less fatigue(MDHAQ β= -19,p<0.05) and among those with a history of depression, greater ability to cope with feelings of anxiety and depression(MDHAQ β=-1.7,p=0.01).

Conclusion: An intervention that uses active mindfulness and affect regulation significantly improves disease activity and physical function in RA patients within 3 months. Individuals with prior depression benefited psychologically as well. Longer follow-up is necessary to study the sustainability of the intervention.

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Paper Session 21 10:21 AM-10:39 AM 4012

FEAR-AVOIDANCE IN ADOLESCENTS WITH CHRONIC PAIN MEDIATES THE EFFECT OF PARENT BEHAVIORS ON FUNCTIONAL DISABILITY

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The fear-avoidance model posits fear of pain leading to fear and avoidance of physical activity, subsequent de-conditioning, and persistent pain and disability (Vlaeyen & Linton, 2000). This model is well-supported in adults but less is known about fear-avoidance in adolescents. Parent responses to child pain are known to influence pain and disability. Protective responses (e.g., frequent attending to pain symptoms, allowing children to withdraw from regular activities) reinforce children's pain symptoms. Protectiveness may impact children's fear-avoidance beliefs. Alternatively, it may lead to more disability for children high in fear-avoidance. We hypothesized that fear-avoidance would predict disability above the effects of pain intensity, and that parent protectiveness would relate to increased disability in adolescents. We tested fear-avoidance as a potential mediator and moderator of protectiveness. Adolescents (n=43; M age = 14.88; 71% female) had chronic headache, abdominal, or musculoskeletal pain (duration >3 months, not due to identified disease). Adolescents and parents completed a pain questionnaire, the Fear Avoidance Beliefs Questionnaire (FABQ; Wadell et al., 1993) the Child Activity Limitations Interview (CALI; Palermo et al., 2004), and the Protectiveness subscale of Adult Responses to Children's Symptoms (VanSlyke & Walker, 2006). Adolescents had moderate pain intensity (M=6.56/10), with 72% reporting daily pain. Adolescents had moderate levels of fear-avoidance and functional disability (measured by the CALI). In multiple regression analyses, the FABQ predicted CALI scores above the effects of pain (β = .33, p = .01) and acted as a mediator. The initial relation of protectiveness to CALI scores (β = .29, p = .05) was non-significant (β = .04, p = .75) after accounting for FABQ scores (β = .42 , p = .02; Sobel z = 1.97, p = .05). Protectiveness may influence disability by increasing children's fear-avoidance beliefs, which should be tested longitudinally. Fear-avoidance beliefs may be an important target for chronic pain treatment in adolescents.

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Paper Session 21 10:39 AM-10:57 AM 4013

BORDERLINE PERSONALITY DISORDER FEATURES AND PAIN: THE MEDIATING ROLE OF NEGATIVE AFFECT IN A PAIN PATIENT SAMPLE

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There is considerable evidence that personality disorders, including Borderline Personality Disorder (BPD), tend to co-occur with chronic pain. Mood disorders also co-occur with chronic pain conditions. Given the central role of affective instability and negative mood in BPD, we proposed that affective features of depression, anxiety, and hostility may account for the association between BPD features and pain complaints in a patient sample. 777 patients completed the Battery for Health Improvement. This included measures of DSM-IV BPD features, affect scales (depression, anxiety, hostility), and pain items. First, a series of multiple regression analyses were used to test the hypothesis that BPD features were associated with pain complaints, somatic complaints, and highest and lowest pain in the past month, controlling for gender and payment type. BPD features scores were associated with all of these pain-related variables (βs = .31***, .51***, .22***, and .09**). Second, based on theories of core features of BPD and literature demonstrating an association between pain and affect, we predicted that affective disturbances would account for these associations. Thus, a series of hierarchical regressions was conducted to determine whether BPD features scores conferred significant association above affect scores. As predicted, after controlling for affect scales, there was no longer a significant positive association between BPD features scores and pain and related complaints. In particular, depression was strongest in accounting for these associations. These results indicate that the association between BPD features and pain is accounted for by negative affect, primarily depression. This is consistent with theories emphasizing the importance of affective disturbances in understanding BPD features, and suggests that clinicians observing or detecting BPD features among pain patients should consider treatment of depression in addressing these issues.

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Paper Session 21 10:57 AM-11:15 AM 4014

PSYCHIATRIC COMORBIDITY IS NOT ASSOCIATED WITH POOR TREATMENT RESPONSE IN SEVERE MIGRAINE

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Mood and anxiety disorders are comorbid with migraine and increase migraine-related disability. Psychiatric comorbidity is thought to predict poorer migraine treatment outcome, but empirical evidence supporting this assumption is lacking.

Severe migraine sufferers completed 5 weeks of optimal acute therapy, and if migraines remained uncontrolled, were randomized (N = 232) to one of four additive treatments: Preventive (beta-blocker) Medication (PM), Preventive Medication Placebo (PL), Behavioral Migraine Management (BMM)+PL, and BMM+PM. A 4-month BMM/dose adjustment phase was followed by a 12-month evaluation phase. Psychiatric disorders were identified by the PRIME-MD (Spitzer, 1994) structured diagnostic interview. Migraine-related impairment was assessed with the Migraine Specific Quality of Life Questionnaire (MSQL; Jhingran, et al., 1998). Migraine episodes/days were obtained from a daily headache diary completed throughout the study. Mixed models for repeated measures analyses evaluated whether changes in migraine days, episodes, or impairment were influenced by psychiatric comorbidity (mood and/or anxiety disorder).

Contrary to conventional wisdom, participants with psychiatric comorbidity showed larger improvements than participants with no psychiatric comorbidity: migraine-related impairment, F(1, 296.432)=15.902, p<.001, migraine days/30 d, F(1, 489.697)=5.008, p<.05, and migraine episodes/30 d, F(1, 491.179)=9.674, p<.01, across treatment groups. Participants with psychiatric comorbidity exhibited higher levels of migraine-related impairment than participants with no psychiatric comorbidity prior to treatment, but this difference disappeared with treatment. Individuals with and without psychiatric comorbidity did not differ in migraine severity prior to treatment, but the former participants recorded 1 fewer migraine episode/ 30 d and 1.3 fewer migraine days/30 d with treatment.

Contrary to common beliefs, psychiatric comorbidity was associated with larger rather than smaller improvements in migraines and migraine-related impairment in the drug and behavioral treatment of severe migraine.

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Paper Session 22 9:45 AM-10:03 AM 4015

SYMPTOM PROFILES IN SURVIVORS OF ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION (AHSCT)

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Co-occuring symptoms have a deleterious impact on health outcomes exceeding that produced by individual symptoms, however research examining symptom profiles in aHSCT survivors is sparse. We used latent class analysis (LCA) to classify survivors based on their patterns of endorsing 30 physical and psychological symptoms, and explored the association of symptom profiles with self-assessed health. Data were drawn from an ongoing longitudinal study of aHSCT survivors (n=150) who were a median age of 45.5 years, male (63%), and a median of 47 months post-transplant. Measures included the Rotterdam Symptom Checklist and the SF-36 v.2 Health Survey. Item analyses revealed marked variability in symptoms. A median of 11 symptoms (range 0–26) were prevalent, with a median of 1 symptom (range 0–20) experienced as moderately to extremely bothersome. LCA supported a three-class model representing a group without physical or psychological symptoms (LC1); a group with few physical symptoms but prominent anxiety, nervousness, worry, and irritability (LC2); and a third with prominent physical symptoms (muscle aches, reflux, dry mouth, sore eyes, headaches, and shortness of breath), together with depression, anxiety, diminished libido, and insomnia (LC3). Fatigue and difficulty concentrating were most prevalent in both LC2 and LC3. The group with prominent physical symptoms and depression was distinguished by statistically (p<.01) and clinically significant impairments in physical (PCS normed mean 41.1±9.3) and mental (MCS normed mean 41.6±9.2) health on the SF-36, while in LC1 and LC2, physical and mental health were preserved and comparable to the US general population (LC1 PCS=53.7±6.5; MCS=56.4±6.5; LC2 PCS=48.5±9.1; MCS=49.9±8.7). Identifying homogeneous symptom classes in survivors of aHSCT may yield insights about the mechanisms that underlie symptom profiles. Research to explore the differential impact of covariates and to evaluate interventions tailored to specific symptom profiles is warranted.

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Paper Session 22 10:03 AM-10:21 AM 4016

MULTI-SITE STUDY OF CAREGIVER OUTCOMES DURING HEMATOPOIETIC CELL TRANSPLANTATION (HCT)

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HCT places high demands on patients and their family caregivers. We assessed caregivers at the 7 transplant centers listed above at 2 time points during the acute phase of HCT: pre-transplant and 90 days post-transplant. We hypothesized that distress would improve from pre-treatment to 90 days as uncertainty regarding acute treatment decreased, but that physical function would worsen with the increased demands on caregivers to manage patient needs. Measures included the Short Form-36 (SF-36), the Center for Epidemiological Studies-Depression (CES-D), and the caregiver version of Cancer and Treatment Distress (CTXD). The 176 enrolled caregivers were on average 48 years old (SD=11.3), 65% female, 88% Caucasian and 92% spouses or partners of the patients. Scores on the CES-D decreased from pre-transplant to 90 days, t=2.43, *P*=.02, but remained more depressed than population norms, *P*<.001; 42% percent of caregivers at pre and 34% at 90 days had CES-D scores ≥16, the cutoff for depression, vs. population norms of 19% with score ≥16. Mean CTXD score also decreased, t=4.54, *P*<.001. Mental component scores of the SF-36 increased, t=-2.13, *P*=.04, while physical component scores decreased over time, t=3.04, *P*=.003. Caregiver outcomes during the acute phase of HCT were consistent with our hypotheses. Physical functioning worsened over time while emotional function improved. Nonetheless, caregivers reported substantially higher rates of depression relative to population norms at both times. Although most caregivers appear to manage well, they are at risk for depression and need screening and referral to appropriate treatment options.

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Paper Session 22 10:21 AM-10:39 AM 4017

COMPLEMENTARY HEALTH PROMOTION INTERVENTIONS FOR CHILDREN UNDERGOING STEM CELL TRANSPLANTATION: REPORT OF A MULTI-SITE TRIAL

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Objective: This trial evaluated the impact of complementary health promotion interventions designed to increase positive affect and reduce somatic distress and mood disturbance in children undergoing SCT. Method: Across 4 sites, 178 pediatric patients scheduled to undergo SCT were randomized to 3 groups: 1) a child intervention involving therapeutic massage and humor therapy (HPI-C); 2) the identical child intervention plus a parent intervention involving massage and relaxation/imagery (HPI-CP); or 3) standard care (SC). Patients and parents completed a battery of baseline measures prior to randomization into treatment arms. Randomization was stratified by site, age, and type of transplant. The intervention began at admission, and continued for four weeks (i.e., through SCT week +3). Primary outcomes included the BASES scales assessing child somatic distress and mood disturbance, and measures of positive and negative affect. Parents also completed measures of mood, perceived stress and caregiver burden. These measures were obtained weekly for 8 observations from admission (week -1) though week+6. Results: A mixed model approach was used to assess longitudinal trends of the self-report outcomes and test differences between groups on these measures. Significant changes across time were observed on all self and parent-report outcomes. However, no significant differences between treatment arms were found on any of the primary outcomes. Exploratory analyses revealed several significant covariates of adjustment trajectories (e.g., gender, diagnosis, optimism) but failed to identify any subgroups for whom the intervention was more effective. Conclusions: Results of this multi-site trial failed to document significant benefits of complementary interventions in the SCT setting. Possible explanations for these null findings will be discussed.

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Paper Session 22 10:39 AM-10:57 AM 4018

IMPACT OF DELIRIUM ON DISTRESS, HEALTH-RELATED QUALITY OF LIFE, AND COGNITION 6 MONTHS AND 1 YEAR AFTER HEMATOPOIETIC CELL TRANSPLANT

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Delirium commonly occurs during myeloablative hematopoietic stem cell transplantation (HCT). Little is known about how delirium during the acute phase of HCT affects long-term distress, health related quality of life (HRQOL), and neurocognitive functioning. This prospective, cohort study examines these outcomes at 6 months and 1 year in 90 patients undergoing HCT. Patients completed a battery assessing distress, HRQOL, and subjective neuropsychological functioning before receiving their first HCT as well as at 6 months and 1 year. Patients with a delirium episode within the 4 weeks after HCT had significantly more distress and fatigue at 6 months (P<.004) and at 1 year (P<.03), compared with patients without delirium. At one year, patients with delirium also had worse symptoms of depression and post traumatic stress (P<.03). Patients with delirium had worse physical health on the SF-12 at 6 months (P<.03) and worse mental health on the SF-12 at 1 year (P<.03). At both 6 months and 1 year, patients with delirium after HCT reported worse memory (P<.009) and executive functioning (P<.006). Delirium during the acute phase of HCT is significantly associated with persistent distress, decreased HRQOL and subjective neurocognitive dysfunction at both 6 months and 1 year.

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Paper Session 22 10:57 AM-11:15 AM 4019

ADHERENCE TO THE POST-ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANT (HSCT) MEDICAL REGIMEN: A DYADIC CHALLENGE FOR THE PATIENT AND FAMILY CAREGIVER

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Background: More than 20,000 cancer patients undergo allogeneic HSCT each year, a potentially life saving but risky procedure. To enhance outcomes and minimize risks, HSCT is not performed unless a family caregiver (FCG) agrees to work together with the patient to adhere to the multicomponent post-HSCT medical regimen, which entails multiple daily medications, strict catheter care, frequent clinic visits and health monitoring, as well as dietary and lifestyle restrictions. Despite the clinical importance of adherence to this regimen, there are few data on the rates and correlates of nonadherence among patient-FCG dyads.
Method: Patients within 100 days post HSCT and their FCGs (n=9 dyads) were recruited from a major cancer center, signed informed consent, and separately reported on adherence over the past week to 16 key tasks of the HSCT medical regimen and how stressful they found it (1–5 scale). Each member of the dyad also completed the Hospital Anxiety and Depression Scale (HADS).
Results: Nonadherence to one or more aspects of the multicomponent post-HSCT medical regimen was reported by all dyads: 22% missed immunosuppressant doses, 44% missed other medication doses (e.g., antibiotic), and 22%-78% did not follow health behavior and lifestyle restrictions (e.g., hand washing, oral care, neutropenic diet). Patients and FCGs were concordant on depression (intraclass correlation coefficient = .80; p=.017). Patients and FCGs with higher depression scores reported the most stress related to following the regimen (Pearson r=.49; p<.05 & r=.81; p<.001, respectively).
Conclusion: Adherence to the post-HSCT medical regimen is less than optimal and is stressful, particularly for patients and FCGs with higher levels of depressive symptoms. Psychosocial interventions targeted to the patient-FCG dyad may be useful for enhancing adherence and improving physical and emotional health outcomes.

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Paper Session 23 9:45 AM-10:03 AM 4020

SHORTCOMINGS IN PUBLIC AND PRIVATE INSURANCE COVERAGE OF STATE-OF-THE-ART DIABETES SELF-MANAGEMENT

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Background. The Diabetes Initiative of the Robert Wood Johnson Foundation demonstrated that self-management programs are effective, feasible, and cost-effective in real-world settings. Our purpose was to determine: (a) whether Medicare, Medicaid, and private insurers covered diabetes self-management education; and (b) whether actual coverage and state laws mandating such coverage were aligned.
Methods. We purposively sampled the most populous state from the East and West coast and randomly sampled 8 additional states from the 4 quadrants of the U.S., 1 above and 1 below the median state population for each quadrant. For each state, we documented the presence of a law mandating coverage of diabetes self-management education and described self-management coverage from Medicaid and two private insurers, assessing both a premium and basic coverage plan for each private insurer.
Results. Nine of the ten states mandated insurance coverage for diabetes self-management education. In the nine states with coverage mandates, only 55.6% of private health insurance plans and 37.5% of state Medicaid plans covered self-management education. Furthermore, as with Medicare's coverage of 10 hours of education in the first year and 2 hours of education for each subsequent year, coverage from Medicaid and private insurers is often (a) limited after the first year, (b) contingent on physician referral, and/or (c) contingent on poor metabolic control.
Conclusions. In spite of state mandates, insurance coverage for self-management education varies greatly across states, from no apparent coverage to limited coverage. This may partially explain why 60% of diabetes patients do not receive self-management education. Moreover, even when basic self-management education is covered, convenient access and ongoing self-management support that fits individuals' preferences and routines are rarely covered, which may negatively impact patients' ability to maintain sustained behavior change.

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Paper Session 23 10:03 AM-10:21 AM 4021

OVERWEIGHT STUDENTS AND THEIR FAMILIES RESPOND TO OBESITY REDUCTION EFFORTS

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Childhood obesity is widely recognized as one of the most pressing health problems in the US today. Arkansas Act 1220 of 2003 was among the first legislative programs enacted to address the problem through a comprehensive school-based initiative. A multi-component evaluation of the implementation and impact of the Act is ongoing, including surveys of school personnel and telephone interviews with a random sample of parents and adolescents enrolled in Arkansas' public schools. The evaluation has shown significant changes in school policies and environments since the implementation of Act 1220 but no concurrent changes in adolescent or family behaviors overall. Baseline and Year 5 data were analyzed to determine whether students who were overweight and their families showed a differential response, compared to students who were not overweight. Findings show important differences between overweight (OW; ≥85th percentile BMI-for-age) and not overweight (NOW; <85th percentile BMI-for-age) groups. For example, in the most recent year of data (2008), parents of OW students were more likely than parents of NOW students to report being concerned about student weight (OW 45%, NOW 16%; $p \leq 0.0001$) and trying to limit "junk foods" eaten by the family (OW 84%, NOW 79%; $p \leq 0.05$). OW students were more likely than NOW students to report: being concerned about their weight (OW 42%, NOW 16%; $p \leq 0.0001$); trying to change to a healthier diet (OW 82%, NOW 55%; $p \leq 0.001$); and starting a diet within the past 6 months (OW 32%, NOW 13%; $p \leq 0.05$). Both groups reported reduced vending machine purchases across time, though the differences between groups were not statistically significant. These findings suggest that OW students and their families are responding to obesity control efforts and that analyses of policy impact may need to focus on families of high risk youth.

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Paper Session 23 10:21 AM-10:39 AM 4022

CONCERN ABOUT CHILDHOOD OBESITY IS A SIGNIFICANT PREDICTOR OF PARENTS TRYING TO MAKE CHANGES AT HOME

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Arkansas became one of the first states to attempt to reduce childhood obesity through multi-component legislation to change school environments when it passed Act 1220 of 2003. Beginning prior to enactment of Act 1220 and continuing each year since that time, a comprehensive evaluation of the process, impact and outcomes associated with these policy changes has been conducted. This evaluation has included an annual survey of approximately 2,250 parents of public school children per year based on multistage stratified random sampling methods. Despite significant changes occurring in school environments intended to reduce childhood obesity, analyses have not revealed overall changes in parental and family nutrition and physical activity behaviors over the evaluation's 5-year time period to date. Analyses of Year 5 data indicate, however, that parents who expressed moderate to strong concern about their child's weight, compared to those who expressed less concern, were more likely to find the BMI health report helpful (odds ratio (OR) = 2.0; $p \leq 0.0001$) and to report: taking the child to a health professional, such as a physician (OR=3.6; $p \leq 0.0001$), school nurse (OR=3.0; $p \leq 0.01$), or a weight specialist (OR=8.0; $p \leq 0.0001$); putting the child on a diet (OR=10.7; $p \leq 0.0001$); and increasing the child's physical activity (OR= 3.4; $p \leq 0.0001$). Of concern, however, is the finding that parents of children who were overweight or obese were significantly less likely to be concerned about their child's weight than parents of children who were not overweight (OR=0.23; $p \leq 0.000$. All analyses were adjusted for parent weight status, parent age, and poverty status. Implications of these findings for programs designed to address childhood obesity will be discussed, including those for how a focus on increasing parental concern about childhood obesity may result in greater home changes to complement school environment changes.

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Paper Session 23 10:39 AM-10:57 AM 4023

MIDDLE SCHOOL AGED YOUTH PARK USE IN A RURAL COMMUNITY

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Understanding what park attributes may influence youth's physical activity may provide direction for planning the built environment to promote more active use by youth. We examined the quality of amenities in parks and recreation spaces that middle school aged youth have access to in a rural community in the Pacific Northwest. Presence and quality of amenities (e.g. drinking fountains, benches, athletic fields) in park and recreation spaces (n=13) were assessed by the Environmental Assessment of Parks and Recreation Spaces (EAPRS) tool. Middle school students completed surveys in the school classroom (n=1102) regarding park use. Fifty percent of respondents were boys and 70% were Latino. Twenty percent reported exercising 60 minutes 7 days a week. The majority of youth who used a particular park reported being active in that park. Forty percent of trips to the parks were done by active transport (bike, walk). High use parks (at least 30% of youth used park) had higher quality athletic fields and courts compared to low use parks ($p= .007$). Parks that youth used more frequently had paths ($p= .001$) and were in safe neighborhoods with sidewalks adjacent to the park ($p= .002$) compared to parks used less frequently. There was no difference between high and low use parks on amenities geared for younger children, such as play sets. These findings suggest that middle school aged youth have specific park amenities that attract use (good athletic fields and courts), but that the environment around parks may also impact use by youth.

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Paper Session 23 10:57 AM-11:15 AM 4024

EFFECT OF A PHYSICAL EDUCATION POLICY ON PHYSICAL ACTIVITY IN ELEMENTARY STUDENTS

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Despite the benefits of physical activity, a majority of school-age children do not engage in the recommended amounts. In response to this need, a physical education program implemented a Walking Wednesdays (WW) policy. The goal of the policy was to increase school-day physical activity during physical education classes. Thus, the purpose of this investigation was to examine the effects of the WW physical education policy on physical activity participation. Participants, 10.64 years, (N=169) engaged in their regular physical education program that consisted of 30 minutes of physical education instruction on Tuesday (PE-T), Wednesday, and Thursday (PE-R). On Wednesdays, the WW policy was implemented and students were instructed to walk/jog four laps around the field that was followed by student choice activities. Students' daily physical activity was monitored for 3 consecutive PE days and was measured through steps accumulated with the Omron HJ-720ITC Pedometer. Descriptive statistics demonstrate that participants accumulated a mean of: 1063 steps (PE-T), 2575 steps (WW), and 1185 steps (PE-R). Paired sample t-tests were conducted to examine differences in steps between days. Findings indicate that significant differences were present in steps accumulated on PE-T and WW, $t(138)=-13.21$, $p<.001$; and WW and PE-R, $t(132) = 12.20$, $p<.001$. On average, students accumulated around 1400 more steps on WW. No significant differences were present between PE-T and PE-R, $p = .625$. In terms of sex differences, an ANOVA revealed that differences were present on PE-T ($p<.001$) and PE-R ($p<.001$). Specifically, boys accumulated an average of 500 more steps during physical education. However, on WW no sex differences were found between girls and boys steps, $p=.378$. The findings support the effectiveness of a WW policy to elicit physical activity during physical education. In terms of gender equity, WW appears to motivate girls to be more active. In conclusion, the WW policy demonstrates promising results toward promoting physical activity during physical education.

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Paper Session 24 9:45 AM-10:03 AM 4025

THE RELATIONSHIP BETWEEN CHILDHOOD SEXUAL ABUSE AND HEALTH RISK BEHAVIORS IN PATIENTS WITH HIV IN TREATMENT FOR OPIATE DEPENDENCE

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Rates of childhood sexual abuse (CSA) are higher among individuals with HIV. Individuals with a history of CSA suffer from a variety of sequelae. Substance use and risky sexual behavior are two behaviors that put individuals at risk for contracting and transmitting HIV, and have been found to be associated with a history of CSA.

This study examines the association of CSA with current sexual risk-taking and substance abuse in an adult sample of HIV-infected individuals in treatment for IV drug use and enrolled in a study to treat adherence to HIV medications and depression. We hypothesized that a history of CSA would be associated with greater transmission risk behaviors.

Participants were HIV-infected adults (N=108, 63 men and 45 women) who enrolled in a randomized controlled trial of CBT for treatment of depression and HIV medication adherence. A clinician administered a modified version of the Addiction Severity Index—Lite to assess substance use in the past 30 days. As part of the self-report battery, participants were asked about CSA occurrences and sexual transmission risk behavior.

53% of the sample reported a history of CSA, with no significant difference between rates for men and women. Measures of CSA were significantly related to heroin use in the past 30 days (OR 1.22 95% CI: 1.01 - 1.48, $p = .04$) and to sexual transmission risk behavior (unprotected anal or vaginal intercourse with serodiscordant partners) (OR: 3.53 95% CI 1.15 - 10.75, $p = .03$).

These findings suggest that rates of CSA are very high in this population, and that CSA may be an important risk factor for the transmission of HIV both through IV drug use and risky sexual activity. This underscores the importance of addressing comorbid sexual abuse history in people managing both HIV and substance use.

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Paper Session 24 10:03 AM-10:21 AM 4026

EMOTION REGULATION AND COPING PREDICT SEXUAL RISK BEHAVIORS IN HIV-POSITIVE MEN

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Men who have sex with men (MSM) have been disproportionately affected by the HIV/AIDS epidemic, with 41% of the 774,467 cases of AIDS reported between 1981 and 2000 resulting from sexual contact between two males (CDC, 2001). In recent years, decreasing concern about HIV and AIDS as an epidemic has been accompanied by growing rates of unsafe sexual behavior among MSM (Valdiserri, 2004) and a resurgence in rates of HIV infection (Osmond et al., 2007). Men living with HIV also engage in sexual risk behavior (Dilley et al., 1997), and some studies have indicated that higher rates of distress in HIV-positive male populations predict increased sexual risk behavior (Rosario, Rotheram-Borus, & Reid, 1996). The current study aimed to further explicate the relationship between emotional distress and risk behavior among HIV-positive MSM. Self-report questionnaire responses were collected from 112 HIV-positive men reporting sexual contact with another male in the last three months. Sexual risk was assessed through the Sexual Risk Behavior Assessment Schedule (Meyer-Bahlburg et al., 1988) and the Condom Use Self-Efficacy Scale (Brafford & Beck, 1991), a measure of ability and willingness to use condoms. Subscales of the Difficulties with Emotion Regulation Scale (Gratz & Roemer, 2004), a measure of emotion regulation, and the Brief COPE (Carver, 1997), a measure of coping strategies, were used as predictors in a multiple regression framework. Sexual risk behavior was associated with lack of emotional awareness ($\beta = .08$, $t = 2.26$, $p = .02$) and negatively associated with an active coping style ($\beta = -.27$, $t = -2.46$, $p = .01$). Inability or unwillingness to use condoms was associated with difficulty engaging in goal-directed behavior when distressed ($\beta = .43$, $t = 2.24$, $p = .03$) and negatively associated with coping through planning ($\beta = -1.49$, $t = 2.66$, $p = .01$). Results are discussed in the context of developing interventions to increase coping and emotion regulation skills for HIV-positive MSM.

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Paper Session 24 10:21 AM-10:39 AM 4027

PREDICTORS OF HIV TRANSMISSION RISK BEHAVIOR AND SEROCONVERSION AMONG LATINO MSM IN PROJECT EXPLORE

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BACKGROUND In the US, Latino men who have sex with men (MSM) are disproportionately affected by HIV. Latinos are at increased risk of contracting HIV compared to non-Latino whites (NLW) and, among Latinos and others, MSM are the largest exposure group. Among this population, there is a paucity of data with large samples examining HIV risk behavior and infection, and such data can guide intervention development for this subgroup.

METHODS Data on MSM who participated in the EXPLORE trial were used. Cross-sectional baseline high-risk sexual behavior was compared across HIV- Latino (n=652) and NLW MSM (n=3094). Predictors of high-risk baseline sexual behavior and HIV acquisition were examined only in Latino MSM.

RESULTS At baseline, Latino MSM were more likely to report serodiscordant unprotected anal intercourse (SDUA; AOR=1.21; 95% CI: 1.01, 1.44) than NLW MSM. Significant predictors of SDUA in Latino MSM included lower self-efficacy for adopting safer sex behaviors (AOR=2.92; 95% CI: 1.61, 5.31), poorer communication skills (AOR=1.73; 95% CI: 1.16, 2.57) and enjoyment of unprotected insertive anal intercourse (UAI; AOR=2.56; 95% CI: 1.64, 4.00). For HIV infection over the study period, Latinos were at significant higher risk of acquiring HIV compared to NLW (AHR=1.44; 95% CI: 1.05, 1.99). Latinos had overall rate of 2.99 per 100 person-years (95% CI: 2.23, 3.92), whereas NLW had overall rate of 1.90 per 100 person-years (95% CI: 1.63, 2.21).

DISCUSSION Current findings support HIV intervention work with Latino MSM that include skills training and counseling to address perceived ability to engage in safe sex behavior, enjoyment of high-risk sexual behavior, and the impact of substance use on HIV acquisition. Findings also suggest need for HIV prevention intervention research that considers differential needs of Latino MSM and how interaction of ethnicity and sexual orientation impact HIV risk behavior and infection.

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Paper Session 24 10:39 AM-10:57 AM 4028

FEMALE DISCLOSURE OF HIV-POSITIVE SEROSTATUS TO SEX PARTNERS

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National data indicates that women living with HIV have difficulties disclosing serostatus to sex partners (SPs)and using condoms consistently. Little is known about the disclosure practices of women from Hawaii (HI) or Seattle, Washington (WA). The CDC recommends that prevention efforts include the promotion of condom use and serostatus disclosure to SPs. Bandura's Social Cognitive Theory guided the design with a specific focus on self-efficacy (SE) for disclosure decision-making and for negotiating safe sex. Methods: A descriptive, cross-sectional design was used to assess up-to-three most recent SP experiences. Results: Eighty four (N=84) women reported a total of 129 most recent SPs, with an overall disclosure rate of 74%. Women with higher SE for knowing when it is safe to disclose were more likely to disclose to SPs. Disclosure rate also varied by SP serostatus. The strongest predictor of nondisclosure was not having a discussion about partner serostatus. Disclosure was associated with less condom use. Compared with committed relationships,women in casual/anonymous relationships were more likely to use a condom. Women from WA were more likely to use condoms with a recent SP than women from HI, and the lowest rate of condom use with most recent SPs was among Hawaiian women. Implications: Current prevention efforts target high-risk sexual contacts of seropositive persons. Consistent condom use messages have not shown efficacy in curbing risk behaviors of committed serodiscordant couples. New prevention efforts need to be developed to help this hard to reach population. Health care providers need to routinely have frank discussions about disclosure to SPs with HIV-positive women, and offer strategies that can enhance the client's behavioral intentions to use condoms, especially in committed partnerships.Further, culturally tailored interventions focused on strengthening SE beliefs for disclosure in Native Hawaiians are needed.

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Paper Session 24 10:57 AM-11:15 AM 4029

MENTAL HEALTH FACTORS ASSOCIATED WITH HIV RISK BEHAVIOR AMONG ADOLESCENTS IN RURAL KENYA

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HIV among adolescents continues to increase despite HIV education efforts, particularly in Sub-Saharan Africa. Results of HIV prevention programs for youth suggest that increasing HIV-related knowledge is not sufficient to lead to behavior change. Therefore, research is needed to identify broader risk factors related to HIV risk behavior. In this study, we examined relationships between behavioral and mental health factors and HIV risk behavior among youth in Kenya, as these factors may influence adolescents' sexual decision-making. Participants included 325 adolescents ages 10 to 18 recruited from primary schools in a rural area of the Nyanza Province. Youth were administered a structured interview that included an HIV risk behavior assessment and the Strengths and Difficulties Questionnaire (SDQ), a standardized measure of emotional symptoms, conduct problems, hyperactivity/inattention, and peer difficulties. A Total Problems composite score reflects combined difficulties across domains. After controlling for age and gender, regression analyses showed that SDQ Total Problems scores were related to whether or not youth reported being sexually active, OR = 1.08 (95% CI = 1.02 - 1.14), p = .01, and to number of total sex partners, β = .213, p = .01. The Emotional Symptoms SDQ subscale was most strongly related to these outcomes; youth with higher levels of emotional symptoms were more likely to be sexually active and to have more sexual partners. SDQ scores did not predict condom use, age at first sex, or involvement in transactional sex. Results suggested that mental health factors are related to sexual debut and number of sexual partners in this adolescent population while other HIV risk behaviors were not related to mental health as it was measured. Mental and behavioral health factors are likely to be one of many areas of importance when planning HIV prevention strategies.

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Citation Paper

Paper Session 25 9:45 AM-10:03 AM 4030

TAILORED CARDIAC REHABILITATION IMPROVES QUALITY OF LIFE IN WOMEN: A RANDOMIZED CLINICAL TRIAL

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BACKGROUND: Women with coronary heart disease (CHD) have lower adherence to cardiac rehabilitation (CR) programs and report poorer quality of life (QOL) than men, thus, hindering lifestyle modifications. PURPOSE: To assess the impact of a motivationally-enhanced, stage-of-change-matched, gender-tailored CR program for improving QOL of women. METHOD: A randomized clinical trial compared QOL scores of women in a traditional 12-week CR program to those of women receiving an augmented program that included motivational interviewing guided by the Transtheoretical model of behavior change. Two measures of QOL, the multiple discrepancies theory questionnaire (MDT) and the self anchoring striving scale (SASS), were administered to 225 women at baseline, post-intervention, and at 6-month follow-up. ANOVA was used to compare changes in QOL scores over time. RESULTS: Baseline MDT and SASS scores were 35.1 and 35.5 and 7.1 and 7.0 for the augmented and traditional CR groups, respectively. Post-intervention, MDT and SASS scores increased to 38 and 7.9, respectively, for the augmented group compared to 36 and 7.1 in the traditional group. Follow-up scores were 37.7 and 7.6 for the augmented group and 35.7 and 7.1 for the traditional group. Significant group by time interactions were found on MDT and SASS [(F(2, 446)=5.94, P=.003); (F(2, 446)=7.23, P=.014)]. Follow-up tests revealed that MDT and SASS scores for the traditional group did not differ over time [(F(2, 446)=.21, P=.809); F(2, 446)=.20, P=.815)]. The augmented group showed significantly increased MDT and SASS scores from baseline to post-test [(F(1, 223)=30.645, P<.001); F(1, 223)=24.617, P<.001)] and despite slight decreases from post-test to 6-month follow-up, MDT and SASS scores remained higher than baseline [(F(1, 223)=23.187, P<.001); (F(1, 223)=10.002, P=.002)]. CONCLUSIONS: Motivationally-enhanced, tailored CR programs can improved QOL in women relative to traditional programs. To the extent that diminished QOL contributes to CR non-adherence, such augmented programs have potential to improve outcomes for women by maximizing their adherence.

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Paper Session 25 10:03 AM-10:21 AM 4031

STROKE SELF-MANAGEMENT: OUTCOMES OF A RANDOMIZED CONTROLLED TRIAL

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Background: Secondary stroke prevention is championed as guideline care; yet there are no systematic programs offered.We developed a stroke self-management program to address these gaps.
Objectives: The purpose of this study was to pilot test a stroke self-management program on stroke specific, quality of life, self-efficacy and risk factor management.
Methods: We conducted a randomized controlled trial at two VA sites where we recruited patients with an acute stroke to receive either the stroke self-management program or an attention-control protocol over a 12-week period following hospital discharge. The standardized program was tailored for post-stroke coping and recovery. Participants received 6 sessions targeting primary outcomes of stroke self management including post stroke depression, secondary stroke risk factor management, and self-efficacy using social learning theory as a framework. We surveyed outcomes at baseline and at 3 months. We conducted an intention to treat analysis comparing the intervention to the control group on outcomes using t-tests.
Results: We recruited 62 participants who were hospitalized with a primary diagnosis of ischemic stroke. The sample was 21.3% African-American and 69.8% White and all but 1 (1.6%) were men. We found trends in differences between groups on self-efficacy to exercise regularly (p<.07) and communicate with physicians (p<.04; minutes spent stretching (p<.09) and aerobic activity (p<.10) and on dimensions of stroke-specific quality of life (changes in family roles (p<.01), social roles (p<.05), work roles (p<.02) and thinking (p<.03)) and changes in social support (p<.05)) and overall stroke quality of life (p<.07).
Conclusion: This pilot study demonstrated the feasibility of delivering a stroke self-management program to recent stroke survivors and improvements in self-efficacy, self-management behaviors, social support and some dimensions of stroke-specific quality of life compared to a group that received an attention placebo program.

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Paper Session 25 10:21 AM-10:39 AM 4032

IMPROVING ADHERENCE TO PHARMACOLOGIC TREATMENT AFTER DIAGNOSIS OF CORONARY HEART DISEASE: A RANDOMIZED CLINICAL TRIAL

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Background: Use of lipid-lowering medication reduces the risk of cardiac events. However, non-adherence to medical therapy has been well documented. Pharmacist-mediated interventions may improve adherence to prescribed medications.
Methods: A randomized controlled trial of a pharmacist-mediated intervention (PI) versus usual care (UC) was conducted, 689 subjects with known coronary heart disease were recruited from the cardiac catheterization laboratories of a university medical center. Patients in the PI condition received 5 telephone counseling contacts conducted by pharmacists, which took place at two weeks following discharge, and at months 1, 3, 6, and 9. Primary endpoints were the proportion of patients with low-density lipoprotein cholesterol (LDL) < 100 mg/dl, and the proportion of prescribed lipid-lowering medication taken by patients as assessed by a continuous multiple-interval measure (CMA) at one-year.
Results: The mean age of participants was 60 years. Sixty percent were male, 68% were married, and 90% were white. Sixty-five percent in the PI group and 60% in the UC group achieved an LDL level <100 mg/dl (p=0.29); Mean CMA for statin medication use was 0.88 in the PI group, and 0.90 in the UC group (p=0.51). However, only 53% and 56% of the patients in the UC and PI groups, respectively, were using statin medication at one-year. Males and patients aged 61–70 were more likely to reach LDL goal.
Conclusions: There was no significant difference between PI and UC groups on LDL goal attainment or lipid-lowering medication adherence. However, the adherence rate in the UC was unexpectedly high (88%) making further improvement difficult to attain. Although adherence rates were high, one-third of patients on statin therapy failed to reach the LDL goal, and 45% of subjects were not prescribed statins, suggesting that physician adherence to guidelines can be improved.

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Paper Session 25 10:39 AM-10:57 AM 4033

PATIENT AND PHYSICIAN BELIEFS ABOUT CONTROL OVER HEALTH: SYMMETRICAL BELIEFS PREDICT MEDICATION REGIMEN ADHERENCE

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Background: Past work suggests that the degree of similarity between patient and physician attitudes may be an important predictor of patient outcomes. Objective: To examine the extent to which patient and provider symmetry in health locus of control (HLOC) beliefs (assessed in parallel for established physician-patient dyads) was associated with objectively-derived medication adherence in patients with co-morbid diabetes mellitus and hypertension. Methods: Eighteen primary care physicians (M age=47.2 years, SD = 10.6; 56% male) in the VA Iowa City Healthcare System and 246 male patients (M age=68.8 years, SD=9.7) of consented providers were surveyed regarding their HLOC beliefs as part of a large study of patient-provider interaction. Medication adherence was computed using VA electronic pharmacy records. Analyses/Results: Physician-patient dyads were classified into three groups according to the similarity of their HLOC scores. Hierarchical linear modeling was used to account for clustering of patients within physicians. After adjustment for age, physician sex, and physician years of practice, dyads holding similar beliefs regarding the degree of personal control that patients have over health outcomes showed significantly higher overall and cardiovascular medication regimen adherence (p's = .03) than in dyads in which the patient held a stronger belief in personal control than did their treating physician. Conclusions: These data are the first to demonstrate the importance of attitudinal symmetry on an objective measure of medication adherence and suggest that a brief assessment of patient HLOC may be useful for tailoring the provider's approach in the clinical encounter or for matching patients with chronic illness to physicians with similar attitudes towards care.

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Meritorious Student Paper

Paper Session 25 10:57 AM-11:15 AM 4034

SELF-EFFICACY MEDIATES THE RELATIONSHIP BETWEEN SOCIAL SUPPORT AND MEDICAL ADHERENCE IN HEART FAILURE PATIENTS

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Non-adherence to medical recommendations is a major concern in heart failure (HF) patients and a leading cause of rehospitalization and mortality. This study aims to investigate (1) the contribution of functional and structural social support to general and specific adherence and (2) whether self-efficacy mediates these relationships. Participants consisted of 269 HF patients (32% women) with a mean age of 54 years. All analyses controlled for demographic covariates (age, gender, marital status, education) and disease severity (NYHA class). Hierarchical multiple regression demonstrated that functional social support was significantly and concurrently associated with both general (β=.264, p<.001) and specific (β=.251, p<.001) medical adherence. The Sobel test indicated that self-efficacy (β=.273, p<.001) significantly mediated the relationship between functional social support (β decreasing from .238 [p<.001] to .166 [p=.005]) and general adherence (p=.002). Self-efficacy (β=.662, p<.001) also significantly mediated the relationship between functional social support (β decreasing from .238 [p<.001] to .062 [p<.001]) and specific adherence (p<.001). The four subtypes (tangible, emotional/informational, affectionate, positive social interaction) of functional social support were highly intercorrelated (r=.754 - .857) and did not appear to differ significantly in their associations with adherence. Structural support was not significantly associated with general or specific adherence (both ps>.05), suggesting that quality rather than quantity of social networks play an important role in shaping health maintenance behaviors. These results suggest that boosting self-efficacy may be a promising target for interventions for HF patients and can be facilitated by strengthening functional social support. Clinicians and caregivers should also consider other pathways through which they can increase patients' confidence in their own disease management abilities.

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Paper Session 26 9:45 AM-10:03 AM 4035

PARENT INVOLVEMENT, FAMILY CONFLICT, AND QUALITY OF LIFE AMONG ADOLESCENTS WITH TYPE 1 DIABETES

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Type 1 diabetes (T1D) is a common childhood chronic illness whose treatment requires adherence to a complex management regimen. The demands of T1D care may impact quality of life (QOL), which is related to regimen adherence and metabolic control. Parents tend to become less involved in T1D care as their children become teenagers. However, self-care autonomy is related to increased parent-child conflict and indices of poor T1D-related health, while more parent involvement is linked to better medical, psychosocial, and QOL outcomes. This study aimed to examine the relationship between parent involvement in illness management, family diabetes-related conflict, demographic and medical factors, and health-related QOL among early adolescents with T1D. Structural equation modeling was used to analyze rating scale and interview data from 162 parent-child dyads. It was hypothesized that family conflict would moderate the relationship between parent involvement in diabetes management and adolescent QOL. Covarying demographic and medical variables were explored. Parent- and youth-reports of conflict and QOL were moderately correlated and reliably measured across families with varying levels of conflict. The model fit was acceptable across Lower- and Higher-conflict families [χ2=309.14 (248), p<.05, RMSEA=.06 (CI=.03-.08), CFI=.91, SRM =.100] and the moderation hypothesis was partially supported (χ2Δ=173.5 (131), p<.05), suggesting that the relationship between parental involvement in T1D management and adolescent QOL likely differs for families experiencing less versus more diabetes-related conflict. Family relationships related to diabetes management appear to play a central role in youths' health-related QOL. Clinically, recognition that teens' optimal self-care and health-related adjustment may involve not only promoting parent involvement in diabetes management, but also preventing or minimizing family conflict, is important.

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Paper Session 26 10:03 AM-10:21 AM 4036

ILLNESS INTRUSIVENESS IN FAMILIES FACING PEDIATRIC TYPE 1 DIABETES: RELATIONSHIP TO SYMPTOMS, SELF-MANAGEMENT AND FAMILY FACTORS

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Illness Intrusiveness (II), the degree to which a disease or its treatments interfere with quality of life, has not been investigated with pediatric Type1 Diabetes (DM1). II was assessed in 179 patients (aged 7–18, M=12, SD=2.4; 51% male; 85% Caucasian), 179 mothers, and 94 fathers. Symptoms experienced by families, self-management, and family aspects of self-management were assessed for relationship to patients', mothers', and fathers' II. Number and severity of hypoglycemic episodes in the past month, self-management behaviors, patients' independence in self-management, parent-child conflict regarding self-management, and last HbA1c scores (IVs in that order) were entered into five hierarchical multiple regression, with patients' II, mothers' II re: self and mothers' observed II for the patient, and fathers' II re: self and fathers' observed II for the patient, respectively, as DVs. All regressions were significant (all p<.01), accounting for the following variance: 28% for patients, 27% for mothers re: self, 27% for mothers' observation of child II, 20% for fathers re: self, 18% for mothers' observation of child II. Conflict and severity of hypoglycemic episodes contributed significantly to prediction of patients' II (.28, .26 respectively, p<.001), and mothers' II scores (.23, .27 respectively, p<.01 for mothers' II; .32, .19 respectively, p<.01 for mothers' observation of patients' II), with HbA1c contributing only to prediction of mothers' II (-.23, p<.006). Only conflict contributed to prediction of fathers' II and fathers' observation of patients' II (.38, p<.001). It appears that interpersonal conflict between parents and the patient, as well as the severity of hypoglycemic episodes constitute salient intrusions, increasing illness intrusiveness for pediatric DM1 patients and their mothers, and family conflict regarding self-management was the only factor to predict illness intrusiveness for fathers. Implications for social ecological models of chronic illness, regrding the burden of DM1 self-management, and for family interventions will be discussed.

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Paper Session 26 10:21 AM-10:39 AM 4037

PATERNAL QUALITY OF LIFE AND CONTRIBUTION TO CARE IN PARENTING A CHILD WITH TYPE 1 DIABETES

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Stress in mothers of children with diabetes is well documented. Fathers' stress from their child's illness, however, has received little attention. Father participation in disease care and its relationship to mother and child well-being is an emerging area. Using the Dads Active Disease Support Scale-Amount subscale (DADS-Amount), this study examines how maternal and paternal pediatric parenting stress, depression, anxiety, marital satisfaction, and sleep relate to perceived amount of father involvement in disease management. Also examined are regimen adherence, type of insulin regimen, and metabolic control (HbA1c) in relation to father involvement in care. A sample of 83 mothers (M age=41.5 years) and 42 fathers (M age=43.9), including 36 pairs of parents completed data sets. Parents were recruited from ADA camps for their children (M age=10.8 years, 52% female, 91% Caucasian, M illness duration=4.4 years, M HbA1c=7.5). In pairs, mothers and fathers on average agreed on amount of father involvement, but some differences were noted (r=.66, p<.001; M difference=.91 points, sd=15.5). Separate correlational analyses were run for mothers and fathers using their own perception of father involvement. In mothers, DADS was related to marital satisfaction (r=.45, p<.001), age of child (r=-.25, p<.05), insulin regimen (r=-.26, p<.05), and approached significance for regimen adherence (r=.22, p=.051). In fathers, DADS was related to frequency (r=.57, p<.001) and difficulty (r=.46, p<.01) of pediatric parenting stress, sleep problems (r=.33, p<.05), anxiety (r=.31, p<.05), age of child (r=-.30, p<.05), and insulin regimen (r=-.34, p<.05). Results suggest father involvement is related to increased marital satisfaction for mothers and poorer quality of life across several measures for fathers. Father involvement is greater with a less intensive insulin regimen (i.e. NPH/R) and when the child is younger. Father involvement may be related to increased regimen adherence. Further research is needed to determine the directional nature of these relationships, and thus their implications.

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Paper Session 26 10:39 AM-10:57 AM 4038

SLEEP CHARACTERISTICS OF PARENTS OF YOUNG CHILDREN WITH TYPE 1 DIABETES

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Childhood chronic illnesses affect many aspects related to quality of life, including sleep, and caregiving demands may result in parental sleep disruption and fatigue. Few studies have examined sleep in relation to T1 diabetes management. This study investigated parent sleep and diabetes care in young children with T1D. 54 parents (89% mothers; M age=38.12 yrs, SD=5.74 yrs) of children (52% male; M age=5.89 yrs, SD=1.13) with T1D (M illness duration=2.46 yrs, SD=1.50) completed the Pittsburgh Sleep Quality Index and additional items about nighttime diabetes care. Parents reported an average bedtime of 11:10 pm and wake time of 6:30 am. Parent’s mean sleep efficiency, calculated by dividing reported actual sleep (6.3 hours/night) by time in bed, was 86.81% (SD=10.30; ideal sleep efficiency≥90%). Parents reported performing blood glucose (BG) checks after their child went to sleep 3.5 nights/wk (mean time=11:30 pm); 35% of parents checked their child’s BG level every night. Parents of children on basal bolus regimens (multiple daily injections, insulin pump) performed significantly more nighttime checks than parents of children on conventional regimens (F(2,50)= 6.39, p<.01). Frequency of BG checks did not predict sleep quality. However, 35% of parents reported sleep disruption due to nighttime BG checks and these parents reported significantly more global sleep difficulties (t(52)=-2.16, p<.05), daytime dysfunction (t(52)=-2.53, p<.05), and poorer sleep quality (t(52)=-2.05, p<.05) than parents who reported their sleep was not disrupted. Parents of young children with T1D reported less sleep than the recommended 7–8 hrs of sleep/night. Those with sleep disruption due to nighttime caregiving experienced more daytime dysfunction, including sleepiness while driving and decreased enthusiasm, which may impact parent-child interactions. Evaluating nighttime caregiving and developing interventions to promote sleep quality are recommended. Future research should assess other factors influencing sleep, including depression.

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Paper Session 26 10:57 AM-11:15 AM 4039

CORRELATES OF HEALTH-RELATED QUALITY OF LIFE IN OVERWEIGHT AND OBESE ADULTS WITH PREDIABETES

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Although the deleterious effect of Type II diabetes on health-related quality of life (HRQL) is well documented, less is known about the impact of prediabetes on HRQL. The purpose of this study was to examine the relationships between various demographic, physiological, and psychological variables and HRQL in a cohort with prediabetes, defined as BMI >25 kg/m^2 and fasting blood glucose between 95 and 125 mg/dl. We examined baseline data from the Healthy Living Partnerships to Prevent Diabetes (HELP PD) study, an on-going trial seeking to translate the Diabetes Prevention Program weight loss intervention into a community-based model (n=301; Mean (SD) age=57.9 (9.5) years). Physiological (e.g., fasting blood glucose, BMI), demographic (e.g., age, education), psychosocial variables (e.g., self-efficacy, satisfaction with physical function) and the SF-36 were completed during enrollment. SF-36 subscales in this prediabetic cohort compared favorably to other obese and diabetes cohorts and national norms, with means ranging from 63.1 (16.8) for vitality to 88.8 (23.7) for emotional role. Males had significantly higher mean Mental Health (MCS) than females : 52.3 (6.1) vs 50.6 (7.7). Age (β=-.30), satisfaction with physical function (SPF)(β=.26), and negative affect (β=-.13) were significantly associated with Physical Health (PCS)(adjusted R^2=.15). Negative affect (β=-.37), SPF (β=.15), self-efficacy for dietary restraint (β=.15), positive affect (β=.19), age (β=.16), and fasting blood glucose (β=.-12) were significantly associated with MCS (adjusted R^2=.43). These data suggest that individuals with prediabetes may not have the decrements in HRQL reported in diabetes cohorts. Future research will determine whether the HELP PD weight loss intervention results in positive changes in HRQL.

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Citation Paper

Paper Session 27 9:45 AM-10:03 AM 4040

DOUBLE JEOPARDY? AGE, RACE AND QOL IN OLDER ADULTS WITH CANCER

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Background: Older adults and minorities have been underrepresented in cancer clinical trials which can lead to disparities in treatment and outcomes. An important outcome that has received little attention is the post-treatment quality of life (QOL) of older adults with cancer from minority backgrounds. The double jeopardy hypothesis suggests being a minority and old could have compounding negative effects on health outcomes. Purpose: To examine the relationship between age and race/ethnicity with mental and physical QOL (SF-12), we analyzed population based data from 1,071 ethnically diverse (77% non-White) adults≥65 years of age (M age=75.7, SD=6.1) diagnosed with breast, prostate, colorectal or gynecologic cancer. We examined 1) the QOL of older long-term cancer survivors by cancer site, race/ethnicity (Non-Hispanic White (NHW), Hispanic, African American (AA), and Asian-Americans) and age (65–74, 75–79 and 80+), and 2) potential interaction effects between age and race on QOL. Results: Physical and mental QOL for breast, colorectal, and gynecologic cancer survivors were significantly lower than general population norms for the elderly. General Linear Modeling revealed a significant age by race interaction effect (p<.05) on physical QOL, after adjusting for other covariates for prostate cancer survivors only. AA and Asian American men with prostate cancer in the 75–79 age group report lower physical QOL scores than NHW and Hispanic, but the pattern reverses in the older age group (80+). For the other cancer sites, the age/race interaction was significant when entered into the model with other demographic variables, but disappeared when comorbid conditions were included. Discussion: With the exception of prostate cancer, there was little evidence of double jeopardy among older ethnically diverse cancer survivors after accounting for comorbid conditions.

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Citation Paper
Paper Session 27 10:03 AM-10:21 AM 4041

RACIAL DISPARITIES IN BREAST CANCER PATIENTS' EXPERIENCE OF DEPRESSION BEFORE AND AFTER DIAGNOSIS

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To identify the extent of racial disparities in elevated depressed mood in African American and white breast cancer patients, we prospectively recruited breast cancer patients receiving treatment at one of two academic medical centers in St. Louis from 5/2003–6/2007 and enrolled them in either a cohort study of early-stage (0-IIA) patients or in a phase 2 clinical trial testing a drug to prevent bone micrometastasis in locally advanced (IIB-III) patients. Demographic and psychosocial measures were completed by interview at enrollment (1–6 weeks post diagnosis) and 1 year later. Clinical data were obtained from medical records; the percentage of households living in poverty at the census-tract level was based on patient's geocoded residential address. Pre-breast-cancer history of depression was reported as receipt of a physician's diagnosis of and/or treatment for depression; elevated depressed mood at enrollment and 1-year follow-up was indicated by CES-D scores >= 16. Multivariable logistic regression, adjusting for covariates, examined the effect of race on three outcomes: history of depression prior to enrollment, elevated depressed mood at enrollment and at 1-year follow-up, the latter two controlling for the previous measure(s) of depression. Of 522 patients (mean age 57 years, range 29–89), African American patients (20% of sample) were less likely to report having a pre-cancer history of depression (odds ratio [OR], 0.3; 95% confidence interval [CI], 0.2–0.6) but were equally likely to report elevated depressed mood at enrollment (OR, 0.7; 95% CI, 0.3–1.7) than white patients. At 1-year follow-up, African American patients were more likely than white patients to report elevated depressed mood (OR, 3.5; 95% CI, 1.3–9.5). Future research should focus on why depressed mood in African American breast cancer patients worsens in the first year after diagnosis, even though they are less likely than white patients to report a history of depression prior to their cancer diagnosis.

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Paper Session 27 10:21 AM-10:39 AM 4042

A COMMUNITY-BASED TRANSLATIONAL APPROACH TO BREAST CANCER DISPARITIES

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Breast cancer is associated with a cluster of metabolic abnormalities referred to as metabolic syndrome. Associations among metabolic syndrome, breast cancer, and demographics establish a complex web of interactions relevant to breast cancer disparities. The NIH Office of Behavioral and Social Sciences Research recommends an interdisciplinary and systems science approach in research examining health disparities that will promote vertical integration across multiple levels of scientific analysis (e.g. cell, individual, community). This presentation describes an evolving academic-community partnership which is examining biological and socio-ecological processes contributing to cancer disparities.

Qualitative data from eight focus groups comprised of 56 rural Arkansas women were independently coded by two investigators. Participants were 40–92 years of age; 29 were black, 27 were white. Perceptions regarding lifestyle behaviors, use of preventive health services and research participation were examined within the conceptual framework of the Social Ecological Model. This analysis revealed differential influences of these behaviors on women's health, all of which must be examined to address disparities. Women valued lifestyle behaviors over preventive health services and research. They noted that family and friends are likely to influence lifestyle behaviors, but indicated that preventive health care and research participation are less often a topic of conversation and are not seen as a target of social influence. All three behaviors were viewed as ways to manage symptoms, rather than as strategies to prevent illness.

These and other perspectives are presented as a framework for developing a translational research agenda to examine associations among cellular mechanisms, behavioral process, and societal influences that contribute to breast cancer disparities. Specific research priorities must emerge from a continuing dialogue that engages lay and academic communities.

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Paper Session 27 10:39 AM-10:57 AM 4043

"THIS REMINDS ME OF MY STRUGGLE": BREAST RECONSTRUCTION DECISIONS AMONG BLACK BREAST CANCER SURVIVORS

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Introduction: Black women are significantly less likely than White women to have breast reconstruction after mastectomy. The Women's Health & Cancer Rights' Act (WHCRA) was intended to address inequities in reconstruction by mandating insurance coverage for it. However, a recent evaluation of WHCRA found ethnic differences in utilization persist. Studies indicate racial/ethnic differences in referral/recommendation patterns, with surgeons less likely to recommend reconstruction for Black women. Black women are also less likely to accept a referral when offered. Altogether, these findings suggest an array of factors - including physician bias and cultural differences in patient preferences - may contribute. As cultural beliefs and values influence related domains of QOL (e.g., body image, surgery preferences), they are likely to influence breast reconstruction decisions.

Methods: Semi-structured interviews exploring breast reconstruction (BR) decisions were conducted with an economically diverse sample of Black breast cancer survivors in NYC who underwent mastectomy post-WHCRA (N = 27, mean age=51; 11 BR, 16 No-BR). Participants were recruited from (a) a private comprehensive cancer center (N=14), or (b) community-based treatment and support centers targeting under-served communities (N =13). Interviews were transcribed verbatim. Data were analyzed using grounded theory methods.

Results: Among BR patients, reasons for surgery were consistent with prior studies among White women, although autologous tissue was preferred over implant reconstruction. While there was overlap with prior research on reasons not to reconstruct, several distinct themes emerged: (a) a spiritual stance towards the body making implant reconstruction unacceptable for many; (b) an ethic of body acceptance; (c) concern and mistrust of unnecessary medical intervention; (d) pre-existing medical burden (e.g., diabetes, HIV) that limit surgery options.

Conclusions: Culture-based values regarding the body may intersect with healthcare biases to contribute to ethnic differences in breast reconstruction use.

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Paper Session 27 10:57 AM-11:15 AM 4044

THE ASSOCIATION OF PERCEIVED RACIAL DISCRIMINATION WITH PATIENTS' HEALTH CARE EXPERIENCES: CHOICE OF MEASURE MATTERS

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Wide variation in measurement has limited our understanding of the prevalence and impact of perceived discrimination in health care settings. This study addresses this issue by examining whether 3 common measures of perceived discrimination detect similar rates of discrimination and show similar associations with patients' health care experiences.

We surveyed 100 Veterans Affairs patients (50 white, 50 African American) with diabetes. We compared the performance of 3 measures of perceived racial discrimination in health care: single-item and multi-item measures assessing personal experiences of discrimination, and a measure assessing general perceptions of racial discrimination in the health care system. We also assessed associations of each measure with patient-reported problems with medical care and receipt of recommended preventive care documented in patient records.

African American patients were more likely than white patients to report perceived discrimination regardless of which measure of discrimination was used (single-item measure: 42% vs. 6%, $p<.001$; multi-item measure: 42% vs. 18%, $p=.01$; general perceptions measure: 74% vs. 40%, $p=.001$). Reports of discrimination were more common when the general perceptions measure was used compared to the single-item (OR=36.53, 95% CI=7.95–167.89) or multi-item measure (OR=20.28, 95% CI=5.12–80.34). Both the multi-item measure (OR=3.96, 95% CI=1.29–12.18) and general perceptions measure (OR=3.61, 95% CI=1.34–9.71) predicted patient-reported problems with care. In contrast, none of the measures predicted receipt of recommended preventive care.

In this study, the prevalence and impact of perceived discrimination depended on what measure of discrimination was used. This highlights the need for caution in comparing results across studies and the need to develop and use consistent measures of perceived discrimination.

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Saturday
April 10, 2010
11:30 AM-1:00 PM

Paper Session 28 11:30 AM-11:48 AM 4045

PERCEIVED SKIN CANCER RISK AMONG A COMMUNITY-BASED SAMPLE OF BLACK ADULTS

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Black Americans experience disproportionately higher rates of skin cancer mortality. This study assessed perceived skin cancer risk among a random community sample of Blacks. Random block groups in twenty predominantly Black urban census tracts in six California cities were sampled. Data were collected via an in-person, door-to-door, anonymous, household survey. The 1,932 participants ranged in age from 18–95 years (Mean=43.0) and were mostly women (57.7%). Participants were asked: “On a scale of 0 to 100, what do you think your chances of getting skin cancer are, where 0 is no chance of getting skin cancer, and 100 means you will definitely get it?” Skin cancer risk perceptions were low (Mean = 16.11). Sun-sensitive skin type and a prior cancer diagnosis were significantly associated with higher perceived skin cancer risk. A subset of Blacks who perceive themselves at high risk for skin cancer also was identified. Future health risk communication messages should be tailored to sun-sensitive Blacks and those who have had a prior cancer diagnosis to potentially reduce racial disparities in skin cancer mortality.

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Meritorious Student Paper
Paper Session 28 11:48 AM-12:06 PM 4046

RANDOMIZED TRIAL OF A DISSONANCE-INDUCTION INTERVENTION TO ALTER UV-RELATED BEHAVIORS

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Sun exposure is a known risk for skin cancer. Appearance-based interventions have been found to be effective in decreasing tanning and increasing sun protection behaviors. Whether cognitive dissonance induction interventions, used successfully to alter other health behaviors, are effective for UV-related behaviors has not been evaluated. To address this issue, we compared the effectiveness of an appearance-based dissonance intervention targeting tanning (dissonance condition) and an appearance-based psycho-educational intervention targeting tanning (education condition) to a dissonance intervention targeting healthy eating and exercising (lifestyle condition). We hypothesized that, relative to the lifestyle condition, participants in the dissonance and education conditions would show a decrease in tanning and an increase in sunscreen use. Participants were 257 females, ages 18–25 (M=19), with no history of skin cancer, who indoor and/or outdoor tanned at least 6 times in the past year. In the dissonance-based conditions, participants publicly opposed the target behavior (i.e., tanning or unhealthy eating/no exercising). In the education condition, they watched a presentation on the negative consequences of tanning and on ways to protect oneself. Behaviors were assessed pre- and one month post-intervention. Participants in the dissonance condition, but not the education condition, reported a decrease in average hours spent sunbathing relative to those in the lifestyle condition, $p < .05$. Participants in the dissonance condition and the education condition reported no change in sunscreen use on the body; however, participants in the lifestyle condition reported a decrease in sunscreen use, $p < .05$. These results suggest that an appearance-based dissonance intervention may successfully alter UV-related behaviors. Future studies should further investigate the utility of dissonance induction for altering UV-related behaviors, comparing it to an intervention that combines psycho-education with dissonance induction, as both conditions had some level of success.

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Paper Session 28 12:06 PM–12:24 PM 4047

HYPOTHETICAL GENOMIC RISK FEEDBACK FOR MELANOMA

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First degree relatives (FDRs) of those affected by melanoma, the most serious form of skin cancer, are at increased risk for the disease due to shared genetics and sun exposure habits. In anticipation of the availability of gene-environment melanoma risk information, we assessed causal attributions for melanoma before and after receipt of hypothetical melanoma genomic risk feedback. In a 3X2 factorial design, FDRs of post-surgical melanoma patients (N=139) were randomized to receive one of three hypothetical risk assessments (modeled on high risk mutation, polymorphism susceptibility, or non-genetic risks) with either a positive or negative result. Self-reported attributions included sun exposure/sunburn history (69% of the sample), family history/genetics (65%), fair skin (27%), and moles, freckles, and environmental or chemical exposure (all <10%). Genetic attributions were rated as most important to personal melanoma risk (M=7.60 on 1–10 scale), followed by the environment (M=6.67), behavior (M=5.98), chance (M=4.29). We examined the influence of the risk feedback on perceived importance of different attributions via ANCOVA; only genetic attributions changed in response to risk feedback ($p<.01$). Positive risk feedback (mutation, polymorphism, non-genetic feedback) was associated with heightened importance of genetic attributions, but importance of genetic attributions did not differ between type of risk assessment. These results indicate that various types of positive risk feedback may lead to heightened salience of genetic factors in personal risk. These findings will help set priorities for counseling strategies to maximize accurate interpretations of gene-environment risk feedback for melanoma and other cancers.

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Paper Session 28 12:24 PM–12:42 PM 4048

PREDICTORS OF SUSTAINED IMPROVEMENTS IN SKIN SELF-EXAMINATION ADHERENCE IN HIGH-RISK MELANOMA FAMILIES FOLLOWING GENETIC TEST REPORTING

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Individuals with a family history of melanoma may undergo genetic testing for a pathogenic CDKN2A/p16 mutation that confers a 76% lifetime risk of melanoma. Because noncarriers' melanoma risk is still twice that of the general population, both carriers and noncarriers are advised to perform monthly skin self-examinations (SSEs) to detect melanoma. Self-reported SSE performance in 37 adults from melanoma-prone families was assessed prior to genetic test reporting and 2 years after. Participants were classified as improving their SSE performance (either performing the recommended number of exams or moving closer to this number relative to prior behavior) or not. Overall, 40.5% of participants showed improved SSE performance from baseline to 2 years. Improvers also reported more thorough exams than nonimprovers. While 60% of unaffected carriers reported improvement, most noncarriers (75%) did not. Although noncarriers reported improvement at 1 month, 56.3% were underscreening at 2 years. Of these, most had reverted to baseline levels of underscreening. In qualitative assessments of reasons for underscreening, participants described themselves as forgetful, unqualified to perform SSEs, or at insufficient risk. Consistent with these qualitative responses, the small number of noncarriers who improved their adherence reported significant (but moderate) increases in cancer worry following test reporting (F(2,20)=6.376, p<.007) and greater worry at 2 years than nonimprovers (3.17 vs. 1.76, t(11)=3.406, p<.006). Additionally, for all participants, perceived control over detecting a melanoma early in its course was higher among improvers (F(1,22)=9.678, p<.005) and increased significantly over time among noncarriers who improved (F(2,21)=4.261, p<.028). These findings suggest that genetic counseling sessions should target worry and control perceptions as potential key determinants of SSE adherence in high-risk patients.

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Paper Session 28 12:42 PM–1:00 PM 4049

FEASIBILITY OF USING INTERNET-DELIVERED VIDEO AS A BEHAVIORAL INTERVENTION

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Background: This study was designed to deliver and evaluate a video intervention for skin cancer early detection in patients with melanoma, who are at risk for recurrence or second primary lesions. We also assessed the feasibility of using the Internet for video intervention delivery and data collection. Few studies have used this method.

Methods: A team of researchers and media specialists developed a 13 minute evidence-based video designed to improve skin cancer knowledge, enhance beliefs about skin cancer detection, and increase thorough skin self-examination (TSSE). The video addresses the seriousness of skin cancer, includes testimonials from patients and demonstrates TSSE. A technology specialist adapted an existing survey for the Internet to measure the main variables and created a study Website. Patients were recruited from a skin cancer specialty clinic. Shortly after enrollment they received an encrypted email with unique login information to access the pre-intervention survey. After completing the survey, participants could access the link to the video. Three months later, participants completed a post-intervention survey on the Internet. Data were stored in the Microsoft SQL server.

Results: 41 participants completed both surveys. The video intervention significantly improved skin cancer knowledge (p=0.002) and TSSE performance and frequency (p=0.007), but did not change beliefs.

Discussion: The Internet methodology presented challenges. Some participants had trouble viewing the video using Quicktime or Windows Media Player. Internet connections were not always fast enough to support video viewing. We could not determine start-to-finish viewing of the video. Some Internet browsers could better adjust to anomalies in the coding and Webpage display than others. There were issues with survey formatting and remote data access.

Conclusion: Internet delivery of a video intervention and surveys is effective for short-term improvement of skin cancer knowledge and TSSE. Beliefs about skin cancer detection are stable. Although feasible, the time and resources required to implement this method are substantial.

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Paper Session 29 11:30 AM-11:48 AM 4050

MECHANISMS LINKING DAILY SELF-WEIGHING AND WEIGHT LOSS IN ADULTS

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Daily self-weighing (DSW) is associated with weight loss likely via direct impact on behaviors that produce caloric deficits. These mechanisms have not been thoroughly tested. The purpose of this analysis was to examine the mediating effects of these behaviors on DSW and weight loss in a 12-month Internet behavioral weight loss intervention. Participants (n=158) were healthy, overweight adults [BMI: 31.6±4.1 kg/m2]. Intention-to-treat analyses showed a mean weight loss of 5.96% after 12 months. At baseline, 3, 6, and 12 months, weight control behaviors and DSW were assessed via the Eating Behavior Inventory (EBI). The EBI is a 26-item questionnaire assessing behavioral weight control strategies, and higher EBI scores are associated with better weight loss. DSW was assessed via the question "I weigh myself daily" and dichotomized as rarely/sometimes and often/always. Total EBI score was then calculated with the remaining items, excluding DSW. Measured weights were obtained in the clinic at the same time points. Using linear regression with exclusion of missing values, compared to those that did not, individuals who reported often/always DSW had higher % weight loss at 6 months [β(SE)=2.78(0.90); p=.003; n=146] and 12 months [β(SE)=3.48(1.2); p=.004; n=141]. Inclusion of EBI total score showed attenuated results that remained significant for 6-month [β(SE)=1.94(0.87); p=.027; n=143], but not for 12-month [β(SE)=2.02(1.2); p=.086; n=139] % weight loss. Accounting for temporality, mediation analyses were conducted to further understand these effects. EBI total score at 6 months fully mediated the association between DSW at 3 months and 6-month % weight loss (Sobel test: p = .019; n=137). Separate analyses showed that EBI total score at 12 months acted as a partial mediator between DSW at 6 months and 12-month % weight loss (Sobel test: p=.018; n=129). These results suggest that daily self-weighing impacts weight loss through greater engagement in strategies to control caloric intake. Causal mechanisms would be better determined if DSW was manipulated in randomized controlled trials.

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Meritorious Student Paper Citation Paper

Paper Session 29 11:48 AM-12:06 PM 4051

OUTCOME EXPECTATIONS AND REALIZATIONS AS PREDICTORS OF WEIGHT LOSS AMONG WOMEN IN A RANDOMIZED TRIAL

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Expectations regarding the effects of weight loss diets, and the perceived degree to which those expectations are met (i.e., "realizations"), may play a role in subsequent adherence and weight regain. However, scant existing research examines these constructs. This exploratory study examined whether baseline outcome expectations and 6-month realizations regarding a diet's effects on perceived shape and appearance were associated with subsequent weight regain between 6 and 12 months. The study was conducted as part of an RCT of 4 popular weight loss diets (Atkins, LEARN, Ornish, and Zone) among 311 overweight/obese women. Data were available for 261 women (baseline BMI=31.7±31.1). Independent samples t tests confirmed that those who dropped out at 6 months did not differ from completers in baseline expectations, weight, or BMI. Among Atkins participants only (n=71), a significant correlation was found between realizations and subsequent regain, r=-.24, p<.04, warranting further analysis (initial weight loss from baseline to 6 months was not correlated with weight regain in any group). Linear regression of baseline expectations, 6-month realizations, and their interaction predicting to subsequent regain revealed a significant relationship between positive realizations and less regain, β=-.39, p<.003. Those who lost a median of >9kg initially yet reported negative realizations regained a median of >6kg. In contrast, those who lost similar weight initially and reported moderately to extremely positive realizations for shape and appearance regained a median of ≤1kg. The results indicate that, among women randomized to an Atkins weight loss diet, positive realizations regarding the diet's effects on perceived shape and appearance were associated with reduced weight regain over a subsequent 6-month follow-up. These exploratory results support continued investigation of the potential impact of outcome realizations on weight loss outcomes.

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Paper Session 29 12:06 PM–12:24 PM 4052

MINDFULNESS-BASED EATING AWARENESS TRAINING: WEIGHT LOSS AND IMPROVEMENT IN EATING REGULATION

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Mindfulness-based treatments are showing increasing promise and may be particularly suitable for disorders marked by behavioral and emotional disregulation. Mindfulness-Based Eating Awareness Training (MB-EAT) draws on the substantial empirical literature showing that obesity is associated with disrupted awareness of hunger and satiety signals, and that with increased frequency of stress-related eating. Previous research with MB-EAT for obese individuals with BED found improvement in eating regulation; weight loss was associated with amount of mindfulness practice. In the current study, obese (avg. 256 lbs) participants (N=117; 13% men; 12% Af-Am/Other; avg. age=49.9) were randomized to a 10 ses. MB-EAT program, plus mindful weight loss components, or to Wait-List Control. Approx.12% met criteria for BED and 14% for sub-clinical BED. F/Up was at immediate post (IP), 2, 3 and 6 months; measures included the BES, TFEQ, and BDI, among others. At baseline, clinical and sub-clinical BED Ss were similar on TFEQ Disinhibition and Hunger, but scored higher (p<.001) than non-clinical Ss; BED Ss were more markedly more depressed (BDI=20.33; p<.001) than both sub-clinical (3.81) and non-clinical (6.24) Ss. Preliminary analyses show that relative to WLC at immediate post, the MB-EAT Ss had more weight loss (6.02 vs. 0.24 lbs; p<.05), improvement on each TFEQ factor (all p<.001) and on the BES (p<.001). Effects were sustained at 1 month followup. Results are consistent with previous research, extend effectiveness to primary weight loss, and to a wider range of eating issues. The presentation will address theoretical and clinical issues, along with analyses from further followup points.

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Citation Paper
Paper Session 29 12:24 PM–12:42 PM 4053

THE PARENT MEALTIME ACTION SCALE (PMAS): DEVELOPMENT AND ASSOCIATION WITH CHILDREN'S DIET AND WEIGHT

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A new and comprehensive Parent Mealtime Action Scale (PMAS) was developed to identify dimensions of mealtime behaviors used by parents, then examined for its usefulness to explain variance in children's diet and weight status. Exploratory factor analysis with 2008 mothers and two confirmatory factor analyses with 541 mothers and 439 fathers produced a 31-item scale with nine dimensions. Mothers reported more gentle PMAS actions like setting SNACK LIMITS, ensuring DAILY FV AVAILABILITY, and using FAT REDUCTION and POSITIVE PERSUASION during meals, whereas fathers reported more forceful PMAS actions like INSISTENCE ON EATING. Seven PMAS dimensions explained variance in children's diet and weight status even when in competition with three well-known predictors (genetic risk, exercise, television). Children with healthier diets and weight had parents who often ensured DAILY FV AVAILABILITY and used FAT REDUCTION, POSITIVE PERSUASION, and INSISTENCE ON EATING during meals, but who rarely showed SNACK MODELING, allowed children too MANY FOOD CHOICES, or made them SPECIAL MEALS different from the shared family meal. Parents also may respond to children's overweight by using more FAT REDUCTION. The PMAS offers a new research, clinical, and educational tool to guide parents in actions most associated with children's diet and weight status.

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Paper Session 29 12:42 PM–1:00 PM 4054

CHANGES IN WEIGHT-RELATED BEHAVIORS AND HEDONIC HUNGER WITH PARTICIPATION IN A 12-WEEK WEIGHT LOSS TRIAL USING A COMMERCIAL FORMAT

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OBJECTIVES: This study assessed 1) whether weight-related behaviors and hedonic hunger (food-related thoughts and desires unrelated to physiological need) changed over a 12-week clinical trial using a commercial weight management program format; and 2) whether such changes were related to weight loss and degree of participation.
METHODS: Subjects (132 adults, BMI 27–35) were randomized to 1 of 2 systems for appraising food intake and asked to attend trial-based weekly group meetings using a commercial weight loss program. Measures: 1) % weight loss; 2) Eating Behavior Inventory (EBI), a self-report measure of behaviors related to weight control; 3) Power of Food Scale (PFS), a self-report measure of hedonic hunger. EBI and PFS were given pre-and post-treatment.
RESULTS: 111 subjects (99 F, 12 M) completed all Week 12 assessments. With no differences between conditions on any measure, analyses used the combined sample. M % weight loss overall was 4.4% (SD=3.71) and M meeting attendance was 9.29 (SD=2.43). Significant improvement was seen on total score and all three factor scores of the PFS, EBI total score, and 21 of the 26 behavior-specific EBI items, ps < .05. Changes in EBI and PFS total scores were correlated with % weight loss, rs = .59 and .21, respectively, ps < .05, as were changes in 17 of the 26 EBI items, rs = .20 to .51, ps< .05. Change in EBI total score, but not PFS total score, was correlated with meeting attendance, rs = .36 (p < .001) and .08 (NS), as were 11 of the individual EBI items, rs = .20 to .32, ps < .05.
CONCLUSIONS: After a brief weight loss program using a commercial format, subjects showed widespread improvement in weight-related behaviors and hedonic hunger, with more improvement related to greater weight loss. Meeting participation was related to improvement in weight-related behaviors but not in hedonic hunger.
Supported by Weight Watchers International

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Paper Session 30 11:30 AM-11:48 AM 4055

INTERNET-BASED PHYSICAL ACTIVITY PROGRAM FOR STUDENTS WITH MENTAL HEALTH DISORDERS: A RANDOMIZED PILOT TRIAL

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Some 12–18% of college students have a diagnosable mental illness and increasing rates of anxiety and depression have important societal implications. Physical activity (PA) has been proposed as a treatment alternative to counseling or medication, and the internet is a means of delivering PA information to the college-aged population. The purpose of this randomized pilot trial was to examine the effects of a 10-week internet-delivered PA program on PA, self-efficacy, anxiety and depression in students receiving mental health counseling. Participants (n=47, M age=25) were randomly assigned to a control or intervention condition. The intervention group had access to a website designed to promote PA, received a pedometer, and attended two meetings with PA counselors who discussed PA goals and barriers. PA was assessed via accelerometry, and depression and state anxiety were measured using the Beck Depression Inventory (BDI) and State-Trait Anxiety Inventory (STAI), respectively. Self-efficacy for PA was assessed using the Barriers Self-Efficacy Scale (BARSE) and Exercise Self-Efficacy Scale (EXSE). There was a significant time effect for PA, with both groups increasing their PA levels across the 10-week intervention and a larger increase in the intervention (d=.68) than the control group (d=.05). There was a significant effect for time, with both BARSE and EXSE declining but more so in the control (BARSE, d=-.48; EXSE, d=-.51) than intervention group (BARSE, d=-.19; EXSE, d=-.22). Effects on the BDI and STAI slightly favored the intervention (BDI, d=-.12; STAI, d=-.09) over the control group (BDI, d=-.07; STAI, d=.27). Finally, correlation analyses showed increases in PA were associated with increases in EXSE (r=.62) and BARSE (r=.63) and decreases in depression (r=-.44) in the intervention group, but not in the control group. These results suggest that an internet-delivered PA intervention may be a promising approach to promoting PA and improving mental health among college students with mental health disorders.

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Paper Session 30 11:48 AM-12:06 PM 4056

RESULTS OF THE ACT TRIAL FOR INCREASING PHYSICAL ACTIVITY

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Increasing moderate-to-vigorous physical activity (MVPA) is critical for preventing the rising rates of obesity in low income and minority adolescents. The purpose of this study was to test the effects of a motivational and behavioral intervention for increasing MVPA in low income and minority adolescents. The “Active by Choice Today” (ACT) is a randomized controlled school-based trial involving 24 middle schools throughout South Carolina. Of the 1,563 6th grade students, who were randomized to (motivational plus behavioral skills) intervention or comparison (health education only) after-school programs, 1,308 students (mean age, 11.3 years, 72% African American, 71% free or reduced lunch, 53% female) completed the study. The primary outcome measure was MVPA based on 7-day accelerometry estimates at mid-point and at 2-weeks post-intervention. Dose and fidelity measures indicated that 11 of the 12 intervention schools met the dose delivered criteria of 75% and 9 of the 12 intervention schools met the implementation fidelity criteria. Baseline analyses controlling for covariates showed that female adolescents engaged in fewer minutes of MVPA than male adolescents and that body mass index (BMI) was negatively correlated with MVPA. Using multiple imputations and an intent-to-treat analyses, a mixed effects model showed a significant intervention effect at mid-point, indicating that on average, students in the intervention schools engaged in significantly greater minutes of MVPA per day than those in the control schools ($p<.05$). A mixed effects analyses, however, demonstrated no difference in MVPA between students in the intervention versus control schools at 2-weeks post-intervention. Motivational and behavioral skill school-based programs can increase MVPA in low income and minority adolescents during after-school intervention programs, but have limited success for increasing MVPA outside of the school environment given the high number of barriers experienced by low income and minority adolescents.

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Paper Session 30 12:06 PM–12:24 PM 4057

COMPARISON OF ENERGY EXPENDITURE, MVPA AND STEPS IN A PERSONAL TRAINING COMPUTER GAME AND SELF-PACED EXERCISE

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The new generation of wireless based computer games is meant to stimulate greater interaction and physical movement during game play. The newest wave of interactive games are marketed as fitness tools and incorporate virtual personal fitness trainers, aerobic and resistance exercises to increase physical movement during play. Although previous studies have examined energy expenditure during sport based interactive games, the physical demands of fitness based interactive games have not been studied. The purpose of this study was to compare energy expenditure, step count, and time spent in moderate-to-vigorous physical activity (MVPA) in an interactive personal training gaming environment (IGE) and a bout of self-paced exercise (SPE). Twenty-two subjects (8 females and 14 males; mean age, 22.4 years) who self reported a regular schedule of exercise wore a Bodymedia Pro3 armband on their right triceps. Data were collected over four days: 2 days the participants played the Wii EA Active Sports Personal Trainer and 2 days the participants were asked to engage in their regular schedule of physical activity. Each participant engaged in a 15-minute orientation session to the IGE condition. Participants were asked to engage in 45 minutes of physical activity during each data collection period. Order of the conditions was counterbalanced. Results demonstrate that participants during the IGE on average expended 216.07 calories, accumulated 1,054 steps and spent 29.77 minutes in MVPA. The means for the participants during the SPE condition were 277 calories, 2,930 steps and 37.45 minutes in MVPA. Running and lifting weights were the most common exercises reported for the SPE condition. Repeated measures ANOVAs and paired t-test post hoc showed that participants expended more calories ($p = .000$), accumulated more steps ($p = .000$) and engaged in more MVPA ($p = .000$) during the SPE condition compared to the IGE. In conclusion, higher physical demands were elicited when participants engaged in their regular schedule of physical activity compared to an interactive gaming condition.

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Citation Paper

Paper Session 30 12:24 PM–12:42 PM 4058

RCT OF A FAMILY PHYSICAL ACTIVITY PLANNING INTERVENTION AMONG PARENTS AND THEIR CHILDREN

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Physical activity interventions among youth have resulted in modest outcomes; thus, there is a need to increase the theoretical fidelity of interventions and hone pilot work before embarking on large scale trials. The purpose of this study was to examine the effect of a planning intervention in comparison to a standard condition on intergenerational physical activity in families with young children. Inactive families ($N=85$), with children between six and 10 years of age, were recruited through advertisements at schools and recreation centres from a medium-sized Canadian city. Families were randomized to either a standard condition (received physical activity guidelines and a local municipal healthy active living guide) or the intervention (physical activity guidelines, local municipal healthy active living guide+planning material) after completing a baseline questionnaire package (self-reported family and personal physical activity from the parents, demographics, intention). Sixty-five families (standard condition $n=34$; intervention condition $n = 31$) completed the four week follow-up questionnaire package. Complete cases analyses using repeated measures analysis of variance showed that the planning intervention resulted in higher self-reported family physical activity frequency ($F=5.31$; $\eta 2 = .08$) and total minutes ($F=4.26$; $\eta 2 = .06$) compared to the standard condition and this was due to an increase in unstructured family activities frequency ($F=7.31$; $\eta 2 = .11$) and total minutes ($F=6.49$; $\eta 2 = .09$) over the four weeks. These significant findings were maintained using intention to treat analyses. Follow-up exposure analysis of the intervention identified that 84% of the families used the intervention material. The results are promising and suggest that theoretical fidelity targeting parent regulation of family activity may be a helpful approach to increasing weekly energy expenditure.

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Paper Session 30 12:42 PM–1:00 PM 4059

EFFECTS OF A TRANSFORMATIONAL TEACHING INTERVENTION ON ADOLESCENT SELF-DETERMINED MOTIVATION: A RANDOMIZED CONTROLLED FEASIBILITY TRIAL

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A growing body of evidence within the organizational psychology literature suggests that transformational leadership behaviors can be developed through short-term interventions, and result in positive changes in followers’ attitudinal and behavioral responses. In this study, we conducted a 5-month trial involving 26 physical education teachers from 11 high schools in the lower mainland of British Columbia as well as their grade nine students (Age = 14, Nstudents=709). The intervention was guided by Kelloway and Barling's (2001) 4-component framework, and involved a one-day experiential workshop for teachers that focused on the four central dimensions of transformational leadership, namely idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. Two months after the initial workshop teachers in the intervention condition received a ‘booster’ component, which involved the provision of reading materials designed to reinforce the principles of transformational teaching outlined in the workshop. The results revealed that after controlling for baseline levels of transformational teaching, teachers in the intervention condition were reported (by their students), to display higher levels of transformational teaching at both two ($F(1, 566)=4.98$, $p<.05$) and four months ($F(1, 508)=6.23$, $p<.05$) after the workshop. The results also revealed that, after controlling for baseline levels of motivation, students of teachers in the intervention condition reported improved levels of self-determined motivation at two ($F(1, 546)=6.14$, $p<.05$) and four ($F(1, 495)=7.92$, $p<.05$) months after the workshop relative to those in the control condition. Given the cost effective and sustainable means of delivering such training opportunities with teachers, future research is encouraged to examine the effects of transformational teaching initiatives on adolescents’ physical activity behaviors both within and outside of school hours.

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Paper Session 31 11:30 AM-11:48 AM 4060

EVALUATION OF A BRIEF WEB-BASED GENETIC FEEDBACK INTERVENTION FOR REDUCING ALCOHOL-RELATED HEALTH RISKS ASSOCIATED WITH ALDH2*2

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There is increasing interest in developing interventions that incorporate genotype-specific risk information to promote health behavior change. Genetic feedback interventions for substance use have focused on tobacco use; the efficacy of interventions for alcohol-related health risks is unknown. We evaluated the feasibility, acceptability and brief efficacy of a web-based intervention tailored to ALDH2 genotype. The ALDH2*2 variant is associated with partial protection against alcohol dependence, but confers significantly increased risk for alcohol-related cancers as a function of alcohol exposure. 200 participants in a prospective study of drinking behavior provided DNA samples and were randomly assigned to either a) web-based feedback with information about their ALDH2 genotype and associated health risks, or b) an attention-control feedback session. Outcomes included immediate cognitive/affective responses to feedback, theoretical correlates of behavior change (risk perception; behavioral intentions; readiness to change), and drinking rates at 30-day follow up. Primary analyses examined intervention effects for participants at increased genetic risk for alcohol-related cancers (ALDH2*1/*2 genotype; n=72). The feedback group reported higher ratings of feedback interest, engagement and negative affect compared to the control group (ps <.05). Compared to control participants, intervention participants also showed greater increases in risk perception and readiness to change immediately following the intervention, as well as significantly greater reductions in drinking quantity and frequency at 30-day follow up (all ps < .05). These results provide preliminary evidence for the feasibility, acceptability and short-term efficacy of web-based genetic feedback interventions for reducing alcohol-related health risks associated with ALDH2*2.

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Paper Session 31 11:48 AM-12:06 PM 4061

BINGE DRINKING IN WOMEN AT RISK FOR DEVELOPING EATING DISORDERS

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The purpose of this study was to determine binge drinking rates in college-age women at risk for developing eating disorders and to examine factors related to binge drinking over time. Participants were 480 college age women who were at high risk for developing an eating disorder and who had a Body Mass Index between 18 and 32. Participants were assessed yearly for four years. Our results showed that participants reported high rates of binge drinking and frequent binge drinking throughout college. Binge drinking was positively correlated with dietary restraint, coping using substances, coping using denial, and life events. Furthermore, binge drinking after one year was predicted by dietary restraint and bulimic behaviors at baseline. Our findings suggest that binge drinking is highly prevalent in women at high risk for developing eating disorders. Results also indicated that binge drinking was related to dieting and maladaptive coping patterns. Interventions and prevention strategies for women with strong weight and shape concerns should also address problematic alcohol use.

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Meritorious Student Paper
Citation Paper
Paper Session 31 12:06 PM–12:24 PM 4062

BINGE DRINKING FREQUENCY PREDICTED BY VETERAN STATUS AND THE INTERACTIVE RELATIONSHIP BETWEEN HISPANIC ETHNICITY AND VETERAN STATUS

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Increases in binge drinking (heavy episodic drinking) have been reported among active duty military personnel who have been deployed to combat areas. As large numbers of US Veterans prepare for return from active military service, studies are needed to determine both binge drinking and maximum drinking rates among US Veterans and factors that influence those rates in order to provide enhanced, targeted services for this population. Using data obtained from self-reported alcohol drinkers (in the past month) collected as part of the 2008 Behavioral Risk Factors Surveillance Survey (N=171,227), we ran zero inflated and zero truncated Poisson regressions (alphas set to .05) of drinking habits for Veterans (verses non-Veterans), controlling for known factors predicting drinking habits (age, ethnicity, children in home, marital status, poor health, low social support, income, education, and health insurance). We found that Veteran status uniquely, positively predicts self-reported binge drinking frequency in the last month (b= 0.0869, P|z|=0.035), but not maximum drinking on a maximum drinking occasion in the last month (P|z|=0.628). In search of subpopulation differences in these associations, we reran these equations with all controls while including interaction terms between Veteran status and ethnicity. In doing so, we found that Hispanic Veterans are significantly more likely to self report binge drinking than the general population (b=.304, P|z|=0.046). In fact, Veteran status negated the US Hispanic population's negative relationship with binge drinking frequency (b=- 0.209, P|z|≤0.000). This paper presents all data and analysis behind these findings and the implications for preventing and treating binge and maximum drinking habits among uniquely at-risk US Veterans, exploring specific implications and interventions for Hispanic Veterans.

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Paper Session 31 12:24 PM–12:42 PM 4063

RISK FACTORS FOR DRINKING AMONG HIV-POSITIVE AFRICAN-AMERICAN ADULTS: DEPRESSION, MOTIVATION, AND GENDER

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Alcohol dependence is often cited in conjunction with the growing rate of African Americans living with HIV (Ma, et al., 2008; Wingood & DiClemente, 1998). African Americans who struggle with alcohol are also likely to be concurrently struggling with depression; this pattern appears across the lifespan (Maag & Irvin, 2005). Although, there is evidence linking depression to HIV; depression to alcohol; and alcohol to HIV, there is limited research that simultaneously examines the interlocking associations between all three factors. Secondary data analysis was conducted on baseline survey data of 88 African American HIV-positive adults with drinking problems enrolled in the Project PLUS intervention to examine the correlates of drinking in the past 30 days. Hierarchical linear regression analysis showed a significant interaction between gender and depression to predict total drinks reported over and above participants' motivation to reduce drinking (R-squared=0.56, p<0.001). Running the model for each gender found that: while depression was the sole predictor of drinking for men and suppressed the role of motivation, the reverse was true for women; depression was not significant after controlling for motivation to reduce drinking. African American men and women living with HIV have different risk factors for recent drinking. Understanding the link between depression, gender, and motivation to reduce drinking for HIV-positive adults with alcohol problems is crucial for the development of gender and culturally relevant treatments.

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Paper Session 31 1 12:42 PM–1:00 PM 4064

ALCOHOL EXPECTANCIES CHALLENGES: A COMPREHENSIVE REVIEW

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Alcohol outcome expectancies research has been build on the assumption that an individual's expectancies about the effects of alcohol affect the likelihood of that individual drinking. From this perspective, researchers have developed positive Alcohol Expectancies Challenges (AECs) that seek to minimize expectancies for positive outcomes (enhanced socialization, relaxation, sexual enhancement, assertion) and to decrease alcohol consumption. The NIAAA (2002) has already identified AECs as a method that has shown effectiveness in reducing alcohol use among college students

The present review offers a comprehensive integration of the 12 randomized published studies that compared positive AECs with control groups. The review highlights the methodological problems that may contribute to the inconsistent outcomes across studies. For example, experimenters have utilized varying expectancy measures that have multiple scales; the multiple scales within each study may not represent statistically independent observations. In addition to difficulties in the measurement of expectancies, the measurement of alcohol consumption has also been problematic. Overall, only 21% of the studies assessed heavy episodic drinking (i.e. binge drinking), which is an important indicator of alcohol related health and social problems within college populations.

The review also examined the overall efficacy of positive AECs at follow-up and found little support for the impact of these interventions. At posttest, only 30% of the studies found any evidence that the interventions affected expectancies, and this result decreased to only 15% at the first follow-up. In addition, AECs significantly altered alcohol consumption (on any measure) in only 26% of the interventions. Overall, this review sounds a cautionary note regarding the impact of these interventions.

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Paper Session 32 11:30 AM-11:48 AM 4065

TEACHING MEDICAL STUDENTS HOW TO INITIATE BEHAVIOR CHANGE DISCUSSIONS: A BLENDED CLASSROOM AND DISTRIBUTED LEARNING APPROACH

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Medical school curricula often provide limited instruction about how to target health behaviors that contribute to disease. Distributed learning (DL) enables students to self-pace learning as they engage with instructional content at any time or any place where the individual has access to the internet. To teach third year, family medicine clerkship students behavior change skills including motivational enhancement, skill building, goal setting, and relapse prevention, we combined an interactive classroom session, with an online learning experience. The DL approach facilitated an active learning process where medical students encountered concepts in the DL material, implemented those concepts in online problem solving activities and through face-to-face interactions in the classroom setting, and finally explored with the instructor via online discussions their implementation of those concepts in patient encounters at the clinical site. We examined how the medical students used the DL materials and whether there were changes in attitudes and knowledge about behavior change counseling. A total of 146 medical students completed pre- and post-course assessments. Of these students, 118 (81%) viewed at least 90% of the online written content and 104 (71%) students viewed it in one sitting. Among those who viewed the content in one sitting it took M=41 min 20 secs (SD=24 mins 35 secs) to view all of the content. Students' confidence in their ability to use techniques to help patients change unhealthy behaviors and their knowledge about health behavior change improved compared to their baseline ratings ($p<.01$). These data suggest that a DL approach facilitates learning, improves medical students' confidence in their skills, allows students to learn material at their own pace, and provides a new avenue for dialog between students and faculty.

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Paper Session 32 11:48 AM-12:06 PM 4066

MENTORS' BEHAVIORS THAT FACILITATE THE DEVELOPMENT OF STUDENTS' RESEARCH SKILLS: A GROUNDED THEORY STUDY

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The purpose is to present a grounded theory of mentoring. Racial and ethnic minorities and females are underrepresented in health research careers resulting in a dearth of research on under represented minorities (URM). Little research examined the influence of mentoring on students' career choices or development of research skills.

Background: Mentoring is an important process for socializing researchers and influencing their career choices.

Methods: Participants in this study (n=60) included 30 faculty members (mentors) from multiple disciplines conducting research and working with 30 undergraduate or graduate students. Mentors and students attended a ½ day workshop on mentoring held at one of three Research Universities. Audio-tapes of the discussions at each of the three workshops were transcribed verbatim and analyzed using constant comparative analysis. Codes were assigned to each response and grouped into categories. Verification was used in each step of the inquiry as the researchers moved back and forth between design, implementation, and data analysis to ensure congruence in each phase of the study.

Results: Participants described the following core concepts: (1) Having knowledge; (2) Having vision; (3) Being creative; (4) Having excellent communication skills; and (5) Being inspiring. Descriptions of each category will be discussed in the presentation and specific examples of URM students will be given. Aspects of the mentoring process that changed students' beliefs and behaviors related to their research capabilities will be described.

Conclusions and implications: Categories 1–4 are congruent with the Dreyfus Model of Skill Acquisition (Dreyfus & Dreyfus, 1980). Category 5, 'being inspiring,' goes beyond skill acquisition as participants described mentors who enabled students to be creative in solving problems, make organizational and personal changes, facilitate career opportunities and empower their students. A commitment to mentoring students, needed in order to encourage students to pursue research careers, is critically important for URM students.

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Paper Session 32 12:06 PM–12:24 PM 4067

EDUCATIONAL INITIATIVE TO ENCOURAGE EVALUATION AND INTEGRATION OF GENETICS INTO SOCIAL AND BEHAVIORAL RESEARCH

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Empirical research since the completion of the Human Genome Project has highlighted the complex nature of health and behavior, even as technology has made it possible to identify genetic variants associated with common traits and behaviors more easily. As more genetic changes are identified and associated with complex traits and diseases, there is an opportunity to incorporate those data into social science research more broadly. Genetics is moving personal and public health toward prevention- based paradigms, for which behavior change is often the most effective intervention. Engaging effectively in prevention-based and other types of research necessitates a transdisciplinary team including genetics specialists and social scientists. To participate in such teams the social scientist nees to appreciate genetics methods to evaluate the utility of genetics-based studies and generate new research questions that incorporate the resulting data but not be an expert in the field. The National Coalition for Health Professional Education in Genetics (NCHPEG), with support from the NIH Office of Behavioral and Social Science Research, has undertaken an effort to produce a web-based educational program in genetics for social and behavioral science (SBS) researchers. The goals of this program are to increase genetics knowledge with the purpose of improving genetics literacy and expanding the research imagination for social scientists. This presentation will address the development of the program's conceptual outline, developed after discussions with geneticists and SBS researchers. Those discussions culminated in multidisciplinary advisory and writing committee meetings. The conceptual outline includes core concepts in genetics and essential overarching themes of variation, gene-environment interplay, evaluating genetics research, and the impact of social and behavioral science methods and perspectives on genetics research. The deliberations provide insight into the educational challenges at the intersection of SBS and genetics and one attempt to meet the challenges.

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Paper Session 32 12:24 PM–12:42 PM 4068

INTEGRATED PRIMARY CARE TRAINING AND EDUCATION IN GRADUATE SCHOOLS: WILL THE NEED BE MET?

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As behavioral health services are becoming increasingly integrated in primary care settings, there is a growing need for psychologists to effectively deliver these services. Psychologists who deliver behavioral health services aim to integrate evidence-based interventions into the primary care setting through a dynamic collaboration with physicians and patients. In response to the increasing need for psychologists trained in behavioral health interventions, there is a growing base of accredited internship sites that offer a major or minor rotation in integrated primary care. We reviewed the Association of Post-doctoral and Internships Centers (APPIC) online directory, which revealed that there are currently 89 sites offering a major rotation and 182 sites offering a minor rotation in integrated primary care. Despite the growing trend of integrated primary care internship opportunities, very few graduate programs offer sufficient training experiences for students. Although internship bound graduate students may be well versed in the traditional mental health approach, most are not prepared to function in the primary care environment (i.e. learning new medico-pharma language, impact of disease on psychological functioning, and communicating (both written and verbal) with medical professionals). Because most integrated primary care training currently takes place at the postgraduate level, psychology interns may experience a difficult transition to delivering integrated primary care. The question then, is what can graduate psychology programs offer through formal training and practical experiences to best prepare students for the integrated primary care field and internships at academic health centers. The purpose of this presentation is to summarize, build upon, and expand the current pre-graduate training paradigms for integrated primary care. Recommendations for training include: specific curriculum, shared training with medical students/residents, increased practica experiences, and development of lecture series or shared grand rounds.

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Meritorious Student Paper
Paper Session 32 12:42 PM–1:00 PM 4069

EFFECTIVENESS OF MOTIVATIONAL INTERVIEWING INTERVENTIONS FOR PEDIATRIC HEALTH BEHAVIOR CHANGE: A META-ANALYTIC REVIEW

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Introduction: Motivational Interviewing (MI) has become an increasingly common approach to promoting health behavior change across health-related domains. Evidence for MI's effectiveness when used with children and adolescents has expanded in recent years. However, reviews of pediatric health behavior research have not quantitatively summarized the effect size of MI treatment outcomes. This study sought to provide estimates of effectiveness across health domains as well as specific effect sizes for different classes of pediatric health behaviors (e.g., substance abuse, diet, sexual health behaviors). Method: Literature searches of electronic databases (i.e., PsycINFO, PUBMED/MEDLINE, & ERIC) were conducted to glean relevant studies. In addition, manual reference searches of identified review articles were conducted. Only studies targeting pediatric health behavior change which provided statistics sufficient to compute effect sizes were included. Results: An omnibus weighted mean effect size for all identified MI interventions revealed a small, but significant, effect size [mean d =.234, 95% CI=.171-.296, n= 35], indicating that MI interventions are generally efficacious across pediatric health domains. A small, but significant, effect size was observed at follow-up for studies providing longer-term follow-up data (mean d =.253, 95% CI=.153-.353, n =21) suggesting that MI interventions in children and adolescents retain some of their effect over time. MI interventions were effective for both substance abuse and other health behavior interventions with a slightly larger effect for non substance-related interventions (e.g., diet, sexual health behavior). Clinicians should consider using motivational interventions, at least as one component of their treatment, when attempting to help children and adolescents make health behavior change.

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Paper Session 33 11:30 AM-11:48 AM 4070

SPIRITUAL AND SOCIAL CAPITAL AND FUNCTIONING IN A NATIONAL SAMPLE OF AFRICAN AMERICANS

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Spiritual and religious capital are emerging constructs that reflect the capital or benefits gained by having a close relationship with a higher power, and being involved in a faith-based community, respectively. They are more specific forms of the broader construct, social capital. The present study examined the relative contributions of spiritual and religious capital to physical and emotional functioning, in a national sample of African American adults. Analyses were conducted to determine if these constructs had a unique contribution above and beyond general social capital, and controlling for a related construct, social support. African American men and women (N=803) were interviewed by telephone. The national sample was recruited using probability-based methods. Participants completed a 30-minute interview and for doing so received a $25.00 gift card in the mail. Hierarchical linear regressions revealed that religious and spiritual capital significantly added to the prediction of both physical and emotional functioning (R squared change = .07, significant at $p < .001$; Model F=9.92, $p < .001$; R squared change = .08, significant at $p < .001$; Model F = 12.17 $p < .001$, respectively), beyond social capital and social support. These relationships were examined separately for men and women, and were suggestive of differential roles of religious and spiritual capital for men vs. women. Analyses were also conducted to examine the role of the specific religious/spiritual capital subscales in predicting functioning. Findings are discussed in terms of implications for church- and faith-based health promotion interventions aimed at health disparities reduction.

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Paper Session 33 11:48 AM-12:06 PM 4071

MEASURING MEANING AND PEACE WITH THE FACIT-SP: DISTINCTION WITHOUT A DIFFERENCE?

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Introduction: The FACIT-Sp is a widely used measure of spiritual well-being, first reported with two empirically-derived factors (Meaning/Peace and Faith). Recent research supports a 3-factor solution, with Meaning and Peace as conceptually distinct factors, but it is unclear whether that distinction is of substantive importance.
Method: Utilizing three existing datasets (Ns = 1615, 207, 450), two and three factors solutions for the FACIT-Sp were examined with exploratory (EFA) and confirmatory (CFA) factor analyses. Correlation and hierarchical multiple regression analyses were conducted to examine the discriminant validity of the separate Meaning and Peace factors.
Results: In both EFA and CFA, the three-factor model was superior in absolute fit and relative to the two-factor model. Subsequent evaluation of the pattern of criterion-related validities suggested no substantive difference between the Meaning and Peace factors. In all three datasets, the correlation of CRV vectors for those subscales approached unity (vector r's = .99, .96, and .99) indicating they function the same way with respect to external correlates. Hierarchical multiple regression analyses mostly confirmed this finding, although variance uniquely attributable to the Peace factor appeared to have incremental validity for some of the HRQL variables.
Conclusion: The superior fit of the three-factor model suggests that respondents do perceive a distinction between Meaning and Peace. However, this does not appear to translate to practical differences in associations with external correlates. Correlation and regression analyses show that Peace may be more strongly related to outcomes than Meaning, but the pattern across outcomes is almost identical for the two factors. Thus, there was little evidence of discriminant validity between these two factors. Although the Meaning and Peace factors could be split, these results suggest there is little to be gained by doing so. Therefore, it is suggested that the FACIT-Sp can be used and scored in line with the original two-factor model, with Meaning/Peace scored as a single scale.

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Paper Session 33 12:06 PM–12:24 PM 4072

SPIRITUALLY-BASED MANTRAM REPETITION TO MANAGE PTSD IN VETERANS: A QUALITATIVE ANALYSIS OF USE AND OUTCOMES

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Objective: This study investigated the qualitative reports of a spiritually-based, non-pharmacological program of mantram repetition—silently repeating a sacred word or phrase intermittently throughout the day—to manage unwanted symptoms of PTSD. Unlike other meditative practices that require a quiet environment, particular posture, or eyes closed, mantram repetition can be conveniently practiced at any time or place.

Methods: Critical incident interviewing by Flanagan was used to conduct semi-structured, qualitative telephone interviews at 3-month post-intervention. Interviews were audio-taped, transcribed, and coded to identify and categorize the number of stressful incidents reported and how participants responded to those incidents.

Results: Participants were 65 outpatient Veterans (1 female) with chronic PTSD (63% Caucasian, 26% African American, 5% Latino and 6% other) with ages ranging from 25 to 84 (M=58, SD=9.2) and an average of 12 (SD=10.9) months of combat. They reported a total of 268 triggering incidents. The most common responses to these incidents were hyper-arousal (n=222), such as irritable/angry outbursts (n=109), anxiety/panic (n=56) and inability to calm down/relax (n=17). Sixty Veterans (92%) reported using mantram repetition effectively. It was most effective for relaxing/calming down (n=143), diverting attention away from the triggering incident (n=28), and letting go of anger (n=26).

Conclusions: Findings suggest that mantram repetition practice is predominantly beneficial for managing symptoms of hyperarousal in Veterans with chronic PTSD. Quantitative findings from the larger randomized trial corroborate these outcomes.

Impact: Spiritually-based practices such as mantram repetition may provide adjunctive, therapeutic benefits for managing PTSD in veterans. Such non-pharmacological approaches may be safer without side effects and may also be more cost effective.

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Paper Session 33 12:24 PM–12:42 PM 4073

SOCIAL AND RELIGIOUS SUPPORT IN PHYSICAL AND EMOTIONAL FUNCTIONING IN A NATIONAL SAMPLE OF AFRICAN AMERICANS

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The present study examined the relative contributions of social support (appraisal, belonging, tangible) and religious support (emotional support received, emotional support provided, negative interaction, and anticipated support) to physical and emotional functioning, in a national sample of African American adults. African American men and women (N=803) were interviewed by telephone. The national sample was recruited using probability-based methods. Participants completed a 30-minute interview and for doing so received a $25.00 gift card in the mail.

Hierarchical linear regressions revealed that religious social support made a significant contribution above and beyond general social support to the prediction of physical functioning (R squared change = .03, significant at p < .001; Model F= 9.94, p < .001). Specifically, belonging social support was associated with better functioning (β=-.17; p < .01), and negative interaction religious support was associated with worse functioning (β = .15; p < .001), suggesting that negative input from fellow church members may have a deleterious effect on physical performance. For emotional functioning, religious social support did not contribute significantly beyond general social support, however the findings for the individual dimensions of support were similar. All models were controlled for age, sex, education, and health status.

The unique contribution of religious social support to physical and emotional functioning highlights the specific role that religious support plays in people's lives, and serves to rule out the potential confound of general social support. Findings are discussed in terms of implications for church- and faith-based health interventions to reduce disparities in this area.

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Paper Session 33 12:42 PM–1:00 PM 4074

INDEPENDENT EFFECTS OF MINDFULNESS BASED STRESS REDUCTION ON SPIRITUALITY AND EMOTIONAL DISTRESS

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Research has shown that individuals with a higher sense of purpose and meaning in life have improved health outcomes; therefore interest in the use of secular practices to cultivate spirituality is growing. One such program, Mindfulness Based Stress Reduction (MBSR), is a structured, 8-wk, non-religious program that teaches participants how to manage stressful thoughts, feelings and behaviors. The purpose of this analysis is: 1) to evaluate changes in non-religious spirituality following MBSR training; and 2) to evaluate the relationship between changes in spirituality and mood. 337 MBSR participants (65%F; age 47±12yrs) voluntarily completed the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-SP-Ex) and the Profile of Mood States Short Form (POMS-SF) at baseline and at the conclusion of MBSR training. The FACIT-Sp-Ex measures overall spiritual well-being, faith and meaning/peace. The POMS-SF assesses overall mood and six mood subscales. Changes in spirituality did not differ by gender and was not correlated with age. Effect sizes are reported as partial η^2. Repeated measures ANOVA showed significant improvements in overall spirituality (η^2=0.38, p<0.001), meaning/peace (η^2=0.39, p<0.001) and faith (η^2=0.22, p<0.001) following MBSR training. Although significant improvement in overall mood (η^2=0.49), depression (η^2=0.30), anxiety (η^2=0.44), confusion (η^2=0.32), anger (η^2=0.34), fatigue (η^2=0.33) and vigor (η^2=0.32) were observed (p<0.001 for all), correlation analysis showed no significant relationship between changes in mood and spirituality. Our findings support that MBSR training is associated with increased spirituality and improved mood. These improvements are independent of each other and challenge the belief that that increases in non-religious spirituality are simply a surrogate marker for improved psychological health.

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Meritorious Student Paper

Paper Session 34 11:30 AM-11:48 AM 4075

DEMOGRAPHIC AND NEGATIVE AFFECTIVE PREDICTORS OF ATTRITION IN A LONGITUDINAL HIV-PREVENTION INTERVENTION

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In an attempt to optimize the reach and generalizability of future HIV-prevention efforts, we explored predictors of attrition in a randomized controlled trial (N=527) of a behavioral intervention that successfully reduced sexual risk-taking among 18 to 30 year old men who have sex with men (MSM). At baseline, participants reported their demographics, prior 3-month sexual behavior, and current emotional state. MSM were then randomly assigned to a wait-list control or an experimental condition in which they interacted with a video-based, HIV-prevention training simulation. MSM acted as the main character in this virtual environment, making risk-relevant decisions (e.g., drug use, condom use) in various dating contexts they may likely encounter in the real world (i.e., online, night club). MSM were asked to return for a 3-month follow-up. Results of a logistic regression conducted to identify predictors of attrition revealed that ethnicity, sexual identification, prior sexual risk-taking, and condition assignment were not significant predictors [p's>.05]. However, age was negatively associated with attrition [OR=.895, 95% CI=.841-.952, p<.001] while income was positively related [OR=1.05, 95% CI=1.00–1.11, p=.039]. Furthermore, our measure of negative affect, primarily comprising shame-related feelings, was positively related to attrition [OR=1.32, 95% CI=1.03–1.69, p=.029]. These findings are disturbing in that younger MSM are more likely to contract HIV and shame, a self-conscious moral emotion, has been linked to increased sexual risk-taking. Our findings suggest a need for behavioral scientists to anticipate and fully consider the impact of age and reactance-related emotional responses when designing interventions. Future research should examine, on a granular level, the antecedents of shame and how best to attenuate it within intervention settings.

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Paper Session 34 11:48 AM-12:06 PM 4076

COMPUTERIZED STRESS MANAGEMENT TRAINING FOR HIV+ WOMEN: A PILOT INTERVENTION TRIAL

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While promising cognitive behavioral stress management interventions for HIV+ men have been reported in the literature, few interventions to address the unique psychosocial needs of HIV+women have been developed or tested. To address this gap in the literature, we developed and evaluated a brief, computerized stress management intervention for HIV+women. The intervention was guided by Lazarus and Folkman's Transactional Model of Stress and Coping, findings from qualitative focus groups, and prior empirical investigations of cognitive behavioral stress management interventions for HIV+men (Brown & Vanable, 2008). Sixty HIV+female participants (70% African-American) were randomized to an immediate or delayed intervention condition. Nearly half (47%) of participants were also engaged in mental health treatment; 22% were receiving substance use treatment. Assessments of psychological functioning, perceived stress, coping self-efficacy, and stress management knowledge were obtained at baseline and at a one month follow-up (92% retention across conditions). The majority of participants (57%) did not own a personal computer and 20% of participants had not used a computer prior to the study. However, all participants were able to navigate the program and most participants provided valid responses to every intervention activity (75%). Intervention satisfaction ratings (M=3.3 out of 4.0) and exit interviews indicated considerable enthusiasm for the program. Compared to the delayed treatment control group, intervention recipients reported improved knowledge regarding stress management at the follow-up, $F(1, 56)=7.5$, $p < .01$. However, depressive symptoms, psychological distress, perceived stress, and coping self-efficacy did not differ between the immediate and delayed intervention groups ($ps > .05$). Findings provide evidence of intervention feasibility and acceptability as well as evidence of improved stress management knowledge. A sufficiently powered RCT is needed to test the impact of our intervention on coping self-efficacy and psychological functioning outcomes.

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Paper Session 34 12:06 PM–12:24 PM 4077

NEW TECHNOLOGY: MOTIVATIONAL ENHANCEMENT SYSTEM FOR YOUTH LIVING WITH HIV

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Although computer-delivered brief interventions cannot fully replicate the human elements of traditional behavioral interventions, they have advantages in terms of tailoring, replicability, increased anonymity, decreased cost and time, and greater relevance to the developmental context of adolescents and emerging adults. We have utilized existing intervention authoring software to develop three specific interventions for youth living with HIV (MISTI targeting sexual risk, MESA targeting medication adherence, and MESH targeting nutrition and exercise). The interventions, based on Motivational Interviewing (MI) principles, are designed to increase intrinsic motivation for change and boost self-efficacy to take action. An animated narrator guides the participant through staging rulers, decisional balance exercises, feedback, and optional goal setting. The narrator reflects back the participant's own responses, with affirmations to boost self-efficacy and statements emphasizing personal choice. Modules for all interventions are individually-tailored, based on the participant's report of readiness to change and willingness to set goals. We will present feasibility and acceptability data regarding the use of MISTI, MESA, and MESH for youth living with HIV (ages 16–25). In Study 1 (MISTI), we randomized 26 youth to a single computer session or a single counselor-delivered MI session targeting sexual risk reduction. 100% of youth received the MISTI session compared to 69% of youth receiving in-person MI. In Study 2 , which is ongoing, youth living with HIV are receiving two sessions of MISTI for sexual risk. In Study 3 (MESA), two computer sessions will be offered for youth newly starting HIV medications across 4 cities. 10 youth will receive MESA targeting medication adherence at baseline and at one month follow-up. 5 youth will test a program targeting nutrition and exercise (MESH) to be used as a future control condition. We will present promising preliminary data based on retention rates, satisfaction questionnaires, and qualitative interviews for all three studies.

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Citation Paper

Paper Session 34 12:24 PM–12:42 PM 4078

DEVELOPING CONCURRENCY MESSAGES TO REDUCE HIV/AIDS DISPARITIES IN BLACK COMMUNITIES

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Background: HIV/AIDS disparities continue to persist among African American and African-born populations in the United States. In Seattle and King County, Washington, non-Hispanic Blacks comprise 6% of the population, yet they represented 18% of all newly diagnosed cases of HIV between 2002 and 2006. Due to structural factors, including disproportionate incarceration rates, social networks, and migration patterns, African American and African-born populations are more likely to be in sexual networks where there is a higher percentage of overlapping sexual partnerships (concurrency). These partnerships play an important role in racial disparities in HIV. Mathematical models show that very small changes in sexual concurrency can have a dramatic impact on HIV transmission. As such, HIV prevention messages highlighting concurrency, are as important as messages promoting condom use or abstinence.

Methods: This community-academic-marketing concurrency project utilized community-based participatory research methods to translate the science of sexual networks into culturally-resonant HIV prevention messages as a novel approach to help reduce racial disparities in HIV in African American and African-born populations. Formative data collection consisted of 20 Key-informant interviews, 10 focus groups, and four community discussions.

Results: Seven thematic categories emerged from formative data collection. Themes included: dating as concurrency; cultural acceptance of concurrency among men; gender norms; stigma (HIV and sexual orientation); lack of discussion and communication about sexual relationships and HIV; and lack of education and awareness of concurrency as a risk factor.

Discussion: The community-academic-marketing partnerships' use of formative data to: develop HIV prevention concurrency messages; disseminate these messages; and pilot and evaluate the impact of HIV prevention concurrency messages in these communities is discussed.

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Paper Session 34 12:42 PM–1:00 PM 4079

HIV/AIDS-RELATED COMMUNICATION AND PRIOR HIV TESTING IN TANZANIA, SOUTH AFRICA, ZIMBABWE, AND THAILAND

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BACKGROUND: Informal, interpersonal communication within a community about HIV and AIDS, or lack of such communication, may influence community members' uptake of voluntary counseling and testing. Drawing from Noelle-Neumann's spiral of silence theory, this study examined the association between communication about HIV/AIDS and prior HIV testing in communities in Tanzania, Zimbabwe, South Africa, and Thailand. METHODS: Participants (N=14,818) in 48 communities across 5 sites throughout the 4 countries completed a behavioral survey assessing communication, prior VCT uptake, social norms, stigma, and sexual risk. RESULTS: Cross-site and site-specific logistic regression models demonstrated that frequent conversations about HIV were significantly associated with prior HIV testing at every site and across sites. Odds ratios for each site ranged from 1.885 to 3.085, indicating a roughly doubled or tripled chance of past VCT uptake. Female gender was also significant across sites and at every individual site except Zimbabwe. CONCLUSIONS: Results indicate that verbal communication may be an important mechanism for increasing health behaviors and inclusion in future interventions should be considered.

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Citation Paper
Paper Session 35 11:30 AM-11:48 AM 4080

IMPACT OF EXERCISE ON SLEEP QUALITY (SQ) AND IMMUNE FUNCTION AMONG BREAST AND PROSTATE CANCER (BC & PC) PATIENTS RECEIVING RADIATION (RTH)

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Physical exercise positively influences sleep via altered concentrations of sleep modulating cytokines (IL-6, TNFα, TNFαr1), but these links are not fully elucidated for cancer-related SQ impairments. This 2-arm pilot study compared the influence of a moderate intensity home-based exercise intervention (HBEX), including resistance and aerobic training, to standard care (SC) on SQ and cytokines. BC and PC patients ($N=38$; mean age=57; 71% breast/female) beginning RTH, were randomized to a HBEX (7 days/wk, 4 weeks) or SC (no exercise) arm. Global SQ (GSQ), subjective SQ (SSQ), sleep latency (SL), sleep duration (SDR), sleep efficiency (SE), sleep disturbances (SDT), use of sleep medication (USM), and daytime dysfunction (DD) were assessed via the Pittsburg Sleep Quality Index. Cytokines (IL-6, TNFα, TNFαr1) were assessed pre- and post-intervention. Participants met the criteria for impaired GSQ (mean= 7.44; cut-off>5.0) at baseline. ANCOVAs, controlling for baseline and age, revealed significant differences in level of SDT and IL-6 with trends toward differences in DD and TNFαr1 between groups post-intervention with the HBEX group demonstrating less SDT and DD and lower IL-6 and TNFαr1 compared to the SC group. The following associations were found in the HBEX group but not in SC: a.) positive associations between changes in IL-6 and SDT ($r=0.65$; $p<0.05$), impaired GSQ ($r=0.45$, $p<0.10$) and impaired SD ($r=0.44$, $p<0.10$) as well as positive associations between changes in TNFα and DD ($r=0.62$; $p<0.05$), impaired SSQ ($r=0.60$; $p<0.05$), impaired GSQ ($r=0.63$; $p<0.05$), SL ($r=0.42$; $p<0.10$), impaired SE ($r=0.42$ $p<0.10$), and USM ($r=0.45$; $p<0.10$). These data suggest that exercise might help cancer survivors to sleep better via down-regulation of inflammatory cytokines. Future phase III RCTs are needed to fully explore these relationships between exercise, sleep and immune function in cancer. NCI grants 1R25CA102618 & K07CA120025.

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Paper Session 35 11:48 AM-12:06 PM 4081

LONELINESS AND PROANGIOGENIC CYTOKINES IN NEWLY DIAGNOSED TUMORS OF COLON AND RECTUM

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Lack of social support has been prospectively associated with cancer progression. Recent studies have attempted to show the role of proangiogenic cytokines as a possible underlying mechanism in this link, by investigating the association of serum levels of these cytokines with different indices of social support and loneliness. This study extended this line of research by measuring the in situ levels of two important proangiogenic cytokines, VEGF and IL-6 in tumors of colon and rectum. Fifty-one newly diagnosed patients with colorectal tumors (mean age=68.3 years) completed two measures of loneliness 1–2 days prior to their surgical treatment. The first was an explicit self-report questionnaire which tapped into negative feelings as a result of low social support. The second was a standardized computer-based task which measured loneliness implicitly. Immunohistochemical analyses were performed on tumor tissues post-surgery to determine cytokine levels. Logistic regression showed that higher levels of implicit loneliness independently predicted higher VEGF, controlling for Dukes stage and explicit loneliness, both of which were nonsignificant predictors. No significant relations were found between the loneliness measures and IL-6. The results of this study suggest VEGF to be a pathway through which psychosocial stress may lead to worse cancer-related outcomes. Implications are discussed in terms of devising targeted psychosocial and immunotherapeutic interventions for cancer patients with low social support.

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Paper Session 35 12:06 PM–12:24 PM 4082

PRE-SURGICAL PSYCHONEUROENDOCRINE ASSOCIATIONS WITH LEUKOCYTE COUNT FOLLOWING ONCOLOGIC SURGERY

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The post-surgical immune response involves hyperinflammation, which may be indicated by elevated leukocyte count. Although some elevation in leukocyte count is an expected physiologic response to surgical tissue trauma, excessively elevated leukocyte count may have deleterious effects on surgical recovery. Greater pre-surgical psychosocial stress and lower social support have been associated with poorer surgical recovery. One mechanism by which this may occur is through (dis) stress-induced impairments in glucocorticoid inhibition of the inflammatory response. This relationship may be especially pronounced and significant among individuals undergoing surgical resection for cancer. To examine this possibility, the present study examined associations between post-surgical leukocyte count and pre-surgical (a) stress and emotional support, and (b) diurnal salivary cortisol production in 59 women undergoing surgery for endometrial cancer, the 4th most common female cancer. Participants had a mean post-surgical leukocyte count of 10.60x109 cells/L ($SD = 2.60$x109 cells/L). Contrary to hypothesis, pre-surgical perceived stress was not associated with post-surgical leukocyte count; however, less receipt of emotional support pre-surgery was associated with greater leukocyte count post-surgery (beta=-.26, $p < .05$). In addition, greater pre-surgical diurnal cortisol output was associated with greater post-surgical leukocyte count above and beyond emotional support (beta = .31, $p < .05$). These findings lend support to the hypothesis that, among women with cancer, pre-surgical social support and glucocorticoid output may have independent relationships with post-surgical leukocyte count, a clinically meaningful index of inflammation. Future research should examine whether glucocorticoid output mediates the relationship between psychosocial factors and post-surgical inflammation and recovery in cancer.

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Meritorious Student Paper
Paper Session 35 12:24 PM–12:42 PM 4083

BEHAVIORAL AND BIOLOGICAL EFFECTS OF PRENATAL STRESS AND SOCIAL ENRICHMENT: RELEVANCE TO HEART DISEASE

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Stress has negative effects on mental health (e.g., depression) and physical health (e.g., cardiovascular diseases [CVD]) and social support may attenuate effects of stress. It is not clear the extent to which stress during sensitive periods of life (e.g., prenatal period) can increase subsequent risk factors for mental and physical health and if prenatal social interventions can attenuate the detrimental consequences of prenatal stress (PNS).

This project used a rat model to determine: (1) biological and behavioral effects of chronic PNS relevant to CVD; and (2) whether prenatal social enrichment can attenuate effects of PNS.

This research was a full factorial design with the independent variables of PNS or no PNS, prenatal isolation or pair housing (i.e., social enrichment), and male or female offspring. The offspring were the subjects of interest. The dependent variables were biological (body weight [BW], serum corticosterone [cort], blood glucose [BG], insulin, cholesterol [chol], c-reactive protein [CRP], heart morphology) and behavioral (food consumption, open field activity, elevated plus maze [EPM], swim test, and social interaction [SI]) variables relevant to CVD.

PNS and early environment had a long- term impact on biological and behavioral indices of health. PNS increased cort ($p=0.07$) and negative SIs ($p = 0.01$), altered heart morphology for both sexes ($p = 0.02$), and lowered BW ($p<0.05$), CRP ($p < 0.01$) and BG ($p < 0.01$) for males only. The prenatal social environment resulted in lower CRP ($p < 0.01$) and changes in heart morphology ($p < 0.01$) for both sexes and greater insulin ($p < 0.05$), activity ($p < 0.05$), anxiety ($p < 0.05$), depressive-like behavior ($p < 0.05$), and more SI for males only ($p < 0.05$). Overall, social environment did not attenuate the effects of PNS. The results revealed that PNS and early social environment have health effects that persist into adulthood in rats and therefore may impact CVD risk and suggest a need for preventative interventions.

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Paper Session 35 12:42 PM–1:00 PM 4084

AN FMRI STUDY OF NEUROCOGNITIVE DEFICITS IN SURVIVORS OF PEDIATRIC LEUKEMIA: WORKING MEMORY AND COPING WITH STRESS

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As many as 40% of survivors of pediatric leukemia experience long-term neurocognitive deficits, particularly in areas of executive functioning (Campbell et al., 2006). The role of deficits in executive functions in later psychosocial functioning may be related to a child's ability to use these complex skills to cope with stress. Previous neuroimaging studies have indicated compensatory responses in children with neurocognitive deficits, such that individuals recruit increased oxygen to brain regions to facilitate performance (Robinson et al., 2009).

We examined the association between brain activation during a fMRI working memory task and executive function (BRIEF), psychosocial functioning (CBCL, YSR), and coping behaviors (RSQ) of at-risk survivors of pediatric ALL (n=8) and healthy controls (n=7). "At-risk" classification was based on poor cognitive ability post-chemotherapy.

Children with difficulties in psychosocial functioning utilized less adaptive types of coping (i.e., disengagement coping) as opposed to more adaptive types of coping (i.e., primary, secondary control coping), and showed deficits in executive function ($p < .05$). Deficits in executive function were also related to use of less adaptive coping ($p < .05$). Analyses of brain activation during fMRI within the ALL group showed that increased activation in the anterior cingulate cortex (Brodmann Area 32) was associated with greater adaptive functioning, in particular more adaptive coping and fewer internalizing and externalizing problems ($p < .05$).

Deficits in psychosocial functioning, executive function, and coping in survivors of ALL are interrelated. Compensatory activation of the ACC appears adaptive, but achieving this outcome requires recruitment of increased physiological resources.

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Citation Paper

Paper Session 36 11:30 AM-11:48 AM 4085

THE INFLUENCE OF CIGARETTE SMOKING ON SIDE EFFECTS AMONG 947 PATIENTS PRIOR TO, DURING, AND AFTER TREATMENT FOR CANCER: A UNIVERSITY OF ROCHESTER CANCER CENTER CCOP STUDY

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Background: Cancer patients who smoke during treatment have reduced overall and disease-free survival rates compared to non-smokers. Smoking during cancer treatment also adversely affects disease recurrence, cancer treatment complications, and quality of life. Few studies have examined the effect of smoking on cancer-related side effects, but smoking in cancer patients represents an important problem because it may intensify side effects, interrupt therapy, and compromise treatment efficacy.

Purpose: To examine the influence of smoking on side effects among 947 cancer patients during treatment.

Methods: Patients diagnosed with cancer and scheduled to receive chemotherapy and/or radiotherapy reported on current smoking status (yes, no) and the severity (from 0="Not Present" to 10="As Bad as You Can Imagine") of 12 side effects (fatigue, hair loss, memory, nausea, depression, sleep, pain, concentration, hot flashes, weight loss, skin problems, and dyspnea) at pre-treatment, during treatment, and 6 months follow-up. Comparison of side effects between smokers (S) and non-smokers (NS) was performed using ANCOVA controlling for demographic variables, treatment, cancer site, and Karnofsky score.

Results: S were more likely to be non-Caucasian, younger, and less educated (P's<0.05). Compared to NS, S reported a higher total mean side effect severity during treatment (S=3.91 vs. NS=3.43; p=0.03). S also reported a greater increase in total mean side effect severity from pre-treatment to treatment (S=+2.48 vs. NS=+2.05; p=0.04). Increased total mean side effect severity persisted at 6 month follow-up (S=2.34 vs. NS=1.80; p<0.01).

Conclusion: S reported greater side effect severity during treatment and at follow-up and a greater increase in side effect severity from pre-treatment to treatment. Targeted cessation efforts need to be initiated for S to decrease side effect severity and the chances of treatment interruptions.

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Paper Session 36 11:48 AM-12:06 PM 4086

ASSOCIATIONS BETWEEN _CYP2A6_ VARIANTS AND SMOKING BEHAVIORS

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Genetic variation in _CYP2A6_ has been associated with nicotine metabolism. Individuals with _CYP2A6*4_ (deletion), _CYP2A6*2_ or _CYP2A6*9_ are slow nicotine metabolizers; individuals with the _CYP2A6*1x2_ (duplication) are fast nicotine metabolizers. However, reports investigating associations between these variants and smoking behaviors have been inconsistent. We examined the associations between _CYP2A6_ variants and smoking behaviors among individuals enrolled in a lung cancer screening study. Methods: Baseline smokers who enrolled in PLuSS, a low-dose CT lung cancer screening study, were selected for genotyping. Those who reported that they were still smoking at the 1-year follow-up were matched (2:1) by decade of age, quarter of consent, and gender to individuals who reported that they had quit. The sample was limited to Whites because of the relatively limited number of non-Whites in the sample. Logistic and linear regression were used to determine the associations between _CYP2A6_ copy number variation (CNV, _CYP2A6*1x2_ or _CYP2A6*4_), _CYP2A6*2_, and _CYP2A6*9_ and age at smoking initiation, smoking duration at baseline and 1-year quit status. Results: Genotyping results were available for 878 participants (48% male, mean age=54). Minor allele frequencies were 2.7% for _CYP2A6*2_ and 7% for _CYP2A6*9_. Most (n=849) had 2 copies of _CYP2A6_. All variants were in Hardy-Weinberg Equilibrium. Neither _CYP2A6*2_ nor _CYP2A6*9_ were associated with any of the smoking behaviors. _CYP2A6_ CNV was not associated with smoking duration at baseline. _CYP2A6_ CNV was associated with smoking cessation such that the odds ratio for cessation in individuals with more than 2 copies of the variant relative to those with 1 copy was 3.63 (95%CI: 1.19–11.13, p=.04); however, very few participants (n=13) had more than 2 copies of the allele. _CYP2A6_ CNV was also associated with age at initiation. Individuals with more than 2 copies of the allele started to smoke at a slightly older age (2.3 years older, p=.04) relative to those with 1 or 2 copies. Conclusions: Our findings suggest that these variants alone have little to no effect on these smoking behaviors.

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Paper Session 36 12:06 PM–12:24 PM 4087

INTERNET USE AMONG SMOKERS IN THE US, 2003 TO 2007

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The Internet has significant potential to deliver smoking cessation information and resources to populations that are difficult to engage in standard treatment approaches. However, there is a lack of data describing the smokers who can be reached by these resources, and equally important, those who cannot. A better understanding of factors differentiating smokers who do and do not use the Internet could help optimize the content and dissemination of smoking cessation resources to these two groups. The aim of the current study was to provide a national assessment of the prevalence and correlates of internet use among US smokers, and to examine changes in these data from 2003 to 2007. Using data from two iterations of the Health Information National Trends Survey, we compared smokers using the Internet to smokers not using the Internet on demographics, smoking history, health variables, and attitudes towards online health information. In 2003, we found that compared to smokers not on the Internet, those on the Internet had a higher income and were more likely to be employed, despite having a younger age. Internet connected smokers also reported less psychological distress, fewer barriers to health care, and better health status. Analysis of the 2007 data revealed similar patterns of economic and health disparities between smokers who did and did not report Internet use. Analyses of trends from 2003 to 2007 indicated some changes in the poopulation of Internet connected smokers over time; in 2007, a higher proportion of online smokers were age 45+, healthy, college educated, and non-Caucasian. Trust in online health information also declined significantly over this period. Despite some evidence of a narrowing digital divide, the current findings suggest that there remain significant limitations to the use of the Internet to reach and engage subpopulations of smokers. Additional research is needed to optimize use of the Internet as a tool for producing population-level reductions in smoking prevalence.

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Paper Session 36 12:24 PM–12:42 PM 4088

A COMPARISON OF PREGNANT SMOKERS TO OTHER WOMEN: ANALYSIS OF THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEYS

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Despite declines, the prevalence of smoking during pregnancy remains alarmingly high; estimates range from 10–20%. Evidence also suggests that declines may be largely due to a general decrease in smoking prevalence among young women rather than a specific drop among women smokers when they become pregnant. Coupled with the high risk of post-partum relapse among smokers who quit while pregnant, and limited efficacious cessation treatments for pregnant women, it is unclear if a direct impact on this population is being achieved. There is a strong need to better understand the characteristics of this population compared to other relevant groups and how they may have changed over time. This analysis assessed predictors of smoking during pregnancy (PGSMK) compared to non-smoking pregnant women (PGNSMK) and non-pregnant smoking women (NPGSMK). Analyses were completed using data from the NHANES-III (1988–1994) and combined NHANES Continuous Surveys (1999–2005) for demographics, Major Depression, and substance use. Consistent patterns were found in both datasets. Compared to PGNSMK, PGSMK were similar on most demographic features, but significantly more likely to report a history of Major Depression ($p<0.05$), ever having used marijuana ($p<0.001$) and/or cocaine ($p<0.01$), and binge drinking within the last year ($p<0.001$). Conversely, no significant differences were noted on comorbid conditions for PGSMK vs. NPGSMK. Controlling for demographics and comorbid conditions via logistic regression revealed that substance use, particularly alcohol use, was a factor that differentiated PGSMK vs. PGNSMK. Other than age, no significant predictors emerged in logistic regressions for PGSMK vs. NPGSMK. Changes across times are also presented. These results suggest that on a variety of potentially important clinical indicators, pregnant smokers are quite similar to other women who smoke. It may be beneficial for treatment development and dissemination to focus on this similarity, rather than on how pregnant smokers differ from pregnant non-smokers.

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Paper Session 36 12:42 PM–1:00 PM 4089

SLEEP PROBLEMS AND SMOKING CESSATION IN WOMEN

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Cigarette smoking can negatively affect sleep quality, and sleep disturbance, a symptom of nicotine withdrawal, can interfere with smoking cessation. Given that women are more likely to experience sleep problems than are men, we evaluated the relationship between sleep and cessation outcome among women enrolled in cessation treatment. Women ($N=322$) in a randomized, clinical trial of bupropion and cognitive behavioral treatment for smoking-related weight concerns provided demographic information, smoking history and nicotine dependence prior to randomization. Biochemically-validated smoking status, sleep disturbances, sleep quality, nicotine withdrawal and depression were collected at baseline and prior to each of the 12 group counseling sessions over 3 months of treatment. Sleep disturbance was assessed using an item from the Beck Depression Inventory (BDI-Sleep). A composite measure of sleep quality was derived from questions on the Wisconsin Withdrawal Scale (WWS). At baseline, 42% of women reported disturbed sleep on the BDI-Sleep and 86% reported poor sleep quality on the WWS. To test the hypothesis that sleep disturbances and quality differ between women who do and do not maintain smoking abstinence, we compared women remained abstinent at 3 months to those who did not. Although depressive symptoms decreased significantly over time for all women ($p<.001$), BDI-Sleep did not significantly change over time, and there were no differences in sleep disturbance by abstinence status ($p>.17$). In contrast, sleep quality decreased for women who did ($p=.008$) and did not ($p=.03$) maintain abstinence, although there was no differential change in sleep quality by abstinence status. In summary, a substantial minority of women smokers interested in quitting smoking began treatment with sleep disturbances and many report poor sleep quality. Although changes in sleep problems did not differ between women who did and did not remain abstinent, sleep quality appears to worsen over time among women smokers.

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