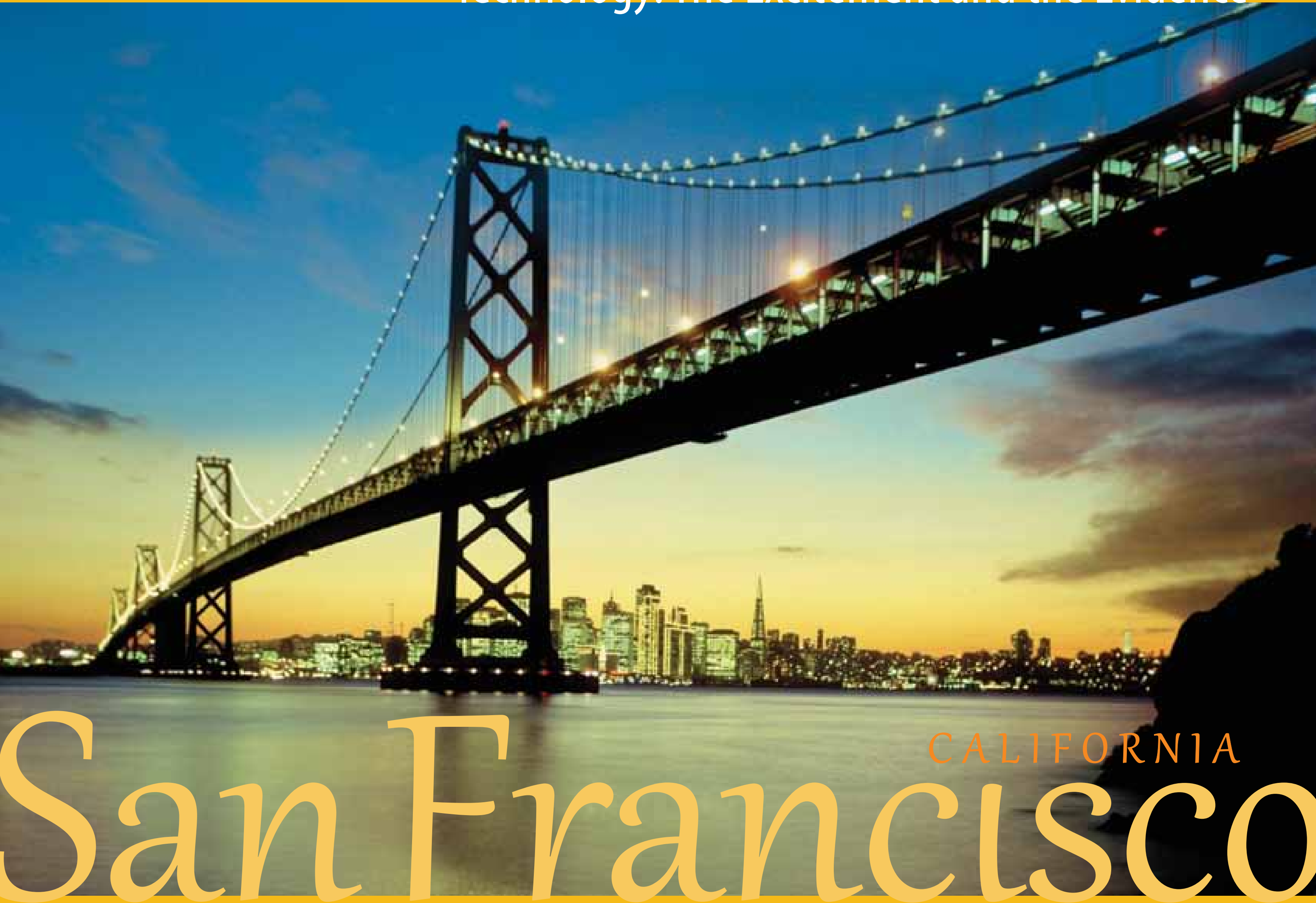
SOCIETY *of* BEHAVIORAL MEDICINE

Better Health Through Behavior Change

RAPID COMMUNICATIONS

Technology: The Excitement and the Evidence



CALIFORNIA

San Francisco

MARCH 20-23, 2013 ✴ 34TH ANNUAL MEETING & SCIENTIFIC SESSIONS ✴ HILTON UNION SQUARE

Rapid Communications
Poster Session A

Wednesday, March 20, 2013

6:30 PM-8:00 PM

A-037a

PREDICTORS OF ELEVATED ANXIETY IN STAGE IV CANCER PATIENTS AND THEIR INFORMAL CAREGIVERS

Ellen Hendriksen, PhD,[1] Alexandra DeGrange, BA,[2] Nora Sporn, BA,[3] Joseph Greer, PhD,[3] William Pirl, MD, MPH,[3] Elyse Park, PhD, MPH,[3] Steven Safren, PhD, ABPP[3] and Holly Prigerson, PhD[4]
[1]Stanford U. School of Medicine, Stanford, CA; [2]PGSP-Stanford PsyD Consortium, Palo Alto, CA; [3]Massachusetts General Hospital, Boston, MA and [4]Dana Farber Cancer Institute, Boston, MA.

Background: Cancer, even in advanced stages, is increasingly managed by informal family caregivers. Anxiety is prevalent, distressing, understudied, and predicts negative mental and physical health outcomes in cancer patients and caregivers.

Methods: 513 matched patient-caregiver dyads were included in the analysis. All patients had cancer in stage IV. Bivariate analyses were first conducted for patient and caregiver demographic, medical and psychosocial factors to identify predictors of anxiety. All predictors significantly associated ($p<0.1$) with anxiety were included in two multiple logistic regression models, one each for patients and caregivers. Predictors that remained significant were retained in two final models.

Results: Gender was significant in both models, with female gender in patients predicting higher anxiety, but female gender in caregivers predicting lower anxiety. In patients, variables that significantly ($p<.05$) predicted higher anxiety included worse self-rated health status and not understanding doctors' explanations. Patient variables that significantly predicted lower anxiety included having received a mental health intervention since diagnosis and using religion to cope with their illness. An additional variable predicting lower anxiety included high self-efficacy ($p=.051$). In caregivers, variables that significantly predicted higher anxiety included higher frequency of stressful caregiving experiences and negative religious beliefs (e.g., punishment). Caregiver variables that significantly predicted lower anxiety included high levels of self-rated emotional well-being and mastery.

Conclusions: Variables with clinical significance should be integrated into development of a psychosocial intervention using an empirically validated treatment for anxiety (i.e., CBT, ACT), treating the patient and caregiver both independently and as a unit.

CORRESPONDING AUTHOR: Ellen Hendriksen, PhD, Stanford U. School of Medicine, Stanford, CA, 94305; ehendrik@stanford.edu

A-037b

CARDIAC VAGAL CONTROL, SOCIAL FUNCTIONING, AND EMOTIONAL ADJUSTMENT IN BREAST CANCER

Anya V. Kogan, MA,[1] John J. Allen, PhD[1] and Karen L. Weihs, MD[2,3]
[1]Psychology, University of Arizona, Tucson, AZ; [2]Psychiatry, University of Arizona, Tucson, AZ and [3]Family Medicine, University of Arizona, Tucson, AZ.

Examining psychosocial and biological factors associated with coping with breast cancer can help to identify patients at greatest risk for experiencing difficulties in coping with their illness. Cardiac vagal control (CVC), as measured by respiratory sinus arrhythmia (RSA), has been proposed as a marker of capacity for emotional and social functioning. Higher RSA is associated with better emotion regulation, social functioning, and coping with life stressors. The association between RSA, perceived social support, anxiety, and quality of intimate partner relationships was examined in a sample of 43 women diagnosed with stage 0, I, II, or III breast cancer. Participants completed questionnaires on perceived stress and social support, anxiety, and quality of intimate partner relationships, and a five-minute resting electrocardiographic (ECG) recording was obtained. Participants completed questionnaires approximately every 3 months for up to a year. Greater RSA at baseline was associated with more positive partner interactions ($r = .39$, $p < .05$) as measured by the Social Relationships Inventory (SRI) and greater affection ($r = .33$, $p < .05$) as measured by the Dyadic Adjustment Scale (DAS). Higher RSA was also associated with a more beneficial trajectory of change in anxiety over time as evidenced by the Taylor Manifest Anxiety Scale (TMAS), with study participants exhibiting greater RSA at baseline showing a decrease in anxiety over time ($\beta = -.002$, $t = -2.5$, $p < .05$). Additionally, lower RSA at baseline was associated with a decrease in perceived social support over time ($\beta = .001$, $t = 2.3$, $p < .05$) as measured by the Multidimensional Scale of Perceived Social Support (MSPSS). The findings suggest that CVC may be an index of capacity for social and emotional functioning during coping with breast cancer diagnosis and treatment, and it may help identify individuals in need of emotionally supportive interventions.

CORRESPONDING AUTHOR: Anya V. Kogan, MA, Psychology, University of Arizona, Tucson, AZ, 85719; apovzner@email.arizona.edu

A-037c

CORRELATES OF SUNBURN AMONG U.S. ADULTS

Dawn Holman, MPH,[1] Zahava Berkowitz, MSc,[1] Gery Guy, PhD,[1] Anne Hartman, MS, MA[2] and Frank Perna, EdD, PhD[2]
[1]Division of Cancer Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA and [2]National Cancer Institute, Bethesda, MD.

Background: Sunburn is commonly reported among adults and increases risk for certain types of skin cancer.

Methods: Adult data from the 2010 National Health Interview Survey were analyzed. The adjusted percentages of the U.S. adult population reporting ≥1 sunburn in the past year were examined by demographic characteristics and health behaviors.

Results: Sunburn decreased with age, from 56.7% among ages 18-20 years to 10.4% among ages 76-85 years and was most common among those with a family history of melanoma (43.4%), non-Hispanic whites (43.4%) and indoor tanning device users (42.5%). Sunburn was more common among those born in the United States (38.1%) or who had lived in the United States for ≥10 years (32.1%) versus <10 years (21.0%). Sunburn was also associated with alcohol consumption ($p<0.001$), physical activity ($p<0.001$), being overweight or obese ($p<.001$), having private or military insurance ($p<0.01$) and having at least some college education ($p<0.05$). Sunburn was not associated with number of sun protective behaviors, poverty status or gender.

Conclusion: Adults who may be most susceptible to skin cancer commonly report sunburns, indicating a need for prevention efforts targeting those at highest risk. The relationship between sunburn and foreign-born status is consistent with other studies showing that more acculturated individuals demonstrate riskier skin cancer-related behaviors. The relationship between sunburn and indoor tanning device use suggests a link with appearance-driven behaviors. Some studies have found appearance-based interventions to be effective in improving skin cancer risk-related behaviors, particularly among young women. The lack of association with number of sun protective behaviors indicates a need to further examine the relative importance and clustering of protective behaviors and compliance with recommendations for sunburn avoidance. The association of multiple health-risk behaviors with sunburn suggests potential opportunities for interventions addressing multiple risky behaviors among adults.

CORRESPONDING AUTHOR: Dawn Holman, MPH, Division of Cancer Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA, 30341; dholman@cdc.gov

A-037d

IDENTIFYING ADHERENCE BARRIERS TO SCREENING MAMMOGRAPHY RECOMMENDATIONS AMONG APPALACHIAN KENTUCKY WOMEN

Elisia Cohen, PhD,[2] Bethney Reynoldson, MA[2] and Robin Vanderpool, DrPH[1]
[1]College of Public Health, University of Kentucky, Lexington, KY and [2]Communication, University of Kentucky, Lexington, KY.

Despite lower breast cancer incidence rates, Appalachian women evidence less-frequent screening mammography and higher mortality risk for breast cancer compared to non-Appalachian women in Kentucky, and the United States, overall. This study examines how a sample of Appalachian women explain barriers and facilitators to screening mammography, and explores their common narratives about their mammography experiences. A paucity of research has examined barriers to timely mammography screening, diagnostic screening, and appropriate follow-up treatment among Appalachian women. Researchers have not assessed whether and how provider communication barriers may contribute to higher breast cancer mortality rates among Appalachian women. Yet, there is increasing evidence that patient-centered communication practices have important implications for cancer screening processes and patient outcomes (Epstein & Street, 2007). Utilizing data from 27 in-depth interviews from women in seven Appalachian Kentucky counties recruited through a community-based research network, the paper identifies lack of patient-centered communication practices in the screening mammography experiences. The women describe how pain and embarrassment, less personal and professional mammography experiences, cancer fears, and poor provider communication pose barriers to timely and appropriate mammography schedule adherence and follow-up care.

CORRESPONDING AUTHOR: Elisia Cohen, PhD, University of Kentucky, Lexington, KY, 40506-0042; elisia.cohen@uky.edu

A-037e

DEVELOPMENT OF A NEW MULTIDIMENSIONAL SCALE TO MEASURE SUFFERING IN ADOLESCENTS WITH CANCER

Christelle Khadra, RN, MSc,[1,2] Jacinthe Lachance Fiola, PhD,[1,2] Sylvie Le May, RN, PhD,[1,2] Isabelle Tremblay, PhD,[3] France Dupuis, PhD,[1,2] Chantal Cara, RN, PhD,[1] Genevieve Mercier, RN, MSc[4] and Marie-France Vachon, RN, MSc[4]
[1]Nursing, University of Montral, Montreal, QC, Canada; [2]Research Center, CHU Sainte-Justine, Montreal, QC, Canada; [3]Department of Psychology, CHU Sainte-Justine, Montreal, QC, Canada and [4]Department of Hemato-oncology, CHU Sainte-Justine, Montreal, QC, Canada.

Background: Suffering related to cancer has increased due to the complexity and length of treatments. It can lead to several negative consequences if not well-managed especially in adolescents who are in a developmental period. Its subjective nature makes it difficult to explain its components without the use of a validated instrument.

Objective: The aim of this study was to develop a scale to measure suffering in adolescents with cancer.

Methods: Semi-structured interviews were conducted with 19 adolescents and 16 healthcare professionals to generate a pool of items by analyzing the transcribed verbatim and then quantifying the emergent themes. A preliminary version of the scale was elaborated and its content validity assessed by five content experts and four lay experts.

Results: Data analysis yielded various themes related to suffering: Physical, psychological, spiritual, social, cognitive and global suffering. Content validity index (CVI) of the scale was 0.98 (established with an interrater agreement (IRA) of 0.88 among content validity experts).

Conclusion: Findings support very good content validity of the scale. Healthcare professionals and adolescents found it very relevant to their experience. Scale's validity requires to be pursued through a pilot study with a larger sample.

Implications for practice: This is the first French scale to evaluate suffering in adolescents with cancer. It will be available to nurses and other healthcare professionals, after its validation, to objectively measure suffering in adolescent cancer patients and will contribute to promote a holistic approach of care for this population.

CORRESPONDING AUTHOR: Jacinthe Lachance Fiola, PhD, Nursing, University of Montral, Montreal, QC, H3C 3J7; jacinthe014@hotmail.com

A-037f

LIFE AND TREATMENT GOALS OF PATIENTS WITH ADVANCED CANCER

Kevin L. Rand, PhD,[1] Larry D. Cripe, MD,[2] Daniella A. Banno, BS[1] and Amanda M. Shea, MS[1]
[1]Psychology, IUPUI, Indianapolis, IN and [2]School of Medicine, Indiana University, Indianapolis, IN.

Improving the care of patients with advanced cancer who may be near the end of life requires better understanding their life and treatment goals and how these relate to psychological adjustment.

Patients (N=63) with incurable advanced lung or gastrointestinal cancers being treated at an NCI-designated cancer center completed self-report measures of hope, optimism, and symptoms of anxiety and depression. Patients then completed a structured interview where they listed their current life and treatment goals. Then, they chose five "priority goals" from among both lists and ranked them in order of importance. Goals were thematically coded based on content (e.g., Life Prolongation: "To live another 20 years"; Social Connection: "Spend time with my family").

The three most common types of priority goals were: Life Fulfillment (49% of patients); Social Connection (43%); and Life-Prolongation (29%). The least common were Comfort/Palliation (13%) and Preparation for Death (5%). Interestingly, a sizable portion of patients (22%) listed Cure as a priority goal, with several (13%) indicating that it was their most important goal.

We examined the associations between types of goals and psychological adjustment. Surprisingly, patients with cure as a priority goal were neither more hopeful nor optimistic than those without cure as a priority goal. Patients listing cure as their most important goal had significantly more depressive symptoms, $t(62) = 2.79$, $p = .007$. To examine the robustness of this association, we ran a regression analysis predicting depressive symptoms. Controlling for patient age, gender, ECOG performance status, physician-rated prognosis, and patient-rated prognosis, having cure as the most important goal remained a significant predictor of depressive symptoms ($\beta = .367$, $p = .017$).

These results suggest that patient life and treatment goals may have important implications for patients' psychological adjustment. Specifically, holding on to cure as an important goal in the face of advanced disease may place patients at risk for greater psychological distress.

CORRESPONDING AUTHOR: Kevin L. Rand, PhD, Psychology, IUPUI, Indianapolis, IN, 46202; klrand@iupui.edu

A-037g

THE ECALM STUDY: ETHERAPY FOR CANCER APPLYING MINDFULNESS ONLINE MINDFULNESS-BASED CANCER RECOVERY (MBCR) FOR UNDERSERVED CANCER PATIENTS IN ALBERTA: FEASIBILITY DATA

Kristin Zernicke, MSc,[1] Tavis Campbell, PhD,[1,2] Michael Speca, PsyD,[2,3] Kelley McCabe, MBA,[4] Steven Flowers, MS, MFT[5] and Linda Carlson, PhD[2,3]
[1]Department of Psychology, University of Calgary, Calgary, AB, Canada; [2]Department of Psychosocial Resources, Tom Baker Cancer Centre, Calgary, AB, Canada; [3]Division of Psychosocial Oncology, Faculty of Medicine, University of Calgary, Calgary, AB, Canada; [4]eMindful, Inc., Vero Beach, FL and [5]Enloe Medical Centre and Mindful Living Programs, Chico, CA.

Mindfulness-Based Cancer Recovery (MBCR), a modified version of Mindfulness-Based Stress Reduction, is an 8-week group psychosocial intervention consisting of training in mindfulness meditation and yoga designed to mitigate stress and chronic illness for cancer patients. Face-to-face (F2F) MBCR programs can improve psychological and physical well-being; nevertheless geographical, practical, physical, or psychological barriers can impede participation in F2F groups. The primary purpose of this trial was to assess the feasibility of an online synchronous MBCR program for underserved distressed cancer patients in Alberta. Design: randomized wait-list controlled trial with assessments pre/post MBCR or wait period. Participants: 45 women and 17 men (n=62) who had completed primary cancer treatment and had limited access to F2F MBCR groups. Results: Approximately 10% of those invited with registry letters responded; of those, 37% consented. Of the 30 participants in the immediate MBCR treatment condition, 25 (83.3%) attended at least half of the classes (Mean classes, 6.4). The mean age was 57 (29 to 79). The majority of participants were White (91.9%) and currently married or cohabiting (82.3%). The most common cancer diagnosis was breast (33.9%) followed by colon or leukemia (both 8.1%), and prostate or thyroid (both 6.5%). The majority of participants indicated they were satisfied with the program and would recommend it to other cancer survivors. Conclusions: An online synchronous adaptation of MBCR is feasible, and underserved cancer survivors in Alberta were willing to participate in and recommend such a program.

CORRESPONDING AUTHOR: Kristin Zernicke, MSc, University of Calgary, Calgary, AB, T2N1N4; k.zernicke@ucalgary.ca

A-037h

SUBJECTIVE REPORTS OF COGNITIVE CHANGES AMONG HEMATOPOIETIC STEM CELL TRANSPLANT SURVIVORS

Lisa M. Wu, PhD,[1] Jane Austin, PhD,[2] Nadia Kuprian, MA,[1] Molly Tanenbaum, MA,[1] Heiddis Valdimarsdottir, PhD,[1,3] Scott Rowley, MD,[5] Luis Isola, MD,[4] William H. Redd, PhD[1] and Christine Rini, PhD[6]
[1]Oncological Sciences, Mount Sinai School of Medicine, New York, NY; [2]Psychology, William Paterson University, Wayne, NJ; [3]Psychology, Reykjavik University, Reykjavik, Iceland; [4]Medicine, Mount Sinai School of Medicine, New York, NY; [5]The John Theurer Cancer Center, Hackensack University Medical Center, Hackensack, NJ and [6]Health Behavior and Health Education, University of North Carolina at Chapel Hill, Chapel Hill, NC.

Neuropsychological tests are important tools for detecting cognitive impairments related to hematopoietic stem cell transplant (HSCT), but they may not capture patients' "real-world," subjective experiences of cognitive changes following this treatment. Although measures of subjective cognitive functioning are generally not correlated with objective tests, they are associated with worse quality of life and psychological adjustment. Few studies have asked HSCT patients directly about subjective cognitive changes they have experienced.

Qualitative interviews were conducted with 69 HSCT survivors (67% female; mean age=58; 77% white) who underwent HSCT 9 months to 3 years previously. Interviews addressed concentration, thinking and memory since transplant. The majority of participants (72%; n=50) reported cognitive impairment since HSCT, with 45% (n=31) reporting that family and friends noticed these changes as well. Memory problems (e.g., forgetting conversations, misplacing objects) were the most commonly reported cognitive impairments (59%; n=41), followed by difficulties in attention and concentration (39%; n=27). Word-finding difficulties were also noted by some participants (19%; n=13). Few (3%; n=2) did not return to work due to memory and concentration problems. However, those who returned to work after HSCT complained that cognitive problems negatively affected work and quality of life.

Perceived cognitive changes are common among HSCT survivors, and point to the importance of subjective cognitive assessments. Capturing patients' reports of cognitive changes is vital to determining appropriate supportive interventions to improve quality of life post-transplant.

CORRESPONDING AUTHOR: Lisa M. Wu, PhD, Oncological Sciences, Mount Sinai School of Medicine, New York, NY, 10029; lisa.wu@mssm.edu

A-037i

EXPLORING THE THERAPEUTIC POTENTIAL OF PARTICIPATION IN PROSTATE CANCER ONLINE SUPPORT COMMUNITIES: PROCESSES AND OUTCOMES

Kasia Campbell, MSc, Neil Coulson, PhD and Heather Buchanan, PhD
University of Nottingham, Nottingham, United Kingdom.

Background: The Internet has rapidly become an easily accessible user-friendly source of health-related information, advice and support and a growing number of prostate cancer patients and family members are participating in online support communities. However, little is known about how participation may impact on community members.

Methods: A cross sectional online survey was completed by 197 members (149 patients; 48 female spouses) drawn from 13 communities. The survey included socio-demographic and medical information and self-reported use of prostate cancer support communities. Participants also completed a 31 item scale assessing 5 therapeutic processes and a 32 item scale assessing 5 therapeutic outcomes, which were developed from a review of the literature together with qualitative online interviews.

Results: The most common therapeutic process experienced by members was 'finding similar others' (M=4.0, SD=0.7) followed by 'receiving useful information' (M=3.9, SD=0.6), 'finding a safe place to talk openly' (M=3.7, SD=1.0), 'helping other members' (M=3.4, SD=0.8) and 'receiving emotional support' (M=3.1, SD=1.0). Similarly, the most common outcome experienced was 'increased knowledge and ability to participate in treatment decisions' (M=4.3, SD=0.6), followed by 'improved relationship with physician' (M=4.0, SD=0.7), 'increased sense of community spirit' (M=3.7, SD=0.8) and 'positive personal reappraisal' (M=3.4, SD=0.9). Regression analysis revealed that each outcome could be predicted by at least 2 processes with the highest proportion of variance (50.4%) explained for 'increased sense of community spirit' and the least (16.4%) for 'personal reappraisal'. The most significant predictor process was 'receiving useful information' followed by 'helping others'.

Conclusion: Our findings suggest that participation in prostate cancer online support communities may hold some therapeutic potential for those who choose to engage with them. Further research is required to fully explore their therapeutic potential.

CORRESPONDING AUTHOR: Neil Coulson, PhD, University of Nottingham, Nottingham, NG3 3AT; neil.coulson@nottingham.ac.uk

A-037j

ASSOCIATIONS BETWEEN COPING STRATEGIES AND WELL-BEING AMONG BREAST CANCER PATIENTS: A META-ANALYSIS

Richard Bränström, PhD[1,2] and Pia Kvillemo, MSc[1]
[1]Department of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden and [2]Department of Public Health, Karolinska Institute, Stockholm, Sweden.

Objective: Knowledge about effective and maladaptive strategies to cope with stressful situations and emotion in relation to cancer is important to help individuals with a cancer diagnosis to maintain good psychological and physical well-being. The primary aim of this study was to examine, through meta-analysis, which types of coping that are related to psychological and physical well-being among breast cancer patients. A secondary aim was to explore the potential moderating influence of situational (cancer stage, current treatment, time since diagnosis) and measurement (cancer specific coping vs. dispositional coping) factors on the association between coping and outcomes. Methods: The meta-analyses included 62 studies and 9,360 participants. Results: The analyses showed that efforts to facilitate adaptation to stress, such as Acceptance and Positive Reappraisal, were consistently related to higher psychological and physical well-being. Disengagement and avoidance types of coping were consistently associated with lower psychological functioning and physical health. The study indicated that in several circumstances, coping effectiveness was dependent on situational and measurement factors. In particular, disease stage, time since diagnosis, and use of cancer-specific coping measures. Conclusions: The study gave support for a categorization of coping strategies into primary and secondary control engagement coping strategies, vs. disengagement coping strategies. Overall, more engagement forms of coping were related to better outcomes, and more disengagement forms of coping were related to poorer outcomes.

CORRESPONDING AUTHOR: Richard Bränström, PhD, Department of Clinical Neuroscience, Karolinska Institute, Stockholm, 11359; richard.branstrom@ki.se

A-037k

EVALUATION OF THE QUALITY OF LIFE IN ADULT CANCER SURVIVORS (QLACS) SCALE FOR EARLY POST-TREATMENT BREAST CANCER SURVIVORS

Stephanie J. Sohl, PhD,[1] Beverly Levine, PhD[2] and Nancy E. Avis, PhD[2]
[1]Department of Medicine, Vanderbilt University School of Medicine, Nashville, TN and [2]Department of Social Sciences and Health Policy, Wake Forest School of Medicine, Wake-Forest, NC.

The transition from cancer patient to cancer survivor is increasingly recognized as an important period of adjustment. Although several quality of life (QoL) measures are available for cancer patients in treatment, these measures do not capture both issues that arise during diagnosis and treatment that continue and longer term concerns. A psychometrically sound QoL instrument appropriate for cancer survivors who are post-diagnosis that assesses the mix of acute and longer-term concerns present during this unique period of time has yet to be identified. Although originally developed for long-term (> 5 years) cancer survivors, the Quality of Life in Adult Cancer Survivors (QLACS) scale targets issues relevant to those newly post treatment such as lingering symptoms, financial concerns, worries about recurrence, and benefits of cancer. The current study evaluated the psychometric properties of the QLACS in a sample of breast cancer survivors who were 18-24 months post-diagnosis. The data reported in these analyses are from an observational study of women (n=653) aged 25 years and older (mean = 54.9 years) who were newly diagnosed with stage I, II, or III breast cancer. The 47 items of the QLACS are grouped into 12 domains; 7 domains are generic and 5 are cancer-specific. The QLACS demonstrated high internal consistency (cronbach's alpha for the 12 domains ranged from 0.78-0.91) and good concurrent and retrospective validity in this sample (assessed by comparison to the Functional Assessment of Cancer Therapy-General). Thus, the QLACS appears to capture quality of life as accurately as other widely accepted quality of life measures, while also allowing for a more comprehensive measurement of issues relevant to post treatment cancer survivors. We believe the QLACS is a promising appropriate measure of QoL for cancer survivors who are 1-5 years post-diagnosis.

CORRESPONDING AUTHOR: Stephanie J. Sohl, PhD, Department of Medicine, Vanderbilt University School of Medicine, Nashville, TN, 37203-1738; Stephanie.Sohl@Vanderbilt.edu

A-037l

A RANDOMIZED CONTROLLED TRIAL OF A TELE-BASED PSYCHOLGICAL INTERVENTION FOR HIGH DISTRESS CANCER PATIENTS AND CARERS

Suzanne K. Chambers, PhD,[1,2] Afaf Girgis, PhD,[3] Stefano Occhipinti, PhD,[1] Hutchison Sandy, MCP,[2] Jane Turner, PhD,[4] Cathy Mihalopoulos, PhD[5] and Jeffrey Dunn, PhD[2,1]
[1]Behavioural Basis for Health, Griffith University, Gold Coast, QLD, Australia; [2]Cancer Research Centre, Queensland Cancer Council, Brisbane, QLD, Australia; [3]Translational Research Centre, UNSW, Liverpool, NSW, Australia; [4]Dept Medicine, University of Queenland, Brisbane, QLD, Australia and [5]Deakin University, Melbourne, VIC, Australia.

Background: A two arm randomised controlled trial with patients and carers who have elevated psychological distress compared minimal contact self management vs. an individualised tele-based cognitive behavioural intervention.

Method: Participants were recruited after being identified as high distress through caller screening at two community-based cancer helplines and randomised either to: a) a single 30-minute telephone support and education session with a nurse counsellor with self management materials or b) a tele-based psychologist delivered five session individualised cognitive behavioural intervention. Session components included stress reduction, problem-solving, cognitive challenging and enhancing relationship support and were delivered weekly. Participants were assessed at baseline and 3, 6 and 12 months after recruitment. Outcome measures include: anxiety and depression, cancer specific distress, quality of life.

Results: Over an 8 month period, 923 patients and carers (74%) were recruited. Study retention over twelve months was 58%. Initial cancer-specific distress, age, education, and income were examined as potential effect moderators. There were no moderation effects for baseline cancer-specific distress, age or income. There was a significant two-way cross-level interaction between Intervention and time and a three-way cross-level interaction between education, Intervention type and time.

For high education patients, the Nurse and Psychologist Intervention were associated with a significant drop in distress over the time period. However for low education patients, only the Psychologist Intervention was associated with a significant drop in distress.

Conclusions: Tailoring psycho-oncology interventions to the needs of low educational level groups is a priority.

CORRESPONDING AUTHOR: Suzanne K. Chambers, PhD, Behavioural Basis for Health, Griffith University, Gold Coast, QLD, 4222; suzanne.chambers@griffith.edu.au

A-049a

THREE-GENERATION PEDIGREES INCREASE PERCEIVED RISK IN YOUNG ADULTS WITH A FAMILY HISTORY OF CORONARY HEART DISEASE OR ASSOCIATED RISK FACTORS

Christopher C. Imes, PhD,[1] Cynthia Dougherty, PhD,[2] Melissa A. Austin, PhD,[2] Lora E. Burke, PhD[1] and Frances M. Lewis, PhD[2]
[1]University of Pittsburgh, Pittsburgh, PA and [2]University of Washington, Seattle, WA.

BACKGROUND: Family history (FH) is an independent risk factor for coronary heart disease (CHD). An understanding of FH and risk factors may enhance a person's motivation to make positive lifestyle changes.

AIM: To test a newly developed intervention that utilizes FH to increase perceived risk and intention to engage in a risk-reducing lifestyle in young adults with a FH of CHD.

METHODS: This pilot, feasibility study used a single group, pre-test/post-test design. The intervention involved the construction and review of a CHD focused three-generation pedigree. Lifetime CHD risk was provided based on the number of relatives with CHD or CHD risk factors. Perceived lifetime CHD risk and intention to engage in a risk-reducing lifestyle were measured before and after the pedigree was reviewed and risk information provided. Perceived risk and behavioral intention were each measured using an investigator-developed, single, 7-point Likert-scaled item and analyzed using the Wilcoxon Signed Rank Test.

RESULTS: The sample, (N=15), of college students, was, on average, 20.8±2.2 years old (mean±SD), female (86.7%), and White (66.7%). Eighty percent of participants had a first- or second-degree relative (F/SDR) with diagnosed CHD. After the lifetime risk was explained based on the pedigree, there was a significant increase in perceived CHD risk (median of 4 vs. 5; p=.006) but not in intention to engage in a risk-reducing lifestyle. Perceived risk (r=.69; p<.05) and intention to reduce risk (r=.56; p<.05) were both positively correlated with the number of F/SDRs with CHD.

CONCLUSION: The pedigree component of the intervention resulted in higher short-term perceived lifetime risk in young adults with a FH of CHD or CHD risk factors, but did not significantly change intention to engage in a risk-reducing lifestyle. The findings suggest that, in asymptomatic young adults, increased perceived risk does not lead to increased intention to engage in risk-reducing behaviors.

CORRESPONDING AUTHOR: Christopher C. Imes, PhD, School of Nursing, Health Promotion and Development, University of Pittsburgh, Pittsburgh, PA, 15261; imesc@pitt.edu

A-049b

SEX DIFFERENCES IN CARDIOVASCULAR REACTIVITY TO MENTAL REPRESENTATIONS OF SOCIAL TIES

Courtney C. Prather, MS, John M. Ruiz, PhD, Carlene Mayfield, BS, Lauren M. Smith, MS and Erin E. Kauffman, MS
University of North Texas, Denton, TX.

Social support is associated with reduced emotional and physiological reactivity to stress. Although relationships are often sources of support, they can also be associated with negative interactions including conflict, criticism and demands. The aim of the current study was to examine how invoking relationship schemas of qualitatively different social network members may differentially affect cardiovascular reactivity to a subsequent stressor. Participants were134 undergraduates (60 females, 74 males) recruited from the University of North Texas and randomly assigned to think and write about 1 of 4 relationship types (supportive, aversive, ambivalent, and neutral social ties) before completing a stress task. Experimental condition and sex were entered as fixed factors into repeated measures general linear models with baseline measures of cardiovascular parameters entered as covariates. Females in the aversive condition exhibited significantly higher diastolic blood pressure (DBP) reactivity during the relationship schema induction task, F(1, 196.29) = 7.77, p<.05, η2 = .20, and the speech-stressor task, F(1, 561.35) = 7.59, p<.01, η2 = .21, compared to males. This pattern was maintained during the recovery period where females in the aversive condition exhibited attenuated DBP recovery compared to males, F(1, 728.22) = 12.85, p<.001, η2 = .30. These findings may reflect sex differences in the ability to cope with aversive social stimuli. Specifically, females may exhibit more reactivity to negative social relationships and experience greater negative impact on their overall ability to cope with environmental stressors. Future research should explore these possibilities.

CORRESPONDING AUTHOR: Courtney C. Prather, MS, University of North Texas, Denton, TX, 76209; courtneyprather@yahoo.com

A-049c

CARDIOVASCULAR DISEASE PREVENTION PRACTICES OF VETERANS IN ADDICTIONS TREATMENT

Kelly Young-Wolff, PhD, MPH,[1] Anne Michalek, BS,[2] Carson Benowitz-Fredericks, BA,[1,2] David Kan, MD[2,3] and Judith Prochaska, PhD, MPH[1]
[1]Stanford University, Stanford, CA; [2]UC San Francisco, San Francisco, CA and [3]San Francisco Veteran Affairs Medical Center, San Francisco, CA.

The Veterans Health Administration leads as a model of quality preventive care. Engaging patients in preventive services, however, can be challenging, particularly for adults with co-occurring disorders. This study examined the cardiovascular disease (CVD) risk behaviors of veterans in addictions treatment and, among those at risk, their motivation for change.

Clients in addictions treatment at the San Francisco VAMC completed the Staging Health Risk Assessment to screen for risk status and readiness to change 14 CVD risks, ASI items of substance use and psychiatric severity, and the SF-12. Multiple regression examined correlates of engagement in multiple risk behaviors, adjusting for demographics.

The sample (N=191) was 97% male, 50% Caucasian, mean age = 53 (sd = 2), and 44% with household income < $10,000/yr; 68% were overweight/obese (BMI >25). Self-reported adherence to blood pressure (BP) (96%), cholesterol (CHOL) (85%), and diabetes (88%) medication was high. Few veterans reported use of illicit substances (7%), marijuana (11%), or binge drinking (4%); 50% were smokers, 50% were sedentary, and a majority had poor diet (64%); 36% had sleep problems (36%), 25% managed stress poorly (25%), and 16% were at risk for depression. Younger age, greater substance use and psychiatric severity, and poorer physical and mental health were associated with a greater number of risk behaviors. Most veterans at risk were motivated to adhere to CHOL (100%) and BP (67%) medications, adopt behaviors to prevent depression (67%), manage stress (63%), and improve sleep (66%) diet (61%), and exercise (61%). Among users, intention to abstain was 50% for binge drinking, 47% for smoking, and 46% for stimulants.

Highly adherent and motivated to adhere to CVD-related medications, most veterans continued to engage in multiple risks, particularly poor diet and physical inactivity. Targeted strategies are needed to engage and link veterans to available services.

CORRESPONDING AUTHOR: Kelly Young-Wolff, PhD, MPH, Prevention Research Center, Stanford University, Stanford, CA, 94305-541190405; kellyyw@gmail.com

A-058a

DOES GENETIC TESTING INCREASE PERCEIVED DIABETES RISK? RESULTS FROM A RCT

Corrine I. Voils, PhD,[1,2] Janet Grubber, MStat,[1] Cynthia J. Coffman, PhD,[1,2] David Edelman, MD,[1,2] Megan McVay, PhD,[2] Matthew L. Maciejewski, PhD,[1,2] Jamiyla Bolton, MS,[1] Alex Cho, MD,[2] Geoffrey S. Ginsburg, MD[2] and William S. Yancy Jr, MD[1,2]
[1]Durham VA Medical Center, Durham, NC and [2]Duke University Medical Center, Durham, NC.

The clinical utility for multifactorial diseases such as type 2 diabetes (DM) is unknown. We examined whether supplementing risk counseling with genetic test results increased perceived DM risk. Participants were veterans aged 21-65 with body mass index (BMI) ≥ 27. At baseline, fasting plasma glucose (FPG), DM family history, and lifetime DM risk were assessed. After 2-4 weeks, participants received DM risk counseling that addressed FPG, family history, and lifetime risk; they then received DM genetic test results (GC-TEST; N=303) or attention control eye disease counseling (GC-EYE; N=298). At baseline and immediately following risk counseling, participants completed an item assessing perceived likelihood of developing DM on a 7-point scale and a modified Illness Perception Questionnaire assessing 8 other perceived risk domains on 10-point scales. Linear mixed models were fit for each risk domain and included a time effect, time*treatment interaction, and randomization stratification variables. Mean age was 54, 42% of participants were White, 53% were Black, 80% were male, 30% had BMI ≥ 35, 53% had moderate/high family-history-based DM risk, and 89% had post-risk counseling measurements. Estimated mean baseline expected personal control over DM was 7.8; the mean was higher in the GC-TEST arm post-counseling (p=0.005; est mean GC-TEST=8.4, GC-EYE=7.9). Estimated mean baseline scores were: consequences (5.7), timeline (6.0), identity (5.5), understanding (5.8), emotional response (5.8), and concern (8.6). In these 6 domains, estimated means increased from baseline to post counseling (p's < 0.0002 for time), but did not differ between treatment arms over time (p's > 0.30). Estimated mean baseline perceived likelihood was 3.2 and of treatment control was 8.7; neither changed over time (p's > 0.17) or by arm (p's > 0.11). Studies investigating the association between genetic test results, health behaviors, and health outcomes are needed to determine the clinical utility of genetic testing for DM.

CORRESPONDING AUTHOR: Corrine I. Voils, PhD, Durham VA Medical Center, Duke University, Durham, NC, 27519; voils001@mc.duke.edu

A-058b

PERCEPTIONS AND ATTITUDES ABOUT INSULIN BY AFRICAN AMERICANS WITH TYPE 2 DIABETES

Denise Bockwoldt, MS, RN,[1] Beth Staffileno, PhD,[1] Lola Coke, PhD[1] and Laurie Quinn, PhD[2]
[1]College of Nursing, Rush University, Chicago, IL and [2]College of Nursing, University of Illinois, Chicago, IL.

Background: Little is known about how mid-life and older African American adults with uncontrolled type 2 diabetes perceive insulin, nor how these attitudes impact diabetes self-management behaviors.

Purpose: The purpose of this study was to describe the perception of insulin in mid-life (ages 35-59) and older (60-80 years) African Americans diagnosed with uncontrolled type 2 diabetes.

Methodology: The Roy Adaptation Model provided the theoretical framework for the study. This qualitative design consisted of three 1-hour focus groups (n=6, n=3, n=4, respectively). Participants were recruited from an urban primary care clinic and urban senior center. The sessions were audio-recorded and transcribed verbatim. Analysis employed the constant comparison method for identifying themes.

Subjects: The majority of participants were women (10/13), insulin-users (9/13), and had health insurance and/or Medicare (12/13). The average age of the mid-life age group (n=7) was 52 years (range 42-58), had an average A1C of 10.8%, (range 9.6%-11.9%) and average diabetes duration of 10 years (range 2-20). The older group (n=6) average age was 70 years (range 62-78) with an average diabetes duration of 21 years (range 15-25). A1C data for the older group was unavailable.

Results: There was little difference in the perception of insulin between the age cohorts. Themes identified include difficulty accepting the diabetes diagnosis and need for insulin, assuming personal responsibility for diabetes outcomes, and psychological struggles with integrating the insulin treatment into one's daily lifestyle.

Implications: Mid-life and older African Americans with type 2 diabetes negatively perceive insulin as a worsening of the diabetes disease process. Despite the ease of pen devices, less pain due to smaller needles, and awareness about the importance of good diabetes control, participants expressed difficulty with psychologically integrating insulin treatment into their daily routine.

CORRESPONDING AUTHOR: Denise Bockwoldt, MS, RN, Rush University, Frankfort, IL, 60423; denise_bockwoldt@rush.edu

A-058c

PRESCRIBING SOCIAL NETWORKING FOR CARE IMPROVEMENT AND PANEL MANAGEMENT

Elissa R. Weitzman, ScD, MSc, Skyler Kelemen, BA and Katharine C. Garvey, MD, MPH
Boston Children's Hospital, Boston, MA.

Detailed self-care and risk behavior information about youth with Type 1 diabetes (T1D) is scarce in clinical settings but vital to healthcare quality. Using a novel, privacy-preserving social networking application (app) we collected structured longitudinal data from youth receiving care for T1D in an ambulatory clinic, measuring: 1) validity of patient-reported data against electronic medical records (EMRs); 2) information gained on risk behaviors; and 3) utility of providing aggregate app data to clinicians for panel management.

55 patients ages 13-25 participated; mean age was 17 years; 49% were male. Subject age and gender did not differ from the overall clinic population but subjects had a lower mean HbA1c% (7.8% vs. 8.4%, p<.0001). Concordance of patient report and EMR was 82% for age of diagnosis, 85% for past-year severe hypoglycemia, 87% for HbA1c%, 95% for continuous glucose monitor use and 100% for insulin pump use and diabetes type. Required EMR notation of health risk behaviors was infrequent yet available for 100% of subjects via the app: 22% and 15% reported past-30 day alcohol use and marijuana use, respectively; 6% reported lifetime tobacco use. Aggregate app data on disease management and risk behaviors were returned to clinicians, who reported

no workflow burdens and high acceptability/utility for filling data gaps and panel management.

Half of participants (N=28, data collection ongoing) updated data an average of 290 days post-baseline (range 164-431 days), informing trend analyses of self-care and risk behaviors including alcohol use onset. Nevertheless, 64% of subjects reported no discussion of alcohol use at their most recent clinic visit, including 7/12 alcohol users, and none reported discussing marijuana or tobacco.

Valid and detailed self-care and risk behavior data can be obtained from youth with T1D via a social networking app, enhancing EMR data and filling gaps on important undocumented risk behaviors. The approach can inform panel management and care improvement without burdening clinicians.

Supported by CIMIT 220376, Harvard Catalyst 027343.386541.05230, CDC PO1HK000088-01

CORRESPONDING AUTHOR: Skyler Kelemen, BA, Boston Children's Hospital, Boston, MA, 02215; skyler.kelemen@childrens.harvard.edu

A-061a

STREAMLINING THE BEHAVIORAL MEDICINE TEACHING PROCESS: USING ELECTRONIC DEVICES AND MODES OF COMMUNICATION FOR EVALUATION AND FEEDBACK

Erin Sheppard, PhD
Family Medicine Residency, Central Michigan University College of Medicine, Saginaw, MI.

Background/Rationale: We are quickly becoming a paperless society. Most information is now exchanged electronically. Residents are more likely to have electronic devices such as smartphones and E-readers, and are already using these devices to supplement their learning. Benefits of providing Behavioral Medicine (BM) feedback electronically are faster exchange of information, ability to organize and store for later reference, and an ecofriendly system of delivering feedback.

Participants: Sixteen Family Medicine Residents at CMU College of Medicine in Saginaw, MI.

Methods: Anonymous survey was sent to all CMU FM Residents via a free survey website assessing past experience with BM feedback, including effectiveness and mode of delivery. Also assessed opinions related to integration of technology into training. Responses were collected October 2012-November 2012. Implementation of new BM feedback process, including use of electronic tablet and note taking application, began November 2012. Evaluation template was created and used to provide consistent and immediate feedback during BM precepting. Completed template was emailed to residents at the end of clinic for their reference. Follow up survey collected responses from December 2012-January 2013, assessing residents' opinions regarding effectiveness of current BM feedback process, including integration of technology.

Results: A 69% response rate was obtained from the initial survey. Most residents felt that there was room for improvement on convenience, timeliness, and usefulness of BM feedback. Most residents used technology on a frequent basis, already had it incorporated into their training, and were interested in receiving feedback electronically. A 69% response rate was obtained from the follow up survey. Residents reported improvements in convenience, timeliness, and usefulness of feedback. Over 50% indicated this was a "Major Improvement" and 91% experienced no problems with the technology. Approximately 55% preferred ongoing electronically delivered feedback.

CORRESPONDING AUTHOR: Erin Sheppard, PhD, Central Michigan University College of Medicine, Saginaw, MI, 48604; shepp1eg@cmich.edu

A-073a

HIV RISK BEHAVIOR KNOWLEDGE AMONG HISPANICS: IMPLICATIONS AND OPPORTUNITIES FOR PRACTITIONERS IN DIVERSE SETTINGS

Jacob Martinez, BS(c),[1] Elias Provencio-Vasquez, PhD,[1] Holly Mata, PhD,[1] Sujehy Arredondo, BS[1] and Joseph DeSantis, PhD[2]
[1]Hispanic Health Disparities Research Center, The University of Texas at El Paso, El Paso, TX and [2]School of Nursing and Health Studies, University of Miami, Coral Gables, FL, FL.

Hispanics are the largest and fastest growing minority in the United States; Hispanic health is of vital importance from social justice and public health perspectives. Hispanics bear a disproportionate burden of HIV-related illness. Efforts to address disparities in HIV incidence and AIDS onset require data-driven practice and policy responses. A variety of social, contextual, and individual risk factors contribute to Hispanic health disparities in the U.S. The purpose of this study was to describe HIV risk behavior knowledge among Hispanics in order to contribute to culturally and linguistically appropriate services in a variety of practice settings. Data were collected as part of a cross-sectional study of violence, sexual risk behaviors, and substance use in Hispanics to identify factors which contribute to HIV/AIDS related disparities. Participants were recruited from a Federally Qualified Health Center and a non-profit agency serving people with HIV through flyers and word of mouth.103 men (50 MSM) and 98 women completed the survey interview. All were Hispanic adults ages 18-55. Results from an existing HIV knowledge scale are highlighted. Items assessed knowledge of transmission routes, condom & lubricant use, and appearance of people with HIV. For example, 60% of participants did not know that most people with HIV appear healthy; 42% did not know that hand lotion is not a good condom lubricant. Misconceptions existed in all areas. Our results suggest HIV knowledge gaps in Hispanics that can be addressed by health education specialists and healthcare practitioners. Increased risk behavior knowledge can reduce HIV risk. With expanded access to healthcare services under the ACA, practitioners will have new opportunities to reduce HIV-related health disparities through culturally and linguistically appropriate services; health promotion efforts should be data-driven and integrated into diverse settings.

CORRESPONDING AUTHOR: Holly Mata, PhD, University of Texas at El Paso, El Paso, TX, 79968; mata.holly@gmail.com

A-073b

COUNSELOR EFFECTIVENESS IN A SUMMER CAMP FOR HIV YOUTH

Maxine London, MA, Niela Fuchs, MA, Jessica Oddo, MA and Dahra Williams, PhD
Psychology, La Salle University, Philadelphia, PA.

Therapeutic summer camps are an increasingly utilized resource for youth with a myriad of conditions such as medical illnesses, developmental disorders, and a range of emotional and behavioral problems. Although therapeutic camps are a popular choice for vulnerable youth, limited research exists regarding the factors that promote positive therapeutic outcomes in these settings. Exploring counselor-related factors that enhance therapeutic outcomes may be especially important as services are commonly delivered by individuals with varied training in the mental health field. Previous research indicates that therapist effectiveness is influenced by elements of the therapeutic relationship, such as alliance, empathy, and warmth (Norcross et al., 2011). Research also indicates that the relationship between alliance and outcome may be moderated by a therapist's personal attributes, including communication skills, experience, and confidence (Ackerman et al., 2003). This study aims to investigate factors that may influence counselor effectiveness in the context of a therapeutic summer camp.

Data was obtained from 41 camp counselors (age 18-60; M=25.07, 52% female), at a week long therapeutic summer camp for youth infected and affected with HIV/AIDS. Counselors were surveyed the day before the start of the camp week. They completed measures, which assessed attitudes towards professional help-seeking (Fisher & Farina, 1995), self-efficacy (Cowen, 1991), confidence, alliance building skills, and listening skills (Williams et al., 2012).

Results indicated that age was positively related to attitudes toward seeking professional psychological help (r=.45, p<.001) and self-efficacy (r=.28, p<.03). Counselor self-efficacy was also positively related to overall counselor skills (r=.33, p<.01), including alliance formation, listening skills, and counselor confidence. Counselor gender and HIV status did not impact attitudes toward seeking help, self-efficacy, or perceptions of counselor competence.

Findings of this study may be valuable for informing counselor-training goals for individuals working in sensitive population therapeutic camps.

CORRESPONDING AUTHOR: Maxine London, MA, Psychology, La Salle University, Philadelphia, PA, 19102; mlondon6@gmail.com

A-087a

GENDER MODERATES THE IMPACT OF BLATANT RACISM ON DEPRESSION IN AFRICAN AMERICAN COLLEGE STUDENTS

Krupa K. Hegde, MA and Stephen D. Jefferson, PhD
Psychology, Eastern Michigan University, Ypsilanti, MI.

Colorblind racial attitudes correlate highly with prejudice, the denial of racial privilege, and the belief in a just world (Neville, et. al., 2000). Stronger colorblind racial attitude beliefs reflect a belief structure that indicates that people are rewarded on merit alone and if people are unsuccessful, it has nothing to do with social structure or circumstances beyond their control. Women tend to be more sensitive to issues relating to prejudice and discrimination, indicating that they may be less likely to find colorblind racial attitudes distressing (Ponterroto, et. al., 1995, as cited in Neville, et. al., 2000). We surveyed a sample of 157 African American college students at a large Midwestern university on a number of variables related to discrimination and health. We hypothesized that there would be a relationship between colorblind racial attitudes and depression in African American college students. We found that men who score highly on the blatant racism subscale of the colorblind racial attitude scale (CoBRAS) were significantly more likely to be depressed than men who scored low on the blatant racism of the CoBRAS (b=.34, p=.02). In contrast, women who score highly on the blatant racism subscale of the colorblind racial attitude scale (CoBRAS) were not significantly more likely to be depressed than women who scored low on the blatant racism of the CoBRAS (b=.03, p=.77). These findings indicate that gender moderates the impact of blatant racism on depression.

CORRESPONDING AUTHOR: Krupa K. Hegde, MA, Psychology, Eastern Michigan University, Ypsilanti, MI, 48197; khegde@emich.edu

A-087b

ALCOHOL-RELATED CONCERNS AND NORMATIVE PERCEPTIONS OF PEER DRINKING PREDICT CHANGE IN OUTCOMES AMONG VETERANS RECEIVING BRIEF ALCOHOL COUNSELING

Michael A. Cucciare, PhD, Daniel M. Blonigen, PhD, Eva Durazo, MPH and Kenneth R. Weingardt, PhD
Veterans Affairs Palo Alto Health Care System, Menlo Park, CA.

As many as 22% of U.S. Military Veterans screen positive for alcohol misuse in primary care settings. Single-dose brief alcohol interventions (BAIs) can be effective for reducing alcohol misuse among civilian adults and U.S. Active Duty Military personnel. The Veterans Health Administration (VHA) recently implemented a performance measure requiring all veterans to receive counseling following a positive screen for alcohol misuse. This initiative has resulted in considerable increases in rates of follow-up counseling; however, variation in the delivery of such care continues to exist across VHA facilities. The identification of clinically amenable factors associated with a positive response to BAIs may help providers make decisions about how to allocate treatment resources. The purpose of the present study was to identify clinical factors that predict change in alcohol-related outcomes among veterans receiving a BAI in primary care. Veterans (N = 167) screening positive for alcohol misuse during a routine primary care visit and receiving a BAI within the prior two weeks were recruited. Alcohol-related outcomes were assessed at baseline and six-month follow-up. Results showed that increased alcohol-related concerns and normative perceptions of peer alcohol use were significantly associated with reductions in several indicators of alcohol consumption at six-month follow-up. Post hoc analysis showed mental health status moderated the relationship between alcohol-related concerns and change in mean drinks per day. Veterans reporting lower mental health functioning and higher alcohol-related concerns demonstrated the greatest change in alcohol use. Our findings indicate that veterans reporting a greater number of alcohol-related concerns and skewed perceptions of peer alcohol use may be particularly responsive to BAIs delivered in primary care.

CORRESPONDING AUTHOR: Michael A. Cucciare, PhD, Veterans Affairs Palo Alto Health Care System, Menlo Park, CA, 94025; michael.cucciare@va.gov

A-087c

EXAMINING THE INFLUENCE OF THREE TYPES OF SOCIAL SUPPORT ON THE MENTAL HEALTH OF MEXICAN TBI CAREGIVERS

Shaina Gulin, Bachelor of Arts,[1] Lillian F. Stevens, PhD,[2] Paul Perrin, PhD,[1] Heather Rogers, PhD, MPH,[3] Teresita Villaseñor Cabrera, PhD,[4] Miriam Jiménez-Maldonado, MS[4,5] and Juan C. Arango-Lasprilla, PhD[3,6]
[1]Department of Psychology, Virginia Commonwealth University, Richmond, VA; [2]Hunter Holmes McGuire Veterans Affairs Medical Center, Richmond, VA; [3]University of Deusto, Bilbao, Spain; [4]Department of Neurosciences, Guadalajara University, Guadalajara, Mexico; [5]Hospital Civil Fray Antonio Alcalde, Guadalajara, Mexico and [6]Basque Foundation for Science, Bilbao, Spain.

Caring for a person with traumatic brain injury (TBI) is associated with depression, anxiety, irritability, and isolation. Social support has emerged as a promising buffer. In Latin America, social support from family members and from other individuals in the community is important. Although Latin America has the highest incidence of TBI worldwide, there is a dearth of formal caretaking resources. Thus, the burden of providing care often falls on family members. The current study examined the influence of three types of social support (appraisal, belonging, and tangible) on caregiver mental health (anxiety, burden, depression, and satisfaction with life) among 90 Mexican TBI family caregivers. More months spent caregiving was associated with decreases in all three types of social support. Older age and fewer years of education were associated with lower appraisal social support. In a series of regressions, greater hours per week spent caregiving was independently associated with lower caregiver state anxiety [t(85) = -2.44, p < .05, β = -.25], and greater satisfaction with life [F (1, 88) = 12.15, p < .05]. Appraisal, belonging, and tangible social support were all independently associated with better caregiver mental health, except satisfaction with life. Appraisal social support independently predicted lower caregiver depression [t(86) = -2.72, p < .05, β = -.449]. Particularly in Latin America, strong social support networks and family connections are closely tied to key mental health issues like caregiver depression.

CORRESPONDING AUTHOR: Shaina Gulin, Bachelor of Arts, Virginia Commonwealth University, Richmond, VA, 23220; gulinsl@vcu.edu

A-087d

ORTHOREXIA NERVOSA: HEALTHY EATING OR EATING DISORDER?

Sonia M. Shah, MA[1] and Russell Gruber, PhD[2]
[1]Clinical Psychology, Louisiana State University, Baton Rouge, LA and [2]Eastern Illinois University, Charleston, IL.

A concept called orthorexia nervosa has recently become prevalent in scientific journal articles. Orthorexia is defined as a fixation on eating only healthy foods, spending hours ruminating on meals or planning future meals, and an obsession with proper nutrition (Bratman, 1997). A measure of the symptoms of orthorexia was developed by Donini et al (2004) and several studies have used this measure to investigate orthorexia, establish prevalence rates, and determine whether orthorexia is actually a disorder. Only one study other than the present one was conducted in the United States. Some studies have found an association between orthorexia, eating disorders, and anxiety, and posited risk factors such as higher body-mass index, level of education, and gender. The present study examined an individual's scores on measures of orthorexia (ORTO-15), anxiety (STAI), eating disorders (EAT-26), and satisfaction with life (SWLS) in a college sample. These inventories and a demographics questionnaire were completed by 172 undergraduates (mean age = 19.8, SD = 2.73). The majority of the sample was female (59.7%) and identified as Caucasian (69.19%). The average female body mass index (BMI) was 25.08, and the average male BMI was 24.9. Based on Donini's (2005) original cut-off for an Italian sample, the majority of participants (69%) met the criteria for orthorexia. The results of the study indicated that there is no association between anxiety, OCD, and orthorexia, but that there is a positive association between symptoms of orthorexia and disordered eating. The findings also indicate that there is a positive correlation between low BMI and higher quality of life, and that there is no difference in the number of orthorexia symptoms endorsed by either gender. These results indicate that further investigation into the current model of orthorexia is necessary, especially when considering cultural characteristics. Clinical implications will be discussed.

CORRESPONDING AUTHOR: Sonia M. Shah, MA, Clinical Psychology, Louisiana State University, Baton Rouge, LA, 70808; Sonia116@gmail.com

A-093a

ASSESSING PSYCHO-SOCIAL FACTORS OF UNCERTAINTY USING A CASE EXAMPLE OF GENOME SEQUENCING

Barbara B. Biesecker, PhD, MS,[1] William Klein, PhD,[4] Leslie G. Biesecker, MD[3] and Paul Han, MD, MA, MPH[2]
[1]Social and Behavioral Research Branch, NHGRI/NIH, Bethesda, MD; [2]Cnt for Outcomes Research and Evaluation, Maine Medical Center, Scarborough, ME; [3]Genetics Disease Research Branch, NHGRI/NIH, Bethesda, MD and [4]Cancer Control & Population Sciences, NCI/NIH, Bethesda, MD.

Recent progress has been made in classifying uncertainty in health care. A new taxonomy distinguishes between scientific, practical, and personal uncertainties, which are psycho-social and existential in nature. However, the psycho-social uncertainties have not been well defined, and their effects may not be limited to negative consequences. We present data from adults participating in an NIH genome sequencing cohort study, in which uncertainty was hypothesized to be a key variable in predicting decisions to learn and act upon health-related information from one's genomic sequence. We developed a scale assessing perceptions of uncertainty specific to genomic sequencing, based on conceptual work on uncertainty and focus groups interviews with study participants. The scale contains 10 items that assess perceptions of the projected effect of uncertainties related to genomic sequence results on one's future health and actions. Three hundred thirty-nine ClinSeqTM participants completed the scale prior to making a decision about whether to learn their sequence results. There was a normal distribution in responses with an overall mean uncertainty score of 3.5 (SD 0.58) and high internal consistency (α=0.835). The highest perceptions of uncertainty related to the accuracy of information while the lowest perception of uncertainty related to communicating results to one's physician. Future use of this scale within this longitudinal study will allow us to identify changes in perceptions of uncertainty over time and how perceptions of uncertainty affect decisions about learning and acting on one's sequence results.

CORRESPONDING AUTHOR: Barbara B. Biesecker, PhD, MS, Social and Behavioral Research, NHGRI/NIH, Bethesda, MD, 20892; barbarab@mail.nih.gov

A-100a

PARENT AND PEER MODELING OF HEALTHFUL DIETARY BEHAVIOURS AND DIETARY INTAKE AMONG OVERWEIGHT AND OBESE ADOLESCENTS

Allison W. Watts, MSc,[1] Louise C. Masse, PhD,[1] Chris Y. Lovato, PhD,[1] Susan I. Barr, PhD[2] and Rhona M. Hanning, PhD[3]
[1]School of Population and Public Health, University of British Columbia, Vancouver, BC, Canada; [2]Food, Nutrition and Health, University of British Columbia, Vancouver, BC, Canada and [3]School of Public Health and Health Systems, University of Waterloo, Waterloo, ON, Canada.

Purpose: Role-modeling of healthful eating behaviours is suggested as an important way parents can positively influence their children's diet. The purpose of this paper was to determine the perceived contribution of parent and peer modeling of healthful eating behaviour on dietary intake among a group of overweight and obese adolescents.

Methods: Self-reported parent and peer modeling of healthful dietary behaviours was collected from 165 overweight/obese adolescents (11-16yrs). One 5-item scale measured parent modeling of fruit, vegetable and low-fat food consumption (α=.80). A second scale measured the same modeling behaviours by peers (α=.78). Teen's dietary intake was measured by 3 web-based 24h diet recalls. Teen's daily intake of three dietary components were examined: servings of vegetables & fruits (VF), percent energy from fat (% fat), and servings of sugar-sweetened beverages (SSB). Multivariable regression was conducted to examine associations between parent modeling, peer modeling, and teen's dietary intake, adjusted for relevant co-variates.

Results: Over half (55%) of teens reported regular healthful food modeling (frequently or always) by parents. Only 11% reported regular healthful food modeling by peers with 30% reporting that peers never modeled healthful food intake. More frequent peer modeling of healthful dietary behaviour, but not parent modeling, was associated with higher VF intake by teens (β=0.58, p=0.05). Parent or peer modeling was not associated with teens' % fat or SSB intake.

Conclusions: More healthful eating by peers may encourage healthful eating among overweight and obese adolescents. Targeting peer groups may be a promising method for improving the diet of adolescents.

CORRESPONDING AUTHOR: Allison W. Watts, MSc, School of Population and Public Health, University of British Columbia, Vancouver, BC, BC, V6H3V4; allison.watts@ubc.ca

A-100b

REGULATORY FOCUS AS A PREDICTOR OF FAST-FOOD EATING HABITS

Natalie Classen, undergraduate (Spring 2013), Marlene Huitink, undergraduate, Jill Quilici, PhD and Erica Wohldmann, PhD
Psychology, California State University Northridge, Northridge, CA.

Obesity is becoming increasingly problematic in the recent years, and frequenting fast-food restaurants may be a contributing factor. Consuming healthy food is a priority for some but not for others, and it is important to understand the mechanisms by which decisions about food-consumption are made. Previous research illustrates that regulatory focus (prevention and promotion) could have a role in people's decision-making process regarding food, and those who exercise control over eating habits (i.e., consuming low-fat foods) tend to be higher in both prevention and promotion focus (Vartanian, Herman & Polivy, 2005). In the present study, 456 undergraduates (55.7% female) were asked to select a hypothetical meal from a mock menu that listed the calorie content of each item and subsequently responded to a questionnaire that included questions about eating and exercising habits, regulatory focus, and demographic information. A hierarchical regression was conducted to examine regulatory focus and dieting status as predictors of frequency of fast-food consumption, while controlling for gender and body mass index (BMI). Gender and BMI were not significant predictors of fast-food eating habits. We found that both high prevention (p=.05) and promotion (p=.021) focus, as well as being on a diet (p=.008), were associated with eating fast food infrequently. These findings indicate that the participants who reported eating fast food infrequently, were more self-regulatory. Our results suggest that the type of focus a person has (prevention and/or promotion) is not of utmost importance, but rather one should have a high level of regulatory focus. One limitation of our study was that eating practices were self-report, and for future research it may be beneficial to examine actual food choices in order to further substantiate these findings.

CORRESPONDING AUTHOR: Natalie Classen, undergraduate (Spring 2013), psychology, California State University Northridge, Northridge, CA, 91330-8255; natalieclassen@gmail.com

A-120a

SMOKING IS ASSOCIATED WITH SUBSTANCE USE AFTER WEIGHT LOSS SURGERY

Jillian B. Carey, MS, Karen K. Saules, PhD, Summar Reslan, MS, Melissa E. Pulcini, MS and Ashley Wiedemann, MS
Eastern Michigan University, Ypsilanti, MI.

Background: An emerging literature suggests weight loss surgery (WLS) may increase risk for substance use disorders (SUDs). However, few studies have examined cigarette smoking post-WLS. Method: This secondary data analysis investigated smoking and its association with substance use among recipients of Roux-en-Y gastric bypass surgery. Participants were 224 adults (78.1% female, M age = 51.03), an average of 6.33 years (SD = 2.94) post-WLS, classified into four groups: No SUD (NoSUD; n =151), pre-WLS SUD but no post-WLS SUD (PriorSUD; n = 42); SUD onset post-WLS (PostSUD; n = 16), and SUD both pre- and post-WLS (PPSUD; n = 9). Anticipating that smoking would co-occur with SUDs, we predicted the NoSUD group would report the lowest smoking rate; the PPSUD group would have the highest smoking rate; and the PriorSUD and PostSUD and groups would report intermediate rates. Results: Significant differences emerged in smoking rates across groups, x2 (3) = 17.20, p = .001. The NoSUD group had the lowest rate (13.5%), even lower than the general US smoking rate (19.3%). However, the PriorSUD and PostSUD groups reported the highest smoking rates (41% and 37.5%, respectively). The PPSUD group reported an intermediate rate (22.2%). Conclusions: Results suggest smoking and SUD tend to co-occur post-WLS, which is particularly concerning because smoking increases the risk for many of the health conditions that WLS is intended to ameliorate. Furthermore, the high smoking rate in the PostSUD group suggests individuals who develop SUD post-WLS may be especially vulnerable, as it is unlikely that they would have started smoking in the absence of having developed SUDs.

CORRESPONDING AUTHOR: Jillian B. Carey, MS, Eastern Michigan University, Ypsilanti, MI, 48197; jcarey6@emich.edu

A-120b

COMPARING THE ASSOCIATION OF A NEW BODY SHAPE INDEX AND BODY MASS INDEX WITH HEART DISEASE RISK FACTORS

Kristen E. Medina, M A, Valerie J. Hoover, MS, Danielle M. Lespinassee, MS, Stacey N. Maurer, MS, Samantha A. Minski, MS, Manal Alabduljabbar, MA, Renee T. Degener, BA, Melissa H. Laitner, BA and Michael G. Perri, PhD
Clinical & Health Psychology, University of Florida, Gainesville, FL.

Body Mass Index (BMI; kg/m2) is commonly used to define obesity status and predict risk of morbidity and mortality. However, BMI does not reflect degree of abdominal fat, a key aspect of body shape that has been shown to be an important marker of morbidity. Recently, a new Body Shape Index (ABSI; waist circumference ÷ by BMI2/3 x height1/2) was developed to create a measure of weight status that incorporates waist circumference (an indicator of abdominal obesity). A recent longitudinal cohort study suggested that ABSI is associated with mortality (Krakauer & Krakauer, 2012). Nonetheless, changes in ABSI have not been examined in a trial where weight and heart disease risk factors are outcome variables. The current study examined the association of changes in ABSI and BMI with changes in body weight and heart disease risk factors in the context of a 6-month behavioral weight-loss intervention. Participants included 255 obese women (M ± SD, age = 51 ± 11 years, baseline BMI = 36.38 ± 3.93 kg/m2) who achieved 8.24 ± 6.66 kg weight loss and significant reductions in systolic and diastolic blood pressure, total cholesterol, triglycerides, and hemoglobin A1c (ps < .001). Change scores were calculated from baseline to six months.

Change in ABSI was significantly correlated only with change in diastolic blood pressure (p < .05). In contrast, change in BMI correlated significantly with reductions in systolic blood pressure, total cholesterol, triglycerides, and hemoglobin A1c (ps ≤ .01). Collectively, these findings suggest that among women weight-related changes in heart disease risk factors are more closely associated with change in BMI than in ABSI.

CORRESPONDING AUTHOR: Kristen E. Medina, M A, Clinical & Health Psychology, University of Florida, Gainesville, FL, 32610; knewell@phhp.ufl.edu

A-120c

PARENT PARTICIPATION POSITIVELY INFLUENCES TEENS' ADHERENCE TO AN E-HEALTH OBESITY PROGRAM

Andrew Tu, MSc,[2] Maria Valente, MA,[1] Allison Watts, MSc,[2] Judith E. de Niet, PhD[2] and Louise C. Masse, PhD[2]
[1]Pediatrics, University of British Columbia, Vancouver, BC, Canada and [2]School of Population and Public Health, University of British Columbia, Vancouver, BC, Canada.

Objective: Adherence to obesity treatment interventions is critical for successful behavior change. The objective of this paper is to understand whether parental participation influenced their teens' adherence in an E-health obesity program.

Methods: This study enrolled 163 overweight and obese teens (11-17 yrs) and their parents into a 34-week E-Health program designed to improve behavioural (physical activity, dietary habits, and sedentary behaviors) and weight outcomes. Each week, teens and parents had the opportunity to learn about strategies that encourage health improvement (for the teen) or that would help teens achieve those improvements (for the parent). Adherence to the program was defined as the average percent of web pages each teen viewed weekly. Parental participation assessed the percent of weeks logged in during the program. A generalized linear model, with relevant covariates, was used to determine whether teens' adherence to the program was influenced by parental participation.

Results: Of the 163 teens, 56% were female and the average Body Mass Index (BMI) was 31 (mean z-score 2.7). Of the parents, 84% were female, 75% were overweight or obese, and their average age was 47. Teens and parents logged in on average 16.2 (standard deviation (SD) 11.7; median 15) and 8.7 (SD 10.2; median 5) weeks respectively. Teen participation rates dropped to 75%, 50%, and 25% by weeks 8, 21, and 33 respectively. Parent participation rates dropped to 75%, 50%, and 25% by weeks 0, 8, and 25 respectively. Multivariable analysis controlling for socio-demographic factors found that the number of weeks parents participated in the program was positively associated with teens' adherence (p<0.01).

Conclusions: The results point to the importance of having parental participation in lifestyle modification interventions for overweight and obese teens. E-Health interventions for teens should encourage the participation of families to increase the likelihood of adherence to the program.

CORRESPONDING AUTHOR: Maria Valente, MA, University of British Columbia, Vancouver, BC, V6H3V4; mvalente@cfri.ubc.ca

A-120d

AFRICAN AMERICAN PARENT-ADOLESCENT COMMUNICATION ABOUT HEALTH AND BODY IMAGE

Michell Pope, MS and Rosalie Corona, PhD
Virginia Commonwealth University, Richmond, VA.

The rate of obesity among African Americans is a major public health threat (CDC, 2009). Prior research suggests that African American girls' acceptance of a larger body size, negative attitudes toward physical activity and/or inability to see the long-term benefits of physical activity may influence girls' health attitudes and behaviors (Duke, 2000; Mabry et al., 2003; Shen et al., 2012). Thus, studies examining factors which may influence African American girls' body image are needed (Levine & Smolak, 2011; Neumark-Sztainer et al., 2006). This study examined the body-related messages maternal caregivers conveyed to their adolescent daughters (11-14 years of age). We conducted semi-structured interviews with 25 caregiver-adolescent dyads. Interviews were transcribed and coded. Results suggest that caregivers play an important role in shaping girls' body image attitudes and behaviors. In the theme, What Others Say Matters: 80% of girls recalled receiving positive body-related feedback ("She's always giving me compliments"); 32% recalled being teased or pressured to lose weight or teased ("She tells me if I'm gettin' too fat"); and 32% reported receiving maternal advice related to healthy lifestyle choices ("She trying to help me to lose some weight so that I won't be obese…'Cause she don't want me to end up dying, getting high blood pressure, diabetes...and that I need to stop eating junk food and candy"). Similarly, 64% of caregivers recalled providing positive comments, ("I try to give her positive feedback…I tell her I like her shape"); 16% pressured/teased their daughters about their weight ("She calls me fat, I call her fat"); and 36% reported conveying health-related information ("I'm concerned about her health, …because, African Americans, we got health problems") and/or nutritional guidance ("She act like she don't' want to eat...I say you not gonna lose weight like that, you gotta eat vegetables and fruit"). Results suggest that ongoing maternal communication promoting positive body image, providing access to healthy foods and opportunities for physical activities are important to girls' health outcomes.

CORRESPONDING AUTHOR: Michell Pope, MS, Psychology, VCU-Biology, Richmond, VA, 23284; popema2@vcu.edu

A-120e

IMPACT OF MISSING DATA IN A WEIGHT CONTROL TRIAL

Samantha Minski, MS, Kristen Medina, MS, Danielle Lespinasse, MS, Stacey Maurer, MS, Manal Alabduljabbar, MA, Renee Degener, BS, Melissa Laitner, BS and Michael Perri, PhD
Clinical and Health Psychology, University of Florida, Gainesville, FL.

Missing data is a common problem in clinical trials and the manner in which missing values are handled may limit the interpretability of treatment effects. Approaches to this problem often involve the assumption that data are missing completely at random (MCAR)-that there are no treatment-related differences between participants with complete and missing data. We evaluated this assumption by examining data for 235 obese adults (M±SD: baseline weight=100.1±15.3kg, age=54.3±11yrs) in a weight control trial. Participants were assessed at baseline, after six months of treatment, and at an 18-month follow-up evaluation. Notably, 74 participants initially declined to attend the 24-month final assessment and their weight was obtained after a concerted effort to have them return. We compared weight change for these 74 adults "with missing data" (who consented to have only weight measured) to 161 adults "with complete data" at the final assessment. At 24 months, those with missing data had significantly smaller weight losses than those with complete data (-3.8±8.1kg v. -6.7±8.4kg, p=.01). Compared to adults with complete data, adults with missing data were significantly heavier at baseline (103±16.8kg v. 98.8±14.4kg, p<.05) and attended significantly fewer treatment sessions (60.2±23.8% v. 80.8±17%, p<.01). We also evaluated the impact of using the last observation carried forward (LOCF) method for the 74 adults whose final weight data may have been missing by examining the proportion of adults who achieved a clinically meaningful weight loss (≥5%) when their weight data was used, compared to LOCF. Results indicate that 37% of the 74 adults achieved a weight loss of ≥5%, but use of the LOCF method increased this to 49%. Collectively, findings suggest that missing data in weight-loss trials may be influenced by baseline and treatment-related factors, and cannot be classified as MCAR. Consequently, statistical analyses that rely solely on data from completers, assume that data are MCAR, or use the LOCF method may inflate treatment effects and lead to faulty conclusions.

CORRESPONDING AUTHOR: Samantha Minski, MS, Clinical and Health Psychology, University of Florida, Gainesville, FL, 32610-0165; sminski@phhp.ufl.edu

A-120f

AFTER BABY FITNESS CHALLENGE (ABFC): IMPACTING DEPRESSION

Sandra C. Mobley, PhD, RN, Deborah Young-Hyman, PhD, Marlo Vernon, MPH and Don Sutherland, PhD
GA Regents University, Augusta, GA.

Poor rural postpartum women with co-morbidities are rarely the focus of lifestyle interventions. Depression (DP) is common in this high risk group. Improvement in DP was a primary aim of this physical activity (PA) & nutrition intervention. This study presents results for DP outcomes @ 12m.

The intervention augmented a Healthy Start program using nurse case management. Women (BMI≥25) were enrolled in ABfC ≤6m delivery. Ss from two E GA counties were Intervention (I) & Control (C) groups. Assessed @ baseline(0), 6 & 12m were height/weight, Edinburgh Postpartum Depression Survey (EPDS), Beck Depression Inventory (BDI); I only - nutrition knowledge, mental & physical wellbeing (SF-12), PA & 24hr diet recalls. Intervention components were nutrition classes & supervised exercise @ local YMCA. Interventionist provided social/problem solving support via phone, email & Facebook, and attended nutrition & PA sessions. Comparisons made between I & C @ 0, 6 & 12m. Correlations assessed between expected predictors & BDI. Those significant tested in regressions; only significant variables reported.

At 0 & 12m, 18% & 12% I, 23% & 27% C, respectively, had clinically elevated BDI scores. BDI scores of I & C not significantly different @ any time. For Ss finishing the study 0 BDI (p<.001) & 0, 6 & 12m EPDS (ps<.02) associated with higher 12m BDI score; for I, 12m mental wellbeing inversely associated (p<.001). BDI Δ 0-12m correlated w/ older age (p<.01) for all mothers; for I 0 & 12m better wellbeing (ps<.02 & .06), improved physical wellbeing 0-12m (p<.02), more interventionist & aggregate staff contact (ps<.10, .06) was associated with lower DP. For I, predictors of BDI Δ 0-12m (N=13, R2Δ=83%) were interventionist contact (p<.05) & Δ in mental wellbeing 0-12m (p<.001). Aggregate staff contact (p<.05) & Δ in BDI 0-12m (p<.001) predict improved mental wellbeing 0-12m (R2Δ=83%).

C & I grps did not differ on DP at any time. Aggregate staff & interventionist support appear to lessen DP in women who finished the intervention. Thus facilitating healthcare & encouraging a healthy lifestyle appear to improve DP in this population.

CORRESPONDING AUTHOR: Sandra C. Mobley, PhD, RN, Obstetrics & Gynecology, GA Health Sciences University, Albany, GA, 31701; samobley@georgiahealth.edu

A-120g

BASELINE PREDICTORS OF MISSED VISITS IN THE LOOK AHEAD TRIAL

Stephanie L. Fitzpatrick, PhD,[1] Frederick L. Brancati, MD,[1] Robert Jeffery, PhD,[2] Karen C. Johnson, MD,[3] Cathy C. Roche, PhD,[4] Brent Van Dorsten, PhD,[5] Molly Gee, RD,[6] Ruby Ann Johnson, NA,[7] Jeanne Charleston, RN,[1] Kathy Dotson, BA[8] and Michael Walkup, MS[8]
[1]Johns Hopkins University, Baltimore, MD; [2]University of Minnesota, Minneapolis, MN; [3]University of Tennessee Health Science Center, Memphis, TN; [4]University of Alabama at Birmingham, Birmingham, AL; [5]University of Colorado Denver, Denver, CO; [6]Baylor College of Medicine, Houston, TX; [7]Northern Navajo Medical Center, Shiprock, NM and [8]Wake Forest University, Winston-Salem, NC.

Retention is critical to the success of long-term behavioral trials. Identifying attributes associated with consecutively missed data collection visits might suggest approaches to improve retention. To identify such attributes, we analyzed 48-month data from Look AHEAD—a randomized, controlled trial in 5145 overweight or obese adults with type 2 diabetes designed to determine the long-term health benefits of weight loss achieved by lifestyle change.

Of the 5016 alive at month 48 and enrolled at active clinic sites, 222 (4.4%) missed two consecutive 6-month data collection visits. In multivariate Cox proportional hazard models, baseline attributes of participants who missed consecutive visits included: younger age (per 5 years; Hazard Ratio [HR] 1.18; 95% Confidence Interval 1.05, 1.30), higher depression symptom scores (HR 1.27; 1.06, 1.42), not married vs. married (HR 1.37; 1.04, 1.82), never vs weekly self-weighing prior to enrollment (HR 2.01; 1.25, 3.23), and randomization to the control group vs active intervention group (HR 1.46; 1.11, 1.91).

Consistent with previous research, younger age, depression symptoms, and randomization to the control group are markers of possible risk of inactive status, even in a high-retention trial like Look AHEAD. Non-married status and failure to self-weigh appear to be novel markers. Whether modifications to screening or retention efforts targeted to these baseline attributes might enhance long-term retention in behavioral trials requires further investigation.

CORRESPONDING AUTHOR: Stephanie L. Fitzpatrick, PhD, Welch Center for Prevention, Epidemiology, & Clinical Research, Johns Hopkins Medical Institutions, Baltimore, MD, 21287; sfitzpa8@jhmi.edu

A-120h

FACTORS THAT INFLUENCE OVERWEIGHT AND OBESE MEN'S PARTICIPATION IN HEALTHY EATING, EXERCISE, AND WEIGHT MANAGEMENT PROGRAMS

Tiare MacDonald, PhD,[1,2] Caitlin Shepherd, PhD,[3,2] Kathryn Rickard, PhD,[2] Ashley Hogan, BS,[2] Joel Berscheid, BS[2] and Ava Drennen, MA[4]
[1]Veterans Affairs Northern California Health Care System, Martinez, CA; [2]Colorado State University, Fort Collins, CO; [3]New York Presbyterian Hospital/Weill Cornell Medical Center, White Plains, NY and [4]University of Colorado Denver, Denver, CO.

Despite the high prevalence of overweight and obesity in men, little is known about eating and exercise behaviors in this population. Additionally, research indicates that men are resistant to seeking help for weight concerns. Few studies, however, have assessed the need for specialized weight interventions designed for overweight and obese men. The present study attempted to gain an in-depth understanding of factors that influence overweight and obese men's engagement in healthy eating, exercise, and weight interventions through the use of qualitative methods. Research questions were developed using a framework that combined components of the theory of planned behavior and PRECEDE-PROCEED model. Six focus groups were conducted with 42 overweight and obese men living in Northern Colorado. Focus groups were recorded, transcribed, an analyzed using Ethnographic Content Analysis. Time, convenience, knowledge, social support, stigma, and masculinity emerged as important factors that influence men's weight-related health behaviors and help-seeking. Results provide support for the development of gender-sensitive weight interventions that take these factors into account.

CORRESPONDING AUTHOR: Tiare MacDonald, PhD, Veterans Affairs Northern California Health Care System, Martinez, CA, 94553; tiare123@gmail.com

A-123a

CORRELATES OF WORK PRESENTEEISM AMONG EMPLOYEES WITH PREVALENT HEALTH CONDITIONS

Gregory J. Norman, PhD and Joseph Drew, BA
Healthyroads, Inc., San Diego, CA.

Background: It has been suggested that the costs of lost work productivity exceed the costs of medical care of employees. Proximal and alternative measures of worker productivity are hypothesized to help understand relations among employee health, productivity, and healthcare costs. Presenteeism has been defined as active employee engagement in work. Decreased productivity and lower work quality are posited to be partially a function of ongoing health conditions. We used the Stanford Presenteeism Scale (SPS-6) to determine which medical conditions were related to presenteeism and correlates of presenteeism among employees with the most salient conditions.

Methods: A total of 8,906 employees of a US retail sales corporation (77% female, mean age 41, 56% with the company > 4 years, 54% married, and 31% household income < $41K) completed a health risk assessment in 2010. Half the employees N = 4,458 reported having a primary medical condition from a list of 20 conditions.

Results: The SPS-6 subscales ('completing work' CW and 'distraction' D) had strong reliability (alpha = .78). The most prevalent medical conditions in the total sample were allergies (33%) followed by depression (10%), hypertension (9%), obesity (8%), migraine (7%), back & neck pain (7%), and arthritis (5%). SPS-CW varied little by health conditions. Three conditions had strong associations with SPS-D (depression, migraine, back & neck pain) with depression having the strongest association (mean = 2.4 sd = 1.1, $p < .001$, eta2 = .075). Linear regression models tested correlates of SPS-D for the subset of employees who had one of these three conditions (N = 1,080). The final model indicated that perceived stress at work ($\beta = .172$), stress management ($\beta = -.133$), positive work climate ($\beta = -.121$), health related stress ($\beta = .114$), number of health conditions ($\beta = .103$) were the main correlates of SPS-D (R2 = .24).

Conclusions: These findings suggest that stress management, work climate and reducing workplace stress may be important factors for affecting presenteeism among employees with depression migraines, or neck & back pain.

CORRESPONDING AUTHOR: Gregory J. Norman, PhD, Healthyroads, Inc., San Diego, CA, 92121; gregn@ashn.com

A-142a

PRIMARY OUTCOMES OF A MULTISITE RANDOMIZED TRIAL OF AN INTEGRATED CARE MODEL FOR HCV PATIENTS

Erik J. Groessl, PhD,[1] Marisa Sklar, MA,[1] Norbert Brau, MD,[3] Ramsey Chueng, MD,[2] Courtney Sanchez, BA,[1] Nicole Campbell, BA,[1] Shannon K. Robinson, MD[1] and Samuel B. Ho, MD[1]
[1]UC San Diego/ VA San Diego, San Diego, CA; [2]VA Palo Alto, Palo Alto, CA, CA and [3]VA Bronx, New York, NY.

Objectives: HCV patients with psychiatric and substance use disorders (SUD) are considered high risk for initiating antiviral treatment. Our objective was to determine if an integrated care model could increase the success rates of antiviral treatment among high-risk HCV patients. Methods: Prospective, randomized trial at VA medical centers located in San Diego, CA Bronx, NY, and Palo Alto, CA. Patients attending HCV clinics between 5/09-2/11 were recruited with routine psychiatric and SUD screening instruments. A mid-level mental health practitioner provided brief mental health interventions and case management within the HCV clinic using a formal integrated care protocol.

Results: 1167 patients were screened at the three HCV clinics. Of these, 65% were eligible for antiviral treatment and had psychiatric and/or SUD risk factors. 365 patients were randomized to either IC or usual care (UC). Overall patient characteristics included 63% non-White (39% African American, 18% Hispanic); 51% homeless in prior 5 years; 80% genotype 1; 27.7% with Audit C >/=4; 50.4% PTSD risk positive; and mean BDI score=15.34. With a mean follow-up of 26 months, significantly more increase integrated care patients initiated antiviral therapy, (32.4% IC vs. 19.7% UC, p=0.006), with 1.6 fold treatment ratios at all 3 sites. To date, the total numbers of patients achieving the primary outcome of sustained viral response (SVR) is increased 2.2-fold in IC vs UC. (26 vs 12 patients, p=0.016). Adverse event data indicate non-significant trends toward fewer hospitalizations, mean hospitalized days, and mean emergency room visit for IC patients. There were 11 deaths in UC compared to 6 deaths in IC (p=0.022).

Conclusions: An integrated care model resulted in significant increases in antiviral treatment initiation and SVR in HCV patients with psychiatric and SUD comorbidities. This intervention was safe, with a trend for reduced adverse events of all causes in the intervention group.

CORRESPONDING AUTHOR: Erik J. Groessl, PhD, UC San Diego/ VA San Diego, San Diego, CA, 92161; egroessl@ucsd.edu

A-142b

DOES KNOWLEDGE OF HUMAN PAPILLOMAVIRUS (HPV) VARY BY ETHNICITY/RACE AND GENERATION STATUS?

Luz M. Garcini, MA,[1] Anne Zhou, BA,[2] Sharon H. Baik, BA,[1] Jessica Barnack-Tavlaris, PhD MPH,[4] Murray Kate, PhD MPH[3] and Elizabeth A. Klonoff, PhD[1,3]
[1]Joint Doctoral Program in Clinical Psychology, SDSU/UCSD, San Diego, CA; [2]Masters Program in Psychology, San Diego State University, San Diego, CA; [3]Comprehensive SDSU/UCSD Cancer Center Partnership, San Diego, CA and [4]The College of New Jersey, New Jersey, NJ.

Significant disparities in HPV infection have been identified across ethnic groups and socioeconomic status (Kahn, Lan, & Kahn, 2007). The purpose of this study was to identify disparities and variables associated to knowledge of Human Papillomavirus (HPV) among ethnically diverse women varying in generation status. Participants were 19,928 adult women in California, who had previously participated in the 2007 California Health Interview Survey (CHIS). Results showed age was an important predictor of HPV knowledge regardless of ethnic/racial group, whereas generation status was a significant predictor of knowledge for Asian Americans only. Overall, first generation women reported the lowest HPV knowledge in comparison to second and third generation women. Additionally, when looking at these differences across ethnic/racial groups, disparities were significant for African American and Asian women. In terms of content, knowledge pertaining to mode of HPV transmission was lower than knowledge about the association of HPV to cervical cancer and the lack of association between HPV and AIDS. This was true regardless of generation status or ethnicity/race. These findings demonstrated the need to consider differences within ethnic/racial groups, including sociocultural factors (e.g., generation status), as a valuable way to develop targeted and context-sensitive HPV educational campaigns that could better address the HPV-related information needs of subgroups within ethnic/racial categories. Future research, outreach, and education should continue to tease apart these important within ethnic/racial group differences to identify and target the most vulnerable groups in order to eliminate health disparities.

CORRESPONDING AUTHOR: Sharon Baik, BA, JDP Clinical Psychology, San Diego State University & UC San Diego, San Diego, CA, 92120; sharon.h.baik@gmail.com

A-142c

SOCIAL SUPPORT NEEDS: DISCORDANCE BETWEEN HOME HOSPICE NURSES AND FORMER FAMILY CAREGIVERS

Maija Reblin, PhD, Kristin Cloyes, PhD, Joan Carpenter, CRNP, Pat Berry, PhD, Margaret Clayton, PhD and Lee Ellington, PhD
College of Nursing, University of Utah, Salt Lake City, UT.

Introduction: In home hospice care, family caregivers (CGs) provide the majority of care with support from hospice nurses who also coordinate other hospice services. Though often a successful model, CGs report unmet needs. If CG has unmet needs and is unable to effectively navigate the demands of care, both patient and CG health may suffer.

Objective: Identify which of 4 types of social support (Informational, Esteem, Emotional, Tangible) are most cited by nurse and CG groups and determine the match in perception of support needs.

Methods: Nurses recruited from a professional meeting and former family CGs recruited from a local hospice and listerv participated in 4 90-minute focus groups (2 nurse, N=12; 2 CG, N=14). Participants were asked how best to support home hospice CGs. Audio recordings of focus groups were transcribed and qualitatively analyzed to identify themes. Within the theme of CG needs, all unique statements were categorized into 1 of the 4 functions of social support.

Results: Nurses had 40 unique statements of CG need; CGs had 78. Examples of each type of support were identified. Nurses most frequently cited the need to provide Information (N=13, 32%), followed by Esteem (N=10, 25%), Tangible (N=9, 22.5%), and Emotional support (N=8, 20%). Meanwhile CGs most cited Tangible (N=25, 32%), then Information (N=22, 28%), Emotional (N=20, 26%), and Esteem support (N=11, 14%).

Discussion: While each group frequently cited Information needs, Tangible support (e.g. taking over duties) was more frequently cited as important by CGs than nurses, whereas Esteem (e.g. validation) was cited more frequently by nurses. Although limited by a small sample and recollection of both groups, results suggest that CG unmet needs may not be a lack, but a mismatch of desired type of support. This has implications for nurse education and interventions to support CGs.

Acknowledgement: ACS PEP 11-165-01-PCSM

CORRESPONDING AUTHOR: Maija Reblin, PhD, College of Nursing, University of Utah, salt lake city, UT, 84112; maija.reblin@nurs.utah.edu

A-142d

MOVING TOWARD PRAGMATIC MEASUREMENT FOR IMPLEMENTATION SCIENCE & BEHAVIORAL MEDICINE

Peyton Purcell, MPH,[1] Borsika Rabin, PhD, MPH, PharmD[2] and Russell E. Glasgow, PhD[3]
[1]SAIC-Frederick, Inc., Bethesda, MD; [2]Institute for Health Research, Kaiser Permanente-Colorado, Denver, CO and [3]Division of Cancer Control & Population Sciences, National Cancer Institute, Bethesda, MD.

Implementation science (IS) encompasses a broad range of constructs and uses measures from a variety of disciplines, including behavioral medicine. However, there has been little standardization of measures or agreement on definitions of constructs across different studies, fields, or authors and many measures are not practical in real-world settings. To further the field of IS there is a need to identify and evaluate IS measures on both their validity and practical relevance.

We describe a collaborative, web-based workspace built on the National Cancer Institute's Grid-Enabled Measures (GEM) portal. The workspace uses a wiki platform to engage the research community in discussion to enhance the quality and harmonization of IS measures relevant to behavior change, among other areas. This poster will summarize the crowd-sourcing approach, share data on currently entered IS measures, describe a rating process that attempted to include practical considerations, and discuss lessons learned and next steps for the workspace and the implications for the behavioral medicine and IS.

The workspace has, to date, summarized information for over 130 measures related to IS across 45 constructs. Measures available include many domains key to behavioral medicine such as adherence, adoption, social support, and health literacy/numeracy. Approximately 60% of the measures have been rated and over 70 measures have their instrument available for download. On average, each instrument has been downloaded by users 93.8 times (range 2-1472). This crowd-sourcing approach has not only provided information about IS measures in many key domains, but also included ratings and comments of these measures in terms of both traditional quality and practicality. The next step is to engage and encourage a broader behavior medicine community to take advantage of this resource and find creative ways to use this tool to advance both IS and behavioral medicine.

CORRESPONDING AUTHOR: Peyton Purcell, MPH, Support to National Cancer Institute, SAIC-Frederick, Inc., Bethesda, MD, 20892; purcellp@mail.nih.gov

A-142e

NEGATIVE URGENCY MODERATES THE EFFECTS OF DIETARY RESTRAINT AND NEGATIVE MOOD ON CALORIE INTAKE

Rebecca L. Emery, BA, BS,[1,2] Kevin M. King, PhD[2] and Michele D. Levine, PhD[1]
[1]University of Pittsburgh, Pittsburgh, PA and [2]University of Washington, Seattle, WA.

Individuals who engage in dietary restraint or experience high levels of negative mood are at risk of overeating. However, it is unclear whether trait differences among these individuals further increases risk for such behavior. Negative urgency, the tendency to act rashly in the face of negative mood, is a personality trait associated with risk of overeating. It may be that individuals high on negative urgency, who also engage in dietary restraint or experience negative mood, are at greater risk of overeating compared to individuals low on negative urgency. Accordingly, we sought to test whether negative urgency moderates the associations between dietary restraint and negative mood on overeating. Female undergraduate students (N = 89) completed self-report measures of negative urgency and dietary restraint and were asked to solve a difficult puzzle. In an attempt to induce a negative mood, subjects were told that the puzzle was easy to solve and were provided with negative feedback on their performance. Subjects then self-reported their mood and completed a taste assessment task in which calorie intake was measured. Although there were no main effects of dietary restraint, negative mood, or negative urgency on calorie intake, negative urgency significantly moderated the associations between both dietary restraint and distinct negative moods on calorie intake. Specifically, negative urgency was related to increased calorie intake among individuals who reported higher levels of dietary restraint and individuals who experienced higher levels of irritability. Contrarily, negative urgency was related to lower calorie intake among individuals who reported higher levels of guilt, shame, and hostility. These findings provide preliminary evidence that negative urgency plays a synergistic role in increasing calorie intake among individuals who engage in dietary restraint and differentially affecting calorie intake among the individual experience of unique negative moods.

CORRESPONDING AUTHOR: Rebecca Emery, BA, BS, Psychology, University of Pittsburgh, Pittsburgh, PA, 15208; rle21@pitt.edu

A-142f
ONLINE HEALTH INFORMATION: A COMPARISON OF GENERATIONS

Tana M. Luger, PhD, MPH[1] and Jerry Suls, PhD[2]
[1]eHealth Quality Enhancement Research Initiative, Center for Health Quality, Outcomes, and Economic Research, Bedford, MA and [2]Psychology, University of Iowa, Iowa City, IA.

Current statistics indicate that 85% of U.S. adults aged 50-64 years (“Baby Boomers”) and 58% of adults aged 65 or older (“Silent Generation”) use the internet (Pew Internet & American Life Project, 2012). In addition, there is evidence that Baby Boomers have gained computer skills in their occupations and will continue to adapt to online technologies as they age (Wagner, Hassanein, & Head, 2010; McMillan, Avery, & Macias, 2008). In particular, seeking health information is a popular online activity, third only to E-mail and search engine use (Fox, 2011), and many older adults claim to use the internet to prepare for physician’s visits or “fill in the gaps” left by health providers (McMillan et al., 2008). Thus, because of the differing generational rates of technology adoption and skills, our study seeks to compare older adults’ online health information-seeking across generational cohorts. Participants aged 50 years or older (N50-64yrs = 38; N65plusyrs = 41) were recruited. Participants were randomly assigned to use the Google search engine or WebMD’s Symptom Checker while attempting to diagnose the symptoms of either mononucleosis or scarlet fever as depicted in a vignette. Participants engaged in a “think aloud” to provide insight into the cognitive processes used to search. A Q sort method (McKeown & Thomas, 1998) was employed for qualitative analysis and cohort differences were compared with χ2 or Fisher’s Exact tests. Members of the Silent Generation were significantly less likely to have familiarity with the computer program that they used to search (χ2(1) = 4.80, p ≤ .03), more likely to show a lack of confidence in their symptom diagnosis (χ2(1) = 11.89, p ≤ .001), and marginally less likely to note the credibility of an information source (χ2(1) = 2.95, p ≤ .09) when compared to baby boomers. These differences point to a need to tailor online health information to different generations’ to ensure that older adults gain access to needed and desired information, whatever their age.

CORRESPONDING AUTHOR: Tana M. Luger, PhD, MPH, Department of Veterans Affairs, Arlington, MA, 02476; Tana.Luger2@va.gov

A-142g
SOCIAL-ENVIRONMENTAL PREDICTORS OF HEALTH-RELATED QUALITY OF LIFE IN YOUTH WITH SPINA BIFIDA: A CROSS-STUDY COMPARISON

Caitlin Murray, BA and Grayson Holmbeck, PhD
Loyola University Chicago, Chicago, IL.

INTRODUCTION: Youth with spina bifida (SB) may be at an increased risk of reduced health-related-quality of life (HRQOL) due to the range of physical and cognitive impairments associated with this condition. Extant research has focused on non-modifiable demographic and illness correlates associated with HRQOL in these youth. This study aimed to (1) provide HRQOL-related descriptive information and (2) examine the predictive utility of modifiable social-environmental predictors of HRQOL in two independent samples of youth with SB.

METHODS: Sample A included participants from a larger, longitudinal study starting in 2006. Time 1 (N = 133 youth ages 8-15), and Time 2 (N = 101 youth ages 10-17) data collection waves were utilized. Sample B included participants from a larger, longitudinal study starting in 1993. Time 4 (N = 61 youth ages 14-16) and Time 5 (N = 53 youth ages 15-16) data collection waves were utilized. Families completed questionnaire data regarding social competence, social acceptance, social skills, perceived emotional support family conflict and cohesion, and community support. HRQOL was measured using the PedsQL in Sample A and the HRQOL-SB (Parkin, et al., 1997) in Sample B.

RESULTS: HRQOL scores were more than one SD lower than scores for healthy youth in Varni et al. (2001), with the exception of emotional HRQOL. Youth with SB were between 1.60 to 2.30 SDs below the healthy population mean on total psychosocial, physical, social, and school functioning. Regression analyses indicated that parent-reported social competence predicted child report of HRQOL over time in Sample A (β = 0.23, p < .05), and social skills predicted child-report of health-related quality of life over time in Sample B, above and beyond demographic and illness variables, β = 0.33, p < .05.

CONCLUSIONS: Youth with spina bifida are at an increased risk for poor HRQOL. Clinical interventions may benefit from a greater focus on building social adjustment to improve HRQOL in this vulnerable population.

CORRESPONDING AUTHOR: Caitlin Murray, BA, Loyola University Chicago, Chicago, IL, 60660; cmurray3@luc.edu

A-153a
TEMPORAL RELATIONSHIPS BETWEEN DAILY PAIN, MOOD, AND ACTIVITY IN PEDIATRIC SICKLE CELL DISEASE

Alyssa M. Schlenz, MA,[1] Jeffrey Schatz, PhD,[1] Catherine B. McClellan, PhD[1] and Carla W. Roberts, MD[2]
[1]Psychology, University of South Carolina, Columbia, SC and [2]Pediatrics, University of South Carolina School of Medicine, Columbia, SC.

Previous pediatric pain research has demonstrated that pain can lead to significant disruptions in mood and daily activity. Researchers have also speculated that mood may exhibit a bidirectional relationship with pain and activity, such that lower positive mood and higher negative mood result in greater pain and activity disruption. The present study focused on analysis of daily electronic diaries in a group of 21 children with sickle cell disease (SCD) (M (age) = 12.52, SD (age) = 2.44; 7 male, 14 female), who reported on daily pain intensity, positive and negative mood, and activities of daily living over a period of eight weeks as part of an intervention study (782 diaries total). The study aims were to: a) replicate a previous study by Gil, et al. (2003), which found that pain was related to same day mood and activity and that pain was the initiating factor in altering positive mood (i.e., no bidirectional relationship) and b) examine temporal relationships between mood and activity, above and beyond the effects of pain. Using multi-level modeling, we first replicated the finding that daily pain is related to same day lower positive mood (t = -4.65, p < .001), higher negative mood (t = 3.70, p < .001), and lower activity (t = -5.17, p < .001). Then, using lagged analyses, we focused on temporal relationships between pain, positive mood, and activity. We found that pain was related to next day positive mood (t = -2.78, p = .005), but not vice versa (t = -0.64, p = .521). Similarly, we found that, after controlling for pain intensity, activity was related to next day positive mood (t = 2.70, p = .007), but not vice versa (t = 1.00, p = .316). These results continue to suggest that pain is associated with same day alterations in mood and activity and that pain may initiate changes in positive mood. Additionally, activity disruption may alter positive mood above and beyond pain intensity in children with SCD.

CORRESPONDING AUTHOR: Alyssa M. Schlenz, MA, Psychology, University of South Carolina, Columbia, SC, 29208; schlenz@email.sc.edu

A-153b

DEPRESSIVE SYMPTOMS AND RHEUMATOID ARTHRITIS: SPOUSE EMPATHIC RESPONDING AS A MODERATOR

Ellen Stephenson, BS,[1] Anita DeLongis, PhD[1] and Allen J. Lehman, PhD[2]
[1]Department of Psychology, University of British Columbia, Vancouver, BC, Canada and [2]Arthritis Research Centre of Canada, Vancouver, BC, Canada.

Spouse depression has been found to negatively affect disease course in patients with rheumatoid arthritis (RA), however the exact mechanisms driving this are unknown (Lam et al, 2009). One possibility is that depressed spouses are less effective in engaging with their partners to manage the arthritis. The extent to which spouses can respond empathically in coping with their partner's RA is hypothesized to predict better functional ability and marital quality for partner suffering from RA. RA patients and their spouses (n of couples=133) independently completed mailed questionnaires at baseline and 1 year later. Each member of the couple reported their depressive symptoms on the Center for Epidemiological Studies Depression Scale. Patients also completed measures of functional impairment, marital quality, and spouse empathic responding. Spouse empathic responding was found to interact with spouse depressive symptoms contributing significantly to the prediction of patient functional impairment reports at follow-up. Only when spouse empathic responding was low was spouse depression associated with greater functional impairment in the patient at the 1-year follow-up. Similarly, in the model predicting patient marital quality at follow-up, there were significant 2-way interactions between empathic responding and both spouse depressive symptoms and patient depressive symptoms. Only when spouse empathic responding was low did patient or spouse depression significantly predict poorer marital quality at follow-up. These findings held when controlling for baseline functional ability or marital quality, patient and spouse depressive symptoms, and demographic factors. Empathic responding from the spouse may buffer against the negative effects of spouse depression on functional and marital outcomes for patients with RA. This research supports the development of interventions that consider the impact of the spouse in the management of RA.

CORRESPONDING AUTHOR: Ellen Stephenson, BS, Department of Psychology, University of British Columbia, Vancouver, BC, V6T 1Z4; ellen@psych.ubc.ca

A-153c

PREOPERATIVE ANXIETY AND ACUTE POSTOPERATIVE PAIN AND ANALGESIC USE IN PERSONS UNDERGOING LOWER LIMB AMPUTATION

Katherine A. Raichle, PhD,[1,2] Travis L. Osborne, PhD,[3] Dawn M. Ehde, PhD,[2] Mark P. Jensen, PhD,[2] Doug G. Smoth, MD[4] and Lawrence Robinson, MD[2]
[1]Psychology, Seattle University, Seattle, WA; [2]Rehabilitation Medicine, University of Washington, Seattle, WA; [3]Anxiety and Stress Reduction Center of Seattle, Seattle, WA and [4]Orthopaedics and Sports Medicine, University of Washington, Seattle, WA.

Recent research suggests that acute pain following amputation surgery may be associated with the development of chronic phantom limb pain (PLP) and residual limb pain (RLP). There has been less research examining other risk factors for pain following amputation. The current study sought to examine the relationship between preoperative anxiety and acute postoperative PLP, RLP, and analgesic medication use in a sample of persons undergoing lower limb amputation. Participants included 89 adults consecutively admitted to a large Level 1 trauma hospital in the Northwest United States for lower limb amputation. They were recruited for a randomized control trial comparing the effects of perioperative epidural anesthesia on post-amputation phantom and residual limb pain. Results of partial-order correlations indicated that greater preoperative anxiety was significantly associated with greater ratings of average PLP for each of the 5 days following amputation surgery after controlling for preoperative pain ratings and daily postoperative analgesic medication use. Partial correlation values ranged from .31 to .60, indicating small to medium effects. Preoperative anxiety was also significantly associated with ratings of average RLP only on postoperative day 1, after controlling for preoperative pain ratings and daily postoperative analgesic medication use (r =.34, p<.05). Correlations between preoperative anxiety and daily postoperative analgesic medication dose were non-significant after controlling for pre-amputation pain ratings. These findings suggest that anxiety may be a risk factor for acute post-amputation PLP and RLP worthy of further exploration. Future research may examine the extent to which psychopharmacological and psychosocial interventions to modify pre-operative anxiety yield a reduction in post-operative acute PLP and RLP.

CORRESPONDING AUTHOR: Katherine A. Raichle, PhD, Psychology, Seattle University, Seattle, WA, 98108; raichlek@seattleu.edu

A-176c

BARRIERS AND ENABLERS TO PHYSICAL ACTIVITY AND WEIGHT MANAGEMENT IN VETERANS WITH LOWER LIMB LOSS: A QUALITATIVE STUDY

Alyson J. Littman, PhD[1,2] and Erin Bouldin, MPH[1,2]
[1]Seattle VA, Seattle, WA and [2]Dept of Epidemiology, Univ of Washington, Seattle, WA.

Obesity is highly prevalent and levels of physical activity (PA) are low in people with lower limb loss (LLL), resulting in increased risk of secondary conditions and decreased physical functioning. We conducted a qualitative study to understand the experiences, barriers, and enablers of PA and weight control in people with LLL to inform future PA/weight management programs, as none targeting this population currently exist. Veterans with foot or leg amputation(s) were purposively recruited for semi-structured interviews. Interviews were transcribed and analyzed by 2 researchers using a priori and emergent codes to identify themes. Participants (n=27; mean age = 54) were all male and had their amputation for 11 y on average. Self-reported PA included transportation-related activity (e.g., walking to work, shopping), exercise using home (e.g., stationary bicycle) and VA-issued (e.g., a handcyle) equipment, and group or solo exercise at a community or VA gym. Enablers of PA included a supportive social environment (e.g., encouragement from a spouse or clinician, social interactions with others, serving as a role model, and having physically active role models); desire for autonomy/independence; well-fitting prostheses; desire for and perceived improvements in physical/psychological well-being; and the daily structure and sense of accomplishment provided by PA. Important barriers to PA were pain associated with their prosthesis and low self-efficacy. Enablers of/motivation for weight loss included a diagnosis/health condition, spousal support, and desire for improved physical functioning; key barriers for weight loss were limited financial resources to afford healthier food and an unsupportive social network. Findings from this study suggest that veterans with LLL may benefit from a PA/weight management program that includes peer and/or spouse support, targets self-efficacy, and reduces financial barriers to PA and healthy food. Enhancing fit of prosthetic devices and teaching pain management are also important factors amenable to intervention.

CORRESPONDING AUTHOR: Alyson J. Littman, PhD, MPH, Epidemiology, Veterans Affairs, Seattle, WA, 98101; alyson@u.washington.edu

A-176d

CONSIDERING THE EXPERIENCE OF VARIETY FROM THE PERSPECTIVE OF SELF-DETERMINATION THEORY: CONCEPTUAL FOUNDATIONS AND PRELIMINARY VALIDITY EVIDENCE

Benjamin D. Sylvester, MA, A. Justine Wilson, MA and Mark R. Beauchamp, PhD
Kinesiology, The University of British Columbia, Vancouver, BC, Canada.

Beyond the three basic psychological needs (competence, autonomy and relatedness) embedded within Self-Determination Theory (SDT; Deci & Ryan, 2000), Sheldon (2011) suggests that additional types of positive experiences may exist and should be explored to better understand well-being. Experiencing variety has been found to be directly related to positive emotions and well-being (Sheldon et al., 2012) and may be particularly salient in exercise contexts as variety has been found to be related to increased enjoyment in exercise (Barkley et al., 2012). Within this four-part study we sought to examine the experience of variety from a self-determination theory perspective, and examine the extent to which variety experienced in exercise settings explains unique variance in well-being beyond the three basic psychological needs. In part 1, we used an iterative process of item generation, focus groups (n = 10) and expert reviews (n = 3), to develop, modify and refine a preliminary instrument to assess variety for use within exercise settings (Perceived Variety in Exercise, PVE). In part 2, 248 adults (from a community sample) completed measures of the PVE scale along with measures derived from the Psychological Needs Satisfaction in Exercise (PNSE) scale, with the data subjected to EFA procedures. Results supported a 4-factor measurement model (including the three needs for autonomy, competence and relatedness, along with variety). In part 3, with a separate sample of 261 adults, the results of a CFA supported the a priori 4-factor measurement model (CFI = .97; TLI = .97; RMSEA = .087). In part 4, based on data derived from participants in both Part 2 and 3 (n = 521), using a cross-sectional design, the experience of variety in exercise was found to explain unique variance in two indices of well-being (positive affect and vitality) above and beyond the three basic psychological needs.

CORRESPONDING AUTHOR: Ben Sylvester, MA, Kinesiology, The University of British Columbia, Vancouver, BC, V6T 1Z4; bsylvest@alumni.ubc.ca

A-176e

PREDICTING PARK USE IN A SOUTHEASTERN U.S. COUNTY: A SIGNAL DETECTION ANALYSIS

Danielle E. Schoffman, BA, Sara Wilcox, PhD, Andrew T. Kaczynski, PhD, Stephanie Child, MPH, Patricia A. Sharpe, PhD, Daheia J. Barr-Anderson, PhD and Melinda S. Forthofer, PhD
Arnold School of Public Health, University of South Carolina, Columbia, SC.

BACKGROUND:

Use of parks is correlated with physical activity (PA) in community-dwelling adults. However, little is known about the combination of individual-level factors associated with park use within a community.

PURPOSE:

To examine factors associated with park use in a Southeastern county in the U.S. that included both rural and urban areas and was socioeconomically diverse.

METHODS:

A 2011 random digit-dial survey in South Carolina included 1010 non-institutionalized adults aged 18+ years in landline-equipped dwellings (n=865) and cell phone-only dwellings (n=145). After missing data exclusions (n=181), 829 respondents were included in the analysis with responses to questions assessing PA level, awareness and use of community parks and trails, and sociodemographic and health-related characteristics. Signal detection analysis, a non-parametric recursive partitioning technique, identified cut-points for defining subgroups based on park use (the dependent variable) (ROC ver4).

RESULTS:

Overall, 54% reported using a park or trail in the past month; signal detection defined seven subgroups of people with similar levels of park use. Park use across subgroups ranged from 32% to 78%. The subgroup with the most park users was <55 years old, well-informed about outdoor recreation areas, and met current national PA recommendations. The subgroup with the least park users was >55 years old and had a lower perceived level of neighborhood safety. Surprisingly, the signal detection process did not identify race or gender as important determinants of park use, and body mass index also played a lesser role than expected in the differentiation of park use subgroups.

DISCUSSION:

Parks are settings that can promote PA. Our results suggest that gendered and ethnically-targeted park promotion campaigns might be unnecessary, and instead efforts should be placed on increasing awareness of park facilities among older, less active community members.

CORRESPONDING AUTHOR: Danielle E. Schoffman, BA, Health Promotion, Education, and Behavior, University of South Carolina, Columbia, SC, 29208; schoffmd@email.sc.edu

A-176f

CHANGES IN COMMUNITY READINESS AMONG KEY INFORMANTS AFTER READY FOR RECESS

Diane Ehlers, MA,[1] Jennifer Huberty, PhD[1] and Cheryl Beseler, PhD[2]
[1]Arizona State University, Phoenix, AZ and [2]Colorado State University, Fort Collins, CO.

Information on how school readiness may impact the effectiveness of school-based physical activity (PA) interventions is lacking. The Community Readiness Model (CRM) provides a useful platform to evaluate school communities' capacity to adopt change in relation to specific issues (e.g., childhood obesity/PA). The purpose of this study was to:

identify key informants who scored highest on school community readiness (CR) at baseline, and determine the effects of Ready for Recess (environmental modifications to school recess) on changes in CR among key informants from baseline to post-intervention.

Key informants (N=98) across 17 schools participated in CR interviews. Interview questions, derived from the CRM and previous research, focused on school CR to address childhood obesity and PA across six CR dimensions (e.g., leadership).

At baseline, principals scored higher than teachers in overall CR and knowledge of the issue and higher than recess staff and nurses in leadership. Leadership CR decreased across key informants. Principals demonstrated significantly greater decreases in leadership when compared with recess staff. After accounting for the variance explained by overall school CR at baseline, PE teachers' leadership CR also declined. A marginally significant interaction was observed between changes in leadership CR and overall school CR at baseline.

Baseline disparities between principals and other key informants suggest that principals may have overestimated the CR of other staff when agreeing to participate in Ready for Recess. Declines among principals indicate that they may not have been prepared to deliver the leadership support needed for the successful implementation of the intervention. Results of this study illuminate the importance of assessing and improving school CR before PA interventions, especially at schools with the lowest CR levels. Qualitative analysis of the interviews is warranted and may elucidate important themes related to key informants' readiness for change and perceptions of the leadership for childhood obesity and PA efforts.

CORRESPONDING AUTHOR: Diane Ehlers, MA, School of Nutrition & Health Promotion, Arizona State University, Phoenix, NE, 85004-0698; dkehlers@asu.edu

A-176g

TRANSLATING RESEARCH TO THE COMMUNITY: CAN A COMMUNITY-BASED BOOK CLUB INCREASE PHYSICAL ACTIVITY AMONG WOMEN LONG-TERM?

Emily Hanigan, Public Health Masters (in progress),[1] Abbey Weddle, Physical Activity and Health Promotion Masters (in-progress),[1] Diane Ehlers, Physical Activity, Nutrition, and Wellness PhD[2] and Jennifer Huberty, Healthy Lifestyles Research Center/Exercise and Wellness Program PhD[2]
[1]Physical Activity and Health Promotion, University of Nebraska Omaha, Omaha, NE and [2]Arizona State University, Pheonix, AZ.

The purpose of this study was to describe physical activity (PA) participation, self-worth (SW), and self-efficacy (SE) at one-year follow-up among women who participated in Fit Minded (FM), a community-based PA book club.

FM is an ongoing community-based PA book club in which a facilitator targets theoretical constructs and SW-enhancing strategies during weekly book discussions. Women were asked to complete questionnaires assessing their PA, SW, and SE at baseline, post-program (8 months), and one year after completing FM (20 months). At one-year follow-up, women were also invited to participate in a phone interview. Descriptive statistics (quantitative data) and immersion crystallization (qualitative data) were used to analyze the data.

Fifteen of 17 women who participated in FM provided consent for their data to be used for research. Twelve women participated in one-year follow-up (mean age = 48 years), with 3 completing questionnaires only, 3 completing the phone interview only, and 6 completing both. PA and SE increased from baseline (PA=1.9 hours per week; SE=40%) to post (PA=4.8 hours; SE=70%) and from baseline to follow-up (PA=3.0 hours; SE=62.3%). SW increased from baseline (2.4) to post (2.5) to follow-up (2.6). All women reported increased awareness and changed perceptions of PA. Women who remained active at follow-up reported that they made PA and themselves a priority and used social support to overcome their PA barriers. Women who struggled to remain active at follow-up reported needing FM to hold them accountable and that they did not prioritize PA.

Few studies have evaluated the potential of community programs to effect PA behavior change long-term. A community-based book club may provide a promising platform for improving women's PA adherence. Consistent with previous research, women's SW continued to increase after FM and many women attributed their continued PA participation to their improved SW. Further research with a larger sample is warranted.

CORRESPONDING AUTHOR: Emily Hanigan, Public Health Masters (in progress), Public Health, University of Nebraska Medical Center, Omaha, NE, 68182; hanigane@gmail.com

A-176h

ACTIVITY PATTERNS OF PRESCHOOL-AGED CHILDREN AT RISK FOR OBESITY

Meghan M. Senso, MS, Elisabeth M. Seburg, MPH and Nancy E. Sherwood, PhD
HealthPartners Institute for Education and Research, Minneapolis, MN.

Pediatric obesity is a major concern and many young US children do not meet physical activity (PA) recommendations and exceed sedentary behavior recommendations. Little is known about the activity patterns of preschool age children, particularly those at risk for obesity. Obtaining more information about how these children spend their time has potential to inform the development of obesity prevention interventions. This study's purpose was to modify a tool for describing activity patterns of 2-4 year old children participating in Healthy Homes/Healthy Kids- Preschool, an RCT pilot study targeting obesity prevention (N=60). The 24-hr Previous Day Physical Activity Recall (PDPAR) was modified to be a staff-administered parent interview; parents reported their child's main activity and intensity for each 30-min block of the previous day. PDPAR-measured activity and screen time were compared to 7 days of accelerometry starting the day after PDPAR administration and a separate parent-completed screen time survey. PDPAR activity types are also described. Parents over-reported amount of moderate-to-vigorous PA when compared to accelerometry (99 min and 69 min respectively). There were no significant correlations between time spent in sedentary, light, moderate or vigorous PA as measured by PDPAR and accelerometry (r=.00, r=.13, r=.06, r=.17 respectively). PDPAR-measured sedentary time was moderately correlated with survey-measured weekend TV (r=.26), other media (r=.43) and TV and other media combined (r=.34). Parent-reported PDPAR data indicate 20% of children had no active play, 45% had 30-60 minutes and 34% had 90 minutes or more of active play. Ninety-five percent reported no active transportation and 51% reported no time playing sports. Almost all (97%) reported playing with toys for at least 90 minutes. Our findings suggest that PDPAR should not be used to report amount of activity, but it may be adequate in estimating amount of media-based screen time. This measure can help researchers gain valuable knowledge about the types of activities in which preschool-aged children are participating.

CORRESPONDING AUTHOR: Meghan M. Senso, MS, HealthPartners Institute for Education and Research, Minneapolis, MN, 55425; Meghan.M.Senso@HealthPartners.com

A-176i

PHYSICAL ACTIVITY GUIDELINES: DO SELF-REGULATORY EFFICACY BELIEFS DISCRIMINATE WOMEN WITH ARTHRITIS WHO MEET OR DO NOT MEET THE RECOMMENDED DOSE?

Miranda A. Cary, BSc, James D. Sessford, MSc, Nancy C. Gyurcsik, PhD, Lawrence R. Brawley, PhD and Kevin S. Spink, PhD
College of Kinesiology, University of Saskatchewan, Saskatoon, SK, Canada.

Women with arthritis have difficulty adhering to the recommended evidence-based dose of physical activity (PA) for disease management (150+ minutes/week). Identifying theory-based factors that distinguish women either meeting or not meeting the PA dose is needed. Documented studies show more active women have higher self-regulatory efficacy (SRE) to overcome arthritis barriers (SRE-AB) than the less active. However, varying disease symptoms that provoke an adherence relapse may require different self-regulatory skills. Thus, efficacy for PA-relapse prevention (SRE-relapse) may also distinguish the more and less active. The purpose of the current study was to determine if both SRE-AB and SRE-relapse discriminated women who met or did not meet the PA recommendations, after controlling for the covariate of pain intensity. Participants (Mage=48.72 ± 14.44 years) with medically-diagnosed arthritis completed online measures of pain intensity, SRE-AB, and SRE-relapse at Time 1, followed by PA two weeks later. Two PA groups were formed - those meeting (n=53; 150+ minutes/week) or those not meeting (n=64; <150 minutes/week) the PA dose. A hierarchical discriminant function analysis controlling for pain intensity revealed that both SRE beliefs contributed to group separation, model $\lambda=.84$, $\chi2(3)=19.59$, $p<.01$; 66% correctly classified. Women meeting the PA dose had significantly higher SRE-AB and SRE-relapse than those not meeting the dose (SRE-AB: M=5.52 ± 3.03 vs. 3.45 ± 2.57; SRE-relapse: M =7.03 ± 2.08 vs. 5.59 ± 2.08; p's<.01). Stronger efficacy to perform multiple self-regulatory actions was associated with meeting the recommended PA dose.

Funded by SSHRC grant #410-2005-2292.

CORRESPONDING AUTHOR: Miranda A. Cary, BSc, College of Kinesiology, University of Saskatchewan, Saskatoon, SK, S7N5B2; miranda.cary@usask.ca

A-185a

GENDER IDENTIFICATION IS ASSOCIATED WITH HEALTH-RELATED QUALITY OF LIFE DIFFERENTLY AMONG AFRICAN AMERICAN, HISPANIC, AND WHITE YOUTH

Sarah M. Scott, BA, Jan L. Wallander, PhD and Sarah Depaoli, PhD
Psychology, UC Merced, Merced, CA.

Gender role orientation (GRO) is a significant factor beyond biological sex in a range of health outcomes including cancer, heart disease, mental illness, and mortality rates. However, few studies have examined the link between GRO and health outcomes for children, even though gender identity is formed in childhood. Furthermore, because gender identities are multidimensional and vary across contexts, a deeper understanding of the racial/ethnic contexts in which masculinity, femininity, or androgyny confer risk or protection is vital to improve health outcomes in different groups. This study examines the association between GRO and health-related quality of life (HRQOL) in young adolescents, and how this relationship may differ between male and females as well as among African American, Hispanic, and White individuals. Drawing from the Healthy Passages™ project, a population-based survey of fifth-grade children in three US metropolitan areas, data were examined from 4,824 participants. Children reported their own HRQOL using the PedsQL, and GRO using the Children's Sex Role Inventory. The structural equation modeling results indicated that among girls in general, both female and male GRO was positively associated with HRQOL; among boys, female GRO was negatively associated with HRQOL whereas male GRO was strongly positively associated with HRQOL. However, the multigroup analyses revealed some important racial/ethnic differences. Female GRO is positively associated with HRQOL for Hispanic and White girls, but negatively for Hispanic boys, and there is no association for African American and White boys. In contrast, male GRO is positively associated with HRQOL for girls and boys of all three racial/ethnic groups. Future studies may identify ways to help males and females overcome negative psychosocial and cultural effects associated with gender roles on health with sensitivity to racial/ethnic membership.

CORRESPONDING AUTHOR: Sarah M. Scott, BA, Psychology, UC Merced, Merced, CA, 95343; sscott7@ucmerced.edu

A-190a

HUMAN PAPILLOMA VIRUS AND HERPES: A QUALITATIVE INQUIRY OF COLLEGE STUDENTS' PERCEPTIONS AND EXPERIENCES

Andrea Hope, EdD and Chris Hirschler, PhD
Health and Physical Education, Monmouth University, West Long Branch, NJ.

College students' perceptions of, and experiences with, two common sexually transmitted infections caused by human papillomavirus and herpes simplex virus were examined in this study. Using an online survey, qualitative data from 213 women and 62 men between the ages of 18 and 25 attending a private university in the northeastern United States were collected. Student responses were coded and analyzed using line-by-line analysis and qualitative software. The online survey provided rich qualitative narratives. Students who believed that they were not infected reported an expectation that infection would be traumatizing. Respondents who were infected described experiences with strong negative emotions as a result of their infection. The results of this study suggest that health educators should avoid moralizing and the use of scare tactics and instead provide more information, including coping strategies. This study revealed a need for effective educational strategies that address prevention, screening, and coping, while considering the realities of college students' lives.

CORRESPONDING AUTHOR: Andrea Hope, EdD, Health and Physical Education, Monmouth University, West Long Branch, NJ, 07764; ahope@monmouth.edu

A-192a

SPIRITUAL WELL-BEING AND SLEEP QUALITY IN PATIENTS WITH MULTIPLE SCLEROSIS: PAIN INTERFERENCE, PERCEIVED DEFICITS, AND ANXIETY AS MEDIATORS

Jameson K. Hirsch, PhD, Julie I. Morrissey, BS and Sheri A. Nsamenang, MS
Department of Psychology, East Tennessee State University, Johnson City, TN.

Multiple Sclerosis (MS) is a dynamic, incapacitating neurological disease affecting 400,000 individuals in the United States, a common feature of which is sleep disturbance. Further, psychological difficulties, such as perceived deficits, perceived pain interference, and anxiety are also associated with increased risk for sleep difficulties. Although spirituality is beneficially related to sleep quality, the mechanism through which spirituality may decrease sleep disturbance is not well understood. As such, we hypothesized that greater spirituality will be associated with greater levels of sleep quality, through the mediating effects of: i) decreased pain interference; ii) decreased perceived deficits; and, iii) decreased anxiety.

Our sample of 81 patients receiving treatment for MS [(83% female; N=64); Mage=51.12, SD=9.6; Ethnicity: 91.4% White (N=74); 1.3% Black (N=1); 2.5% Multiracial (N=2); 4.9% Other (N=4)] completed measures of spirituality, perceived deficits, perceived pain interference, anxiety, and sleep quality. Results of mediation analyses utilizing Preacher and Hayes techniques, supported our hypotheses. In independent models, perceived deficits (R2 = .57, F(5, 68) = 4.23, p < .01), perceived pain interference (R2 = .57, F(5, 65) = 6.35, p < .001), and anxiety (R2 = .43, F(5, 69) = 4.40, p < .01) fully mediated the relationship between spirituality and sleep quality. In a multiple mediation model, only pain remained a significant mediator.

Our results suggest that, for individuals with MS, spiritual well-being may enhance sleep quality by decreasing the effects of perceived deficits, perceived pain interference, and anxiety. Spirituality may serve as a resource for coping with psychological difficulties which, in turn, may have a beneficial effect on sleep quality. When appropriate, clinicians working with individuals with MS may consider assessing and encouraging the practice of a patient's spiritual beliefs.

CORRESPONDING AUTHOR: Jameson K. Hirsch, PhD, Department of Psychology, East Tennessee State University, Johnson City, TN, 37614; hirsch@etsu.edu

A-206a

RELIGIOUS BELIEFS ABOUT SMOKING: DO AFRICAN AMERICANS BENEFIT MORE THAN CAUCASIAN AMERICANS?

Adam C. Alexander, BA, Leslie A. Robinson, PhD, Amy S. Farrell, MA and Francisco I. Salgado-Garcia, MA
Psychology, The University of Memphis, Memphis, TN.

Although African Americans report smoking fewer cigarettes than Caucasians., tobacco-related diseases are disproportionately prevalent in the African American community. Some have wondered whether religiosity is a buffer against smoking in African Americans, but religious beliefs specifically about smoking have not been adequately examined. The present study examines the relationship between religious beliefs about smoking and ethnicity. African American and Caucasian adolescents were assessed to evaluate if their beliefs were related to their use of tobacco smoking..

Overall, 3,957 adolescents (82.9% African American; 17.1% Caucasian American) were recruited as part of the Memphis Health Project, a longitudinal study of smoking onset in the urban mid-South. Most of the students were in the 11th grade. Logistic regression was used to assess the relations between a number of variables and the likelihood of respondents' smoking.

The model was significant (χ2 (3) = 449.433, p = .001, η2 = .027). Overall, African American teens have significantly stronger religious beliefs against smoking than Caucasians. Furthermore, the interaction between ethnicity and religious beliefs was statistically significant. Each point decline in religious belief rendered young African Americans 28% more likely to be current smokers (OR = 1.282, p <.001. In contrast, each point decline in religious belief made Caucasian teens 67% more likely to be a current smoker (OR = 1.670, p <.001)

In sum, African American teens are more likely than their Caucasian peers to have strong religious beliefs against smoking. These beliefs may help account for the lower levels of tobacco use among African American adolescents. Notably, these beliefs reduce the odds of smoking for both African American and Caucasian adolescents, but the protective effect is more pronounced among Caucasians. This finding should be replicated in research with other samples and age groups.

CORRESPONDING AUTHOR: Amy Farrell, MA, Psychology, University of Memphis, Cordova, TN, 38018; amydineen@gmail.com

A-206b

HEALTH BEHAVIORS AMONG HISPANIC ADOLESCENTS

Alisha D. Howarter, MA,[1] Kymberley K. Bennett, PhD,[1] Jillian M. Clark, BA,[1] Kadie M. Harry, MA[1] and Jennifer B. Unger, PhD[2]
[1]Psychology, University of Missouri - Kansas City, Kansas City, MO and [2]Institute for Health Promotion and Disease Prevention Research, University of Southern California Keck School of Medicine, Alhambra, CA.

Adolescent health behaviors have been shown to be significant predictors of future adult health. Hispanic adolescents face additional life stressors unique to their race, such as discrimination, acculturation, and maintenance of traditional cultural values. In 2009, Gallo and colleagues revised a theoretical model titled the Reserve Capacity Model (RCM) that can be used to understand the relationships between SES, stress, and poor health outcomes. This model posits that to handle stressful events, individuals turn to their "reserves," which include tangible resources (e.g., money), interpersonal resources (e.g., social support), and intrapersonal resources (e.g., optimism). The model suggests that people of low SES tap into their reserves often, and have little time to replenish them once used. In this project, I evaluated the culturally-relevant RCM using three years of data from 1,565 Hispanic American adolescents. Participants completed measures of perceived discrimination, acculturative stress, familism, and symptoms of depression. Path analysis was used to examine relationships between these variables and the outcome variables smoking and use of alcohol. Results indicated direct and positive relationships between perceptions of discrimination, smoking and use of alcohol (r = .10, p < .01; r = .10, p < .01, respectively). As pressure to acculturate towards the mainstream culture was significantly related to the use of alcohol (r = .06, p = .03). Both these relationships were partially mediated by reserve capacity and negative emotions (χ2(12) = 98.43, p < .05; CFI = .93; RMSEA = .07). Mediation resulted in a reduction to non-significance in the relationship between perceptions of discrimination and both outcome variables (smoking β = .02, p = .54; alcohol β = .05, p = .06). The relationship between stress related to acculturation and use of alcohol was also well-mediated by this model (alcohol β = -.08, p < .01).

CORRESPONDING AUTHOR: Alisha D. Howarter, MA, Psychology, University of Missouri - Kansas City, Kansas City, MO, 64110; ada7c9@umkc.edu

A-214a

INDIVIDUAL DIFFERENCES IN COPING STRATEGIES PREDICTS PSYCHOSOCIAL ADJUSTMENT AMONG MOTHERS WITH A CHILD RECENTLY DIAGNOSED WITH CANCER

Berhane Messay, MA,[1] Anna Marsland, PhD, RN,[1] Alina Vaisleib, Bachelor's[2] and Linda Ewing, Phd, RN[2,1]
[1]Psychology, University of Pittsburgh, Pittsburgh, PA and [2]University of Pittsburgh Medical Center, Pittsburgh, PA.

Most mothers of children newly diagnosed with cancer cope well with their child's diagnosis. However, 25-30% of mothers show prolonged symptoms of distress that can impact not only their mental and physical health, but also the health of other members of their family. Individual differences in coping style are theoretically proposed to moderate the negative impact of adverse life events and may identify markers of risk that can be targeted by preemptive intervention.

The current study assessed coping strategies (brief COPE), social support (Interpersonal Support Evaluation List and Social Constraint Scale) and levels of distress (Beck Depression Inventory, State-Trait Anxiety Inventory, and Perceived Stress Scale) among 53 mothers (mean age=35.90, SD = 7.97; 85% Caucasian) of children who were within 2 weeks of cancer diagnosis at Time 1. Mothers were then reassessed approximately 4 months later.

Regression analyses show an inverse association of active coping strategies at Time 1 with depressive symptoms at Time 2 after controlling for demographic characteristics (β= -.328, p = .024). Conversely, tendency to engage in self-blame and use "maladaptive coping strategies" (Carver, Scheier, and Weintraub, 1989) at Time 1 was associated with greater distress on all measures at Time 2, controlling for demographic variables and baseline levels of depression (β's range from .462 to .342, p <.05). Social support at Time 1 also buffered levels of distress at Time 2, with higher Time 1 scores on perceived social support and lower scores on the social constraint scale predicting lower levels of distress on all measures (for social constraint : β's range from .551 to .377, p <.01; for social support: β's range from -.319 to -.301, p < .05).

These findings suggest mothers with low levels of social support and who display maladaptive coping strategies, such as self-blame, may be at increased psychosocial risk and benefit from early preventative intervention.

CORRESPONDING AUTHOR: Berhane Messay, MA, Psychology, University of Pittsburgh, Pittsburgh, PA, 15260; bem67@pitt.edu

A-214b

PERCEIVED STRESS AND DIET IN TYPE 2 DIABETES PATIENTS

Karin A. Garcia, MS,[1] Diana A. Chirinos, MS,[1] Marc Gellman, PhD,[1] Maria Llabre, PhD,[1] Ronald Goldberg, MD[2] and Neil Schneiderman, PhD[1]
[1]Psychology, University of Miami, Coral Gables, FL and [2]Department of Medicine, University of Miami Miller School of Medicine, Miami, FL.

Stress has been consistently shown to have negative effects on health, including in patients with Type 2 Diabetes (T2D). Not much research has been conducted on the effects of stress on dietary consumption, particularly in inner city, primarily minority populations. This study aimed to examine the relationship between perceived stress and diet among inner city ethnic minority T2D patients. The study sample was comprised of 227 (141 women, 86 men) T2D patients recruited for the Community Approach to Lifestyle Modification for Diabetes (CALM-D) study. Perceived stress levels were measured using the Perceived Stress Scale. Diet was measured using a 24-hour dietary recall obtained at baseline to estimate food and beverage consumption. All models controlled for age, gender, body mass index and fasting glucose. Mean age was 55 years and mean stress score was 16. Participants consumed an average of 1554 kilocalories (kcal) per day. Mean daily consumption of total fat, total protein, total dietary fiber and total sodium were 56, 71, 15 and 28 grams, respectively. Perceived stress was associated with higher consumption of kcal per day after controlling for age, gender, body mass index and fasting glucose (β=0.22, P=0.004). More specifically, perceived stress was associated with increased consumption of total fat (β=0.19, P=0.011), total protein (β=0.19, P=0.013) and total dietary fiber (β=0.15, P=0.039) in adjusted models. In our sample, sodium was not associated with elevated stress levels (β=0.13, P=0.098). Perceived stress was significantly associated with overall increased consumption in inner city minority patients with T2D. Future research should focus on stress reduction interventions to improve diet and overall health in diabetic populations.

CORRESPONDING AUTHOR: Karin A. Garcia, MS, Department of Psychology, University of Miami, Coral Gables, FL, 33146; kgarcia@psy.miami.edu

A-214c

DIURNAL PATTERN OF SALIVARY CORTISOL AND ITS RELATIONSHIPS WITH PSYCHOSOCIAL FACTORS IN BREAST CANCER PATIENTS: A LATENT GROWTH MODELING APPROACH

Rainbow T. H. Ho, PhD,[1,2] Ted C T Fong, MPhil,[1] Caitlin K P Chan, MPhil's Candidate[2] and Cecilia L W Chan, PhD[2]
[1]Centre on Behavioral Health, The University of Hong Kong, Hong Kong, Hong Kong and [2]Department of Social Work & Social Administration, The University of Hong Kong, Hong Kong, Hong Kong.

Background: Patients with breast cancer experience elevated risk of psychological distress and disrupted circadian cortisol pattern, a manifestation of anomalous activity of the hypothalamic-pituitary-adrenal axis.

Purpose: This study explored the diurnal cortisol patterns of patients with breast cancer and the associations with psychological distress, social support, and health-related measures.

Methods: This study recruited 181 patients with breast cancer and collected measurements on self-perceived anxiety, depression, social support, physical activity, sleep quality, total sleep hours, and time of awakening. Salivary cortisol were collected upon awakening, at 1200h, 1700h, and 2100h. Latent growth modeling was adopted to investigate the diurnal cortisol patterns and the associated psychosocial factors.

Results: An unconditional logarithmic growth model revealed an adequate fit to the diurnal cortisol measures ($\chi2(5) = 7.72$, $p > .05$, CFI = .971, TLI = .965, RMSEA = 0.055, SRMR = .041), suggesting a logarithmic decay trend. The conditional growth model, which incorporated the covariates of psychological distress, social support, and health-related measures, fitted the data well ($\chi2(27) = 27.83$, $p > .05$, CFI = .995, TLI = .989, RMSEA = 0.013, SRMR = .025). Flatter diurnal cortisol slope was found to be significantly associated with higher negative social support (B = 0.105, SE = 0.045, p = .019), later time of awakening (B = 0.142, SE = 0.055, p = .010), and shorter total sleep hours (B = -0.114, SE = 0.050, p = .022). No significant association was found between diurnal cortisol slope and anxiety (B = -0.030, SE = 0.025, p > .05) or depression (B = -0.010, SE = 0.026, p > .05).

Conclusions: The results indicate that longer total sleep hours, amelioration of negative social support, and waking up early could be related to positive endocrine outcomes, reflected as steeper diurnal cortisol patterns in breast cancer patients.

CORRESPONDING AUTHOR: Rainbow T. H. Ho, PhD, Centre on Behavioral Health, The University of Hong Kong, Hong Kong, Nil; tinho@hku.hk

A-221a

MANAGING PROBLEMATIC SUBSTANCE USE IN OUTPATIENT PSYCHIATRIC CARE IN SWEDEN

Christopher R. Sundström, MSc,[1] Anne H. Berman, Associate professor[1,2] and Kristina Sinadinovic, PhD[1]
[1]Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden and [2]Stockholm Center for Dependency Disorders, Stockholm, Sweden.

Introduction

About 25% of psychiatric patients are known to have problematic substance use. The National Board of Health and Welfare in Sweden recommends that treatment providers of general and psychiatric care systematically identify patients with problematic substance use, and provide brief intervention (BI) for them. It is not known to what extent these recommendations are followed in psychiatric care.

Method

Two separate online surveys were designed, one for outpatient psychiatric clinic directors and the second for clinical staff at these clinics. The survey to clinic directors focused on guidelines at the clinic for identifying and treating problematic substance use. The survey to staff focused on management of problematic substance use among patients and personal experiences in identifying such use and offering BI.

Results

Response rate for clinic directors was 60% (n=126). Almost all clinics (92%) had guidelines for identifying problematic alcohol use in the assessment phase, 79% for problematic drug use. Guidelines for BI existed for hazardous alcohol use at 49% of the clinics, for hazardous drug use at 42%. Among staff, response rate was 30% (n=334). Most (67 %) stated that they always ask patients about alcohol use during the assessment phase, 57% said they always ask about drug use. Under half (38%) reported using some kind of BI with hazardous alcohol and drug use. One in five (22%) were interested in participating in future studies integrating e-interventions for problematic substance use with psychiatric care.

Discussion

Guidelines for managing problematic substance use had been formulated at almost all clinics. A majority of the staff reported always asking patients about both alcohol and drug use during assessment, but the use of BI was much less frequent. Alternative ways of identifying and treating problematic substance use in psychiatric care may be needed and additional research should be carried out on how to increase treatment provision for problematic substance use via complementary e-interventions.

CORRESPONDING AUTHOR: Christopher R. Sundström, MSc, Clinical Neuroscience, Karolinska Institutet, Stockholm, 117 28; christopher.sundstrom@ki.se

A-223a

WORRY ABOUT CHANGES IN SEXUAL FUNCTION (WCSF) PRE-AND-POST STEM CELL TRANSPLANTATION (SCT): PREVALENCE AND RECOMMENDATIONS FOR SCREENING

Veronica Sanchez Varela, PhD Clinical Psychologist,[1,2] James Gerhart, PhD,[2] Kurrie Wells, PhD,[3] Henry Fung, MD[1] and Stevan Hobfoll, PhD[2]
[1]Internal Medicine, Rush University Medical Center, Chicago, IL; [2]Behavioral Sciences, Rush University Medical Center, Chicago, IL and [3]Cancer Treatment Centers of America, Philadelphia, PA.

Sexual dysfunction is a major quality of life problem after cancer treatment, and survivors of SCT report sexual dysfunction even 5 years after transplant. However, screening for sexual problems is not regularly integrated in cancer care. We report prospective data on WCSF in an SCT patient sample, and discuss recommendations for screening. Methods: Participants completed the Cancer Treatment Distress Scale (CTXD) pre-SCT (T1) and at 90-days post-SCT (T2). Analysis focused on a single item where patients rated the degree to which "changes in my sex life because of treatment" caused worry or distress in the previous week (0=none, 3=severe). Analyses included data from 88 participants at T1, and 68 participants at T2. Participants median age was 56 years (range=21-76); 56% were male; 70% were White. Results: A larger proportion of participants reported moderate-severe WCSF at T1 (37.1%) than at T2 (19.1%), (p<.001). 9% of patients reported moderate-severe worry at T2 but not at T1. At T2 survivors with moderate-severe worry did not differ from survivors with mild-no worry in terms of age, gender, marital status, disease risk or anxiety symptoms. A larger proportion of autologous-SCT recipients reported less WCSF than allogeneic-SCT patients. Discussion: A significant number of SCT recipients who report WCSF pre-SCT will likely experience a decline in worry post-SCT. However, a still sizable number of survivors will likely experience WCSF post-SCT, and some survivors who do not report experiencing worry prior to transplantation may experience worry as survivors. WCSF experienced by SCT survivors appears to be independent from reported anxiety symptoms and therefore sexual problems should be assessed directly and independently from other distress symptoms. SCT patients should be screened for sexual problems pre-SCT and at regular intervals post-SCT.

CORRESPONDING AUTHOR: Veronica Sanchez Varela, PhD Clinical Psychologist, Rush University Medical Center, Chicago, IL, 60612; veronica_varela@rush.edu

Rapid Communications
Poster Session B

Thursday, March 21, 2013

7:00 PM-8:30 PM

B-037a

COGNITIONS AND CANCER SCREENING IN HISPANIC AMERICANS

Alexandria Booker, Bachelor of Arts (2013),[1,4] Vanessa Malcarne, PhD[1,2] and Georgia Sadler, BSN, MBA, PhD[2,3]
[1]Dept of Psychology, San Diego State University, San Diego, CA; [2]Moores UCSD Cancer Center, La Jolla, CA; [3]Dept of Surgery, University of California, San Diego, La Jolla, CA and [4]SDSU MBRS-IMSD Program, San Diego, CA.

Although the prevalence of cancer in Hispanic Americans (HAs) is lower than in other ethnic groups, HAs have an elevated risk of cancer mortality. Screening for cancer is recommended and has been linked to earlier diagnosis and increased survival rates. The current study aimed to identify cognitive correlates of screening adherence in an adult community sample of HAs. Participants were asked whether they had obtained a mammogram (for women) or a prostate-specific antigen (PSA) test (for men), and how long ago the test occurred. Adherence was defined as having been screened within the past two years. Adherent and non-adherent men and women were then compared on several health-related cognitions, including knowledge of cancer causes and perceptions of control over health and cancer risk. Out of a larger sample of 436, analyses were restricted to individuals for whom mammograms or PSA tests are recommended (i.e., women over 40 years or men over 50 years), which resulted in n = 121 women and n = 64 men. Results showed that 45.3% (n = 29) of men and 77.7% (n = 94) of women were screening adherent. Independent sample t-tests showed no significant differences between adherent and non-adherent men and women for acculturation, health literacy, health-related locus of control (4 subtypes), or knowledge of the causes of cancer. Most of the women reported being screening adherent; thus, it was difficult to test differences based on adherence in this group. Less than half of the men reported being adherent; more research is needed to examine what factors can increase screening behaviors in HA men. Future research should examine the cognitive correlates of cancer screening in a larger sample to better understand if the rate of adherence observed in this sample is a trend across the population, as well as to identify what factors may motivate the HA population to practice health behaviors.

CORRESPONDING AUTHOR: Alexandria Booker, Bachelor of Arts (2013), Psychology, San Diego State University, San Diego, CA, 92182; booker.alex@hotmail.com

B-037b

SPIRITUALITY AND POST-TRAUMATIC GROWTH PREDICT FEAR OF RECURRENCE AMONG YOUNG ADULT CANCER SURVIVORS

Alexis R. Munoz, MPH,[1] Sofia F. Garcia, PhD,[2] David Victorson, PhD[2] and John Salsman, PhD[2]
[1]School of Public Health, University of Illinois Chicago, Chicago, IL and [2]Feinberg School of Medicine, Northwestern University, Chicago, IL.

Background: Fear of recurrence (FoR) is a common stressor among post-treatment cancer survivors, which may be related to spiritual and existential factors (e.g., meaning, life appreciation, perceived growth). Few studies have examined FoR among young adults (YAs) with cancer, especially its association with these constructs of interest. This study aims to explore the relationship between FoR, spiritual well-being, and posttraumatic growth among YA cancer survivors.

Methods: YA cancer survivors (ages 18-39; N=335) were recruited from an online research panel and stratified by cohort (0-12, 13-24, and 25-60 month-post-treatment cohorts). Participants completed questions on demographic and clinical characteristics, the Fear of Recurrence Scale, the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-Sp) and the Post Traumatic Growth Inventory-Short Form (PTGI-SF).

Results: Participant mean (M) age was 31.8 years and a majority (68%) were women. Average FoR scores were 14.82 (Range 5-24), with the highest levels occurring 13-24 months post-treatment (M=15.42) and significantly lower levels occurring 25-60 months post-treatment (M=13.90, p<.05). In a multiple regression model controlling for age, gender, time and education, predictors of FoR (R2 = 33.5%) included peace (β=-0.36, p<.01), meaning (β=-0.13, p=.05), and appreciation of life (β=.17, p<.05). FACIT-Sp and PTGI-SF total scores were correlated with each other (r=.28, p<.01).

Conclusions: FoR scores among YAs were comparable to those observed in older cancer survivors and was greater among YAs who completed treatment more recently. Spirituality measured by personal meaning and peace were associated with less FoR. Appreciation of life was associated with greater FoR, suggesting those with greater awareness of uncertainty and mortality may appreciate life more. Longitudinal research is needed to explore the course of FoR over time and identify optimal strategies for managing FoR among YA survivors.

CORRESPONDING AUTHOR: Alexis R. Munoz, MPH, Public Health, University of Illinois Chicago, Chicago, IL, 60612-4394; alexismunoz12@gmail.com

B-037c

FATIGUE AND FATIGUE INTERFERENCE DIFFERENTIALLY PREDICT POOR QUALITY OF LIFE AND GREATER DISTRESS IN EARLY-STAGE CHRONIC LYMPHOCYTIC LEUKEMIA

Eleshia Morrison, Master of Arts,[1] Joseph Flynn, DO, MPH,[2] Jeffrey Jones, MD, MPH,[2] John Byrd, MD[2] and Barbara Andersen, PhD[1]
[1]Psychology, The Ohio State University, Columbus, OH and [2]Division of Hematology, The Ohio State University, Columbus, OH.

Objective: Despite the prevalence of chronic lymphocytic leukemia (CLL) among the leukemias (ACS, 2012), few studies have examined its psychological and quality of life (QoL) correlates. Active surveillance is common for most early-stage patients; however the limited research on CLL has focused primarily on those receiving treatment. The present study is one of the few to examine physical symptoms and QoL in untreated patients. The focus is on fatigue, a key symptom. Fatigue and fatigue interference are hypothesized to differentially predict distress and QoL.

Method: A cross-sectional design was used; 112 early-stage (0-II), untreated patients were accrued. The majority were male (56%); median age 61; Caucasian (100%) with stage 0 (63.1%) CLL. Mean time since diagnosis was 4.6 yrs. Measures assessed depressive symptoms, mental & physical QoL, health anxiety, CLL-specific stress, fatigue, and fatigue interference. Hierarchical linear regression tested whether fatigue and interference differentially predict distress and QoL.

Results: Age and time since diagnosis were control variables. Correlation analysis between fatigue and interference show these constructs to be related, but distinct (r=.454, p<.01). As hypothesized, they differentially predicted distress and QoL. Fatigue predicted: depressive symptoms; worse physical QoL; and health anxiety worry (ps<.01). Interference predicted: depressive symptoms; worse physical & mental QoL; CLL-specific stress; health anxiety worry (ps<.01); and health anxiety reassurance seeking (p<.05).

Significance: Results highlight the importance of identifying the subset of early-stage patients for whom physical symptoms may be accompanied by worse adjustment. Identification of predictors of adjustment better inform patient care both during active surveillance and treatment. These data are compelling in providing a perspective on the biopsychosocial characteristics of this understudied population.

CORRESPONDING AUTHOR: Eleshia Morrison, Master of Arts, Psychology, The Ohio State University, Columbus, OH, 43210; morrison.364@osu.edu

B-037d
PROMOTING GARDASIL USE AMONG UNDERGRADUATE WOMEN

Giselle K. Perez, MA, Dean G. Cruess, PhD and Olivia Bogucki, BS
Psychology, University of Connecticut, Storrs, CT.

Cervical cancer is a virally mediated disease with the majority of cases due to the human papillomavirus (HPV). HPV infections are the most prominent sexually transmitted diseases among college-aged women. Although HPV vaccines such as Gardasil afford women a valuable method of cancer prevention, vaccination rates are often incomplete or inadequate. This study evaluated the effectiveness of an interactive, information-motivation-behavioral skills (IMB) based, multimodal program to promote Gardasil use among 62 undergraduate women (mean age = 19.21; 66.1% Caucasian, 8.1% African American, 21.0% Asian, 21.0% Hispanic, 4.8% other) enrolled at a major public university. Secondary aims targeted additional health behaviors, including risky sexual practices and Pap Screen utilization. Participants were randomly assigned to a single session, active intervention group or an attention control group and were assessed pre-intervention, post-intervention, and at a 1-month follow-up. At baseline, a majority of participants demonstrated high levels of vaccine knowledge, low mastery of HPV/cervical cancer information, and ambivalence about pursuing vaccination. Following the intervention, the IMB group demonstrated increased levels of HPV/cervical cancer and Gardasil knowledge (F(1.76, 5.90) = 4.69, p = .015), higher levels of self-reported motivation (F(2, 112) = 4.16, p = .018) and intention (F(1.78, 99.82) = 7.40, p = .002) to get vaccinated, and more positive attitudes toward vaccination (F(1.78, 99.79) = 7.11, p = .002). Although there were no significant group differences in Gardasil acquisition at the follow-up, women in the IMB group demonstrated greater intentions to engage in regular screening in accordance with current guidelines ($\chi 2(2) = 15.84$, p = .003). These results provide support for an IMB-based intervention in helping elucidate factors that impact young women's decision to get vaccinated. Findings may help guide the development of a cost-effective, cancer preventive program that can be easily disseminated and implemented in university clinics and health centers.

CORRESPONDING AUTHOR: Giselle K. Perez, MA, Psychiatry, Massachusetts General Hospital, Boston, MA, 02114; gperez-lougee@partners.org

B-037e
COMPETITIVE TESTING OF HEALTH BEHAVIOR THEORIES: HOW DO PROS, CONS, SUBJECTIVE NORMS, AND INTENTION INFLUENCE MAMMOGRAPHY BEHAVIOR?

Caitlin C. Murphy, MPH,[2] Sally W. Vernon, PhD,[2] Pamela Diamond, PhD[2] and Jasmin Tiro, PhD[1]
[1]Clinical Sciences, UT Southwestern Medical Center, Dallas, TX and [2]Center for Health Promotion & Prevention Research, UT School of Public Health, Houston, TX.

Background: Application of health behavior theories to interventions is recommended to advance our understanding of the theoretical mechanisms that drive behavior change and build consensus about common theoretical constructs and pathways. Competitive hypothesis testing may explain differences in predictive power between theories. For mammography, no studies have used a competitive testing approach. By testing competing hypotheses of the Health Belief Model (HBM) and Theory of Reasoned Action (TRA), we sought to quantify the pathways linking subjective norms, benefits, barriers, intention, and mammography.

Methods: We conducted a secondary analysis of longitudinal data from a national sample of women veterans enrolled in a mammography intervention trial. Women randomized to the control group were included in this analysis (n=704). Structural equation modeling was used to evaluate 3 competing hypotheses of the HBM and TRA. Direct, partially mediated, and fully mediated models were compared via Satorra-Bentler $\chi 2$ difference testing.

Results: Barriers had both a direct negative effect on mammography behavior (-0.75, p<.001) and indirect effect partially mediated by intention ($\chi 2$ diff = 56.6, p<.001). Benefits had little to no effect on behavior and intention; however, it was negatively correlated with barriers (-0.25, p<.001). Subjective norms, a construct not explicitly included in HBM, directly affected behavior (0.56, p<.001) and indirectly affected intention through barriers ($\chi 2$ diff = 17.2, p<.001).

Conclusion: We found empiric support for different assertions of the HBM and TRA. Intention does not completely mediate the effect of barriers, benefits, and norms on mammography. Our results suggest that future interventions should focus on building social influence and reducing negative attitudes toward mammography.

CORRESPONDING AUTHOR: Jasmin Tiro, PhD, Clinical Sciences, UT Southwestern Medical Center, Dallas, TX, 75390; jasmin.tiro@utsouthwestern.edu

B-037f
INFORMATIONAL AND PSYCHOSOCIAL NEEDS OF PATIENTS WITH HUMAN PAPILLOMAVIRUS-ASSOCIATED OROPHARYNGEAL CANCER

Kathrin Milbury, PhD,[1] David I. Rosenthal, MD,[1] Adel El-Naggar, MD[1] and Hoda Badr, PhD[2]
[1]General Oncology, The University of Texas, MD Anderson Cancer Center, Houston, TX and [2]Mount Sinai School of Medicine, New York, NY.

Although the incidence of oropharyngeal squamous cell carcinoma (OPSCC) attributable to human papillomavirus (HPV) is rapidly increasing, patients' psychosocial and informational needs related to its sexual transmission remain unexplored. The goal of this study was to assess informational and psychosocial needs of HPV-positive (HVP+) OPSCC patients and identify psychosocial challenges associated with having an HPV+ cancer. Patients (N=62; 87% male; mean age = 56 years) with HPV+ OPSCC and in committed relationships completed paper-pencil questionnaires assessing their HPV-related knowledge (e.g., cancer etiology, transmission), information needs (e.g., communicability) and psychosocial concerns (e.g., stigma, relational consequences, self-blame). Patients also completed measures of distress and health behaviors. Medical information was obtained from patients' medical charts. Sixty-six percent of patients correctly identified their HPV status but only 35% of them recognized HPV as their putative cancer cause. The majority of patients disclosed their HPV status to their partner, 41% discussed transmission of the virus, and only 23% felt informed regarding potential transmission risks and precautions. Thirty-nine percent wanted their oncologist to discuss more about HPV-related issues and 58% sought this from other sources. Over one-third said they would be interested in more HPV-related information. HPV+ patients experienced more behavioral self-blame (mean=2.27, SD=1.23) than HPV-negative (HPV-) patients (mean=1.62, SD=.96), but HPV+ patients reported less distress (mean=3.52, SD=2.54) than HPV- patients (mean=5.43, SD=4.17). Significant knowledge gaps exist regarding patients' understanding of the link between HPV and OPSCC and the implications of infectious etiology. Best practice guidelines must be established to improve patient care.

CORRESPONDING AUTHOR: Kathrin Milbury, PhD, General Oncology, The University of Texas, MD Anderson Cancer Center, Houston, TX, 77030-4009; kmilbury@mdanderson.org

B-037g

BREAST CANCER PATIENTS' AND PROVIDERS' PERSPECTIVES AND ATTITUDES TOWARD PERSONAL HEALTH RECORDS

Kuang-Yi Wen, PhD, Suzanne Miller, PhD and Alison Petok, MS
Fox Chase Cancer Center, Philiadelpia, PA.

Patient use of online electronic personal health records (PHR) holds the potential to make important improvements in health outcomes. Breast cancer is second only to lung cancer in incidence in American women, affecting one in eight over the course of a lifetime. Longitudinal care for this population is complex including facilitation of ongoing shared decision making, management of treatment side effects and psychosocial distress as well as the need for o surveillance and healthy behavior promotion over time. As breast cancer care increasingly occurs in ambulatory settings, delivery of personal health information to breast cancer patients and families via PHR provides an opportunity to motivate and structure patients to proactively manage and improve their health, potentially increasing the utility and quality of care. The goal of this study is to examine breast cancer patients' perspectives on PHR and to compare patient attitudes with those of a breast cancer provider team. Thirty-two newly-diagnosed breast cancer patients and 20 providers were interviewed. The majority of both patients and providers expressed a need to share patient information, acknowledging concerns about sharing, including data security and confidentially issues, the possibility of unnecessarily increasing patient's anxiety and providers' burden, as well as patient health literacy issues to understand PHR. Despite patients' general enthusiasm for online health information and care management tools, providers voiced frustration with an increase in patient use of the internet for cancer information due to reliance on untrustworthy sources. Both patients and providers agreed that reliable information and understandable PHR would benefit patients throughout their treatment and survivorship. The benefits and challenges to developing a patient-centered PHR system will be discussed in terms of the implications for improving breast cancer patient care management and doctor-patient communication.

CORRESPONDING AUTHOR: Kuang-Yi Wen, PhD, Fox Chase Cancer Center, Cheltenham, PA, 19012; Kuang-Yi.Wen@fccc.edu

B-037h

COGNITIVE-BEHAVIORAL STRESS MANAGEMENT EFFECTS ON EMOTIONAL PROCESSING IN BREAST CANCER PATIENTS AT DIFFERENT STAGES OF DISEASE

Laura Bouchard, MS,[1] Michael Antoni, PhD,[1,2] Suzanne Lechner, PhD,[2,3] Jamie Stagl, MS,[1] Lisa Gudenkauf, BS,[1] Devika Jutagir, BA,[1] Stefan Gluck, PhD[3] and Charles Carver, PhD[1,3]
[1]Psychology, University of Miami, Coral Gables, FL; [2]Psychiatry and Behavioral Sciences, University of Miami Miller School of Medicine, Miami, FL and [3]Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL.

Objective: Cognitive-behavioral stress management (CBSM) encourages emotional processing (EP) in women undergoing treatment for breast cancer (BCa), but less is known about whether these effects are stronger in women at later stages of disease and whether EP covaries with adaptive coping processes. Methods: Women with non-metastatic BCa were enrolled 2-10 weeks post-surgery and randomized to either a CBSM intervention group or a psycho-educational (PE) control group. Women reported EP using the Emotional Approach Coping scale (EAC) and coping strategies using the COPE at baseline and 6-mo post-enrollment. A 2x2 ANCOVA was conducted to examine whether the effects of CBSM were different for women with early-stage (0-I) (N=43) vs later-stage (II-III) (N=39) BCa compared to women who received PE with early-stage (N=53) vs later-stage (N=30) BCa. Analyses were conducted while controlling for baseline EP, treatment history (chemotherapy, radiation therapy, and hormone replacement therapy), and markers of SES (income, ethnicity, and education level). Results: A significant stage by condition interaction effect was found such that women with later-stage disease who received CBSM vs PE reported the greatest EP at 6-mo, F(1, 152)=8.46, p=0.004. Among later-stage cases assigned to CBSM, 6-mo increases in EP were associated with increases in active coping (r=0.39, p=0.014), positive reframing (r=0.52, p=0.001), and planning (r=0.55, p<0.001). Conclusions: Results indicate that stage of disease moderates the effect of CBSM on EP, such that women with later-stage disease report greater increases in EP which are in turn associated with greater increases in reports of adaptive cognitive and behavioral coping strategies.

CORRESPONDING AUTHOR: Laura Bouchard, MS, Psychology, University of Miami, Coral Gables, FL, 33145; LCBouchard@gmail.com

B-037i

ELEVATED DISTRESS IN PRE-MENOPAUSAL WOMEN PRIOR TO SURGERY FOR OVARIAN CANCER

Lauren Clevenger, BA,[1] Koen DeGeest, MD,[1] Frank Penedo, PhD,[2] Premal H. Thaker, MD,[3] George M. Slavich, PhD,[4] Anil K. Sood, MD[5] and Susan K. Lutgendorf, PhD[1]
[1]University of Iowa, Iowa City, IA; [2]Northwestern University, Chicago, IL; [3]Washington University, St. Louis, MO; [4]University of California, Los Angeles, Los Angeles, CA and [5]University of Texas MD Anderson Cancer Center, Houston, TX.

Purpose: Women with ovarian cancer often experience high levels of distress at the time of diagnosis, due to late cancer detection and poor prognosis. However, no studies to date have investigated the effect of menopausal status on levels of distress and quality of life (QOL) at the time of primary surgical resection which is known to induce abrupt onset of menopausal symptoms. To address this issue, we examined differences in self-reported psychological symptomatology between pre- and post-menopausal women anticipating surgical resection for ovarian cancer.

Sample and Methods: Women with a pelvic mass were recruited presurgically. Of those diagnosed with primary epithelial ovarian, fallopian tube, or peritoneal cancer, 214 completed the Profile of Mood States, CESD, Social Provisions Scale, Impact of Events Scale, and FACT-O. Clinical information was extracted from medical records. 70 women were pre-menopausal prior to surgery.

Results: In general linear models adjusting for cancer stage, pre-menopausal status was significantly associated with higher levels of self-reported anxiety (F=11.69, p=.001), anger (F=12.77, p<.001), and depressive mood (F=9.42, p=.002). Pre- and post-menopausal women did not significantly differ on indices of social support, thought intrusions, or QOL (all ps>.14).

Conclusion: Pre-menopausal status is associated with increased self-reported anger, anxiety, and depressive mood, independent of cancer stage. Pre- and post-menopausal women did not differ on indices of perceived stress, social support, or quality of life. These findings suggest the clinical importance of menopausal status in screening for psychosocial distress in patients anticipating surgery.

CORRESPONDING AUTHOR: Lauren Clevenger, BA, Psychology, The University of Iowa, Iowa City, IA, 52242; lauren-clevenger@uiowa.edu

B-037j
SOCIAL FUNCTIONING IN CHILDREN WITH CANCER AT TIME OF DIAGNOSIS

Leandra Desjardins, PhD Candidate,[1] Cynthia Gerhardt, PhD,[2] Kathryn Vannatta, PhD[2] and Bruce Compas, PhD[1]
[1]Vanderbilt University, Nashville, TN and [2]Ohio State University, Columbus, OH.

Research has suggested possible problems in social functioning in children diagnosed with cancer (e.g. Katz et al., 2011), although results have been mixed (Noll et al., 1999). Studies have largely focused on social functioning in children beyond the first year from diagnosis (e.g. Stam et al., 2001). Studies reporting data near time of diagnosis inform the possible developmental trajectory of problems in social functioning. However, the few studies of social functioning at time of diagnosis have been limited by sample size (Vago et al., 2011), specificity of diagnosis (Brinkman et al., 2012) and single informant report (Mulhern et al. 1993). We report findings from a study of children with heterogeneous cancer diagnoses involving multiple informant reports of child social functioning near diagnosis. Families completed questionnaires shortly after diagnosis (M=2.37 months, SD=1.89). Parents (317 mothers, 168 fathers) completed the Child Behavior Checklist on 334 children aged 5-17 years (M=10.6, SD=3.9). A subsample of 159 children aged 10-17 years completed the Youth Self Report. Mean child Social Competence ranged from T= 45.16 to 47.52, with effect sizes ranging from .25 to .48. Mean child Social Problems ranged from T= 53.32 to 54.25, with effect sizes ranging from .33 to .43. Child age was positively correlated with Social Competence as reported by mothers (r=.29, p<.001), fathers (r=.30, p=.001), and youth (r =.33, p<.001). Girls self reported greater social problems than boys, t(110) = 2.51, p=.01. A series of ANOVAs yielded a significant effect of child diagnosis on Father reports of Social Competence, F (3,119) = 3.53, p=.02. Post hoc tests indicated lower Social Competence scores were associated with a brain tumor diagnosis as compared with lymphoma (p=.01) and other solid tumors (p=.03), but not leukemia (p=.08). These findings identify important correlates of and sources of individual differences in difficulties in social functioning in a large sample of children with cancer near time of diagnosis.

CORRESPONDING AUTHOR: Leandra Desjardins, PhD Candidate, Vanderbilt University, Nashville, TN, 37215; leandra.desjardins@vanderbilt.edu

B-037k
OVARIAN CANCER (OC) SCREENING AS A TEACHABLE MOMENT (TM) FOR HEALTH BEHAVIOR CHANGE (HBC): THE ROLE OF POSITIVE SCREENING CONSEQUENCES AND EFFICACY BELIEFS

Rachel F. Steffens, MS and Michael Andrykowski, PhD
Behavioral Science, University of Kentucky College of Medicine, Lexington, KY.

A TM occurs after a health related event when patients are receptive to positive HBC. As data suggest cancer screening may serve as a TM, the trajectory of HBC-related intentions and efficacy beliefs pre- and post OC screening was assessed. Efficacy beliefs and positive screening consequences were also examined as predictors of intentions for HBC. Intentions to change diet and exercise were assessed in women (n=59) prior to (T1), 24-hours post (T2), and 1 month following (T3) routine OC screening. Actual changes in diet and exercise were assessed at T3. We hypothesized HBC-related intentions and efficacy would increase after OC screening with larger increases in women reporting greater positive consequences of screening (PCOS). Results from paired samples t-tests indicated from T1 to T2, intentions to exercise increased (p<.05) while intentions to change diet did not (p>.05). From T1 to T3, reports of exercise and eating a nutritious diet increased (both p's<.05). From T1 to T2, efficacy to change diet or exercise from did not change (p>.05) but did from T2 to T3 (p<.01). Reported PCOS did not predict intentions for a nutritious diet (p>.05) but appeared to be important in predicting intentions to exercise at T3 (p=.06). Exercise and nutritious diet efficacy beliefs at T3 were significant predictors of actual exercise and diet HBC at T3 (p<.01). In sum, results indicated significant increases in HBC intentions after routine OC screening with increased efficacy beliefs playing an important role in actual HBC. Most women also reported PCOS and PCOS predicted increased intentions to exercise. Future research should continue to examine cancer screening as a TM with the potential to serve as a platform for promoting HBC.

CORRESPONDING AUTHOR: Rachel F. Steffens, MS, Behavioral Science, University of Kentucky College of Medicine, Lexington, KY, 40536; Rachel.Steffens@uky.edu

B-037l
PREDICTORS OF ANXIETY AND DEPRESSION IN DAUGHTERS OF BREAST CANCER PATIENTS

Sarah Ormseth, MA,[1,2] David Wellisch, PhD,[2] Narineh Hartoonian, PhD[3] and Taylor Draper, MA[1,2]
[1]Psychology, Loma Linda University, Los Angeles, CA; [2]Psychiatry, UCLA, Los Angeles, CA and [3]Rehabilitation Medicine, University of Washington, Seattle, WA.

Aims: To profile depression and anxiety symptoms of daughters of breast cancer patients attending a high risk breast cancer clinic, and to examine mother's survival status and daughter age at time of mother's diagnosis as moderators of change in symptomatology. Methods: Data were obtained during participants' first three visits to the Revlon/UCLA Breast Center High Risk Clinic. Data from 55 women were available for analyses. To evaluate the effects of mother's survival and daughter age at time of mother's diagnosis on change in anxiety (State-Trait Anxiety Inventory) and depression (CES-D score) across clinic visits, 2 (mother survived or died) x 2 (<20 years or ≥20 years old at diagnosis) x 3 (symptomatology at first, second, and third clinic visits) repeated measures ANOVAs were employed. Results: The interaction among mother's survival, age at diagnosis and anxiety scores across clinic visits was significant, F(2,48)=3.77, p=.030. Follow-up analyses indicated an interaction between age at diagnosis and anxiety for daughters whose mothers died, F(2,22)=4.52, p=.023, with decreased anxiety in those who were younger at the time of diagnosis (p=.004), but not in those who were older (p=.269). The interaction among mother's survival, age at diagnosis and depression across visits was also significant, F(2,50)=3.72, p=.031. Follow-up analyses demonstrated a significant interaction between age at diagnosis and depression for daughters whose mothers died, F(2,23)=4.94, p=.016, with daughters who were younger showing decreased depression during subsequent clinic visits (p=.044). Among daughters whose mothers died who were older at the time of diagnosis, a marginal increase in depression was observed (p=.097). Conclusions: Daughters whose mothers died who were older at the time of their mother's diagnosis appear at risk for greater anxiety and depressive symptomatology upon return visits to a high risk breast cancer clinic. Results will be discussed in terms of theoretical and clinical implications.

CORRESPONDING AUTHOR: Sarah Ormseth, MA, Loma Linda University, Los Angeles, CA, 90095; sormseth@gmail.com

B-037m

FACTORS ASSOCIATED WITH COMPARATIVE PROSTATE CANCER RISK PERCEPTION IN FIRST DEGREE RELATIVES

Stacy N. Davis, PhD, Steven K. Sutton, PhD, Mitul V. Patel, MS, Susan T. Vadaparampil, PhD, Cathy D. Meade, PhD, Brian M. Rivers, PhD, Javier F. Torres-Roca, MD, Randy V. Heysek, MD, Philippe Spiess, MD, Julio Pow-Sang, MD, Paul B. Jacobsen, PhD and Clement K. Gwede, PhD
H. Lee Moffitt Cancer Center, Tampa, FL.

Background: First degree relatives (FDRs) of men with prostate cancer (PCa) are at increased risk for PCa. Little is known about the factors that may impact their comparative risk perception. The purpose of this study was to explore correlates of comparative PCa risk. We expected higher comparative risk would be positively correlated with PCa worry, PCa knowledge, age, relative who had PCa (sibling or parent), more than one family member with PCa, and past prostate specific antigen (PSA) testing.

Methods: Baseline data were collected from 85 males who participated in a prospective study of PCa informed decision making. To be eligible, men had to be a FDR (brother or son of a man diagnosed with PCa) and aged 40-70 years. Comparative PCa risk perception was assessed as perceived chance of developing PCa compared to other men their age.

Results: Majority of participants were White (86%), married (72%), had a high school degree (95%), employed full-time (69%), and had a prior PSA test (69%). Most men (66%) had a father with PCa and 14% had more than one family member with PCa. Only 39% of men thought their chance of getting PCa was higher compared to other men their age. In univariate analysis, comparative PCa risk was not related to PCa worry, PCa knowledge, or past PSA testing. However, men whose father had PCa had higher comparative risk compared to men whose brother had PCa ($p<.00$). In addition, younger men reported higher comparative risk ($p<.00$) as well as men with more than one family member with PCa ($p<.05$). Logistic regression analysis showed that, within a full model, significant correlates were age (OR: .93, CI= .86,1.00) and having additional family members with PCa (OR: 7.67, CI=1.46, 40.38).

Conclusion: Additional research is needed to better understand how younger age and multiple relatives with PCa help to shape perceptions of comparative PCa risk. Although preliminary, these findings suggest the need for increased risk communication education for FDRs.

CORRESPONDING AUTHOR: Stacy N. Davis, PhD, Health Outcomes and Behavior, H. Lee Moffitt Cancer Center, Tampa, FL, 33612; stacy.davis@moffitt.org

B-037n

DEPRESSION SYMPTOMS MODERATED THE PROSPECTIVE ASSOCIATION BETWEEN MOTIVATIONAL REGULATION AND LEISURE-TIME PHYSICAL ACTIVITY AMONG BREAST CANCER SURVIVORS

Steve Amireault, MSc[1] and Catherine Sabiston, PhD[2]
[1]Laval University, Quebec City, QC, Canada and [2]University of Toronto, Toronto, ON, Canada.

Backgroung. Depression symptoms can be both a determinant and outcome of physical activity (PA). This study aimed to investigate the effect of different types of motivation in predicting PA among breast cancer survivors using the self-determination theory. The moderating effect of depression level was also investigated.

Methods. Breast cancer survivors aged ≥ 18 were recruited through advertisements and oncologist referrals from local medical clinics and hospitals. At baseline, 201 women completed the Behavioral Regulation in Exercise Questionnaire and the Center for Epidemiological Studies Depression to assess different types of motivational regulations (amotivation, external, introjected, identified, and intrinsic motivation) and depression, respectively. The Godin-Shephard Leisure-Time Exercise Questionnaire (GSLTEQ) was used to assess moderate/vigorous leisure-time PA at baseline and 3-month follow-up. One hundred and seventy participants completed the GSLTEQ at follow-up and were classified as active (PA score ≥ 24) and insufficiently active (PA score < 24) in reference to current public health guidelines

Results. At follow-up, 90 (52.9%) women were classified as active during their leisure-time. Hierarchical logistic regression analysis indicated that baseline PA behavior (Odds ratio (OR) = 1.04, 95%CI: 1.01, 1.06) and intrinsic motivation (OR = 1.73, 95%CI: 1.16, 2.60) were associated with meeting PA guidelines. Levels of depression moderated the intrinsic motivation to PA behavior relationship (OR = 3.15, 95%CI: 1.29, 7.68). That is, the odds for women reporting intrinsic motivation of meeting PA guidelines were 3.15 higher for each one-unit increase in level of depression. Correct classification in PA behavior was 70.2%.

Discussion. These results suggest that enhancing intrinsic motivation should be an important component of PA intervention among breast cancer survivors in the time following treatment, especially among those presenting depression symptoms.

CORRESPONDING AUTHOR: Steve Amireault, MSc, Laval University, Quebec City, QC, G1V 0A6; steve.amireault@fsi.ulaval.ca

B-037o

TRAJECTORIES OF POSTTRAUMATIC GROWTH (PTG) IN WOMEN WITH BREAST CANCER

Suzanne C. Danhauer, PhD,[1] Doug Case, PhD,[2] Stephanie Sohl, PhD,[3] Richard Tedeschi, PhD,[4] Greg Russell, MS,[2] Kelli Triplett, MA,[1,4] Beverly Levine, PhD[1] and Nancy Avis, PhD[1]
[1]Social Sciences & Health Policy, Wake Forest School of Medicine, Winston Salem, NC; [2]Biostatistical Sciences, Wake Forest School of Medicine, Winston Salem, NC; [3]Vanderbilt University Medical Center, Nashville, TN and [4]Psychology, University of North Carolina at Charlotte, Charlotte, NC.

Study goals were to: (1) determine trajectories of Posttraumatic Growth Inventory (PTGI) scores in breast cancer survivors; and (2) identify variables associated with trajectories. This observational, longitudinal study was conducted with women newly diagnosed with breast cancer (stage I-III) (N=653). Women completed baseline questionnaires within 8 months of diagnosis and follow-up questionnaires 6, 12, and 18 months later. A group-based SAS finite mixture model (TRAJ) was applied to identify subgroups of PTGI trajectories. Chi-square tests and analysis of variance were applied to determine baseline characteristics associated with trajectory membership for demographic, medical, and psychosocial (active-adaptive coping, passive coping, depressive symptoms, illness intrusiveness, social support) variables. Women's ages ranged from 25-96 (median=54) years, with the majority being non-Hispanic white (90%), married (72%), and college-educated (63%). All four trajectory groups were stable over 22 months. Trajectory 1 (14% of sample) showed consistently low PTG (mean = 22), Trajectory 2 (26%) showed consistently low-moderate PTG (mean=38). Trajectory 3 (32%) showed consistently moderate-high PTG (mean=59), and Trajectory 4 (28%) showed consistently high PTG (mean=78). Baseline characteristics were associated with overall differences in trajectory membership such that women in Trajectory 1 were more likely to be older and White, less likely to have received chemotherapy, and reported lower levels of illness intrusiveness, social support, and active-adaptive coping strategies than women in Trajectory 4 (p-values <.05). Trajectories 2 and 3 showed the same patterns with mean values incrementally in between those of Trajectories 1 and 4. All trajectories showed stability over time without systematic variation.

CORRESPONDING AUTHOR: Suzanne C. Danhauer, PhD, Social Sciences & Health Policy, Wake Forest School of Medicine, Winston Salem, NC, 27157; danhauer@wakehealth.edu

B-037p

MIRROR, MIRROR ON THE WALL: EFFICACY OF APPEARANCE-BASED VIDEO EDUCATION VERSUS HEALTH-BASED VIDEO EDUCATION IN IMPROVING SUNSCREEN USE

William Tuong, BA and April W. Armstrong, MD
Dermatology, UC Davis School of Medicine, Sacramento, CA.

Skin cancer prevention studies have traditionally used "health-based" messages that emphasize the relationship between ultraviolet (UV) light exposure and skin cancer risk. Alternatively, "appearance-based" messages emphasize the negative effects of UV light on appearance (i.e., premature photoaging) rather than health to promote sun protective behaviors. Our primary aim was to examine the efficacy of an appearance-based video intervention compared to a health-based video control in promoting sunscreen application among adolescents. A total of 50 eleventh grade high school students (80% women) were randomized to view either the appearance-based or health-based video. All participants completed a baseline survey that assessed demographics and sunscreen application behavior. A 6-week follow-up survey was conducted to assess change in sunscreen application behavior. At baseline, the appearance-based group (0.60 ± 1.15 days per week) and health-based group (0.72 ± 1.95) had similar frequencies of sunscreen application per week. At the 6-week follow up survey, the appearance-based video group reported a mean sunscreen application frequency of 2.64 ± 2.38 days per week. Compared to baseline, the increase was statistically significant, $p<0.001$. The health-based video intervention group reported a mean sunscreen application frequency of 0.92 ± 1.96 days per week. However, this increase from baseline was not statistically significant. Moreover, the appearance-base group showed a mean increase of 2.20 ± 1.41 days per week, whereas the health-based group demonstrated a mean increase of 0.29 ± 0.58 days per week. The mean increase of the appearance-based group was significantly higher than the health-based group, $p<0.001$. Results indicate that appearance-based video education may be effective in promoting sunscreen application.

CORRESPONDING AUTHOR: William Tuong, BA, Dermatology, UC Davis School of Medicine, Sacramento, CA, 95816; wtuong@gmail.com

B-037q

BIOBANKING AS A HEALTHY CONTROL: PERCEPTIONS OF HEREDITARY CANCER FAMILIES

Alexis Koskan, PhD, Ivana Sehovic, MPH, Clement K. Gwede, PhD, Cathy M. Meade, PhD, Tuya Pal, MD and Gwendolyn P. Quinn, PhD
Health Outcomes & Behavior, Moffitt Cancer Center, Tampa, FL.

Background: Participation of individuals from genetic high risk families in biobanking initiatives is vital to further clinical and genomics research. Exploring how personal genetic risk status (e.g., unaffected carriers within hereditary cancer families or strong family history) impacts decision making can inform researcher training efforts and enrich biobanking recruitment.

Methods: Participants were recruited through research networks of families across the US. At-risk individuals (18+, no personal cancer history, first degree family member with cancer or had a test for hereditary cancer) completed a 90-minute telephone focus group. This interview focused on knowledge of and attitudes toward health research and biospecimen collection, as well as motivations for participating and ethical concerns. The constant comparison method was used to analyze the transcripts, coding for a priori domains and emergent themes.

Results: A total of 40 at-risk individuals (3 Male, 37 Female, 100% White) completed the focus group. Motivations for participation included helping family members/others and furthering the development of cancer treatments. While most individuals had participated in research, all were either unaware they could withdraw or unsure how to withdraw from a study. 50% were unaware of the GINA Discrimination law. After receiving details about the law, 75% did not trust the law to protect them from insurance or employer prejudice. Other concerns included loss of privacy or true anonymity, access to samples by other researchers, researcher profits from discoveries, and use of samples in other areas of research.

Conclusion: While this population has a strong desire to contribute towards cancer research, they have unique concerns regarding confidentiality, loss of privacy, and discrimination. There is a need to enhance existing training for researchers to improve their understanding of high genetic risk community members' perceptions about biobanking. Future research should examine additional perspectives from racial/ethnic minority populations.

CORRESPONDING AUTHOR: Gwendolyn P. Quinn, PhD, Health Outcomes & Behavior, Moffitt Cancer Center, Tampa, FL, 33612; gwen.quinn@moffitt.org

B-037r

IMPLEMENTATION INTENTIONS FOR RURAL PRIMARY CARE COLON CANCER SCREENING

Kimberly Engelman, PhD,[1] Trish Long, PA,[1] Hung-Wen Yeh, PhD,[2] Cheryl Gibson, PhD,[4] Allen Greiner, MD[3] and Edward Ellerbeck, MD[1,4]
[1]Preventive Medicine & Public Health, University of Kansas Medical Center, Kansas City, KS; [2]Biostatistics, University of Kansas Medical Center, Kansas City, KS; [3]Family Medicine, University of Kansas Medical Center, Kansas City, KS and [4]Internal Medicine, University of Kansas Medical Center, Kansas City, KS.

Purpose: Patients in rural communities face additional barriers to colorectal cancer (CRC) screening. We evaluated a phone-based, implementation intentions intervention that helps patients define, step-by-step, the processes that they plan to follow to complete their screening.

Methods: Rural patients > 50 years of age and not up-to-date with CRC screening from 28 rural primary care practices were randomized to receive phone-based, counselor-guided: 1) generic CRC (GenCRC) screening and healthy living information counseling (N=206) or 2) implementation intentions (II) counseling in which patients were led by a counselor to identify the steps needed to get screening; a behavioral contract outlining the agreed upon steps was mailed to each II participant (N=167). Baseline and 120-day measures included test arrangement, barriers, fatalism, and self-efficacy.

Results: II recipients were 3.6 times more likely than GenCRC participants to arrange for CRC screening (31% vs. 11%, $p<0.001$). II participants perceived less test-related discomfort (45% vs. 63%, $p=0.002$) and less difficulty with finding time to be tested (27% vs. 41%, $p=0.002$). Other factors associated with CRC screening included: less difficulty knowing which recommendations to follow, ease of, and time for testing, reduced perception of testing discomfort and embarrassment, higher perceived susceptibility to CRC and greater perceptions of test utility.

Conclusions: Augmenting the primary care routine with simple step-by-step planning with a telephone counselor can reduce barriers to testing and increase test scheduling rates.

CORRESPONDING AUTHOR: Kimberly Engelman, PhD, Preventive Medicine & Public Health, University of Kansas Medical Center, Kansas City, KS, 66160; kengelma@kumc.edu

B-048a

HOSTILE ATTRIBUTION IS ASSOCIATED WITH INCREASED GALECTIN-3 IN HEART FAILURE PATIENTS

Andrew J. Wawrzyniak, PhD,[1] Kerry S. Whittaker, MS,[2] Sarah M. Godoy, MA,[3] Kristie M. Harris, MS,[4] Maria N. Banis, MA,[2] Nadine S. Bekkouche, MA,[2] Stephen S. Gottlieb, MD[5] and David S. Krantz, PhD[2]
[1]School of Nursing & Health Studies, University of Miami, Coral Gables, FL; [2]Medical & Clinical Psychology, Uniformed Services University, Bethesda, MD; [3]Psychology, American University, Washington, DC; [4]Psychology, The Ohio State University, Columbus, OH and [5]Division of Cardiology, University of Maryland Medical Center, Baltimore, MD.

Introduction:

Galectin-3 (Gal-3), a biomarker of vascular fibrosis that is released by activated cardiac macrophages, has a prognostic capacity for clinical outcomes in heart failure (HF) patients. In behavioral medicine, hostility has been implicated as a detrimental psychosocial construct to cardiovascular health. The impact of hostility on Gal-3 has yet to be elucidated; this relationship may serve as a target for a behavioral adjuvant in HF treatment.

Methods:

Anthropomorphic (age, sex, race, BMI, diabetic status), physiological (blood pressure, ejection fraction), behavioral (smoking), and psychosocial measures (Cook-Medley Hostility Scale, Beck Depression Inventory-II) were obtained from 96 HF patients (27.1% female; mean age = 56.93 +/- 11.2 years). Blood samples were obtained to provide serum creatinine and cholesterol; plasma concentrations of beta-natriuretic peptide (BNP) and Gal-3 were log transformed for analysis.

Results:

After adjusting for age, gender, BMI, diabetic status, systolic blood pressure, ejection fraction, smoking, hypercholesterolemia, depressive symptoms, and log BNP, along with estimated glomerular filtration rate (eGFR; $\beta = -0.616$, $p<0.001$), of the five Cook-Medley subscales, only greater Hostile Attribution (the tendency to perceive hostile intent on the part of others) predicted higher log Gal-3 ($\beta = 0.193$, $p=0.002$; model $R2 = 0.564$, $p<0.001$).

Conclusions: These findings indict Hostile Attribution as a potent detrimental psychosocial construct on plasma Gal-3, a fibrosis indicator that serves as an objective predicator of adverse outcomes in HF patients. HF management should assess hostility and integrate interventions aimed at improving interpersonal perception as part of a comprehensive treatment.

CORRESPONDING AUTHOR: Andrew J. Wawrzyniak, PhD, School of Nursing & Health Studies, University of Miami, Coral Gables, FL, 33146-3850; awawrzyniak@med.miami.edu

B-048b

CAN AN ARM ILLUSION PARADIGM SERVE AS A LABORATORY-ANALOG FOR BLOOD DONATION?

Jennifer M. Kowalsky, MS,[1] Christopher R. France, PhD,[1] Janis L. France, PhD,[1] Brooke Berlan, BA candidate,[1] Brett Ankawi, BA,[1] Anna Beynon, BA-candidate[1] and Thomas Ritz, PhD[2]
[1]Ohio University, Athens, OH and [2]Southern Methodist University, Dallas, TX.

BACKGROUND: Fear of having blood drawn is a significant predictor of syncopal reactions to blood donation (e.g., faintness, dizziness). In this study we tested whether an arm illusion with a simulated blood draw could elicit physiological and syncopal reactions in fearful individuals.

STUDY DESIGN AND METHODS: Undergraduate students (N=55) were stratified on the basis of their answer to the Medical Fears Survey (MFS) question "How afraid are you of having blood drawn from your arm?" with responses ranging from 0 (no fear or concern) to 4 (terror). They then took part in an arm illusion manipulation to create the sensation that a rubber phlebotomy training arm was their own arm. Participants subsequently completed an analog blood draw while measures of SBP, DBP, HR, cerebral oxygenation, and expired CO2 were obtained during: 1) a 5 min baseline, 2) 30s with a needle visible, 3) 30s of arm preparation for simulated blood draw, 4) 60s of simulated blood draw, and 5) a 60s recovery period after needle removal. Subjective ratings of syncopal reactions were obtained immediately following the recovery period.

RESULTS: Using a series of 5 MFS Fear Rating x 4 Time Period MANOVAs, significant changes from baseline were observed for each physiological measure (Wilks' Lambda ranging from 0.62-0.73, all $p<0.01$). In addition, significant MFS Fear Rating x Time interactions were observed for SBP (Wilks' Lambda=0.64, $p<0.05$) and DBP (Wilks' Lambda=0.54, $p<0.01$), reflecting larger drops in blood pressure during the recovery period for those with the highest MFS fear rating. Finally, MFS Fear Rating was positively correlated with reported syncopal reactions ($r = 0.47$, $p<0.001$).

CONCLUSION: The arm illusion with simulated blood draw can be used to induce physiological and syncopal reactions among those who report fear of having blood drawn. Accordingly, this paradigm may provide a useful analog to test syncopal prevention strategies (e.g., applied muscle tensing) among prospective blood donors and those with blood-injection-injury phobia.

CORRESPONDING AUTHOR: Christopher R. France, PhD, Ohio University, Athens, OH, 45701; france@ohio.edu

B-048c

USING COMMUNITY-BASED PARTICIPATORY PRINCIPLES IN TRANSLATIONAL GENOMIC RESEARCH

Harlyn G. Skinner, MS,[1] Larissa Calancie, BS,[1] Jonathan Schisler, PhD,[2] Maihan Vu, DrPH, MPH,[3] Molly DeMarco, PhD,[3] Beverly Garcia, MPH[3] and Alice Ammerman, DrPH, RD[1,3]
[1]Nutrition, University of North Carolina Chapel Hill, Chapel Hill, NC; [2]Medicine, University of North Carolina Chapel Hill, Chapel Hill, NC and [3]Center for Health Promotion and Disease Prevention, University of North Carolina Chapel Hill, Chapel Hill, NC.

Heart Healthy Lenoir (HHL) is a translational research study using genomic analysis, and clinical and lifestyle interventions to reduce cardiovascular disease (CVD) disparities in Lenoir County, North Carolina. Researchers used community-based participatory principles to ensure research strategies were appropriate and addressed the needs, priorities, and concerns of the community. African-American (n=19) and White (n=16) adults in Lenoir County participated in 4 focus groups exploring perceptions about genomics and CVD. A brief demographic survey was administered and a semi-structured interview guide used to conduct discussions, which were digitally recorded, transcribed verbatim, and imported into ATLAS.ti for analysis.

Five key themes emerged. 1. Language. Participants wanted researchers to be honest and speak in plain English. 2. Knowledge. Participants wanted to generate knowledge for societal benefit, health benefits, or to know more about themselves. 3. Incentives. The most frequently requested participation incentive was the individualized return of genomic results to make lifestyle changes to live healthier lives. 4. Safety. Participants wanted assurance that staff was experienced and personal information was confidential. 5. Psychological constructs. Fatalism, trust, and control were discussed. There were no major thematic differences between racial groups. Results were used to foster participant understanding and trust, and reduce misconceptions in the informed consent and recruitment processes. Due in part to these efforts, 82% of eligible participants enrolled in the HHL: Genomics study.

Results demonstrate how community-based participatory research principles can be used to gain deeper insight into the community and increase participation in translational genomic research. Future research will investigate return of genomic results in this community.

CORRESPONDING AUTHOR: Harlyn G. Skinner, MS, Nutrition, University of North Carolina Chapel Hill, Chapel Hill, NC, 27516; hskinner@unc.edu

B-048d

CENTRALIZED, STEPPED, PATIENT PREFERENCE-BASED TREATMENT FOR PATIENTS WITH POST-ACUTE CORONARY SYNDROME DEPRESSION: CODIACS VANGUARD RANDOMIZED CONTROLLED TRIAL

Karina Davidson, PhD
Medicine, Columbia University Medical Center, New York, NY.

Authors: CODIACS investigators

Funding/Support: This work was supported by grant 5RC2HL101663, HL-088117, HL-84034 from the National Institutes of Health.

Background: Controversy remains about whether depression can be successfully managed after acute coronary syndrome (ACS) and the costs and benefits of doing so. We sought to determine the effects of providing post-ACS depression care on depressive symptoms and health care costs.

Methods: We performed a multicenter randomized controlled trial with 150 patients with elevated depressive symptoms (Beck Depression Inventory [BDI] score >10) 2 to 6 months after an ACS. Patients were recruited from 2 private and 5 academic ambulatory centers across the United States between March 18, 2010, and January 9, 2012. Patients were randomized to 6 months of centralized depression care (patient preference for problem-solving treatment given via telephone or the Internet, pharmacotherapy, both, or neither), stepped every 6 to 8 weeks, (active treatment group; n=73) or to locally determined depression care after physician notification about the patient's depressive symptoms (usual care group; n=77). The main outcome measures were change in depressive symptoms during 6 months and total health care costs.

Results: Depressive symptoms decreased significantly more in the active treatment group than in the usual care group (differential change between groups, −3.5 BDI points; 95% CI, −6.1 to −0.7; P = .01). Although mental health care estimated costs were higher for active treatment than for usual care, overall health care estimated costs were not significantly different (difference adjusting for confounding, −$325; 95% CI, −$2639 to $1989; P=.78).

Conclusions: For patients with post-ACS depression, active treatment had a substantial beneficial effect on depressive symptoms. This kind of depression care is feasible, effective, and may be cost-neutral within 6 months; therefore, it should be tested in a large phase 3 pragmatic trial.

Trial Registration: clinicaltrials.gov Identifier: NCT01032018

CORRESPONDING AUTHOR: Karina Davidson, PhD, Medicine, Columbia University Medical Center, New York, NY, 10032; kd2124@columbia.edu

B-048e

PATIENT PREFERENCES IN HEALTH BEHAVIOR CHANGE

Rita Kukafka, DrPH, MA, Wenjing Zhao, PhD and Bibhas Chakraborty, PhD
Columbia University, New York, NY.

Decision-aids designed to incorporate patient preferences into health decisions have been applied in contexts involving single treatment decisions, although we believe this model may be well-suited to engage patients in multiple health behavior change. In order to make changes in one's diet, or tobacco use, patients must agree that change is both beneficial (risk reducing) and feasible (they can be successful). This is of critical importance because unhealthy behaviors are responsible for substantial morbidity, and often occur together to produce additional health burden. A previously developed TLC decision-aid provides patients with tailored feedback on risk benefit and success factors to help patients make decisions about improving health behaviors. OBJECTIVE: To evaluate decision factors and individual preferences for health behavior change. METHODS: A random sample of 39 participants was invited to use TLC and, based on the tailored information on risk benefit and success rates, to make a decision of behavioral change among 4 choices: diet, physical activity, smoking or weight. A risk and a success rate principal component (PC) were created by Principal Component Analysis. Multinomial logistic regression analyses were performed where choice of behavioral changes were regressed on levels of risk benefit and success rate PC, controlling for age, gender and literacy. RESULTS: Preliminary data revealed that: 1) a choice to change smoking was mainly predicted by a high risk benefit ($p=0.18$), but a choice to change physical activity was predicted by a high success rate ($p=0.24$); 2) age was slightly negatively associated with the probability of making a choice ($p<0.20$); 3) male participants had higher odds of choosing to change diet, smoking or weight compared to females ($p<0.20$); and (4) high literacy was a predictor of a choice ($p=0.06$). CONCLUSIONS: In addition to risk benefit, success may also impact decision-making. Indeed, risk and success may have distinct effects on each specific behavioral change. Our findings provide new insight into understanding the critical decision factors and patient preferences involved in health behavior changes.

CORRESPONDING AUTHOR: Rita Kukafka, DrPH, MA, Biomedical Informatics, Columbia University, New York, NY, 10032; rita.kukafka@dbmi.columbia.edu

B-058a

WHERE YOU LIVE MATTERS: URBAN VS RURAL MILIEU AND ADOLESCENT TYPE 1 DIABETES MANAGEMENT

Francisco Argueta-Ortiz, BSc[1] and Deborah J. Wiebe, PhD, MPH[1,2]
[1]School of Behavioral and Brain Sciences, The University of Texas at Dallas, Richardson, TX and [2]Div. of Psychology, Dept. Psychiatry, University of Texas Southwestern Medical Center, Dallas, TX.

Social and geographic differences between urban and rural environments may affect health, but have not been examined in the context of adolescent diabetes management. The research objective was to explore the social milieu of urban vs. rural neighborhoods in relation to metabolic control in adolescents with type 1 diabetes. Adolescents with type 1 diabetes > 1 year (N=118, M age=12.74 yrs., 54.2% girls, 47.5% Hispanic, 25.4% on insulin pump) and mothers completed questionnaires. Metabolic control (HbA1c) was indexed from medical records. Urban/Rural, neighborhood density and median family income were obtained through public census databases. Counties classified as large central metro were categorized urban (39.8% rural). Urban had poorer A1c level than rural, (8.82 vs 8.16%, p=.026). Urban vs rural had different social milieu. Urban scored higher in risk factors that are related with poorer metabolic control like density, percentage of minorities, including Hispanic rate and more Hispanic participants (ps<.001). Urban vs. rural did not differ in risk factors such as family income, mother's perceived stress, risk behaviors like alcohol consumption and smoking (ps>=.05). Additionally, urban scored to live closer to medical facilities than rural (p<.001) and neither was there a difference between pump status (p=.52). A stepwise regression analysis including urban/rural and associated variables was conducted, excluding mother's perceived stress, risk behaviors and pump status, showing that the urban/rural variable predicted A1c β=-.63, t (111)=-2.18, p=.03 and neighborhood median family income β=-.00001, t (111)=-2.18, p = .03, explaining significant variance in HbA1c R2=.08, F (2,111)=5.01, p=.008. Research suggests the geographic and socioeconomic milieu of one's lived environment may affect adolescent diabetes management, more research is needed to explain and improve outcomes.

CORRESPONDING AUTHOR: Francisco Argueta-Ortiz, BSc, School of Behavioral and Brain Sciences, The University of Texas at Dallas, Richardson, TX, 75080; Francisco.Argueta@utdallas.edu

B-058b

USING PARTICIPATORY DESIGN FOR KNOWLEDGE ACQUISITION IN THE DEVELOPMENT OF A WEB AND MOBILE PHONE-BASED TAILORED PATIENT DECISION SUPPORT TOOL FOR DIABETES SELF-MANAGEMENT IN AN UNDERSERVED POPULATION

Heather Cole-Lewis, PhD, MPH, Suzanne Bakken, DNSc, RN, FAAN, FACMI and Lena Mamykina, PhD, MS
Columbia University, New York, NY.

Diabetes is a growing epidemic and rates are highest among minorities and those of lower socioeconomic status. Health information technology has been useful in clinical settings that serve socially disadvantaged populations and the ubiquity of mobile phones has improved access to these populations.

The purpose of this study was to develop an evidence and practice-based knowledge base for diabetes self-management education (DSME), incorporate this knowledge base into a logic-based algorithm to facilitate tailored delivery of DSME via web and mobile phone based on patient characteristics, and assess the validity of the knowledge base with domain experts.

In order to develop the knowledge base, researchers drew upon the domain expertise of two diabetes educators through in-depth interviews. With the guidance of domain experts, information from a review of the literature and clinical practice recommendations for diabetes were used to guide the development of computable knowledge base of strategies and recommendations for DSME.

To assess the validity of the knowledge base, two focus groups were held with diabetes educators at an urban community health center in New York City serving majority Black and Latino patients. Diabetes educators were asked to provide input on the comprehensiveness, accuracy, and cultural relevance of the knowledge base. Focus groups were recorded and transcribed. Transcripts were reviewed and coded independently by authors.

Preliminary results of focus groups indicate that diabetes educators are generally satisfied with the knowledge base and find information to be similar to that which is provided in face-to-face DSME sessions. However, participants did provide valuable culturally specific information related to food and wording of strategies and recommendations. Feedback from focus group participants will be incorporated into the final design of the knowledge base and the knowledge base will be further evaluated among intended users.

CORRESPONDING AUTHOR: Heather Cole-Lewis, PhD, MPH, Columbia University, New York, NY, 10032; hec7008@dbmi.columbia.edu

B-058c

DIABETES AND METABOLIC SYNDROME IN PREDICTING SEVERE DEMENTIA, INSTITUTIONALIZATION AND MORTALITY IN A POPULATION-BASED SAMPLE OF ALZHEIMER'S DISEASE

J. Wanzek, MA,[1] S. Schwartz, MS,[1] C. Sanders, BS,[1] M. Gilbert, MS,[1] R. Munger, PhD,[1] C. Marano, MD,[2] M. Mielke, PhD,[3] C. Lyketsos, MD[2] and J. Tschanz, PhD[1]
[1]USU, Logan, UT; [2]Johns Hopkins, Baltimore, MD and [3]Mayo Clinic, Rochester, MN.

Background

While few studies have examined the relationship between diabetes mellitus (DM) and the progression of dementia in Alzheimer's disease (AD), the results are mixed. Recent analyses from the population-based Cache County Study suggest faster decline only among those treated with insulin. Here, we examined whether DM with insulin treatment and the metabolic syndrome (MS) predict outcomes of severe dementia, institutionalization and mortality.

Methods

Subjects were 335 persons with AD: 23 with DM and insulin, 51 with DM no-insulin. M (SD) age of dementia onset = 84.3 (6.4). MS was defined as history of DM and any two of the following: hypertension, high cholesterol/triglycerides (HC), or overweight (BMI >30kg/m2). Subjects were followed every 6-18 months with the Mini-mental State Exam (MMSE) and Clinical Dementia Rating (CDR) and monitored for place of residence and death. Severe dementia was defined as CDR rating of "severe" or MMSE score <= 10. Separate Cox regression models examined survival time to institutionalization, severe dementia, and death while controlling for onset age, dementia duration and demographics.

Results

DM regardless of insulin treatment did not predict progression to any of the 3 clinical outcomes (p>0.17). A trend for longer survival time to institutionalization (p=.058) and death (p=.069) was suggested for MS, but not after inclusion of covariates. Examining components of the MS, HC predicted longer survival time to severe dementia (HR, 95% CI=.57, .36-.92) and death (HR, 95% CI=.77, .60-.98), whereas underweight BMI (BMI <18.5kg/m2) predicted shorter survival time to death (HR, 95% CI=2.1, 1.3-3.4).

Conclusions

Although previous analyses suggest diabetes affects dementia progression early in the course of AD, it does not predict time to other clinical endpoints. High cholesterol and higher BMI at time of diagnosis predict slower progression to important clinical endpoints, and warrant further study.

CORRESPONDING AUTHOR: Joseph Wanzek, MA, Utah State University, Logan, UT, 84322-2180; joseph.wanzek@aggiemail.usu.edu

B-058d

THE ROLE OF STRESS AND COPING IN THE MANAGEMENT OF TYPE 1 DIABETES MELLITUS AMONG COLLEGE STUDENTS

Jenifer Thomas, PhD,[1] John Moring, MS,[2] Anne Bowen, PhD,[1] Adara Lindt, n/a[1] and Victoria Emerson, n/a[1]
[1]Fay W. Whitney School of Nursing, University of Wyoming, Laramie, WY and [2]Department of Psychology, University of Wyoming, Laramie, WY.

College students with type 1 diabetes mellitus may experience difficulty with disease control because diabetes self-care activities (i.e., diet, exercise, blood glucose testing, foot care, medication regimen) may interfere with college life (Balfe, 2009). Prolonged stress (Kennedy, Kassab, Gilkey, Linnel, & Morris, 2008) and avoidant coping styles (Pritchard, Wilson, & Yamnitz, 2007) are related to health problems among college students and may especially impact chronically ill students. The purpose of this study was to investigate the hypothesis that college students with low perceived stress would engage in more diabetes self-care activities (DSCA) and more active coping. Pilot data were collected from 46 students, diagnosed with type 1 diabetes, through an on-line self-report questionnaire. Bivariate regression analyses supported the hypothesized relationships. First, stress was related to DSCA in that students with low perceived stress reported following a healthful eating plan, checking feet, and taking recommended number of diabetes pills. Second, low perceived stress was related to active coping, positive reframing, planning, and acceptance; however high perceived stress was related to avoidance behaviors (i.e. substance use, behavioral disengagement, and self-blame) that may result in poor diabetic control. The final analysis revealed that active coping, positive reframing, and planning were related to following a healthful eating plan; active coping and humor were related to participating in 30 minutes of physical activity. These results support the need to examine the moderating and mediating relationships between stress, coping, and DSCA. Promoting active coping and stress management during the college years may have significant effects on the long-term health of emerging adults with type 1 diabetes because these years may represent first efforts at entirely independent disease self-management in a context of social and academic stress.

CORRESPONDING AUTHOR: Jenifer Thomas, PhD, Fay W. Whitney School of Nursing, University of Wyoming, Laramie, WY, 82071; jthoma41@uwyo.edu

B-073a

FEASIBILITY OF BUNDLING HPV VACCINATION, RAPID HIV TESTING, AND PERSONALIZED RISK REDUCTION COUNSELING FOR YOUNG GAY AND BISEXUAL MEN

H. Elsa Larson, MA,[1,2] Jacob J. van den Berg, PhD,[2,3] Gail Yates, RN[2] and Michelle A. Lally, MD, MSc[2,3]
[1]Psychology, University of Rhode Island, Kingston, RI; [2]Infectious Diseases, The Miriam Hospital, Providence, RI and [3]Medicine, Alpert Medical School of Brown University, Providence, RI.

HPV infection has been linked to HIV acquisition among young gay and bisexual men (GBM). Evidence of this association spotlights an opportunity to enhance HIV prevention while simultaneously increasing HPV vaccine uptake among young GBM. The purpose of this pilot study was to explore the feasibility and acceptability of an innovative HPV vaccine program targeted to young GBM. GBM aged 18-26 (N=50, median age=23, 58% white) were recruited to receive 3 doses of HPV4 vaccine with optional rapid HIV testing and tailored counseling over three visits. Sexual risk behaviors and HIV/HPV knowledge of participants were assessed at baseline via a self-administered questionnaire and a risk assessment conducted by the research nurse. Baseline results indicated 100% of men received 1 dose of HPV4 vaccine, 88% accepted a concurrent HIV test, and 90% developed a personalized risk reduction goal to achieve by the next visit. Of men who completed the first visit, 44% had ≥5 male partners in the past year, 56% reported unprotected receptive anal sex, 32% had been diagnosed with ≥1 STI, and 14% were engaged in sex work. Participants had higher mean scores for HIV knowledge (M=15.6; SD=2.5; range 0-18) than for HPV knowledge (M=8.5; SD=2.4; range 0-12). Participants expressed moderate levels of perceived likelihood of getting HPV-related disease without vaccine (M=10.2; SD=2.5; range 4-20). Preliminary findings support the feasibility of recruiting GBM for targeted HPV vaccine programs as well as the acceptability and efficiency of bundling HIV testing with HPV vaccine delivery to maximize prevention impact. Future directions include examining the scalability, advantages, and barriers to integrating clinic-based HIV and HPV prevention services.

CORRESPONDING AUTHOR: H. Elsa Larson, MA, Psychology, University of Rhode Island, Kingston, RI, 02881; helarson@my.uri.edu

B-073b

INCREASES IN BODY MASS AND ASSOCIATIONS WITH METABOLIC RISK AMONG HIV-TESTED ADULTS IN NHANES

Kerstin E. Schroder, PhD, Amy Warriner, MD and Carrie M. Howell, MS
Health Behavior, University of Alabama at Birmingham, Birmingham, AL.

Background: Cardiometabolic abnormalities in HIV infection are commonly attributed to the effects of the virus and ART medications causing chronic inflammation and metabolic dysregulation. However, increasing rates of overweight and obesity threaten to contribute substantially to the health risks among HIV+. This study examines trends in body weight and cardiometabolic risks among HIV+ and HIV- participating in NHANES between 1999 and 2010, focusing on overlaps between biomarkers of metabolic dysregulation and body mass index (BMI) in the prediction of cardiometabolic risk.

Method: The sample included 17486 non-pregnant adults (age>=18) who were tested for HIV in NHANES and identified as either positive (n=99) or negative (n=17387). Using anthropomorphic measures, laboratory test results, and IDF criteria for the metabolic syndrome, a cardiometabolic risk index was created. ANOVA, Poisson regression, and Chi-Square tests were performed, comparing trends in body weight and risk factor distributions among HIV+ and uninfected persons.

Results: HIV+ and HIV- adults differed significantly in age (M=37.7 vs 33.3 years) gender (73.7% vs 50.6% males), and ethnic composition. An ANCOVA controlling for these factors revealed significant effects of time (NHANES cycle) and HIV-status and a time-by-HIV interaction on BMI ($p<0.05$). BMI increased more rapidly among HIV+. Further, among HIV+, a greater number of cardiometabolic risk factors were found, controlling for age, gender, ethnicity, and BMI ($p<0.05$). Both HIV status and BMI were significantly related to cotinine (a biomarker of smoking/smoke exposure) and biomarkers of infection and liver disease, such as albumin and globulin. Controlling for these factors eliminated the effects of HIV status and attenuated the effects of BMI on cardio-metabolic risk. However, BMI remained a significant predictor of cardiometabolic risk among HIV+ ($p<0.05$, one-tailed).

Conclusions: The rapidly increasing obesity rates among HIV+ demand attention given the exacerbation of cardio-metabolic risks in this already compromised population.

CORRESPONDING AUTHOR: Kerstin E. Schroder, PhD, Health Behavior, University of Alabama at Birmingham, Birmingham, AL, 35294; kschroder@uab.edu

B-073c

EMOTIONAL EXPRESSION IN A WRITTEN TRAUMA DISCLOSURE INTERVENTION: IMPACT ON HIV/AIDS-TARGETED QUALITY OF LIFE

Rachel Ruffin, PhD,[1] Gail Ironson, MD, PhD,[2] Jonathan Atwood, MS,[3] Conall O'Cleirigh, PhD,[4] Jane Leserman, PhD,[1] Joanne Fordiani, PhD[5] and Neil Schneiderman, PhD[2]
[1]UNC Chapel Hill, Chapel Hill, NC; [2]University of Miami, Coral Gables, FL; [3]University of New Hampshire, Durham, NH; [4]Mass General Hospital, Boston, MA and [5]VA Boston Healthcare System, Boston, MA.

Purpose: Expressive writing (EW) has been linked to positive health outcomes, including health-related quality of life (HRQoL), but has not been well examined in HIV+ adults. We evaluated whether emotional expression (EE) during an EW trauma disclosure intervention impacted HRQoL in HIV+ adults.

Methods: A diverse sample of 106 HIV+ adults participated in a 4-session EW intervention where they wrote about a past traumatic/stressful life event using their deepest emotions and thoughts. HLM analyses assessed longitudinal relationships between Positive and Negative EE and change in three subscales from the HIV/AIDS-Targeted Quality of Life measure: Overall Healthy Functioning; Without Health Worries; and Life Satisfaction. HLM models controlled for demographic (age, gender, ethnicity, education), medical (CD4 and VL) and psychological (stressful life events) variables.

Results: EE did not significantly predict changes in any of the HRQoL subscales in the full sample. However, when men and women were examined separately, higher Negative EE predicted greater increases in Life Satisfaction for women ($\gamma 16 = .265$, $t(36) = 2.144$, $p = .039$), while higher Negative EE predicted greater decreases in Life Satisfaction for men ($\gamma 16 = -.334$, $t(54) = -2.976$, $p = .005$). Positive EE did not predict HRQoL changes in men or women.

Conclusions: Greater use of Negative, but not Positive, EE during an EW intervention predicted improvements in Life Satisfaction for women but a decline for men. Future analyses should examine if various types of Negative EE (e.g., anger, sadness) differ by gender and explain the differential impact on HRQoL.

CORRESPONDING AUTHOR: Rachel Ruffin, PhD, UNC Chapel Hill, Chapel Hill, NC, 27599; rachel_ruffin@med.unc.edu

B-087b

COACTION ACROSS MULTIPLE BEHAVIORS WITH VETERANS

Patricia J. Jordan, PhD,[1,3] Kerry E. Evers, PhD,[2] Laurel King, PhD,[3] Viil Lid, MS[3] and Claudio R. Nigg, PhD[4]
[1]Extramural Research, Pacific Telehealth & Technology Hui, Honolulu, HI; [2]Pro-Change Behavior Systems, Inc., South Kingstown, RI; [3]Pacific Health Research and Education Institute, Honolulu, HI and [4]Office of Public Health Studies, University of Hawaii at Manoa, Honolulu, HI.

Coaction is a unique aspect of behavior change, focusing on the extent to which change of one health risk behavior is associated with change in additional health risk behaviors. This study utilized a TTM-based, Computerized Tailored Intervention (CTI) for smoking cessation, adapted for veterans, who were randomized into 2 groups: CTI only (Tx) and CTI plus tailored text messaging (Tx-plus). All veterans were active smokers, distributed across the stages of change (SoC), with 11.9% in Precontemplation, 63% in Contemplation, and 25.1% in Preparation. Participants [n=116(Tx), n=119(Tx-plus)] completed baseline, 1- and 3-month follow-ups. The quit rate at 3 months was 32.8% for those in Tx compared to 43.2% for those in Tx-plus. SoC was assessed for 6 other behaviors — exercise, healthy eating, stress management, depression prevention, alcohol use and sleep — but no intervention was provided. Change from risk to no-risk was evident on these behaviors. Of those at risk for alcohol misuse at baseline (28.9%), 56.7% moved to criteria (Action or Maintenance SoC) at 3 months. Among those with exercise risk at baseline (53.6%), 50.4% moved to criteria. Among those at baseline risk for stress (42.9%), 66% met criteria at 3 months. Similar findings were evident for depression, diet, and sleep. Complete data, including coaction differences between the 2 groups will also be highlighted. Veterans are at high risk for a number of negative health behaviors, so early and effective intervention is critical. This study demonstrates that coaction can occur in the presence of a single-behavior intervention and that multiple-behavior interventions, sequential or concurrent, may not be necessary for some populations.

CORRESPONDING AUTHOR: Patricia J. Jordan, PhD, Extramural Research, Pacific Telehealth & Technology Hui, Honolulu, HI, 96819; patricia.jordan@pacifichui.org

B-087c

MODELING MINORITY STRESS DIMENSIONS AS DETERMINANTS OF HOMELESSNESS AND HEALTH DISPARITIES AMONG YOUNG GAY AND BISEXUAL MALES

Douglas Bruce, PhD[1] and Ron Stall, PhD[2]
[1]DePaul University, Chicago, IL and [2]University of Pittsburgh, Pittsburgh, PA.

Minority stress, including experiencing and internalizing gay-related stigma, has been shown to have significant associations with negative health outcomes among adult gay and bisexual men, yet research that empirically examines the effects of minority stress on developmental pathways of young gay and bisexual men has been limited. We surveyed 200 young gay and bisexual males ages 16-24 (38% Black/African American, 26.5% Latino/Hispanic, 23.5 White/Caucasian, 12% Multiracial or other ethnic group) on a range of minority stress, demographic and health behavior variables. Maximum likelihood methods were used to fit an exploratory path model that best predicted paths from minority stress dimensions to adverse health outcomes. Participants reported high proportions of being homeless during the past year (39.5%), major depressive symptoms (32.5%) and daily marijuana use (16.5%). Path analysis indicated significant pathways from experiences of gay-related discrimination to being kicked out of one's parental home (OR= 6.05, p<.01) and internalized homophobia (OR = 4.56, p<.01). Gay-related discrimination and internalized homophobia were both significantly associated with homelessness during the past 12 months (ORs = 5.53, p<.01). Having been kicked out of one's parental home was significantly associated with daily marijuana use (OR=4.71, p<.01). Gay-related discrimination and internalized homophobia had direct and significant effects on depressive symptoms (OR= 5.25 and OR=6.31, p<.01, respectively), as well as significant indirect effects on depressive symptoms through homelessness during the past 12 months. High rates of homelessness, depressive symptoms and daily marijuana use in our sample greatly exceed those reported in the emerging adult population in the U.S. The experience and internalization of gay-related stigma may help explain continuing health disparities experienced by young gay and bisexual men.

CORRESPONDING AUTHOR: Douglas Bruce, PhD, MPH Program, DePaul University, Chicago, IL, 60614; dbruce1@depaul.edu

B-087d

SUPPORTIVE ACCOUNTABILITY: IMPROVING ADHERENCE TO BEHAVIORAL INTERVENTION TECHNOLOGIES

Jennifer Duffecy, PhD, David C. Mohr, PhD, Mary Kwasny, PhD and Xuan Cai, MS
Center for Behavioral Intervention Technologies, Preventive Medicine, Northwestern University, Chicago, IL.

Purpose

The effectiveness of and adherence to eHealth interventions is enhanced by human support. We have developed a model of support referred to as "Supportive Accountability." Human support increases adherence through accountability to a coach who is seen as trustworthy, benevolent, and having expertise. Accountability should involve clear, process-oriented expectations that the patient is involved in determining. Reciprocity in the relationship, through which the patient derives clear benefits, should be explicit.

Methods

The Supportive Accountability Questionnaire (SAQ) is a six-item measure developed to assess the level of accountability to an intervention coach felt by participants. Items were measured on a 1-6 scale. A total percentage was calculated, with a higher percentage demonstrating higher levels of accountability. The measure was administered to participants (N= 47) in a web based trial for the treatment of major depression who accessed the intervention with the support of a coach.

Results

The six-item SAQ shows good internal consistency (alpha = .79) at the six week assessment. Scores ranged from 14 - 98%, with a median accountability of 63%.

The total SAQ score is weakly correlated with login days (r=. 332) and total number of logins (r=.404). Items 1 (r=.471), 2 (r=.525) and 3 (r = .350) appear to be driving the relationship. Futhermore, when comparing groups that were randomly assigned to receive coach support versus groups that self selected to have a coach, the group that self selected demonstrated a stronger relationship between accountability and login days (r=.525 vs r=.028), even though the overall accountability scores were not significantly higher.

Conclusion

Supportive Accountability may be an important construct in adherence to behavioral intervention technologies.

CORRESPONDING AUTHOR: Jennifer Duffecy, PhD, Center for Behavioral Intervention Technologies, Preventive Medicine, Northwestern University, Chicago, IL, 60611; jduffecy@hotmail.com

B-087e

PEDIATRIC PSYCHOLOGY CONSULTATION-LIAISON SERVICES: A CLINICAL REVIEW

Jessica Collins, MS,[1] Andrea Kamath, MA,[1] Melanie Bierenbaum, PsyD,[1] Keith Slifer, PhD[1,2] and Melissa Hendricks, PhD[1,2]
[1]Pediatric Psychology Consultation Program, Kennedy Krieger Institute, Baltimore, MD and [2]Psychiatry and Behavioral Sciences, Johns Hopkins University School of Medicine, Baltimore, MD.

Pediatric psychology consultation-liaison (CL) service is the most active form of collaboration between pediatric psychologists and health care specialists. The type and duration of pediatric CL services range from one-time assessment to longer-term interventions for patients, families, and hospital staff. Youth referred for CL services demonstrate significantly more internalizing and externalizing behaviors than non-referred hospitalized peers (Cater et al., 2009). Common referrals are coping with hospitalization and diagnosis, adherence to medical regimens, general or procedural anxiety, and managing mood and behavior (Drotar, et al., 2003; Olson et al., 1988). The few studies that have examined patterns of CL referrals reveal great variability in both referral concerns and sources (Carter et al., 2009). This study investigated the pattern of pediatric CL services in an urban children's hospital. Data were collected from 187 consecutive referrals over 13-months. The composition of this service includes pediatric psychologists, psychology associates, postdoctoral fellows, and predoctoral interns. Patients' ages ranged from infancy to 18 years (M = 9.9) and 65% of referrals were for females. The CL service was re-consulted for sixty-eight patients (36%) during subsequent hospitalizations. Consults were most frequently requested by Hematology, Gastroenterology, and Oncology departments. Coping and pain management were the most common referral concerns. Majority of consultations (96%) were conducted by a predoctoral intern or postdoctoral fellow within 48-hours of the initial request, under the supervision of a licensed psychologist. Differences in referral patterns as a function of medical diagnosis, gender, age and referring department will be presented. Although these findings may be limited in generalizability, they highlight future implications for planning and administration of pediatric CL services as well as the expanding role of pediatric psychologists.

CORRESPONDING AUTHOR: Jessica Collins, MS, La Salle University, Philadelphia, PA, 19141; jamc713@gmail.com

B-087f

ILLNESS BELIEFS OF ELDERLY ASTHMATICS WITH DEPRESSION: ASSOCIATIONS WITH ADHERENCE

Katherine Krauskopf, MD,[1] Alex D. Federman, MD, MPH,[1] Anastasia Sofianou, MS,[1] Michael S. Wolf, PhD, MPH,[2] Melissa Martynenko, MPA, MPH,[1] Ethan A. Halm, MD, MPH,[3] Howard Leventhal, PhD,[4] Jonathan Feldman, PhD[5] and Juan P. Wisnivesky, MD, DrPH[1]
[1]Mount Sinai School of Medicine, New York, NY; [2]Northwestern University, Chicago, IL; [3]UT Southwestern Medical Center, Dallas, TX; [4]Rutgers, The State University of New Jersey, New Brunswick, NJ and [5]Yeshiva University and Albert Einstein College of Medicine, New York, NY.

Background: Depression in the elderly is linked to decreased medication adherence and poorer asthma outcomes. We investigated differential illness beliefs as a potential pathway linking depression with adherence.

Methods: Prospective cohort of asthmatic ≥60 years in New York and Chicago, 2010-2012. Depressive symptoms (DSx) were assessed with the Patient Health Questionnaire-9, (score ≥10 indicated DSx). Adherence was evaluated with the Medication Adherence Reporting Scale. We assessed illness beliefs via Brief Illness Perceptions and Beliefs about Medication Questionnaires.

Results: Overall, 429 patients were included (84% women, 38% Hispanic); 21% had DSx. DSx were associated with decreased asthma medication adherence (OR: 0.39, 95%CI: 0.24-0.64). Patients with DSx were more likely to believe asthma was present only when symptomatic (OR: 1.7, 95%CI: 1.1-2.7) and that their doctor could cure asthma (OR: 1.7, 95%CI: 1.1-2.9). Patients with DSx believed that asthma affected their life severely and they had little control over their asthma, were more concerned about their asthma, and more likely to report that it severely affected their emotions ($p<0.05$). Asthma medication concerns were more frequent among this group (p=0.0003); there were no differences in beliefs about medication necessity (p=0.86). Beliefs about symptom severity, medication concerns, and emotional responses to asthma were associated with lower adherence (p<0.01 for all comparisons).

Conclusion: DSx were associated with decreased medication adherence, a key determinant of asthma control. DSx were also associated with asthma health and medication beliefs predictive of non-adherence. Future interventions may target these modifiable pathways to improve asthma self-management and outcomes in this population.

CORRESPONDING AUTHOR: Melissa Martynenko, MPA, MPH, Mount Sinai School of Medicine, New York, NY, 10029; melissa.martynenko@mountsinai.org

B-087g

COMPARISON OF WEIGHT OUTCOMES FOR VETERANS WITH AND WITHOUT PTSD ENROLLED IN VA'S NATIONAL WEIGHT MANAGEMENT PROGRAM

Katherine D. Hoerster, PhD, MPH,[1] Zongshan Lai, MS, MPH,[2] Alyson Littman, PhD, MPH,[1] Laura Damschroder, MS, MPH,[2] David Goodrich, EdD,[2] Elizabeth Klingaman, PhD,[3] Karin Nelson, MD, MSHS[1] and Amy Kilbourne, PhD, MPH[2]
[1]VA Puget Sound Healthcare System, Seattle Division, Seattle, WA; [2]VA Ann Arbor Healthcare System, Ann Arbor, MI and [3]VA Maryland Healthcare System, Baltimore, MD.

Approximately 10-20% of Veterans who served in a war zone have post-traumatic stress disorder (PTSD), a mental health condition that is associated with increased risk for overweight and obesity, cardiovascular disease, type 2 diabetes, and premature mortality. Veterans with PTSD are therefore an important target population with regard to weight management interventions. An evidence-based weight management program called MOVE! has been implemented throughout the Veterans Affairs (VA) healthcare system. Given the disproportionate disease burden among Veterans with PTSD, it is important to evaluate the reach and effectiveness of MOVE! among Veterans with PTSD. To date, no published studies have examined this issue. This study analyzed VA clinical and administrative data to evaluate the reach and effectiveness of MOVE! treatment for VA patients with and without PTSD. Among those referred to MOVE! during Fiscal Years 2008-2010, 12-month weight change outcomes were available for 53,098; 12,563 (2,860 with PTSD and 9,703 without PTSD) had "intense and sustained" MOVE! participation, defined as having at least 8 MOVE! encounters over four months. Rates of intense and sustained participation were equivalent for those with and without PTSD (23.6% vs. 23.7%, p=0.74). However, among Veterans with intense and sustained participation, average weight loss at 12 months was lower for those with PTSD (5.1 lbs (SD=18.0)) than for those without PTSD (6.7 lbs (SD=20.2)). Additionally, weight loss was lower for Veterans with PTSD than those without in a multivariate regression model adjusting for age, race, sex, marital status, number of medical co-morbidities, and presence of another mental health diagnosis, β= -1.4, p=.005. Findings suggest that further investigation is warranted to identify potential mechanisms for tailoring MOVE! treatment delivery to address weight loss barriers unique to Veterans with PTSD.

CORRESPONDING AUTHOR: Katherine D. Hoerster, PhD, MPH, VA Puget Sound Healthcare System, Seattle Division, Seattle, WA, 98108; Katherine.Hoerster@va.gov

B-094a

DEVELOPMENT AND VALIDATION OF A HEALTH INFORMATION TECHNOLOGY (HIT) CURRICULUM: TOWARDS MORE MEANINGFUL USE OF ELECTRONIC HEALTH RECORDS

Madhabi Chatterji, PhD,[1] Jennifer Tripkin, EdD,[1] Sara Johnson, MS,[1] Nancy Koh, PhD,[1] Syncia Sabain, EdD,[2] John Allegrante, PhD[1,3] and Rita Kukafka, DrPH[2,3]
[1]Teachers College, Columbia University, New York, NY; [2]College of Physicians & Surgeons, Columbia University, New York, NY and [3]Mailman School of Public Health, Columbia University, New York, NY.

Objective: The Health Information Technology for Economic and Clinical Health (HITECH) initiative of the 2009 American Recovery and Reinvestment Act was intended to promote meaningful use of Electronic Health Records (EHRs). This paper reports on a comprehensive model employed to develop, validate, and facilitate regional implementation of curriculum components as part of that coordinated national effort. The end objective was to prepare healthcare and information technology professionals with competencies necessary to implement EHRs meaningfully and improve patient care.

Methods: Between 2010 and 2012, the Office of the National Coordinator for Heath Information Technology funded 5 Curriculum Development Centers across the U.S. to design and develop curriculum modules that could be implemented at the regional community college level to support workforce development. Using an iterative, systems-based and participant-oriented approach, the Columbia University center developed and validated instructor-friendly versions of curriculum materials in three phases: 1) curriculum content and assessment development, 2) content validation, and 3) curriculum implementation, formative program evaluation, and national scale-up efforts guided by a systemic logic model.

Results: We produced validated and usable versions of curriculum goal frameworks, student learning outcomes, multiple-choice tests, and performance assessments for 40 HITECH units in the four curriculum components, tied to an implementation protocol and logic model: 1) Public Health IT, 2) Vendor Specific Systems, 3) Usability and Human Factors, and 4) Training and Instructional Design.

Conclusions: We present the comprehensive and stakeholder-oriented, iterative design and validation approach used as an innovative and replicable methodology that will improve quality of care in field settings.

CORRESPONDING AUTHOR: John Allegrante, PhD, Health and Behavior Studies, Teachers College, Columbia University, New York, NY, 10027; jpa1@columbia.edu

B-100a

THE IMPACT OF PRIMING A HEALTHY EATING GOAL ON FOOD PREFERENCE

Suzanna Forwood, PhD,[1] Amy Ahern, PhD,[2,1] Gareth J. Hollands, PhD[1] and Theresa M. Marteau, PhD[1]
[1]Behaviour and Health Research Unit, Institute of Public Health, University of Cambridge, Cambridge, United Kingdom and [2]MRC Human Nutrition Research, Cambridge, United Kingdom.

Introduction: In the context of a food purchasing environment filled with advertising and promotions, and an increased desire from policy makers to guide individuals towards choosing healthier foods, this study seeks to understand whether a food advert can act as a prime for healthy eating by activating a healthy eating goal and increasing preference for healthy over less healthy foods.

Methods: Online study with participants randomly allocated to one of four groups in a 2x2 factorial design (prime/no prime and load/no load). A healthy eating goal was primed with stimuli that paired fruits and vegetables with positive mood or with social norms. The prime consisted of i) three adverts for fruits and vegetables which participants were asked to rate, and ii) a banner at the top of the page with an image and the text 'feel great'. Cognitive load was produced by requiring participants to hold in memory a string of letters. Goal activation was assessed by a size estimation task (asking participants to make size estimates of healthy and less healthy foods). Food preference was assessed by asking participants to make choices between pairs of fruits and less healthy snacks. Additional measures included current hunger and thirst, restraint, age, gender, and self-reported weight and height.

Results: Hunger reduced preference for fruits over less healthy snacks (B=-0.65, p=0.002). The prime countered this effect and maintained preference for fruits over less healthy snacks relative to non-primed participants (B=2.20, p=0.03). These effects were unaffected by cognitive load.

Conclusions: This study provides preliminary evidence that healthy eating can be promoted using simple adverts as primes. The lack of impact of cognitive load on the impact of the adverts is compatible with these effects occurring through non conscious processes but more sensitive measures of such processes are being used in a replication of this study.

CORRESPONDING AUTHOR: Gareth J. Hollands, PhD, Behaviour and Health Research Unit, Institute of Public Health, University of Cambridge, Cambridge, CB2 0SR; gareth.hollands@medschl.cam.ac.uk

B-100b

EVALUATING A NUTRITION PROGRAM EMBEDDED WITHIN A RISK REDUCTION YOUTH INITIATIVE

Mindy Ma, PhD,[1] William Sanchez, BA,[2] Jeorge Vega, BA,[2] Judith McCalla, PhD[3] and Lydia Malcolm, MS[1]
[1]Psychology, Nova Southeastern University, Davie, FL; [2]Parks and Recreation, City of Hialeah, Hialeah, FL and [3]Psychology, University of Miami, Coral Gables, FL.

Objective: Reversing the childhood obesity epidemic is a critical objective of Healthy People 2020. Community-based interventions addressing obesity have demonstrated promising results, but many programs require scarce resources. The current study aimed to examine the impact of a brief and low-cost nutrition program embedded within a community-based risk reduction intervention for adolescents.

Method: Participants consisted of 45 Latino youth (66.7% male) ages 12-17 (M ± SD = 15.29 ± 1.52) enrolled in the Early Prevention and Intervention Program (EPI) at a city parks and recreation center. The EPI is an 8-week, 16-session program designed to provide adolescents with the knowledge and skills necessary to be productive citizens. Participants included court ordered, and self, family, and school referred at-risk youth. The nutrition component consisted of a single 2-hour session on nutrition along with 8 15-minute supplemental sessions throughout the EPI program. Pre- and post-assessments were conducted at the initiation and conclusion of the EPI program.

Results: Paired-samples t-tests were conducted to compare the pre- and post-test scores. At post-assessment, adolescents scored higher on nutritional knowledge [44.32% vs 31.82% correct; $t(43) = 6.07$, $p < .01$], reported consuming more fruit [past week: 4-6 vs 1-3 times; $t(44) = 3.20$, $p < .01$], and indicated a reduction in soda consumption [past week: 1-3 vs 4-6 times; $t(43) = -2.06$, $p < .05$]. Marginal significance was observed for an increase in consumption of 100% fruit juice [past week: 7 vs 4-6 times; $t(43) = 1.81$, $p = .08$] and milk [past week: 7 vs 4-6 times; $t(42) = 1.72$, $p = .09$].

Conclusions: Preliminary findings indicate a brief nutrition program can be successfully embedded in a community-based intervention targeting risk reduction among Latino adolescents. The nutrition program is cost-effective and can be easily embedded into existing community youth initiatives.

CORRESPONDING AUTHOR: Mindy Ma, PhD, FCAS - SBS, Nova Southeastern University, Fort Lauderdale, FL, 33314; mma800@yahoo.com

B-121a

THE CONNECTION BETWEEN IMPULSIVITY AND MOTIVES FOR FOOD CHOICE

Ryan W. Brown, Student,[1] Andrea T. Kozak, PhD[1] and Angela Fought, MS[2]
[1]Psychology, Oakland University, Rochester, MI and [2]Preventive Medicine, Northwestern University, Chicago, IL.

Background: Impulsivity is a personality trait in which a person quickly engages in behaviors without consideration of an adequate plan or the consequences of one's actions. Recent studies have found that impulsivity causes overeating, an important factor related to overweight and obesity. However, overeating is just one of many factors associated with weight issues. Motives regarding food choice might also help to explain whether a person is lean or overweight/obese. Further, impulsivity may influence food choice. The aim of this investigation was to examine the possible association between impulsivity and reasons for food choice. Methods: The Barratt Impulsiveness Scale (BIS-11) and the Food Choice Questionnaire (FCQ) were completed by 224 university students (mean age=20.2; 31.7% were overweight/obese). The BIS-11 yields a total score; higher total scores are indicative of higher levels of impulsivity. The FCQ has nine subscales (health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concern); a high score on a subscale means that the factor is a very important reason for choosing a food item. Linear regression models were conducted with five FCQ subscales hypothesized to be significantly associated with impulsivity. Results: As predicted, significant inverse relationships were found between impulsivity and the FCQ subscales of health (p=0.001), natural content (p=0.043), and weight control (p=0.000). Significant positive relationships between impulsivity and the FCQ subscales of sensory appeal (p=.693) or convenience (p=.500) were not detected. Conclusion: One's impulsivity level is associated with some reasons for food choice, which in turn, may have implications for the maintenance of a healthy weight and weight loss.

CORRESPONDING AUTHOR: Andrea T. Kozak, PhD, Psychology, Oakland University, Rochester, MI, 48309; kozak@oakland.edu

B-121b

PREDICTING THE RISK OF BECOMING LOST TO FOLLOW-UP IN A LIFESTYLE WEIGHT-LOSS INTERVENTION

Danielle M. Lespinasse, MS, Kristen E. Medina, MS, Stacey N. Maurer, MS, Samantha A. Minski, MS, Renée T. Degener, BA, Melissa H. Laitner, BA, Manal Alabduljabbar, MA, Kristina von Castel-Roberts, PhD and Michael G. Perri, PhD
University of Florida, Gainesville, FL.

Participants who are "lost to follow-up" represent an important concern in clinical trials. Because such individuals often are not missing at random, their absence at follow-up assessments may limit the validity and generalizability of study findings. A concerted effort was made in a rural lifestyle weight-loss intervention to decrease participant burden by allowing individuals who would otherwise be lost to follow-up to consent to weight measurement only at the final 24-month assessment rather than completing a full assessment. Understanding the differences between full assessment completers and weight-only individuals may aid researchers in determining those who are at risk of becoming lost to follow-up. We examined this question in a weight loss clinical trial in which 161 participants completed a full follow-up assessment and 74 participants who initially declined to participate in follow-up subsequently agreed to measurement of weight only. A discriminant function analysis was conducted to determine whether participant demographics and treatment engagement predict full completion versus weight-only at the final assessment. The analysis returned one function which was significant, $\lambda = .82$, χ2(4, N = 235) = 45.13, p<.001, indicating that participant age and attendance during the first two months of treatment differentiated completers and weight-only individuals (R2 = .18). Overall, the model correctly classified 77% of completers and 55.4% of weight-only participants. The analysis indicated that attendance at the first nine sessions and age (standardized canonical discriminant function coefficient = .76 and .54, respectively) contributed most to distinguish the two populations. Participants who were older and who attended more of the first nine sessions were more likely to complete a full assessment at 24-month follow-up. Therefore, the development of strategies to increase early attendance, particularly among younger participants, may reduce an individual's risk of becoming lost to follow-up.

CORRESPONDING AUTHOR: Danielle M. Lespinasse, MS, University of Florida, Gainesville, FL, 32608; dlespinasse@phhp.ufl.edu

B-121c

ASSOCIATION BETWEEN PHYSICIAN ATTITUDES ABOUT ENERGY BALANCE CARE, AND CARE DELIVERY

Jeremy A. Steeves, PhD, MPH, Gordon Willis, PhD, Benmei Liu, PhD, Rachel Ballard-Barbash, MD, MPH and Ashley Wilder Smith, PhD, MPH
National Cancer Institute, Bethesda, MD.

Background: Primary care physicians (PCPs) may be an important source of energy balance (EB) care, by providing physical activity-, diet-, and weight-related clinical assessment and counseling.

Purpose: To profile PCP beliefs about the effectiveness of EB care, and to assess the relationship between beliefs and self-reported delivery of EB Care.

Methods: We analyzed data from a National Cancer Institute-sponsored, nationally representative EB survey of 2022 practicing PCPs (Internal medicine, OB/GYN, Family Medicine, and Pediatrics) fielded in 2008. PCPs' beliefs about EB care included: attitudes regarding responsibility, counseling success, effective strategies, confidence, effectiveness, role modeling, and personal credibility. EB care delivery outcomes included PCPs' assessment, counseling, referral, and follow-up of patients' diet, physical activity, and weight control. Descriptive and weighted multiple logistic regression analyses were performed. Models adjusted for PCP specialty, age, gender, race, region, urbanicity, and patient population.

Results: Most PCPs (83%) strongly agreed that physicians have a responsibility to promote EB. However, only 29% strongly agreed that there are effective strategies to help patients achieve EB and few (16%) strongly agreed that they are effective at helping their patients. Internal Medicine specialty (vs. OB/GYNs or Pediatrics), Female gender and Asian-American (vs. White) race were associated with stronger positive EB-related beliefs (p's<0.05). Adjusted models indicated that all EB beliefs were significantly associated with delivery outcomes (OR range 1.16 (1.05-1.30) to 2.80 (1.97-3.98)).

Conclusions: PCPs with stronger positive personal beliefs about EB care were more likely to deliver EB care. Future studies to improve EB care delivery in primary care settings need to take PCP beliefs into account. Further, as most PCPs feel a strong responsibility to promote EB, but have concerns about their effectiveness and the few available strategies, interventions to support PCPs in addressing patients' EB are needed.

CORRESPONDING AUTHOR: Jeremy A. Steeves, PhD, MPH, Applied Research Program, National Cancer Institute, Bethesda, MD, 20892; jsteeves24@gmail.com

B-121d

PRELIMINARY EVIDENCE FOR THE EFFICACY OF A SOCIAL MEDIA DELIVERED WEIGHT-LOSS PROGRAM IN ADOLESCENTS

Katie McInnis, BA,[1] Roberta Anding, MS, RD, LD, CDE, CSSD,[2] Margaret Briley, PhD, RD, LD[1] and Constance M. Wiemann, PhD[2]
[1]Nutritional Sciences, The University of Texas at Austin, Austin, TX and [2]Baylor College of Medicine, Houston, TX.

More than 90% of adolescents routinely access the Internet and 73% own a mobile phone. Given its popularity among adolescents, social media could provide an important avenue for the delivery and evaluation of weight loss programs targeting this population. This preliminary study examined the use of Twitter by health professionals and professional athletes in the delivery of an adolescent-focused weight loss intervention. No prior published study has evaluated the use of Twitter to reduce obesity in this population. To date, 25 obese adolescents have been randomly assigned to one of two mentors: a registered dietitian or a professional football player. Subjects in both groups receive nutrition/exercise Twitter messages 3x/wk and video messages 2x/wk for 12 weeks. Messages for both groups promote healthy eating/exercise and are identical with the exception of the person who sends the message. All subjects who have completed 6-month follow-ups (n=8) found Twitter easy to use even though only 33% had prior experience. Most parents (89%, n=9) reported positive changes in their child's behaviors and every parent reported positive changes in their child's attitudes about healthy eating and exercise. Additionally, 75% of parents reported a change in their or their family's eating and exercise behaviors. Participants in the athlete group did not significantly decrease their BMI (Z=-0.943, p=0.345) but significantly increased their perception of the importance of eating a healthy diet (Z=-2.207, p=0.027) and exercising (Z=-2.032, p=0.042). Subjects in the dietitian's group significantly decreased their BMI (Z=-2.023,p=0.043) but did not significantly increase how important they thought it was to eat healthy (Z=-1.890, p=0.059) and exercise (Z=-1.342,p=0.18). All parents and children stated that they would participate in a program like this again. The use of social media may be an effective intervention delivery method for adolescents but the mentor sending the message may also have an effect on behavioral change.

CORRESPONDING AUTHOR: Katie McInnis, BA, Nutritional Sciences, The University of Texas at Austin, Austin, TX, 78704; katiemcinnis12@gmail.com

B-121e

DO WOMEN ENROLLED IN COMMERCIAL WEIGHT-LOSS PROGRAMS 'SIT' TOO MUCH?

Lindsay S. Meldrum, BSc,[1] Philip M. Wilson, PhD,[1] Diane E. Mack, PhD,[1] Jenna D. Gilchrist, BA,[1] Matthew J. Burns, BSc[1] and Chris M. Blanchard, PhD[2]
[1]Kinesiology, Brock University, St Catharines, ON, Canada and [2]Medicine (Cardiology), Dalhousie University, Halifax, NS, Canada.

Background: Prolonged sitting behavior has been identified as one factor contributing to elevated health risks in adults independent of physical activity. Limited data is available pertaining to the assessment of sitting behavior among users of commercial weight-loss programs (CWLP).

Objective: This study examined the utility of the sitting behavior item embedded within the International Physical Activity Questionnaire (IPAQ-Sit) as a tool to measure this health risk behavior among CWLP users.

Methods: Data were collected from a purposive sample (N = 15; Mage = 44.33 ±15.58 years) of women enrolled in CWLP. Most participants were married/common-law (53.30%), university educated (53.30%), full/part-time employed (86.60%), and Caucasian/White (93.30%). Body Mass Index (BMI) values ranged from 22.32 to 48.41 kg/m2 (73.30% > 25.00 kg/m2). Each participant completed the IPAQ-Sit after wearing a Sensewear Armband (BodyMedia Inc., Pittsburgh, PA) for a period of 7 consecutive days.

Results: Mean reported sitting time was 395.00 min/day (SD = 174.87 min/day; Interquartile Range = 300.00 to 540.00 min/day). Reponses to the IPAQ-Sit approximated a normal distribution (Skewness = -0.82; Kurtosis = -0.36). Greater reported sitting time was linked with average time spent sleeping (r = 0.57), laying down (r = 0.55) and engaging in sedentary activity (r = 0.46) recorded from the Sensewear Armband data. Average time spent sitting did not significantly differ from population-based estimates of sitting duration reported using the IPAQ-Sit (t(14)=1.81, p = 0.30, 95%CI = -48.04, 145.64).

Conclusions: The IPAQ-Sit appears to be a useful way to measure sitting behavior in women using CWLP. Given the brevity and utility of the IPAQ-Sit, it is recommended that research examining weight-control behaviors in women using CWLP include this item alongside more comprehensive indicators to capture the full range of sedentary behaviors habitually undertaken by this cohort.

CORRESPONDING AUTHOR: Philip M. Wilson, PhD, Kinesiology, Brock University, St Catharines, ON, L2S3A1; pwilson4@brocku.ca

B-121f

CAN A MULTI-COMPONENT INTERVENTION IN SCHOOL WORKSITES INVOLVING NUTRITION AND PHYSICAL ACTIVITY ENVIRONMENTAL AND POLICY CHANGES PREVENT WEIGHT GAIN?

Lori Pbert, PhD,[1] Susan Druker, MA,[1] Barbara Estabrook, MSPH,[1] Robert Magner, MPH,[1] Kristin Schneider, PhD,[2] Monica Wang, ScD,[1] Nicole Wedick, ScD[1] and Stephenie Lemon, PhD[1]
[1]Medicine, University of Massachusetts Medical School, Worcester, MA and [2]Psychology, Rosalind Franklin University, Chicago, IL.

Most adults in the US gain 1-2 pounds per year, which accumulates over time and contributes to the growing problem of obesity. Worksites such as public high schools are an important setting in which to promote weight gain prevention and associated healthy behaviors. Environmental and policy-based initiatives are key components of worksite obesity initiatives because they reach large numbers of captive individuals and can be sustainable, but research to date has been equivocal. This cluster-randomized trial compared the effectiveness of a multi-component worksite intervention including environmental and policy-based interventions to an education materials only comparison condition on weight gain prevention, diet and physical activity among public high school employees in 12 public schools in central Massachusetts. A cohort of 782 employees completed assessments at baseline, 12 months and 24 months. The intervention included components targeting policies related to access to and availability of opportunities for physical activity and healthy eating, the physical environment, the social environment and the individual. Mixed-effects models were used to assess intervention effectiveness. The study sample was predominantly female (67%) and non-Hispanic white (96.7%), with 35.8% overweight and 29.0% obese. The intervention group significantly increased their total physical activity (methrs/day) compared to the control group (4.5 methrs/day, p<0.001) at 12 month follow up. There were no differences observed for the other main outcomes, including weight, BMI, waist circumference, fruit and vegetable consumption, fat intake, and Eating Behavior Index. These effects were not modified by gender, position (e.g., teacher), or obesity at baseline. Results suggest that, while a multi-component school worksite intervention does not result in weight gain prevention, it is effective in increasing physical activity.

CORRESPONDING AUTHOR: Lori Pbert, PhD, Preventive and Behavioral Medicine, University of Massachusetts Medical School, Worcester, MA, 01655; lori.pbert@umassmed.edu

B-121g

WEIGHT LOSS, BEHAVIOR CHANGE AND SUPPORT AMONG COUPLES

Megan Lewis, PhD,[1] Marlyn Allicock, PhD,[2] Allison Deal, MS,[2] James Hersey, PhD,[1] Leila Kahwati, MD,[1] Breda Munoz, PhD,[1] La-Shell Johnson, MPH[2] and Carla Bann, PhD[1]
[1]Research Triangle Institute, Research Triangle Park, NC and [2]University of North Carolina, Chapel Hill, NC.

Although spousal support is important for health and behavior, there are few studies that examine the effect that spouses have on each other over the course of a weight loss program. A total of 1,755 participants from four Midwestern states were randomized to one of three evidence-based weight loss groups with increasing intervention intensity: 1) mailed material and basic Web access; 2) plus an interactive Web site; 3) plus brief phone-and Web-based coaching support. Participants' weight, blood pressure, diet, and physical activity were measured at baseline, 6 and 12 months. Among the 1,755 participants, 177 were couples who participated together. Analyses showed that couples who participated together did better compared to those participating without a spouse, regardless of intervention condition. After 12 months, spouses participating together were almost one and a half times more likely (OR=1.40) to increase fruit consumption, were much less likely to eat high-fat protein (OR=0.71) and fast food (OR=0.80) than the other relationship statuses. Those participating with their spouse lost, on average, 3.4% (SE 0.85) more weight after 6 months and 2.73% (SE 0.99) after 12 months and had better blood pressure at 6 but not 12 months. In addition, using structural equation modeling we examined a subset of couples (n=133) for whom we had support measures to assess the role of spousal support on outcomes. Husbands with greater spousal support had better physical activity (p= 0.02) and tended to weigh less at 6 months (p=0.06). Spousal support was not significantly related to outcomes among wives (all models CFI=1.00, TLI=0.99, and RMSEA=0.03).

CORRESPONDING AUTHOR: Megan Lewis, PhD, Research Triangle Institute, Research Triangle Park, NC, 27709-2194; melewis@rti.org

B-121h

THE ROLE OF SELF-MONITORING IN THE MAINTENANCE OF WEIGHT LOSS SUCCESS

Melissa H. Laitner, BA, Renée T. Degener, BA, Kristen E. Medina, MS, Danielle M. Lespinasse, MS, Stacey N. Maurer, MS, Samantha A. Minski, MS, Manal B. Alabduljabbar, MA and Michael G. Perri, PhD
Clinical and Health Psychology, University of Florida, Gainesville, FL.

Self-monitoring has been shown to play a crucial role in contributing to preliminary success in behavioral weight loss treatment. However, less is known about the role of self-monitoring during the year following treatment -- a period when participants commonly regain one-third to one-half of weight lost. In the current study, we examined the association between self monitoring and weight loss success during an initial 6-month intervention (Phase 1) and a 12-month extended care period (Phase 2) in a group of 167 obese older women (M ± SD: baseline BMI = 37.0 ± 5.1 kg/m2, age = 59.9 ± 6.2 years). Cluster analysis tests identified groups of participants with "low," "moderate," and "high" success rates during Phases 1 and 2 of treatment. Cluster 1 (29.9% of the sample), the low success group, had mean losses of 2.6% initial weight in Phase 1 (SD ± 2.4) and regained 1.1% of weight in Phase 2 (SD ± 4.7). Cluster 2 (49.1%), the moderate success group, had mean losses of 11.1% in Phase 1 (SD ± 4.0), but regained 4.8% in Phase 2 (SD ± 4.0). Cluster 3 (21.0%), the high success group, had mean losses of 14.0% body weight in Phase 1 (SD ± 4.3) and an additional 7.4% loss in Phase 2 (SD ± 4.0). We hypothesized that moderate and high success participants would show higher rates of self-monitoring during both phases of treatment. The results of an ANOVA showed no significant between-group differences in self-monitoring during Phase 1 ($p = .645$), but all three groups differed significantly from each other during Phase 2 ($p = .001$). Bonferroni-corrected post-hoc testing indicated high success participants completed the most self-monitoring records during Phase 2, followed by the moderate group, with the low success group completing the least number of records. While previous research has shown the benefits of self-monitoring during initial weight-loss treatment, these findings highlight the importance of continued self-monitoring to long-term success in weight management.

Support: NHLBIR01HL73326

CORRESPONDING AUTHOR: Melissa Laitner, BA, Clinical and Health Psychology, University of Florida, Gainesville, FL, 32610; laitner@phhp.ufl.edu

B-121i

SOCIOECONOMIC STRESS BY DOPAMINE RECEPTOR 2 GENE INTERACTIONS IN THE DEVELOPMENT OF OBESITY

Michael V. Stanton, MA,[1,2] Charles Jonassaint, PhD,[3] Gary Bennett, PhD,[1] Elizabeth Hauser, PhD,[4] Timothy Strauman, PhD,[1] Richard Surwit, PhD[1] and Redford Williams, MD[1]
[1]Psychology and Neuroscience, Duke University, Durham, NC; [2]Psychology, VA Palo Alto Health Care System, Palo Alto, CA; [3]General Internal Medicine, Johns Hopkins School of Medicine, Baltimore, MD and [4]Center for Human Genetics, Duke University, Durham, NC.

Background: Previous research suggests that early life socioeconomic stress and certain genetic polymorphisms may be partly associated with increased adiposity; however, research on both genetic and environmental predictors fail to account for the dramatic increase in obesity over that last several decades. Hypothesis: It was hypothesized that a GxE interaction between DRD2-related SNPs and parental education would predict trunk and total fat mass. Sample: The current study analyzed genetic and psychosocial data from 697 participants collected for the Family Heart Study, an investigation examining the relationship between psychosocial behaviors and cardiovascular risk factors. Methods: Interactions were assessed between four single nucleotide polymorphisms (SNPs) in the D2 receptor and ANKK1 genes and tertiles of parental education predicting DXA-scan-measured trunk and total body fat mass. Results: An interaction between mother's education and RS1116313 SNP predicted trunk fat ($F(4,191)=2.94$, $p=0.022$) and total body fat ($F(4, 191)=3.94$, $p=0.004$). The effects were driven by a reduction in trunk and total fat mass among C/C or T/T homozygotes with a high mother's education, which was not observed among C/T heterozygotes. Father's education was neither an interactive nor a main effect predictor in any models. Conclusions: Trunk and total body fat composition are predicted by an interaction between mother's education and the RS1116313 SNP. Supported by NHLBI grant P01HL036587.

CORRESPONDING AUTHOR: Michael V. Stanton, MA, Psychology and Neuroscience, Duke University, Durham, NC, 27705; michael.stanton@duke.edu

B-121j

WEIGHT LOSS "MAINTAINERS" VS. "REGAINERS": POST-TREATMENT PHYSICAL ACTIVITY FACILITATES WEIGHT MAINTENANCE IN OBESE WOMEN

Renee T. Degener, BA, Melissa H. Laitner, BA, Danielle M. Lespinasse, MS, Kristen E. Medina, MS, Stacey N. Maurer, MS, Samantha A. Minski, MS, Kristina M. von Castel-Roberts, PhD and Michael G. Perri, PhD
Clinical Health Psychology, University of Florida, Gainesville, FL.

Maintenance of weight loss is a major challenge to the long-term effectiveness of behavioral treatments for obesity. Participants typically regain 35-50% of their initial weight loss within 1 year of completing treatment. Retrospective studies of individuals who have maintained large weight reductions for ≥ 5 years suggest physical activity (PA) may be a critical facilitator of long-term weight control. The present study identified successful and unsuccessful weight maintainers in a community-based intervention and evaluated differences in their PA over 18 months. Based on weight changes during an initial 6 month intervention phase (Ph1) and a 12 month extended care phase (Ph2), cluster analyses were performed on a group of 167 older obese women (M + SD: baseline BMI = 37.0 + 5.1 kg/m2, age = 59.9 + 6.21 years). Three clusters were distinguished by High, Moderate and Low weight loss success during Ph1 and Ph2. The High cluster (N=35) lost a mean of 14.0% (+ 4.3) of initial weight in Ph1 and continued to lose 7.4% (+ 4.0) in Ph2. The Moderate cluster (N=82) lost a mean of 11.1% (+ 4.0) in Ph1, but regained 4.8% (+ 4.0) of initial weight in Ph2. The Low cluster (N=50) lost only 2.6% (+ 2.4) in Ph1 and regained 1.1% (+ 4.7) in Ph2. The High cluster was unique in achieving a non-obese mean BMI of 29.2 (+4.1) at 18 months. Clusters were compared on frequency of moderate-or-higher PA using CHAMPS, a reliable and well validated assessment of PA in adult community samples. Results of one-way ANOVAs indicated clusters did not differ in PA at baseline ($F(2)=0.12$, $p = .89$). Post-hoc analyses indicated High and Moderate had significantly higher PA than Low at the conclusion of Ph1 ($p < .05$). High engaged in more PA at the conclusion of Ph2 than participants who regained (e.g. Low & Mod.; $F(2)=7.3$, $p = .001$). These findings highlight the importance of PA for both initial weight loss and maintenance, even in select subgroups such as older obese women.

CORRESPONDING AUTHOR: Renee T. Degener, BA, University of Florida, Gainesville, FL, 32610; rdegener@phhp.ufl.edu

B-121k

PREDICTORS OF WEIGHT LOSS IN OVERWEIGHT AND OBESE AFRICAN AMERICAN WOMEN

Sara Wilcox, PhD, Rebecca Kyryliuk, MPH and Meghan Baruth, PhD
Univ of South Carolina, Columbia, SC.

Background: Overweight and obesity rates are highest in African American women. Even modest reductions in weight can favorably impact health. Purpose: To examine predictors of ≥5% weight loss over a 15-mo period in African American women participating in a church-based study. Method: Height and weight were measured by study staff at baseline and 15-mos later. After baseline, churches (n=74) were randomized to a 15-mo intervention that targeted moderate- to vigorous-intensity physical activity (MVPA) and healthy eating or to a delayed intervention control group. Analyses were limited to overweight and obese women with pre and post data. The dependent variable was dichotomized as presence or absence of a ≥5% reduction in weight. Independent predictors were sociodemographics (age, education, # children in home, marital status), health-related (# health conditions, physical limitations), behavioral (leisure time MVPA, fruit and vegetable consumption, fat- and fiber-related behaviors), and psychosocial (stress). Behavioral variables and stress were tested as baseline predictors and change from pre to post. Bivariate and simultaneous models (included if bivariate p<.10) controlled for age, education, randomization, phase, and church size and clustering. Results: Participants (N=443, 58 churches) were 56.4±12.3 years, had 2.2±1.6 health conditions, with a baseline BMI of 35.0±6.9 kg/m2. 14.2% of participants had ≥ 5% weight loss. Bivariate predictors of weight loss (p<.10) were older age, fewer health conditions, no physical limitations, fewer children in house, and increased leisure time MVPA. In the simultaneous model, fewer children in the home and increased leisure time MVPA remained significant predictors (p<.05). Conclusion: Increasing leisure time MVPA appears to be an important strategy for making modest but meaningful reductions in weight in overweight and obese African American women. Weight loss may be more difficult among women with caregiving responsibilities perhaps due to multiple role constraints or other family dynamics.

Funded by NHLBI. Content does not necessarily represent the official views of NIH/NHLBI

CORRESPONDING AUTHOR: Sara Wilcox, PhD, Department of Exercise Science & Prevention Research Center, University of South Carolina, Columbia, SC, 29208; wilcoxs@mailbox.sc.edu

B-121l

IMPACT OF THE HOME FOOD ENVIRONMENT ON DISEASE RISK FACTORS IN OBESE ADULTS FROM RURAL COMMUNITIES

Stacey Maurer, MS, Kristen Medina, MA, Danielle Lespinasse, MS, Samantha Minski, MS, Manal Alabduljabbar, MA, Renee Degener, BS, Melissa Laitner, BA and Michael Perri, PhD
University of Florida, Gainesville, FL.

Relatively little attention has been given to the potential influence of the home food environment on disease risk factors commonly associated with obesity. This issue may be of particular relevance in rural communities, which have a high prevalence of obesity and limited access to healthy foods such as fresh fruits and vegetables. The findings from a previous study of obese adults in rural communities demonstrated that having a greater number of healthy foods in the home was associated with a lower body mass index (BMI) and that decreasing the availability of high-fat foods in the home was associated with improved weight loss. The current study sought to examine the influence of the home food environment on blood pressure and glycemic control in a sample of obese adults taking part in a 6-month weight management program. The participants were 166 obese women from rural counties of northern Florida (M±SD, age = 59.7±6.2 years, BMI = 36.5±4.8 kg/m2). At baseline and Month 6, blood pressure was measured using an automated blood pressure monitor and participants underwent a blood draw, which was analyzed for hemoglobin A1c (HbA1c) by Quest Diagnostics Clinical Laboratories. The home food environment was assessed using the Family Eating and Activity Habits Questionnaire. At baseline, the presence of unhealthy foods in the home was significantly associated with glycemic control, such that having a greater number of unhealthy foods in the home was associated with a higher HbA1c (r = .19, p = .016). Over the course of six months of weight-loss treatment, a greater decrease in unhealthy foods in the home was associated with greater improvements in both systolic (r = -.17, p = .033) and diastolic (r = -.16, p = .037) blood pressure. Collectively, these findings suggest that the home food environment may have an impact on disease risk factors in obese individuals from rural communities and that modifying the food environment by decreasing unhealthy foods can have a beneficial impact on blood pressure.

CORRESPONDING AUTHOR: Stacey Maurer, MS, University of Florida, Gainesville, FL, 3260; smaurer5@phhp.ufl.edu

B-123a

FOCUS GROUPS MOVE ONLINE: FIRST USE OF TUMBLR FOR EHEALTH CURRICULUM DEVELOPMENT

Diane L. Elliot, MD,[1] Diane Rohlman, PhD,[2,1] Megan Parish, MPH,[1] Eric Serres, none,[1] Hannah White, none,[1] Ginger Hanson, PhD[1] and Dede Montgomery, MS[1]
[1]Medicine, Oregon Health & Science Univ, Portland, OR and [2]Occupational and Environmental Health, University of Iowa, Iowa City, IA.

Online health promotion/risk reduction programs have been successful and are particularly relevant for tech-savvy adolescents and young adults. However, these groups are notoriously demanding Internet users. Successful technology-enabled programs have engaged prospective participants in their development. To date, this has involved focus and usability groups and advisory panels. Tumblr is a free, easily modifiable feature rich micro-blog hosting platform offering customizable templates, and it can be linked to online surveys. We asked whether Tumblr pages could be used to present and prioritize potential components for an online young workers' risk reduction/health promotion program. METHODS: PUSH (Promoting U through Safety & Health) is a project to translate a paper-based NIOSH young worker safety program to an online format. A convenience sample of young seasonal parks and recreation workers (87% white, mean [SD] age 17.9 [2.3] years, 65% female) were asked to provide feedback concerning sequentially presented Tumblr pages with various elearning activities (brief videos, games, written content and quizzes) linked to SurveyGizmo to rate both learning and likability on a 7-point agreement scale. Program designers considered all Tumblr presented activities as potentially appropriate. A weekly competition drove engagement across seven weeks. RESULTS: 370 participants rated 12 Tumblr elearning activities. For the activities, mean likability (4.9 to 5.6) and learning (4.3 to 5.9) varied, and the two scores did not parallel each other. Findings allowed prioritizing content and identifying preferred elearning methods. CONCLUSION: This is the first description of using Tumblr pages and a linked survey as a feasible and useful means to obtain formative information for online curriculum development.

CORRESPONDING AUTHOR: Diane L. Elliot, MD, Medicine, Oregon Health & Science Univ, Portland, OR, 97239; elliotd@ohsu.edu

B-142a

PREDICTORS OF USE OF A WEB-SUPPORTED TOOLKIT FOR IMPLEMENTATION OF THE PATIENT-CENTERED MEDICAL HOME MODEL IN THE VA

Amanda Midboe, PhD,[1] Thomas J. Taylor, PhD,[1] Jeff Luck, PhD,[3] Candice Bowman, PhD, RN,[2] Nina Smith, MPH,[2] Bonnie Bruce, DrPH[1] and Steven Asch, MD[1]
[1]Research, VA Palo Alto Health Care System, Menlo Park, CA; [2]VA Greater Los Angeles, Los Angeles, CA and [3]Oregon State University, Corvallis, OR.

Since April 2010, the VA has been implementing the Patient-Centered Medical Home model in over 900 primary care clinics. These interdisciplinary teams of providers are known as Patient-Aligned Care Teams (PACTs), which include physicians, nurses, and behavioral health specialists. Some key purposes of the PACTs are to increase coordination of care as well as access to care. Implementation of the PACT model requires primary care teams to develop tools that support key PACT outcomes. The PACT Toolkit was developed in 2011 to facilitate sharing of these innovations and is an organized, web-supported toolkit that is easily accessible. Providers share innovations and tools in line with key PACT goals that have been developed and implemented at VA facilities. In an effort to capitalize on strengths of the PACT toolkit and improve any limitations, an online survey of use of the PACT Toolkit website was conducted in fall, 2012.

A total of 452 PACT team members responded to the survey, with 70% (n = 315) of those respondents indicating they had visited the PACT Toolkit website. Those who visited the toolkit website were compared with those who reported not visiting the website (30%, n = 137) in unadjusted univariate multi-level logistic models (random-intercept specified for VA facility where the respondent worked). Notable associations with visiting the website included training at the regional level (OR = 1.57, p < .05) and a higher likelihood of visiting the toolkit website for each month involved in PACT (OR = 1.02, p < .05). Website visitation also varied as a function of one's role in PACT in the univariate model (Wald $\chi 2$ (4) = 15.14, p < .01) with Registered Nurses and clerical associates more likely to have visited the website than LPNs, social workers, pharmacists, and dieticians on the team. PACT Toolkit use may partly depend on the degree of training PACT members receive, their role in the team, and how well tools fit needs of PACT members.

CORRESPONDING AUTHOR: Amanda Midboe, PhD, Research, VA Palo Alto Health Care System, Menlo Park, CA, 94025; amandamidboe@gmail.com

B-142b

IMPROVING THE QUALITY OF ASTHMA CARE USING THE INTERNET

Jennifer Poger, MEd, Andrew Pool, MSc, Heather Stuckey, DEd, Erik Lehman, MS, Timothy Craig, DO and Christopher Sciamanna, MD, MPH
Penn State Hershey Medical Center, Hershey, PA.

Background:Asthma is a significant health burden, as approximately 7% of Americans are currently diagnosed with this condition. Despite widespread dissemination of evidence-based guidelines, more than half of adults with asthma are uncontrolled. The purpose of this randomized control trial was to test the efficacy of an intervention designed to help patients know what questions to ask their provider, as well as to know when they need a provider visit sooner than scheduled by providing them with access to an asthma module of a patient activation website. This recently collected 12 month data expands on the 6 month data presented at SBM 2012 and more strongly supports our conclusions.

Methods:408 participants were randomized 1:1 to one of two conditions: Participants in the Intervention Condition (IC) received feedback about their asthma control, including questions to ask their asthma care provider at their next visit. Participants in the Control Condition (CC) received feedback about questions regarding preventive services (e.g., cancer screening) that they should ask their primary care provider. The main outcome measure is the change in the percentage of patients in each group whose asthma is controlled (ACT ≥ 20), according to the Asthma Control Test (ACT) and NAEPP guidelines.

Results:325 participants completed 12 month follow up measures (IC: N=157; CC: N=168). Participants in the IC reported a significantly greater mean change in the overall ACT score than participants in the CC (2.1 vs 1.2; p=.012). Significant between group differences were observed in the mean change in rescue inhaler/nebulizer use frequency (0.6 vs 0.3; p=.005). Participants in the IC reported a significant between group mean change in the number of inhaled asthma medications they used between baseline and 12 months (0.4 vs 0.2; p=0.021).

Conclusions:Participants randomized to the IC reported greater improvement in asthma control compared to the CC. Results indicate that individuals with chronic conditions, such as asthma, may benefit from using patient activation websites with tailored feedback.

CORRESPONDING AUTHOR: Andrew Pool, MSc, Penn State Hershey Medical Center, Hershey, PA, 17033; apool@hmc.psu.edu

B-142c

CAN A VIDEO INTERVENTION IMPROVE CHILDREN'S INHALER TECHNIQUE?

Delesha M. Carpenter, PhD, MSPH,[1] Betsy Sleath, PhD,[1] Dan Reuland, MD, MPH,[1] Tamera Coyne-Beasley, MD, MPH,[1] Susan Blalock, PhD,[1] Charles Lee, MD,[2] Frances Nguyen, BS,[1] Rachel Mooneyham, BA[1] and Mark Weaver, PhD[1]
[1]University of North Carolina, Chapel Hill, NC and [2]Polyglot Systems, Inc, Morrisville, NC.

Background. Proper inhaler technique is critical for delivery of asthma medications to the lungs. Our goal is to determine whether a brief video intervention can improve the inhaler technique of children with asthma. This abstract presents preliminary data from our video intervention study.

Methods. Children (n=40) ages 7-17 with persistent asthma were recruited at 2 nonurban pediatric practices in North Carolina. Eligible children demonstrated their inhaler technique for metered dose inhalers (MDIs) either with or without a spacer. Using a validated inhaler technique checklist, a trained research assistant recorded whether the child correctly performed each inhaler step. After a regularly-scheduled office visit, children then were randomized to watch either a 2-minute-long asthma inhaler technique video (intervention group) or a nutrition video (control group). Children's technique was assessed again after their office visit. A linear mixed model that included intervention group (control, experimental), time (pre/post visit), and intervention*time as fixed effects and subject as a random effect was used to determine whether there were differences between the experimental and control groups.

Results. Children were primarily male (65%) and of Hispanic ethnicity (75%). Mean child age was 10.2 years. Only 1 child performed all inhaler steps correctly prior to the intervention. Only 23% of children reported that their physician showed them how to use their inhaler during their medical visit. In the intervention group, pre/post inhaler technique improved by a mean of 1.22 steps ($p < 0.001$). The mean change in inhaler technique was significantly better for the intervention group when compared with the control group ($p = 0.0015$). All children (100%) reported that the inhaler technique video was helpful.

Conclusion. Children in the video intervention group demonstrated larger improvements in inhaler technique than children in the control group.

CORRESPONDING AUTHOR: Delesha M. Carpenter, PhD, MSPH, Division of Pharmaceutical Outcomes and Policy, University of North Carolina, Chapel Hill, NC, 27599; dmcarpenter@unc.edu

B-142d

OPPORTUNITIES TO OPTIMIZE EHEALTH TECHNOLOGY FOR PATIENTS WITH MULTIPLE CHRONIC CONDITIONS

Donna M. Zulman, MD, MS,[1,2] Emily Jenchura, BA,[1] Danielle Cohen, MPH,[1,2] Eleanor Lewis, PhD[1] and Steven M. Asch, MD, MPH[1,2]
[1]VA Palo Alto Health Care System, Menlo Park, CA and [2]Division of General Medical Disciplines, Stanford University, Stanford, CA.

Background: Patients with multiple chronic conditions face many self-management challenges and are at risk for poor clinical outcomes. We sought to understand how these patients use eHealth technology (e.g., personal health records, mobile applications), and how this technology might be optimized to support their health care needs.

Methods: In this mixed methods study, we administered a mail-out survey to users of VA's personal health record, My HealtheVet. After identifying survey respondents with ≥3 chronic conditions who use technology for health-related purposes, we conducted 6 focus groups (stratified by age and common health conditions). Focus group participants discussed their current use, desired use, and barriers to use of eHealth technology to manage multiple medical problems. We used descriptive statistics and standard content analysis methods to analyze quantitative and qualitative data, respectively.

Results: Among survey respondents with ≥3 conditions (n=308), eHealth technology was used most frequently to search for health information (82%), communicate with providers (69%), manage medications (68%), track medical information (55%), and make treatment decisions (47%). Focus group participants (n=37) described a number of challenges—including organizing medical records from multiple sites, communicating with multiple providers and synthesizing their recommendations, and managing complex medication regimens—that could be amenable to eHealth technology solutions. However, these patients also experienced barriers to use of existing eHealth tools including cost, privacy concerns, and incompatibility of medical record systems.

Conclusion: As eHealth technology evolves to meet the needs of patients with multiple chronic conditions, it will be important to develop tools that integrate information about different conditions, facilitate communication with multiple providers, and enable patients to easily share their medical records with providers in different healthcare systems.

CORRESPONDING AUTHOR: Donna M. Zulman, MD, MS, Stanford University, Stanford, CA, 94305; dzulman@stanford.edu

B-142e

PROTECTING PRIVACY AND CONFIDENTIALITY IN ONLINE HEALTH COMMUNITIES

Jacqueline Amoozegar, MSPH,[1] Douglas Rupert, MPH,[1] Jennifer Gard Read, MPH,[1] Rebecca Moultrie, AB,[1] Kathryn Aikin, PhD,[2] Amie O'Donoghue, PhD[2] and Helen Sullivan, PhD, MPH[2]
[1]RTI International, Research Triangle Park, NC and [2]U.S. Food and Drug Administration, Rockville, MD.

Background: Online health communities (OHC) are an increasingly popular source of health information, and studies show that OHC participation can improve social support, intervention adherence, and patient-provider discussions. However, OHCs can lead to inappropriate disclosures of personal health information, both accidental and intentional, and no study has examined to what extent OHC members try to protect their privacy.

Methods: A trained moderator conducted in-person and online focus groups with verified members of OHCs (n=89) and asked about OHC activities, including privacy and confidentiality. Two researchers independently coded transcripts of each group with NVivo 9.2 to identify themes.

Results: Most participants considered privacy and confidentiality important for several reasons: wanting to keep diagnoses and illness details private, being concerned about personal safety, and reducing unwanted marketing emails. These concerns affected which OHCs participants joined, the content and frequency of their posts, and their interactions with other members. However, a few participants considered privacy an outdated ideal in the digital age and shared personal illness information freely in OHCs.

While OHCs typically protect privacy by limiting personal information collected, requiring member login, and offering privacy controls, most members protect their own privacy by using anonymous email accounts and usernames, entering fake profile information, and keeping OHC accounts separate from other online activities (e.g., Facebook).

Conclusions: Most individuals are cognizant of an OHC's potential to breach privacy and confidentiality, and they are careful to protect their personal health information in these forums. Individuals who are less careful have no expectation of privacy or desire to keep their illness confidential.

CORRESPONDING AUTHOR: Jacqueline Amoozegar, MSPH, RTI International, Research Triangle Park, NC, 27709; jamoozegar@rti.org

B-142f

MINDFULNESS BASED TINNITUS STRESS REDUCTION PILOT STUDY: A SYMPTOM PERCEPTION-SHIFT PROGRAM

Jennifer J. Gans, PsyD, Patricia O'Sullivan, PhD and Vallena Berchef, BS
Jennifer Gans, UCSF, San Francisco, CA.

This pilot study aims to investigate whether a novel mind-body intervention, Mindfulness Based Tinnitus Stress Reduction (MBTSR), may be a beneficial treatment for chronic tinnitus. Eight tinnitus patients who had previously received Tinnitus Counseling (standard of care) at the University of California, San Francisco (UCSF) Audiology Clinic participated in the MBTSR program. The program included eight weeks of group instruction on mindfulness practice, a one-day retreat, supplementary readings, and home-based practice using meditation CDs. Using a pre-post intervention design, mean differences (paired t-tests) were calculated. Benefits were measured by a reduction in clinical symptoms, if present, and a tinnitus symptom perception shift. Tinnitus symptom activity and discomfort as well as psychological outcomes were assessed by self-report questionnaires. Both quantitative and qualitative data were gathered. Results indicate that Effect Sizes, if supported by a larger study, may be clinically significant and demonstrate a substantial decrease for items measuring perceived annoyance and perception of handicap of tinnitus. Change scores on study measures all moved in the hypothesized direction, with the exception of negligible change found for the Acting with Awareness (d=-.05) factor of mindfulness. This pilot study provides preliminary evidence that an eight-week MBTSR program may be an effective intervention for treating chronic tinnitus and its co-morbid symptoms, and may help reduce depression and phobic anxiety while improving social functioning and overall mental health. These promising findings warrant further investigation with a randomized controlled trial.

CORRESPONDING AUTHOR: Jennifer J. Gans, PsyD, Jennifer Gans, UCSF, San Francisco, CA, 94123; jennifer.gans1@gmail.com

B-142g

PSYCHOSOCIAL FACTORS PREDICT IMPROVED MEDICATION ADHERENCE AFTER HOSPITALIZATION

Julia R. Van Liew, BA,[1] Alan J. Christensen, PhD,[1,2] Barry L. Carter, PharmD[3,4] and Karen B. Farris, PhD[5]
[1]Psychology, University of Iowa, Iowa City, IA; [2]Internal Medicine, University of Iowa, Iowa City, IA; [3]Pharmacy Practice & Science, University of Iowa, Iowa City, IA; [4]Family Medicine, University of Iowa, Iowa City, IA and [5]College of Pharmacy, University of Michigan, Ann Arbor, MI.

Background: Hospital discharge can be a chaotic event entailing changes to multiple medications and lack of care continuity. Psychosocial factors may impact patients' successful medication adherence.

Purpose: To assess for the impact of psychosocial factors on medication adherence within 90 days after hospitalization.

Methods: As part of a large prospective study of medication management after hospitalization, patients (N=942) with specific cardiovascular diseases, pulmonary diseases, or diabetes who were believed to be at risk for adverse drug events were assessed. The sample was 52% female, 91.4% Caucasian, and an average of 60.9 years old (SD=12.39). Patients completed measures of familial support and medication self-efficacy at time of hospitalization. Patient-reported general health and medication adherence were assessed at hospitalization and 30 and 90 days after discharge. For the current analyses, a mean value across these three time points was calculated for each of these variables.

Results: Medication adherence was predicted by a multiple regression model including familial support, medication self-efficacy, and self-rated general health. The overall model was significant (F(3, 916) =99.86, p<.001) and accounted for approximately 25% of the variance in adherence (R2=0.246). Moreover, each psychosocial factor independently predicted adherence: familial support (β= .063, p<.05), medication self-efficacy (β=.46, p<.001), and self-rated general health (β=.074, p<.05).

Conclusions: Familial support, medication self-efficacy, and self-rated health individually and collectively predicted adherence across 90 days after hospital discharge in a sample of at-risk medical patients. Attention to psychosocial factors during this clinically important period is warranted.

CORRESPONDING AUTHOR: Julia Van Liew, BA, Psychology, University of Iowa, Iowa City, IA, 52242; julia-vanliew@uiowa.edu

B-142h

"OLD-SCHOOL" HEALTH INFORMATION SEEKING: TALKING TO YOUR DOCTOR, HINTS 2011-2012

Thomas K. Houston, MD, MPH,[1,2] Julie E. Volkman, PhD,[1] Caitlyn Lutfy, MPH,[3] Timothy P. Hogan, PhD,[1,2] Daniel Amante, MPH,[2] Stephanie L. Shimada, PhD,[1,4] Tana Luger, PhD,[1] D. Keith McInnes, ScD[4,5] and Hua Feng, MD, MS[1,2]
[1]VA eHealth QUERI, Bedford, MA; [2]UMass Medical School, Worcester, MA; [3]WI-HER, LLC, Bethesda, MD; [4]BU School of Public Health, Boston, MA and [5]VA HIV QUERI, Bedford, MA.

Background: Increasingly, people are using the Internet as a health information resource, but have not completely eliminated traditional approaches, like talking to their doctor.

Methods: The NCI Health Information National Trends Survey (HINTS) 2011-2012 (N = 3959) assessed health information seeking and needs in a national, representative sample of U.S. adults. HINTS asked, for the most recent health information need, indicate their first source. We examined characteristics of healthcare provider-first information seeking using survey weighted percentages.

Results: Among the top responses, health information seekers reported going first to the Internet (n = 1691, 42.7%) most frequently, followed by going to a doctor/healthcare provider (n = 436, 11.0%) first, then publications (books, brochures, magazines and newspapers) (n = 362, 9.2%) first, and family/friends/co-workers (n = 119, 3.0%) first. Healthcare provider-first information seekers were older (M = 53.74; SD = 2.74), female (n = 236; 54.6%), with 22.8% (n = 116) having some college or more education. Almost a third of these seekers earn between $20,000-$49,999 (n = 133; 33.4%), and the majority own their own home (n = 303; 69.0%), have health insurance (n = 414; 88.4%) and are completely comfortable with English (n = 342; 80.6%). Veterans were more likely (OR=1.82, CI=1.17-2.82) to seek health information from a doctor/healthcare provider compared to non-Veterans. Healthcare provider-first information seekers were less likely (OR=0.59, CI=.38-.91) to be concerned about the quality of information provided by healthcare professionals.

Conclusions: Seeking information from healthcare providers is a not so close second behind the Internet, but remains a valuable resource sought by a subset of patients.

CORRESPONDING AUTHOR: Julie E. Volkman, PhD, eHealth QUERI, Dept. of Veterans Affairs, Bedford, MA, 02067; julie.volkman@va.gov

B-142i

RACE AND SEX GROUP DIFFERENCES IN EMERGENCY DEPARTMENT SOCIAL SERVICE DELIVERY: RESULTS OF A DATABASE TRACKING SYSTEM

Megan Moore, PhD,[1] Eve Ekman, MSW[2] and Martha Shumway, PhD[3]
[1]Social Work, University of Washington, Seattle, WA; [2]Social Welfare, University of California, Berkeley, Berkeley, CA and [3]Psychiatry, University of California, San Francisco, San Francisco, CA.

Racial and sex-based disparities in Emergency Department (ED) care have been documented for a variety of medical services. However, very little is known about the nature of social work services in the ED. The present study examined social work service utilization by race and sex in a large, urban, public, trauma center ED. Retrospective data from an ED social work database were compared to data from hospital administrative records to determine types and relative rates of social work services provided. Of the 829 patients seen by ED social workers during the eight-month study period, 21% were homeless. Mean (SD) age was 43.7 (19.4) years and 69% were male. 56% were being treated for a traumatic injury; 25% were intoxicated at time of visit. 81% were referred for counseling, and the majority of patients received crisis, family, domestic violence or substance abuse counseling and referral. Of all patients discharged from the ED in the study year (N=46,200), White patients were 2.09 times more likely than Hispanics, 1.36 times more likely than Asian/Pacific Islanders and 1.51 times more likely than African Americans to receive ED social work services. Males were 1.38 times more likely than females to receive services. Findings suggest disparities in social work service delivery in this ED. ED social workers provide important counseling and referral services to patients and families. It is imperative that all patients have equal access to these services. Ongoing, large-scale surveillance of ED social work services is warranted to understand and address referral and access disparities, particularly for ethnic minority patients and women.

CORRESPONDING AUTHOR: Megan Moore, PhD, Social Work, University of Washington, Seattle, WA, 98195-4900; mm99@uw.edu

B-142j

TEXTING TEENS TO PROMOTE KNOWLEDGE, ATTITUDE AND BEHAVIOR CHANGE FOR SKIN CANCER PREVENTION

Melanie D. Hingle, PhD, MPH, RD,[1] Aimee Snyder, BS,[2] Naja McKenzie, PhD,[3] Cynthia Thomson, PhD, RD,[2,3] Robert A. Logan, PhD[4] and Robin Harris, PhD[2,3]
[1]Nutritional Sciences, University of Arizona, Tucson, AZ; [2]Mel & Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ; [3]University of Arizona Cancer Center, University of Arizona, Tucson, AZ and [4]National Library of Medicine, Bethesda, MD.

Background: Skin cancer is the most common form of cancer. Primary prevention emphasizes early adoption and practice of sun protection behaviors. Adolescent years represent a period of high risk for excess ultraviolet radiation exposure, thereby presenting a 'window of opportunity' for intervention. The ubiquity of mobile phone use among today's youth offers an engaging medium to communicate sun safety information.

Purpose: The purpose of the Texting 4 Teens Study was to evaluate the effect of a skin cancer prevention intervention using targeted SMS (text) messages on changes in knowledge, attitudes, and behaviors related to skin cancer prevention in adolescents.

Methods: Participants were recruited from 2 area middle schools. English speakers, ages 11-15, who routinely used a mobile phone and completed a 45-minute sun safety education session were eligible. Participants received 4 text messages each week for 12 weeks and completed questionnaires assessing skin and sun protective knowledge, attitudes, and behavior pre and post intervention. Baseline and 12-week responses were tested for equality using a Wilcoxon Signed Rank Test.

Results: 60 youth completed baseline assessments; 53 students completed 12-week assessments. Significant increases were reported for: sun protective behaviors (e.g., sunscreen application, shade seeking), knowledge about skin cancer risk, and confidence in ability to find skin cancer prevention information using media (i.e. Internet).

Conclusions: A brief, low intensity text message-based intervention successfully impacted youth skin cancer prevention knowledge, attitudes, and behaviors. Future research will determine whether effects are sustained at 24 weeks and will explore how sun safety parenting practices inform these effects.

CORRESPONDING AUTHOR: Melanie D. Hingle, PhD, MPH, RD, Nutritional Sciences, University of Arizona, Tucson, AZ, 85721; hinglem@email.arizona.edu

B-142k

DETERMINANTS OF ORAL HEALTH STATUS IN A RURAL POPULATION

Yi Guo, PhD[1] and Henrietta L. Logan, PhD[2]
[1]Health Outcomes and Policy, University of Florida, Gainesville, FL and [2]Community Dentistry and Oral Epidemiology, University of Florida, Gainesville, FL.

Objectives: To evaluate the current oral health status among rural residents and understand the associated social determinants.

Methods: We telephone-surveyed individuals in rural census tracts throughout North Florida (n=1881). Logistic regression analyses were performed to assess the association between oral health status (fair or poor versus better oral health) and potential social determinants. As a secondary analysis of those who had a regular dentist (n=1055), we performed logistic regression analyses to study the association between negative attitude towards dental visits and participants' self-reported dental visit experience.

Results: Overall, 15.5% of the participants reported having fair or poor oral health. Lower financial security (OR=0.62, p= .003), more chronic disease conditions (OR=3.65, p<.001), and higher level of depressive symptoms (OR=1.62, p=.002) were associated with fair or poor oral health. Among African Americans, higher health literacy was associated with better oral health (OR=0.64, p=.009). Participants who reported cost of dental visits was a bigger problem (OR=1.61, p<.001) and those who disliked dentist visits (OR=1.41, p<.001) were more likely to report fair or poor oral health. In the secondary analysis, participants who disliked dental visits were more likely to report that their dentist did not listen carefully to them (OR=1.50, p<.001). Participants who reported a "painful" last dental visit were more likely to dislike dental visits (OR=3.89, p<.001). Among Whites, those who reported a "frightening" last dental visit were more likely to dislike dental visits (OR=7.25, p<.001).

Conclusion: Improving health literacy could promote better oral health among African Americans. Negative attitude about dental visits is associated with patients' perception that dentists do not listen carefully to them. Future research should address improving oral health by improving patient's interpersonal experience when they do visit the dentist.

CORRESPONDING AUTHOR: Yi Guo, PhD, University of Florida, Gainesville, FL, 32608; yiguo@ufl.edu

B-142l

STIGMATIZED BELIEFS AGAINST INDIVIDUALS WITH CHRONIC FATIGUE SYNDROME

Christina C. Graham, PhD,[1] Dana Anderson, PhD,[2] Laura Arnold, BA to be earned May 2013,[2] Joshua Polkinghorn, BA to be earned May 2013,[2] Yesenia Arellano, BA to be earned May 2013[2] and Jessica Lewis, BA to be earned May 2013[2]
[1]Psychiatry and Behavioral Sciences, University of Washington, Seattle, WA and [2]Psychology, Pacific Lutheran University, Tacoma, WA.

Individuals with Chronic Fatigue Syndrome (CFS) frequently report perceiving negative attitudes from others because of their illness. There is ample evidence to suggest that health providers do indeed report negative beliefs, such as psychological instability, motivation to gain benefit from the illness, or limited ability to handle stress. There are no published data attesting to the general public's perception of individuals with CFS, however. The goals of these studies were to determine the extent of stigmatized beliefs toward individuals with CFS in a non-medical population, and to examine factors contributing to stigmatized beliefs. Study 1 was conducted with 147 undergraduates who read fictional vignettes about an individual displaying symptoms of CFS. Vignette characters were diagnosed either with CFS or Viral Supratentorial Myalgia (VSM; a made-up term suggesting biomedical etiology). Participants then rated 12 items assessing various aspects of stigma. Results indicated more stigma attributed to the CFS label as compared to VSM. Study 2 also examined the effect of label on stigma, as well as whether the presence of a discrete biological marker reduced stigma. Participants (n = 119) read vignettes similar to that of Study 1. Vignette characters were diagnosed either with CFS or Myalgic Encephalomyelitis (ME). Additionally, vignettes described either the presence or absence of a virus. Participants also self-reported political orientation and health locus of control. Interestingly, no stigma difference was found between the labels CFS and ME. As predicted, the absence of a virus increased stigma. Greater stigma was associated with conservative political orientation and internal health locus of control. Overall, results from these studies suggest that non-medical others do indeed tend to harbor stigmatized beliefs toward individuals exhibiting symptoms of CFS. These results have implications for health care providers working with individuals with CFS who report feeling stigmatized by others.

CORRESPONDING AUTHOR: Christina C. Graham, PhD, Psychiatry and Behavioral Sciences, University of Washington, Seattle, WA, 98108; ccgraham@uw.edu

B-154a

A MOBILE SUBLIMINAL PRIMING INTERVENTION FOR PAIN

Alina M. Valdez, BA (in progress),[1] Abraham M. Rutchick, PhD[1] and C. Benjamin Flynn, MA[2]
[1]California State University, Northridge, Northridge, CA and [2]B-Fly Software, Seattle, WA.

Pain is challenging to treat and contributes to increased health care costs and lower quality of life; thus, there is utility in developing new approaches to pain management. This study applied principles derived from guided imagery protocols, namely the envisioning of pleasant and relaxing experiences, to a priming-based intervention. Specifically, subliminally exposing participants to relaxing images could activate corresponding physiological and affective states and thereby confer resistance to pain. Pilot research demonstrated that this procedure is effective if images are presented on a desktop computer; the current study used a mobile device to administer the intervention. Healthy undergraduates (N = 81) completed a baseline cold pressor task while continuously indicating how much pain they felt using the Faces Pain Scale (intensity was recorded every five seconds). Participants withdrew their hands from the ice bath when the discomfort became too great; immersion time was a measure of pain tolerance. Next, participants used a mobile device to complete a categorization task that they were told could potentially decrease their discomfort in the cold pressor. Unbeknownst to participants, they were subliminally (20ms) exposed to either relaxing images (e.g., Zen gardens, beach scenes) or neutral images (abstract paintings) while completing the categorization task. The participants then completed a second cold pressor task, again while indicating pain intensity. Participants exposed to relaxing images tolerated the cold pressor for significantly longer, relative to baseline (mean difference = 3.8 sec), than did participants exposed to neutral images (mean difference = -7.8 sec, p = .03). Sixteen of the 41 (39%) participants who received the relaxing images felt meaningfully less pain (a difference of at least 1.3 scale points per time point) during the second cold pressor task, compared to 7 out of 40 (18%) participants who received the neutral images; this difference was statistically significant (OR = 3.02, $\chi 2= 4.61$, p = .03). Future investigations will test this intervention on participants with clinical pain conditions.

CORRESPONDING AUTHOR: Alina M. Valdez, BA, California State University, Northridge, Glendale, CA, 91207; alina.valdez.646@my.csun.edu

B-154b

HEALTH-LITERACY-ADAPTED CBT AND PAIN EDUCATION FOR LOW-SES INDIVIDUALS WITH CHRONIC PAIN: ONE-YEAR FOLLOW-UP

Joshua C. Eyer, PhD,[1] Beverly E. Thorn, PhD[1] and Melissa A. Day, MA[1,2]
[1]Psychology, University of Alabama, Tuscaloosa, AL and [2]Psychiatry, University of Washington School of Medicine, Seattle, WA.

According to the Institute of Medicine (IOM; 2011), chronic pain affects nearly one-third of the US population and includes conditions such as back pain, arthritis, and diabetes-related pain. Groups with low socioeconomic standing, such as rural minorities, carry greater risk for chronic pain conditions and greater risk for poor outcomes of pain treatment. One reason for this is that existing treatments are poorly adapted for the specific needs of these groups. For example, individuals may lack the health literacy to understand standard health education materials or more complex psychosocial treatments. This poster reports outcomes at 12 months for a randomized, controlled trial of a health-literacy-adapted cognitive-behavioral pain therapy (CBT) versus a similarly adapted pain-education control.

Participants in the 12-month follow-up were 45 individuals with chronic pain (of an initial 61 treatment completers; 74%) who were receiving treatment from a federally qualified (low-income) health center. Analyses compared change on key outcomes across time (repeated measures ANOVA) and between treatment conditions (ANCOVA).

Results indicated significant improvements across groups on Pain Intensity, Pain Interference, and Pain Catastrophizing. Significant effects for group were identified only for Pain Catastrophizing, wherein CBT patients improved more than Education patients. Follow-up analyses showed that pre-post changes in catastrophizing significantly predicted lower Depression and Pain Catastrophizing and higher Quality of Life at 12 months for members of the CBT group but not the Education group.

These data indicate that health-literacy-adapted CBT and Pain Education can both produce important changes in pain experience for individuals with chronic pain and low socioeconomic standing. Furthermore, CBT appears to produce changes in the way patients think about their pain that leads to long-term improvements in dysfunctional thinking and quality of life and long-term reductions in depressive symptoms.

CORRESPONDING AUTHOR: Joshua C. Eyer, PhD, Psychology, University of Alabama, Northport, AL, 35473; joshuaeyer@gmail.com

B-154c

REDUCTION OF BODILY PAIN IN RESPONSE TO AN ONLINE POSITIVE ACTIVITIES INTERVENTION

Leslie R. Hausmann, PhD,[1,2] Ada O. Youk, PhD[1,2] and Acacia Parks, PhD[3]
[1]VA Pittsburgh Healthcare System, Pittsburgh, PA; [2]University of Pittsburgh, Pittsburgh, PA and [3]Hiram College, Hiram, OH.

Studies show that completing brief positive activities that increase pleasure, engagement, and/or meaning in one's life (e.g., identifying and using one's personal strengths) can improve mental health. Less is known about the effect of positive activities on physical health outcomes. Using data from a randomized, controlled trial of a positive activities intervention disseminated online, we tested the hypothesis that positive activities would reduce bodily pain.

Participants recruited via a web-based research portal were randomly assigned to complete 0, 2, 4, or 6 evidence-based positive activities over a 6-week period. Participants were emailed a new activity each week or a reminder to complete online survey measures. Follow-up assessments were collected 1, 3, 6, and 12-months post-intervention. The main study enrolled 1361 participants and found that depressive symptoms, the primary study outcome, decreased for all groups, with the largest decrease occurring for those who completed 2 or 4 activities.

For this analysis, we examined whether the intervention reduced bodily pain (BP) among those who had a score < 78 on the BP subscale of the SF-36 at baseline (N=633; BP scores range from 0 to 100 and higher scores indicate less pain). We used a linear mixed model with fixed effects for time, intervention group (combined 2, 4, and 6 activities group vs. 0 activities control group), and the interaction to examine changes from baseline BP scores at 1, 3, and 6 months post-intervention. BP scores improved more over time for those who completed positive activities compared to those in the no activities control group (interaction: p=0.05). BP scores improved from 62.0 at baseline to 72.5 at 6 months in the combined 2, 4, and 6 activities group, compared to a change from 61.9 to 65.8 in the 0 activities group.

This study suggests that positive activities disseminated online can reduce bodily pain in an adult sample of internet users.

CORRESPONDING AUTHOR: Leslie R. Hausmann, PhD, Center for Health Equity Research and Promotion, VA Pittsburgh Healthcare System, Pittsburgh, PA, 15206; leslie.hausmann@gmail.com

B-154d

MINDFULNESS AND PAIN IN INDIVIDUALS WITH MIGRAINES: A RANDOMIZED CONTROLLED TRIAL COMPARING EFFECTS OF MINDFULNESS AND RELAXATION TRAINING ON PAIN-RELATED OUTCOMES

Margaret Feuille, BA and Kenneth I. Pargament, PhD
Bowling Green State University, Bowling Green, OH.

Studies suggest that mindfulness training improves quality of life among persons with

chronic pain. The purpose of this study was to examine whether mindfulness training yields improved pain-related outcomes relative to relaxation training among individuals with migraine. Migraineurs were randomly assigned to training in either basic relaxation (R) or mindfulness-of-breathing (M). After two weeks of practicing their assigned technique for 20 minutes a day, participants completed a cold pressor task. The time each participant held his or her hand in the water was recorded. Just after the task, participants rated the level of pain and stress experienced during the task and completed a measure of state mindfulness during the task. We hypothesized that participants in the M group would experience better outcomes regarding stress, pain, and time in water.

Results partially supported our hypothesis. Participants in the M group reported less stress during the cold pressor task relative to the R group, while time in water and self-report pain were not significantly different between groups. State mindfulness correlated significantly with greater time in water, but not with stress or pain. Results indicate that, among individuals with migraine, mindfulness training is modestly more helpful than relaxation instructions regarding pain outcomes, and that mindful awareness may be a resource in improving pain-related outcomes.

An exploratory arm of this study compared a spiritual mindfulness (SM) condition to the M and R conditions. The SM group did not experience significantly improved cold pressor outcomes relative to the M group, though the SM did report greater state mindfulness during the task relative to other groups. These results indicate that spiritual content may not improve pain-related outcomes of mindfulness training, but may be a resource in cultivating mindful awareness.

CORRESPONDING AUTHOR: Margaret Feuille, BA, Bowling green state university, Bowling Green, OH, 43402; mfeuill@bgsu.edu

B-154e

FUNCTIONAL IMPAIRMENT IN CHRONIC PELVIC PAIN: WHEN ADDRESSING THE PAIN IS NOT ENOUGH

Caroline Saulino, PsyD, Mary Bugenski, BS, Lisa Miller, PhD, Anne Eshelman, PhD and David Eisenstein, MD
Henry Ford Health System, Detroit, MI.

While there is literature regarding functional impairment in chronic pain, little has been investigated about interference in daily activities due to chronic pelvic pain. Therefore, the current study investigated various types of interference, including interruption in household activities, work, social engagement, and relationship problems. The relationship of interference with depression and anxiety was also explored.

Fifty-one consecutive female patients completed a routine psychiatric evaluation at a chronic pelvic pain clinic from October 2011 to September 2012. The pain variables gathered were self-reports and psychiatric symptoms were measured with the HADS.

Interference in daily activities was relatively common among these pelvic pain patients. Prevalence rates of types of interference include: 68.6% in household activities, 35.3% missed work due to pain, 17.6% have left work early, and 7.8% report losing their employment due to pain. In terms of social relationships, 25.5% have missed plans with friends, 23.5% no longer plan social events, 13.7% plan around the pain, and 11.8% actively isolate themselves. Relationship problems also arise: 35.3% report avoidance of intercourse due to pain and 29.4% no longer attempt intercourse. Surprisingly, pain severity was only related to interference in sexual activities. Additionally, the type of pain (e.g., sharp, dull, radiating) and the frequency of pain (continuous vs. intermittent) were also not related to types of interference. However, depression and anxiety were significantly related to some types of interference, including household activities (p = .01 and p = .002, respectively), loss of work (p = .03 and p = .01, respectively) and planning social events (p = .04 and p = .01, respectively).

Results suggest that functional impairment may be multifaceted; therefore a reduction in pain severity may not entirely address patient disability. Additional psychological interventions may be warranted to minimize overall disability.

CORRESPONDING AUTHOR: Lisa Miller, PhD, Henry Ford Health System, Royal Oak, MI, 48067; millerlisar@gmail.com

B-154f

MONITORING, BUT NOT BLUNTING, AFFECTS PLACEBO ANALGESIA

Suzanne Helfer, PhD,[1] Andrew Geers, PhD[2] and Rebecca Kamody, BS[3]
[1]Adrian College, Adrian, MI; [2]University of Toledo, Toledo, OH and [3]University of Memphis, Memphis, TN.

Individuals with blunting coping styles usually report less pain than those with monitoring coping styles. It is unclear if coping style changes an individual's response to a placebo expectation. This study was designed to explore the effects of monitoring and blunting coping styles on placebo analgesia during a laboratory cold pressor task. Seventy-six healthy non-smoking participants (33 male, 43 female) completed the

Miller Behavioral Style Scale. Participants were then randomly assigned to a placebo expectation condition or a no-expectation condition. In the placebo expectation condition, the experimenter applied an inert medicinal-smelling cream to participants' non-dominant hand and informed them it would reduce the pain associated with the cold pressor task. Participants in the no-expectation condition were told it was a hand cleanser. Then participants completed a 2 min cold pressor task, in which they immersed their non-dominant hand in ice and water at 4 degrees Celsius. Then participants completed the Short Form McGill Pain Questionnaire. Separate hierarchical regression analyses were performed to explore the effects of each coping style on pain ratings. In the first step, condition (placebo expectation or no-expectation, dummy coded) and coping style score (centered) were entered. In the second step, the interaction between condition and coping style was entered. For monitoring, a significant main effect of condition, a significant effect of monitoring, and a significant interaction were found (all p's < .05). Participants in the placebo expectation condition reported less pain. High monitors reported more pain than low monitors. The interaction indicated that the placebo effect only occurred for high monitors. When the same regression analysis was repeated with blunting, blunting had no effects on pain reports and no interaction with expectation condition. It appears that monitoring and blunting coping styles interact with placebo expectations, and that the effect of monitoring on pain reports can be reduced with expectation effects.

CORRESPONDING AUTHOR: Suzanne Helfer, PhD, Adrian College, Adrian, MI, 49221; shelfer@adrian.edu

B-177b

PREDICTORS OF NATURAL CHANGE IN PHYSICAL ACTIVITY BEHAVIOR USING NON-EXPERIMENTAL DATA: A SYSTEMATIC REVIEW

Alison Quinlan, MSc Kinesiology and Ryan Rhodes, PhD
University of Victoria, Victoria, BC, Canada.

An understanding of the determinants of physical activity (PA) behavior change is important in order to fine-tune the targets for our interventions. The purpose of this paper was to review and appraise the available evidence on predictors of PA behavior change. Studies were eligible if they described a published longitudinal trial of three months or longer duration without experimental intervention in adult populations. Literature searches were conducted from June 2012 to August 2012 in eight common databases. The literature search yielded a total of 2778 potentially relevant records, using a combination of keywords. Of these, 1432 abstracts were obtained and reviewed, yielding full text reports; 39 unique studies passed the eligibility criteria and an additional 7 studies were added through cross-referencing of the articles. Themes were appraised within the socio-ecological framework and several predictors of natural PA change were identified. For demographic/individual factors, age (11/15), low levels of education (9/13), low income (4/6) and decreased health (7/10) predicted a decline in PA. Mixed results were found for ethnicity (6), retirement (8), and gender (8). Behavioral factors such as high levels of smoking (9/10) predicted a decline in PA and alcohol consumption produced mixed results across 4 studies. For psychological factors positive self-efficacy (9/10), positive intention (3/4) and positive emotion/affect (4/4) were predictive of increased PA change, yet knowledge of PA showed no predictive utility. Among social factors parenthood (3/5) and marriage (7/12) predicted a decline in PA. Higher levels of social support (9/10) and divorce (3/4) predicted an increase in PA. Among environmental factors aesthetics (3/4) predicted an increase in PA while mixed results were found for connectivity and safety across 6 studies. Contemporary findings suggest that future interventions target intention, self-efficacy, the affective appraisal of PA, social support, neighborhood design and groups undergoing life transitions such as marriage or parenthood to reduce natural declines in PA.

CORRESPONDING AUTHOR: Alison Quinlan, MSc Kinesiology, University of Victoria, Victoria, BC, V8N2N1; alisonq@uvic.ca

B-177c

"I'M NOT SWEATING MY HAIR OUT": OVERCOMING PHYSICAL ACTIVITY BARRIERS IN AFRICAN AMERICAN WOMEN

Amy G. Huebschmann, MD,[1] Lucille C. Johnson, MA[2] and Andrea L. Dunn, PhD[3]
[1]Medicine, University of Colorado School of Medicine, Aurora, CO; [2]Center for African American Health, Denver, CO and [3]Klein Buendel, Inc., Golden, CO.

Background: Only 36% of U.S. African American (AA) women meet the Healthy People 2010 physical activity objectives compared to 50% of Caucasian women. Lower rates may be related to cultural barriers, including the costs and time required to restyle hair after exercise — a reported barrier in one-third of AA women. To inform future interventions, a key qualitative segment of this mixed-methods study sought to identify hairstyle-related physical activity barriers and facilitators in AA women.

Methods: The study was co-developed by a community health and academic investigator with input from key stakeholders. To date, we have completed four of 8 planned focus groups with AA women in the Denver area. Focus groups were stratified by age (30-49 years; 50-75 years) and physical activity levels (<60 minutes/week vs. ≥60 minutes/week), and led by trained AA females. Data codes for hairstyle-related facilitators and barriers were developed from phrases of similar meaning in an iterative coding scheme.

Results: Thirty AA women have participated. The major hairstyle-related themes involved perspiration. Specific barriers were the time burden to restyle hair after perspiring and the cost burden from needing more hairstyle products and more hair salon visits due to regular aerobic exercise. However, certain hairstyles facilitated activity because perspiration has minimal effects on them (e.g., "Before I got my 'locks' [hairstyle], I was like I'm not sweating my hair out"). Other hairstyle-related facilitators were: high self-efficacy to restyle hair after perspiration; reducing exercise intensity to avoid sweating. These themes were reported across all strata of age and activity.

Discussion: AA women whose hairstyle is affected by perspiration may avoid physical activity because of the financial and time burden associated with restyling their hair. Future interventions that build self-efficacy to restyle hair after perspiration may allow more regular aerobic exercise for AA women.

CORRESPONDING AUTHOR: Amy G. Huebschmann, MD, Medicine, University of Colorado School of Medicine, Aurora, CO, 80045; amy.huebschmann@ucdenver.edu

B-177d

THE RELATIONSHIP BETWEEN MOTHERHOOD AND OBJECTIVELY MEASURED PHYSICAL ACTIVITY AMONG CANADIAN WOMEN

Anca Gaston, PhD,[2,1] Amy Doelman, MPH,[2] Sarah Edwards, MSc[2] and Jo Ann Tober, PhD[2]
[1]School of Kinesiology, The University of Western Ontario, Brantford, ON, Canada and [2]Brant County Health Unit, Brantford, ON, Canada.

Although regular physical activity (PA) is associated with numerous health benefits, only 15% of Canadian adults meet PA guidelines and women tend to be less active than men (Colley et al., 2011). Whereas self-report studies have shown that women with children tend to engage in less PA than women without children, little is known about how motherhood impacts objectively measured PA. This study examined the impact of motherhood on objectively measured PA among a nationally representative sample of women participating in the 2007-2009 Canadian Health Measures Survey. Physical activity was assessed using accelerometry and the variables of interest were weekly minutes (min) of inactivity, light, moderate and vigorous intensity movement, and number of steps per week. Participants were non-pregnant women between the ages of 15 and 60 who provided at least 4 days of PA data (N = 416). 'Mothers' were women who self-identified as a parent living with a child under age 12. Separate ANCOVAs revealed that compared to women without children, mothers spent less time per week being inactive (M = 6762.77 min, SD = 700.20 vs. M = 6965.82 min, SD = 717.10; p = .02; η2 = .02) and more time engaged in light-intensity PA (M = 1717.89 min, SD = 521.17 vs. M = 1529.70 min, SD = 533.17, respectively; p = .004; η2 = .03). However, there was a trend favoring women without children for moderate-intensity PA (M = 135.37 min, SD = 110.12 vs. M = 122.92 min, SD = 92.13; p = .11; η2 = .01) and vigorous-intensity PA (M = 20.51 min, SD = 46.74 vs. M = 16.97 min, SD = 38.66; p = .08; η2 = .01). Steps per week did not vary between groups (p = .83). With respect to meeting PA guidelines, logistic regression revealed a trend effect favoring women without children (OR = 1.71; 95% CI, 0.91-3.21; p = .09). These findings indicate that although mothers spend less time engaged in moderate-vigorous PA, they accumulate more light-intensity and overall PA per week than women without children. Implications for health and PA promotion will be discussed.

CORRESPONDING AUTHOR: Anca Gaston, PhD, School of Kinesiology, The University of Western Ontario, Brantford, ON, N3T 6M5; ancagaston@gmail.com

B-177e

PHYSICAL ACTIVITY AND PAIN: EXERGAMING AMONG AFRICAN AMERICAN AND NON-HISPANIC WHITE WOMEN WITH KNEE OSTEOARTHRITIS

Bridgett Rahim-Williams, PhD, MPH, MA,[1,2] William Parker Hinson, MPH,[2] Kemar Mapp, MPH[2] and Michael Marsiske, PhD[3]
[1]National Institute on Minority Health & Health Disparities, National Institutes of Health, Bethesda, MD; [2]Beahvioral Science & Community Heath, University of Florida, Gainesville, FL and [3]Clinical & Health Psychology, University of Florida, Gainesville, FL.

Osteoarthritis is a debilitating and painful joint condition. Research supports physical activity to improve functional status of individuals with osteoarthritis. The purpose of this research was to test the efficacy and utility of health games technology (e.g. exergame cycling) to reduce pain sensitivity and increase physical activity and functional mobility among African American and non-Hispanic White women ages 50-70 with knee osteoarthritis. Whether innovative health game technology versus standard exercise can be used to improve physical activity and functional mobility thereby reducing disability among women with knee OA is an unexplored area of research.

We hypothesized that novel interventions such as health games (e.g. exergame cycling) would facilitate increased physical activity, functional mobility and decrease report of pain compared to standard measures of physical activity (e.g. stationary cycling without game technology).

Measures included mechanical pressure pain stimuli, exergame and non-exergame cycling, pain ratings, blood pressure, heart rate, pedaling distance, cycling time and psychosocial assessments.

Mean visual analogue ratings of pain were significantly lower under the gaming condition, and for whites. Enjoyment was significantly higher under the gaming condition, and African Americans gained greater enjoyment with the game. There were no main effects, or race by condition interaction.

Games for health technology hold promise as interventions to improve health outcomes such as increased physical activity, functional mobility and decreased pain. Such outcomes have implications for reducing debilitating effects of chronic disease disability and for increasing the enjoyment of physical activity.

CORRESPONDING AUTHOR: Bridgett Rahim-Williams, PhD, MPH, MA, National Institute on Minority Health & Health Disparities, National Institutes of Health, Bethesda, MD, 20892-5465; bridgett.rahim-williams@nih.gov

B-177f

MAXIMAL EXERCISE TESTING AND MEDICAL CLEARANCE FOR EXERCISE IN PATIENTS WITH PSYCHOSTIMULANT USE DISORDERS

Chad D. Rethorst, PhD, Tracy L. Greer, PhD, Adriane dela Cruz, MD, Thomas Carmody, PhD and Madhukar H. Trivedi, MD
UT Southwestern Medical Center, Dallas, TX.

BACKGROUND: Medical comorbidities are common among psychostimulant users. In a general population sample, psychostimulant use was associated with greater cardiovascular, neurologic, and general medical symptoms. Given the known impact of physical activity on these medical comorbidities, it is apparent that psychostimulant users would greatly benefit from engagement in physical activity. However, the poor health of these patients and the known cardiotoxic effects of stimulants bring into to question whether psychostimulant users can safely engage in an exercise program.

METHODS: The Stimulant Reduction Intervention Using Dosed Exercise (STRIDE) trial enrolled psychostimulant users into a 9-month randomized controlled trial examining the effects of an exercise intervention vs. a health education control group. All potential participants completed a maximal exercise test conducted using American College of Sports Medicine guidelines. The results of the test, along with laboratory and physical exam results, were assessed by a trained medical professional to provide medical clearance for exercise participation. We examined demographic and clinical characteristics of enrolled participants compared to those ineligible due to a medical contraindication.

RESULTS: 302 participants were enrolled in STRIDE, while 41 individuals were excluded from participation based on their physical health. The excluded participants did not differ from the enrolled participants by gender (p = 0.898), age (p = 0.072), or ethnicity (p = 0.860). Days of cocaine use (p = 0.071) and amount of use (p = 0.495) did not differ between the two groups. Excluded participants did indicate significantly greater medical comorbidities on the Self-Administered Comorbidity Questionnaire (p = 0.004) and greater cigarette use (p = 0.027).

CONCLUSION: The vast majority of patients seeking inpatient treatment for stimulant use are physically able to engage in an exercise program. However, medical comorbidities and cigarette use are indicative of potential exercise restrictions.

CORRESPONDING AUTHOR: Chad D. Rethorst, PhD, UT Southwestern Medical Center, Dallas, TX, 75390-9119; chad.rethorst@utsouthwestern.edu

B-177g

THE MODERATING EFFECT OF DEPRESSIVE SYMPTOMS ON DAILY EXERCISE SELF-EFFICACY DURING PHYSICAL ACTIVITY INITIATION

Julie L. Kangas, BA and Austin Baldwin, PhD
Psychology, Southern Methodist University, Dallas, TX.

Background: Self-efficacy is a critical factor in successful health behavior changes, like initiating regular exercise. Exercise self-efficacy typically increases following participation in exercise (McAuley et al., 1995), but depressive symptoms are associated with difficulties in increasing self-efficacy (Beck, 1991). The purpose of the current study was to examine how depressive symptoms affect the relation between exercise and daily self-efficacy during the first four weeks of exercise initiation.

Methods: One hundred sixteen previously inactive participants (mean age: 34.5; 29.3% overweight, 34.5% obese; 75.9% female; 42.2% Caucasian) initiated a self-directed exercise routine. Daily assessments, completed during the first four weeks, included reports of completed exercise and exercise self-efficacy. Thirty-five percent of participants reported clinically significant depressive symptoms at study entry, with scores >16 on the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). Mixed linear models were used to examine the relations among these variables.

Results: Consistent with previous research, higher levels of depressive symptoms predicted lower levels of daily self-efficacy over the four weeks ($t= -2.19$, $p<.05$) and greater daily minutes of exercise predicted higher levels of daily self-efficacy ($t=8.43$, $p<.01$). However, both effects were qualified by a significant interaction between daily exercise minutes and baseline depressive symptoms ($t=1.97$, $p<.05$), such that daily minutes of exercise were a stronger predictor of higher daily self-efficacy scores for those with depressive symptoms than for those without symptoms.

Implications: The results indicate that depressive symptoms moderate the effects of daily exercise on daily self-efficacy. For people with depressive symptoms, daily exercise self-efficacy is more responsive to the amount of exercise that day than for people without symptoms. Theoretical and clinical implications will be discussed.

CORRESPONDING AUTHOR: Julie L. Kangas, BA, Psychology, Southern Methodist University, Oak Leaf, TX, 75154; jkangas@smu.edu

B-177h

THE RELATIONSHIP BETWEEN TRANSFORMATIONAL TEACHING AND ADOLESCENT PHYSICAL ACTIVITY: THE MEDIATING ROLES OF PERSONAL AND RELATIONAL EFFICACY BELIEFS

Jessica Bourne, MA,[1] Yan Liu, PhD,[1] Christopher A. Shields, PhD,[2] Ben Jackson, PhD,[3] Bruno D. Zumbo, PhD[1] and Mark R. Beauchamp, PhD[1]
[1]Univ. of British Columbia, Vancouver, BC, Canada; [2]Acadia Univ., Wolfville, NS, Canada and [3]Univ. of Western Australia, Perth, WA, Australia.

The purpose of this study was to examine the extent to which transformational teaching, exhibited by secondary school physical education teachers, predicts within-class and leisure-time physical activity engagement among adolescents, as well as the extent to which those effects are mediated by both relational and personal efficacy beliefs. Mid-way through the school year, 874 Grade 10 adolescents (N males = 461; N females = 413; Mage = 15.41, $SD = .61$) provided ratings of transformational teaching with regard to their physical education teacher's behaviours. At that time adolescents also provided ratings of their confidence in their teacher's capabilities (i.e., other-efficacy), as well as an estimation of their teacher's confidence in their abilities (i.e., relation-inferred self-efficacy; RISE). Two months later, students completed measures of self-efficacy, as well as within-class physical activity (WCPA) and leisure-time physical activity (LTPA) behavior. Through use of structural equation modeling, the results revealed that adolescents' perceptions of transformational teaching were positively related to WCPA and LTPA, and these effects were mediated by adolescents' RISE and self-efficacy beliefs (total indirect effect $b = .185$, $p<.001$). When taken together, the results of this study suggest that displays of transformational teaching by school physical education teachers have the capacity to bolster students' relational and personal efficacy beliefs, which in turn predict adolescent engagement in effortful physical activity during class time as well as during leisure time.

CORRESPONDING AUTHOR: Mark R. Beauchamp, PhD, School of Kinesiology, Univ. of British Columbia, Vancouver, BC, V6T 1Z1; mark.beauchamp@ubc.ca

B-177i

ACUTE AFFECTIVE RESPONSE TO MODERATE-INTENSITY EXERCISE; ASSOCIATION WITH ADOLESCENTS' FUTURE PHYSICAL ACTIVITY (PA)

Priel Schmalbach, BS and Margaret Schneider, PhD
Social Ecology, University of California, Irvine, Irvine, CA.

Aim. This study explores the relationship between affective response during exercise and PA behavior one year later among adolescents. We hypothesized that affective response during an exercise task would predict future PA behavior, whereas affective response after an exercise task would not.

Methods. One-hundred and ninety-two students (mean age=14.8 years, non-hispanic white=70%, male=55%) were recruited in the summer after their 9th grade year. PA was measured at baseline and follow-up (one year later). PA measures (at baseline and one-year later) included moderate-to-vigorous PA (MVPA) by accelerometer, vigorous PA by 3-day PA recall (3DPAR), and sports participation during the previous year. Affective response to exercise was measured with the Feeling Scale during and after a 30-minute moderate-intensity exercise task on a stationary bicycle. For each outcome variable, future PA was regressed on the covariates (baseline PA and baseline affect) first, then on affective response during exercise and after exercise.

Results. Baseline PA was consistently associated with future PA behavior across the three outcome variables (vigorous PA by 3DPAR [incident rate ratio [IRR]=1.04, $p<0.001$], MVPA by accelerometer [IRR = 1.01, $p<0.001$], and sports participation over the past year by self-report [IRR=1.20, $p<0.001$]). However, baseline affect and affective response during and after an acute bout of moderate-intensity exercise were not significantly associated with long-term PA levels when controlling for baseline PA levels.

Conclusion. The findings do not support an association between affective response to exercise and adolescent PA across one year. Such an association might emerge within the context of an intervention study or over a longer time period, or when appropriate psychosocial and/or environmental moderators are considered. It may also be that baseline PA, having been already determined by prior affective experiences associated with exercise, may act as a proxy for exercise-related affect. Future exploration of this association is warranted.

CORRESPONDING AUTHOR: Priel Schmalbach, BS, Social Ecology, University of California, Irvine, Irvine, CA, 92617; pschmalb@uci.edu

B-177j

PICTURE THIS: VISUAL MESSAGING TO BRIDGE LOW HEALTH LITERACY IN HISPANICS

Sean Arayasirikul, PhD Student, Melinda Bender, PhD, Suzanna Martinez, PhD, Katie Reeves, BA and Christine Kennedy, PhD
Department of Family Health Care Nursing, University of California, San Francisco, San Francisco, CA.

Mobile technology can be a viable tool for health care providers to help encourage physical activity (PA) and reduce sedentary behavior (SB). Yet, there is a need to bridge the challenges of low health literacy (LHL) in this effort. Mobile phones offer a unique opportunity to address LHL and health disparities because of their widespread use in the population and as a platform that can provide visual content with minimal text. While SMS texting is the predominant approach in studies, it places high literacy and cognitive demands on LHL individuals. The objective of this three phase study was to develop a mobile phone application (mHealth app) to help health care providers to promote more PA and less SB among patients. In the first design phase we recruited urban Mexican American adults, a group at high risk of SB. We have conducted 3 focus groups with 26 Spanish-speaking, Latinos of Mexican descent (consumers), 2 focus groups with 16 Spanish-speaking promotoras and six in-depth interviews with nurse practitioners. Groups explored the feasibility and acceptability of a potential mHealth app using visual communication, testing multiple visual design elements including non-textual representations (e.g. icons, pictograms, animation, and videos). First phase results indicate a high degree of acceptability of a mHealth app with an emphasis on visual communication among consumers. Thematic analysis of data demonstrates on one hand, the growing salience of several factors that may serve as barriers and facilitators for the meaningful use of mHealth technology. Comparing the unique perspectives of consumers in contrast to that of promotoras' and nurse practitioners offered a preliminary sketch of the ways in which these various stakeholder groups diverged in their conceptions and beliefs about the use of a mHealth app. These data will be further elaborated in this presentation and will shape the functional requirements of a mHealth app.

CORRESPONDING AUTHOR: Sean Arayasirikul, PhD Student, Department of Family Health Care Nursing, University of California, San Francisco, San Francisco, CA, 94143-0606; sean.arayasirikul@ucsf.edu

B-177k

MATURE STUDENTS MEETING EXERCISE GUIDELINES: DOES MANAGING MULTIPLE LIFE GOALS MATTER?

Sean R. Locke, MA Applied Social Psychology, A. Crozier, MHK, M. Gierc, MPH and L. Brawley, PhD
University of Saskatchewan, Saskatoon, SK, Canada.

The growing number of adults returning to university has resulted in a more heterogeneous student body. Research suggests that mature students (i.e., age 24+) have multiple competing demands (e.g., family, work) for their time exceeding those of traditional students (i.e., age 17 to 19). Research examining the impact of such demands on declining physical activity (PA) of mature and traditional students is scant. Social Cognitive Theory (SCT) proposes that self-regulatory efficacy influences individuals' ability to concurrently manage multiple goals. Mature students, who must concurrently manage their PA in concert with a greater number of demands than traditional, may struggle to meet current PA guidelines, particularly during their initial transition to university. The purpose of this study was to differentiate sufficiently and insufficiently active individuals. We hypothesized that differing student status, perceived challenge of managing multiple goals, and concurrent self-regulatory efficacy would discriminate activity level. Participants (N=109) were first-year undergraduates (traditional and mature) who completed an online survey. MANOVA ($F(3,105)=8.21$, $p<0.01$, ES=0.19) and a discriminant function analysis differentiated those meeting/not meeting sufficient PA, correctly identifying 70.6% of the cases. Specifically, both perceived challenge of managing multiple goals and concurrent self-regulatory efficacy significantly predicted PA level. In contrast to hypotheses, student status did not contribute to PA level classification. SCT results are similar to predictive findings in a population of working mothers. Results dispel the myth that mature students are less likely to be active. Rather, it appears that the concurrent self-regulation of multiple goals should be given more consideration when examining predictors of PA adherence.

CORRESPONDING AUTHOR: Sean R. Locke, MA Applied Social Psychology, University of Saskatchewan, Saskatoon, SK, S7H 4V9; locke.sean@gmail.com

B-177l

QUALITATIVE RESEARCH TO TARGET A PHYSICAL ACTIVITY INTERVENTION TO FIRST DEGREE FEMALE RELATIVES OF BREAST CANCER SURVIVORS

Sheri J. Hartman, PhD[1] and Rochelle K. Rosen, PhD[2]
[1]University of California, San Diego, La Jolla, CA and [2]The Miriam Hospital, Providence, RI.

While many risk factors for breast cancer (BC) are not modifiable some are, including amount of physical activity (PA). We used qualitative research to learn how to modify an existing PA intervention to target first degree female relatives (FDFRs) of BC survivors. FDFRs were enrolled in a 12-week theory-based and individually-tailored PA intervention. This home-based print intervention was developed for, and previously shown to be efficacious in, healthy men and women. Four focus groups were conducted with 20 FDFRs (4-6 per group) after they completed the intervention. Focus groups were audio recorded and transcribed. Two independent coders reviewed each transcript and NVivo software was used to aid data analysis. FDFRs provided feedback related to BC and general areas for intervention modification. Almost all FDFRs indicated reducing their BC risk was a motivator to exercise, but that it did not motivate behavior change in the current intervention. Many endorsed adding a personalized discussion about their BC risk factors, including, but not limited to PA. More than half had inaccurate information about BC risk factors and requested information about BC "facts and myths". More generally, participants requested increased opportunities for accountability from study staff. Several wanted the number of staff contacts to be tailored to their individual needs. Most wanted social support via contact with other current or former participants. Many wanted the print intervention to be delivered online and for the accountability and social support to occur online. Overall, the FDFRs supported that a PA intervention targeted around BC would be more motivational. Although the intervention was individually tailored based on theory, they wanted additional tailoring related to BC risk factors and PA change. They also wanted technology incorporated to increase accountability, social support, and immediacy of receiving information. The data from the focus groups will be used to develop a targeted and tailored intervention for FDFRs.

CORRESPONDING AUTHOR: Sheri J. Hartman, PhD, Family and Preventive Medicine, University of California, San Diego, La Jolla, CA, 92093; sjhartman@ucsd.edu

B-182a

A QUASI-EXPERIMENTAL STUDY OF THE IMPACT OF PRENATAL YOGA ON AFFECT, CORTISOL LEVELS, AND POSTPARTUM DEPRESSIVE SYMPTOMS

Svetlana Bershadsky, MA and Ilona S. Yim, PhD
Psychology & Social Behavior, University of California, Irvine, Irvine, CA.

Background. Postpartum depression (PPD) negatively impacts maternal and child physical and mental health. Research has indicated that psychosocial (e.g., stress, anxiety) and physiological (e.g., cortisol) factors may be associated with increased risk of PPD; however, the effects of mind-body techniques on altering these risk factors are not well investigated. The aim of the present study was to evaluate the influence of prenatal yoga on antepartum affect and cortisol levels and postpartum depressive symptoms.

Method. At 16 and 26 weeks' gestational age (GA), a convenience sample of women who practiced yoga during pregnancy (Yoga Group; n = 38) was assessed on affect (DABS; Derogatis, 1975) and salivary cortisol immediately before and after a 90-minute session of prenatal Hatha yoga and at corresponding times in the natural environment. Women who did not practice yoga or other relaxation techniques during pregnancy (Control Group; n = 13), recruited via obstetrician referrals, flyers, and internet ads, were similarly assessed on affect and salivary cortisol in their natural environment. At two months post partum, all participants reported on depressive symptoms (9-item CES-D; Santor & Coyne, 1997).

Results. Three-way (time X condition X GA) within-subjects ANOVAs revealed that among women in the yoga group, mean cortisol levels were lower, F (1,20) = 4.96, p = .04, and improvements in positive, F (1,23) = 5.04, p = .04 and negative affect, F (1,16) = 12.36, p < .01 were greater on days of yoga practice compared to the natural environment. Yoga and control group participants did not differ in affect or cortisol levels in the natural environment at 16 or 26 weeks' GA, as shown by mixed two-way (time X group) ANOVAs. Post partum, women in the yoga group had fewer depressive symptoms than women in the control group, t (30) = 3.10, p < .01.

Conclusions. Findings indicate that yoga is associated with lower cortisol levels, improved affect, and reduced PPD symptoms. These findings may have implications for improving maternal and child health outcomes.

CORRESPONDING AUTHOR: Svetlana Bershadsky, MA, Psychology & Social Behavior, University of California, Irvine, Irvine, CA, 92697-7085; sbershad@uci.edu

B-186a

DELIVERY OF HEALTH DECISION MESSAGES IN AFRICAN-AMERICAN CHURCHES

Brook Harmon, PhD,[1] Sei-Hill Kim, PhD,[2] Christine Blake, PhD, RD[2] and James Hebert, ScD[2]
[1]University of Hawaii Cancer Center, Honolulu, HI and [2]University of South Carolina, Columbia, SC.

Understanding individuals' exposure to health decision information is the first step in understanding how health decisions are made. African-Americans' exposure is of interest given issues related to health disparities and medical system mistrust. Churches, a trusted source, in the African American community have a history of addressing a spectrum of issues, but little is known about exposure to health decision information in these settings. This study aimed to characterize health decision information present in 11 African-American churches. Content analysis was conducted on print media collected over one year. The coding framework used in analysis had intercoder reliability of .77. Messages related to health decision making were identified (n=243) and represented three main topics: screening, medical services, and health insurance. Differences in media types used and sources were seen. However, screening messages were most common (n=156, 64%), messages were most often communicated using flyers/handouts (n=90, 37%), and were most often developed by the church (n=71, 29%). To understand changes in topics over time, we examined differences at baseline, 6-months, and 12-months using chi-square tests. All topics increased, with the increase in health insurance messages being significant (p <.05). Findings suggest African-American churches are a source of health decision information, but the level of detail varies and much comes from secondhand sources. Insight is provided into the type of information African-American communities are being exposed to and ways churches can stay current on changes in health policies.

CORRESPONDING AUTHOR: Brook Harmon, PhD, University of Hawaii Cancer Center, Honolulu, HI, 96813; bharmon@cc.hawaii.edu

B-190a

FAMILIAL INFLUENCES ON LATINO ADOLESCENTS' SEXUAL WILLINGNESS

Felisa A. Gonzales, MPhil, Paul J. Poppen, PhD, Maria Cecilia Zea, PhD and Amita Vyas, PhD
George Washington University, Washington, DC.

Adolescent sexual behavior is likely shaped by socialization processes within the family. This study explored whether two family factors, family cohesion and parental monitoring, are associated with lower willingness to engage in vaginal intercourse among Latino adolescents, and whether these factors are more influential for females than males.

326 Latino youth (185 females, 141 males) who were in 9th or 10th grade and were participating in after-school programs completed a survey using A-CASI technology. The youth answered 11 questions about their relationships with their families (two factors - family cohesion α=0.94, parental monitoring α=0.85) and 6 questions about their willingness to engage in vaginal intercourse with a romantic partner (α=0.77) and with a casual partner (α=0.84). Generalized linear modeling was used to test main and interaction effects when controlling for age, relationship status, previous sexual activity, grade, and acculturation.

Willingness to engage in vaginal intercourse with romantic partners (M=1.83, SD=0.84) and casual partners (M=1.66, SD=0.85) was low (4-point Likert scale). Only one interaction term was significant (β=-0.26, p<.01). Post-hoc analyses revealed higher levels of parental monitoring to be associated with lower willingness to engage in vaginal intercourse with a casual partner among Latino males (β=-0.39, p<.001), but not females (β=-0.06, p>.05). No main effects for family cohesion on willingness to have vaginal intercourse with casual partner were observed, nor were any main effects for parental monitoring or family cohesion on romantic partner willingness.

Although these data suggest that family cohesion and parental monitoring may have limited influence over Latino adolescents' willingness to engage in sexual intercourse, it is important to note that absolute level of willingness was quite low. These family factors may have shaped Latino youths' openness to sexual opportunities before mid-adolescence. Research that assesses family influences over time can shed light on the process of sexual socialization among Latino youth.

CORRESPONDING AUTHOR: Felisa A. Gonzales, MPhil, Psychology, George Washington University, Washington, DC, 20052; felisag@gwmail.gwu.edu

B-190b

SOCIAL NORMS AND SEXUAL HOOKUPS AMONG FIRST-YEAR COLLEGE WOMEN

Shannon M. Sweeney, MS, MA,[1] Peter A. Vanable, PhD,[1] Robyn L. Fielder, MS,[2,3] Kate B. Carey, PhD[3] and Michael P. Carey, PhD[2,3]
[1]Syracuse University, Syracuse, NY; [2]The Miriam Hospital, Providence, RI and [3]Brown University, Providence, RI.

Hookups, defined as sexual encounters between partners who are not dating or in a traditional romantic relationship, may have important health consequences (e.g., sexually transmitted disease, sexual coercion). Because little is known about the social-cognitive determinants of this behavior, we prospectively examined the influence of social norms on sexual hookups among college women. Women may enter college with personal norms that differ from their perceptions of the norms held by peers. Given the results of recent studies examining norms and hookups, we hypothesized that as this discrepancy increased, the likelihood of engaging in hookups would decrease. Participants were 395 college women (M age = 18.1 at baseline; 67% White) who completed 9 monthly surveys. We assessed two norms, hookup attitudes and hookup limits, at waves 1 and 5. For each norm, we created a self-other discrepancy score by subtracting the former from the latter; positive scores indicate that the participant believes others are more permissive than herself, zero indicates no difference, and negative scores indicate that the participant believes she is more permissive. At waves 2-9 (September-April 2010), we assessed number of oral and vaginal sex hookup partners over the last month, which we combined into four dichotomous indicators (i.e., oral or vaginal sex hookup in Fall or Spring semester). In all logistic regression models, the self-other discrepancy score for hookup limit emerged as a predictor (ps < .05), even after controlling for peak intoxication level and past hookup behavior. The discrepancy score for hookup attitude emerged as a predictor in one model (p < .05). As the self-other discrepancy increased, the likelihood of engaging in future sexual hookups decreased. Further analyses revealed that the participant's own hookup limit was the strongest predictor of hookup behavior. Interventions to reduce the negative consequences associated with hookups should include attention to women's personal attitudes.

CORRESPONDING AUTHOR: Shannon M. Sweeney, MS, MA, Syracuse University, Syracuse, NY, 13210; smsweene@syr.edu

B-192a

PRENATAL ANDROGEN EFFECTS ON QUALITY OF SLEEP

Ashley C. Yaugher, BA, BS and Gerianne Alexander, PhD
Psychology, Texas A&M University, College Station, TX.

Background: In other animals, it is well established that prenatal androgen's influence the development of sex differences in behavior, including sleep. In older adults, women report shorter sleep times and worse sleep quality, sex differences that have been associated with levels of sex hormones. The relationship between sleep quality and sex hormones in young adults has had little focus. A primary goal of this research is to extend findings that prenatal androgen action may influence sleep in women and men. A secondary goal was to replicate and extend associations between subjective sleep quality and impulsivity in women and men to objective measures of sleep quantity. Results will support previous findings that higher levels of prenatal androgen's as measured by digit ratios, a proxy measure of prenatal androgen action, will predict lower percent of sleep in young adults. Less sleep in young adults should also predict higher levels of impulsivity.

Method: A sample of 88 young adults wore the actigraphy watch on the wrist for seven days in order to record activity levels and sleep interruptions, and had their digit ratios measured to record prenatal androgen levels. Subjective measures used include a demographics questionnaire, the PSQI, and BIS-11.

Results: There were no sex differences in average percentage of sleep throughout one week. Digit ratios, subjective sleep quality, and behavioral impulsivity did not predict overall percent of sleep. However, a hierarchical regression demonstrated that higher impulsivity scores predicted higher subjective sleep scores or poorer subjective sleep quality (β=.40, p<.000).

Conclusions: There were no significant sex differences in digit ratios or sleep measures. Less subjective sleep quality predicts higher impulsivity score. However, objective measures were unrelated to higher impulsivity scores. Sex differences in sleep may be less apparent in young adults or require an increased sample size. As most of the participants had high, normal percent of sleep, a larger sample of young adults with poorer sleep outcomes may be informative.

CORRESPONDING AUTHOR: Ashley C. Yaugher, BA, BS, Psychology, Texas A&M University, College Station, TX, 77840; ayaugher@neo.tamu.edu

B-192b

DEPRESSION, ANXIETY, AND HOSTILITY ARE ASSOCIATED WITH SELF-REPORTED BUT NOT OBJECTIVE SLEEP DURATION

Desiree J. Zielke, PhD,[1] Emmy Dennis, BS,[2] Tabitha Ratcliffe, BS[2] and Jesse C. Stewart, PhD[3]
[1]Sanford Health, Fargo, ND; [2]Indiana University Center for Aging Research, Indianapolis, IN and [3]Psychology, Indiana University-Purdue University Indianapolis, Indianapolis, IN.

Negative emotional factors - including depression, anxiety, and hostility - have been associated with shorter sleep duration; however, most studies have relied on self-reports of sleep duration. Accordingly, our aim was to examine the associations of negative emotional factors with measures of both self-reported and objective sleep duration. Participants were 99 women (mean age=22 years, 32% non-white) who completed the Center for Epidemiological Studies-Depression Scale, Generalized Anxiety Disorder-7, and Buss-Perry Aggression Questionnaire. Self-reported sleep duration was assessed by Item #4 of the Pittsburgh Sleep Quality Index. Objective sleep duration was calculated by averaging the duration values obtained from the three weeknights of actigraphy. We computed a sleep duration difference score as objective minus self-reported sleep duration. Regression models (adjusted for age, race, body mass, tobacco use, and alcohol use) revealed that depressive symptom severity (β=-.21, p=.04) was associated with self-reported sleep duration, while anxiety symptoms (β=-.15, p=.12) and hostility (β=-.17, p=.09) fell short of significance. None of the emotional measures were associated with objective sleep duration (all ps>.24). Depressive symptoms (β=0.27, p=.01), anxiety symptoms (β=0.24, p=.02), and hostility (β=0.23, p=.03) were each positively related to the duration difference score, indicating that participants with high levels of negative emotional factors tended to underestimate their objective sleep duration. Collectively, our results suggest (a) negative emotional factors are associated with shorter self-reported but not objective sleep duration and (b) individuals with elevated negative emotional factors tend to overestimate their sleep duration difficulties. Self-reported short sleep among persons experiencing emotional distress may reflect a reporting bias as opposed to a true sleep issue.

CORRESPONDING AUTHOR: Desiree J. Zielke, PhD, Sanford Health, Fargo, ND, 58122; desiree.zielke@gmail.com

B-207a

RESONANCE OF U.S. CIGARETTE GRAPHIC WARNING LABELS AMONG VULNERABLE POPULATIONS IN THE GREATER BOSTON AREA

Cabral A. Bigman, PhD,[1,2] Rebekah H. Nagler, PhD[1,2] and K. Viswanath, PhD[1,2]
[1]Department of Social and Behavioral Sciences, Harvard School of Public Health, Boston, MA and [2]Center for Community-Based Research, Dana-Farber Cancer Institute, Boston, MA.

The 2009 Family Smoking Prevention & Tobacco Act gave FDA authority to regulate tobacco products. FDA subsequently created nine graphic health warning (GHW) labels to accompany textual warnings on cigarettes and researchers have called for studies to understand the effects of communication about tobacco products on vulnerable populations, including the effects of warnings on tobacco cessation. While focus groups on FDA GHWs have been conducted with Appalachian residents, few participants were current smokers and the findings may not extend beyond the largely non-Hispanic White Appalachian population. We conducted 5 focus groups (4 English, 1 Spanish) with Black, Hispanic, LGBT and immigrant smokers (N=40, ages 18-70) in the greater Boston area as part of a larger study on the effects of GHWs on vulnerable populations. Thematic coding using NVivo yielded several recurrent themes, including skepticism about the authenticity of some GHWs, belief that there were few exemplars with whom younger audiences would relate, and a perceived need for greater visual-verbal redundancy for some GHWs. While some younger adult participants (age 18-24) said they would joke about certain GHWs, both younger and older adults also said they would use particular labels to warn others about the dangers of smoking. Although many participants suggested that the GHWs could be more effective and that they may take steps to avoid particular labels, they were largely supportive of GHW policy. Concern about government intrusion did not emerge as a theme. Few believed the labels alone would lead them to quit, but participants reported that the GHWs made them think about their smoking, and some said certain GHWs made them consider cutting back on the number of cigarettes they smoked. Additional focus groups will be conducted with other vulnerable populations, including adolescent and blue-collar smokers.

CORRESPONDING AUTHOR: Cabral A. Bigman, PhD, Harvard School of Public Health/Dana-Farber Cancer Institute, Boston, MA, 02215; cbigman@hsph.harvard.edu

B-207b

ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS (ADHD) AND SMOKING TRAJECTORIES: A FACTOR MIXTURE AND ZERO-INFLATED POISSON (ZIP) LATENT GROWTH CURVE ANALYSIS

Chien-Ti Lee, PhD,[1] Francis J. McClernon, PhD,[1] Scott H. Kollins, PhD,[1] Trenette Clark, PhD,[2] Kevin Prybol, BS,[1] Sharnail Bazemore, MS[1] and Bernard F. Fuemmeler, PhD[1]
[1]Duke University Medical Center, Durham, NC and [2]University of North Carolina, Chapel Hill, NC.

BACKGROUND: The association of ADHD and smoking has been widely studied, yet little is known about how ADHD symptoms relate to trajectories of cigarette use over time. We examined associations between ADHD symptoms and trajectories of cigarette use from ages 13 to 32. ADHD symptoms were defined dimensionally and using factor mixture modeling.

METHOD: We tested the association between inattentive (IN) and hyperactive-impulsive (HI) symptoms on smoking trajectories in 10,606 adolescents from the National Longitudinal Study of Adolescent Health. Cigarette trajectory models were constructed using ZIP latent growth models that simultaneously estimate the zero (probability of cigarette use) and count (level of cigarettes typically smoked) components of change over time. In separate models, these growth components were regressed on both IN and HI symptoms controlling for sex, parental education, race and conduct disorder symptoms.

RESULT: The factor mixture modeling analysis supported a two-factor (IN and HI) two-class (unaffected and affected) structure. For those in the affected classes of IN and HI, probability of cigarette use at the intercept (age 13) was higher than those in the unaffected classes (βintercept=-.26, SE=.09, p<.01; βintercept=.22, SE=.10, p<.05, respectively). However, among those who initiated cigarette use, being in the affected class of IN and HI were both associated with more rapid increase in level of cigarette use over time (γslope=.39, SE=.16, p<.05; γslope=.51, SE=.19, p<.01, respectively) and less leveling off over time (γquadratic=-.39, SE=.16, p<.05, γslope=-.25, SE=.09, p<.01, respectively). Defining the symptoms dimensionally resulted in similar findings.

DISCUSSION: Findings demonstrate the importance of IN and HI symptoms on cigarette initiation and use over time among those who initiate smoking. Future work is needed to better understand factors that may mediate or moderate the ADHD-cigarette use link.

CORRESPONDING AUTHOR: Victoria B. Blocker, BS, Community and Family Medicine, Duke University, Durham, NC, 27707; brooke.blocker@duke.edu

B-207c

CHARACTERIZING SMOKING CESSATION MAINTENANCE AMONG FORMER SMOKERS: A LATENT CLASS ANALYSIS

James Clifton, MA, Sydney M. Loewen, BA, Sarah Depaoli, PhD and Anna V. Song, PhD
University of California, Merced, Merced, CA.

Currently, 68.8% of adult smokers report that they want to quit smoking, and while many will attempt quitting, smoking relapse rates are high (CDC, 2012). A popular theory to explain how individuals move from smoking to cessation is Prochaska's (1997) transtheoretical model (TTM) of health and behavior change. Previous research has identified distinct subtypes of smokers within each of the first three stages of TTM (e.g., Norman et al., 2000), but within-stage classification among former smokers has not been examined. To that end, this study implements latent class analysis (LCA) to explore sources of heterogeneity among former smokers in the maintenance stage of TTM. Data on 2,505 former smokers were obtained from the 2008 California Adult Tobacco Survey. LCA was used to identify subgroups of former smokers based on patterns of responses to ten indicators of smoking attitudes and behaviors, including frequency of smoking prior to quitting, abstinence period, self-efficacy, expectations for future smoking, and attitudes toward tobacco. Five latent classes were identified, with prevalence rates ranging from 8.7% to 33.1%. The LCA revealed substantial heterogeneity in smoking attitudes and behaviors across classes of former tobacco users. The average duration of smoking prior to quitting ranged from 2.10 to 49.16 years and the average abstinence period ranged from 5.49 to 28.02 years. Attitudes among classes of former smokers ranged from individuals who believe that they will probably smoke again, that they are not vulnerable to nicotine dependence, and that smoking carries little potential for addiction, to individuals who forecast a small chance of smoking in the future, and believe that they are quite susceptible to nicotine dependence and that smoking is highly addictive. While further research is necessary to understand the complex processes underlying smoking cessation maintenance, this work suggests that former smokers should be treated as a heterogeneous population and that future intervention efforts may benefit from a tailored approach to targeting relapse prevention.

CORRESPONDING AUTHOR: James Clifton, MA, University of California, Merced, Merced, CA, 95348; jamespclifton@yahoo.com

B-207d

RECEPTIVITY TO TOBACCO-RELATED MESSAGES AND YOUTH SMOKING

Kristen Emory, PhD, MA, John Pierce, PhD and Karen Messer, PhD
Moores Cancer Center, University of California, San Diego, San Diego, CA.

Background: Receptivity to tobacco industry marketing is associated with future smoking. Public health counter-marketing campaigns have been associated with reduced smoking. As these campaigns compete to influence the public, there is a need to understand the inter-relationship of ad receptivity and smoking behavior.

Methods: In 2003, a national sample of primary caregivers and pre-teens were enrolled in a study of the effect of parenting on smoking initiation (N=1036); participants were surveyed multiple times. In 2007-8, 766 youth were re-surveyed, baseline never smokers with complete data were retained for analysis (N=670). Self-reported data include sociodemographics, home and peer smoking, tobacco advertisement (ad) preferences, smoking bans, smoking risk, and schooling. Smoking was assessed by the question "Have you ever smoked a cigarette, even a few puffs?". Separate questions assess favorite tobacco-related ads (favorite tobacco control only, favorite cigarette ad only, both, or no favorite tobacco ad). Adjusted regression explores cross-sectional associations with smoking experimentation.

Results: Overall, 70.9% of adolescents reported a favorite tobacco-related ad; 57.8% reported a favorite tobacco control ad and 43.1% reported an industry ad. Nearly one third (30%) of adolescents reported both favorite tobacco industry and control ads. The few adolescents who only reported a favorite industry (13.1%) were twice as likely to have experimented than those reporting only a tobacco control ad (OR=2.0,95%CI:1.045-3.92). The probability of experimentation was lower and non-significant for those reporting both types of ads (OR=1.35, 95%CI:0.76-2.39). Other significant predictors include smoking risk, smoking best friends, grades less than As, older age, and parents with less than a high school education.

Conclusions: Both receptivity to tobacco industry ads and public health counter-ads are associated with smoking behavior. Public health campaigns may effectively counter the known influence of tobacco marketing in smoking initiation. Results need to be confirmed in a longitudinal study.

CORRESPONDING AUTHOR: Kristen Emory, PhD, MA, Family and Preventative Med, UCSD, San Diego, CA, 92101; KRISTEN.T.EMORY@GMAIL.COM

B-214a

OCCUPATIONAL STRESS AND STRAIN AMONG TELEPHONE HELPLINE VOLUNTEERS: MEDIATING ROLE OF SELF-EFFICACY

Kim Lee Kho, Bachelor of Psychological Medicine and Business, Carina K. Chan, PhD and Paul Jambunathan, BA(HONS),(UK); MAPP PSYCH (CLINICAL & EDUC),(AUST); DIP SPORTS PSYCH(M'SIA/CAN)
Monash University, Bandar Sunway, Malaysia.

Occupational stress has been found to have serious psychological and physical impact on paid employees and volunteers. However, there is limited research on this psychological factor among volunteer telephone counselors. Guided by the self-efficacy theory, the study aimed to examine the role of self-efficacy on the stress-strain relationship. Volunteer telephone counselors (N = 155) who worked in a telephone helpline organization in Malaysia completed the Occupational Stress Inventory-Revised edition, General Self-Efficacy scale, and Marlowe-Crowne Social Desirability Scale. After controlling for social desirability, role insufficiency (degree to which ones' skills, training, and experience are appropriate to the job requirements) predicted less self-efficacy that in turn predicted more vocational strain ($\beta = .35, p < .05$), psychological strain ($\beta = .30, p < .05$), interpersonal strain ($\beta = .13, p < .05$), and physical strain ($\beta = .22, p < .05$). Role ambiguity (clarity of expectations, evaluation criteria, and priorities) also predicted less self-efficacy which in turn predicted more vocational strain ($\beta = .30, p < .05$), psychological strain ($\beta = .22, p < .05$), interpersonal strain ($\beta = .07, p < .05$), and physical strain ($\beta = .15, p < .05$). Further, role boundary (degree of conflict in role demands and loyalties in the workplace) predicted less self-efficacy which in turn predicted more vocational strain ($\beta = .37, p < .05$), psychological strain ($\beta = .42, p < .05$), interpersonal strain ($\beta = .28, p < .05$), and physical strain ($\beta = .24, p < .05$). Properly planned and executed stress management training and programs that enhance self-efficacy can be beneficial in the personal management of stressors associated with voluntary work and may subsequently reduce strain. Effective training programs are also essential before and after the commencement of voluntary work to clarify any inconsistencies or conflicts, in addition to ensuring each volunteer is equipped with proper and adequate skills and knowledge.

CORRESPONDING AUTHOR: Carina K. Chan, PhD, Monash University, Bandar Sunway, 46150; carina.chan@monash.edu

B-214b

COMPARATIVE EFFECTIVENESS OF IN-PERSON AND TELEPHONE-ADMINISTERED CBSM FOR CHRONIC FATIGUE SYNDROME

Michael H. Antoni, PhD,[1] Emily Lattie, MS,[1] Sara Czaja, PhD,[2] Mary Ann Fletcher, PhD,[3] Dolores Perdomo, PhD,[2] Sank Nair, MS[2] and Nancy Klimas, MD[4]
[1]Psychology, Univ Miami, Coral Gables, FL; [2]Psychiatry and Behavioral Sciences, Univ Miami, Miami, FL; [3]Medicine, Univ Miami, Miami, FL and [4]Medicine, Nova Southeastern University, Davie, FL.

The biobehavioral stress model of Chronic Fatigue Syndrome (CFS) holds that stress can lead to physiological dysregulation and CFS symptom exacerbation. Cognitive behavioral stress management (CBSM) may offer benefit, but given the debilitating and unpredictable nature of CFS symptoms, patients face practical barriers to receiving treatment. These barriers may be reduced by technology-assisted delivery of treatment. Previously, we conducted separate randomized controlled trials of live group CBSM (L-CBSM) and of telephone-based group CBSM (T-CBSM), and demonstrated their ability to reduce stress and physical symptoms in persons with CFS. Here we examine the differential effects of 3-month weekly L-CBSM (N=44), T-CBSM (N=57), time-matched telephone-Health Education (TH) (N=55), and a one-day live self-help (LSH) (N=25) group. L-CBSM ($p < .05$) and T-CBSM ($p < .05$) showed greater Perceived Stress Scale (PSS) reductions relative to TH and LSH groups, but there were no significant differences in L-CBSM vs T-CBSM in PSS reduction, $F(1,82)=.60$, $p>.10$. Differential effects on CFS symptoms were found comparing L-CBSM, T-CBSM, TH and LSH, $F(3,140)=4.16$, $p<.01$. While each CBSM condition was superior to their comparison group, L-CBSM showed larger reductions in total symptom severity than

T-CBSM, F(1,87)=7.21, p<.01. L-CBSM also produced significantly larger decreases than T-CBSM in both the frequency, F(1,87)=6.69, p=.01, and severity, F(1,87)=5.44, p=.03, of post-exertional malaise—a cardinal CFS symptom. While T-CBSM offers benefits, L-CBSM may be more powerful. Because CFS patients find it difficult to attend live group meetings, ongoing work examines the effect of "videophone" based group CBSM, which balance the power of L-CBSM with the convenience of T-CBSM.

CORRESPONDING AUTHOR: Emily Lattie, MS, Psychology, Univ Miami, Coral Gables, FL, 33146; elattie@psy.miami.edu

B-214c

EEG POWER SPECTRAL DENSITY ACTIVITY (1-40HZ) DURING HUMOR ASSOCIATED MIRTHFUL LAUGHTER EUSTRESS COMPARED TO A STRESS ACTIVITY: THE POWER OF GAMMA

Lee Berk, DrPH, MPH, CLS,[1,2] Paula Calvacanti, DSc,[1] Neha Rekapalli, MPT,[1] Prema Pawar, MPT,[1] Veasna Tan, MA[3] and Chris Berka, PhD[3]
[1]Allied Health, Loma Linda University, Loma Linda, CA; [2]Pathology, Loma Linda University, Loma Linda, CA and [3]Advanced Brain Monitoring, Inc., Carlsbad, CA.

Humor associated mirthful laughter experiences (HAML) relate to fundamental aspects of human existence. These experiences are characterized by emotions, happiness, alertness, higher mental activity inclusive of perception and consciousness. To date, no electroencephalography (EEG) study has been conducted to identify and differentiate Power Spectral Density (PSD) correlates across frequency bins1-40Hz for Humor experiences comparative to Stress experiences. Purpose: This study measured EEG spectral power in 20 healthy university students mean age 28±6.2 during a HAML and stress experience. Methods: EEG activity was recorded from 9 scalp locations/channels F3, Fz, F4, C3, Cz, C4, P3, POz, and P4 using the EEG B-Alert 10X System™. Each subject was randomly administered 2 separate 10 minute videos: Humor and Stress. Results: Comparing HAML vs. stress, all nine channels showed greater Beta Band Activity (13-30Hz) (p=0.01) and Gamma Band Activity (GBA) (31-40HZ) ((p=0.001) for HAML. More significantly, Humor Gamma was greater than Humor Beta (p=0.01) for all nine channels. Comparing Humor vs. Stress, Theta (3-7Hz) and Alpha (8-12Hz) for Parietal Left (P3) vs. Parietal Right (P4) showed Humor greater in P3 region than P4, for both bandwidths. Conclusions: These results indicate that HAML have correlates of marked changes in EEG PSD for specific bandwidths but most significantly for (GBA) across the whole hemispheric brain as measured by the B-Alert 10X System™. Other research suggests 1) GBA offers an adequate tool for studying cortical activation patterns during emotional processing and 2) GBA is suitable for EEG-based emotion classification of happiness and sadness. Our EEG findings suggest that HAML may be a potential inducer of "higher mental activity", conscious perception, and happiness using GBA as a neurofeedback marker. Further research needs to be done to elaborate these findings.

CORRESPONDING AUTHOR: Lee Berk, DrPH, MPH, CLS, Allied Health Sciences, Loma Linda University, Loma Linda, CA, 92354; lberk@llu.edu

B-214d

THE EFFECTS OF SEXUAL ORIENTATION ON STRESS REACTIVE CORTISOL

Robert-Paul Juster, MSc,[1] Nathan Grant Smith, PhD,[2] Philip J. Johnson, PhD,[3] Jean-Philippe Lefebvre-Louis, BA,[4] Marie-France Marin, PhD,[6] Shireen Sindi, MSc,[1] Jens C. Pruessner, PhD[1] and Sonia J. Lupien, PhD[5]
[1]Neurology and Neurosurgery, McGill University, Montreal, QC, Canada; [2]Educational and Counselling Psychology, McGill University, Montreal, QC, Canada; [3]Psychology, McGill University, Montreal, QC, Canada; [4]Social Work, University of Quebec in Montreal, Montreal, QC, Canada; [5]Psychiatry, University of Montreal, Montreal, QC, Canada and [6]Psychiatry, Harvard University, Boston, QC, Canada.

Lesbian (L), gay (G), and bisexual (B) individuals frequently report heightened distress, yet investigations into their physiological stress responsivity are missing from the literature. The current study investigated whether sexual minorities might manifest differential levels of the stress hormone cortisol than heterosexuals (Hs) in response to social-evaluative threat. Participants included 87 healthy adults (mean age 25, 54% men) identifying as L/G/B (n = 46) or as Hs (n = 41). Stress was induced using the Trier Social Stress Test and 10 salivary cortisol samples were collected throughout a two-hour afternoon visit. Data were analyzed using repeated measures ANCOVA split by sex with sexual orientation as the between-subject factor and cortisol as the with-subject factor while controlling for age, self-esteem, and disclosure status.Results reveal that L/B women had higher cortisol levels than Hs women 40 minutes after stress exposure. As a group, G/B men had significantly lower cortisol levels in contrast to Hs men. It is possible that G/B men who are able to successfully overcome stigma may be resistant to chronic stress and stress reactivity. Yet, the opposite might be true for L/B women who displayed heightened distress during recovery that may indicate ruminative processes.In conclusion, these results suggest that it is important to include intra-sex variations like sexual orientation as well as unique developmental challenges like disclosure processes in future psychoneuroendocrine studies.

CORRESPONDING AUTHOR: Robert-Paul Juster, MSc, Neurology and Neurosurgery, McGill University, Montreal, QC, H2K3G8; robert.juster@mail.mcgill.ca

B-214e

DISPOSITIONAL MINDFULNESS MODERATES ASSOCIATIONS BETWEEN MATERNAL CAREGIVING STRESS AND DEPRESSIVE SYMPTOMS

Shane Keller, BA, Elissa S. Epel, PhD, Justine Arenander, BA and Aric A. Prather, PhD
Psychiatry, University of California, San Francisco, San Francisco, CA.

Chronic psychological stress is a robust predictor of depression; however, not all individuals exposed to high stress are negatively affected. Accordingly, there has been substantial interest in identifying possible protective factors. Mindfulness has emerged as psychological process that may buffer the deleterious effects of stress. In this study, we examined the whether dispositional mindfulness, measured using the Five Facet Mindfulness Questionnaire (FFMQ) (Baer et al., 2006), moderates the relationship between chronic psychological stress and depression in a sample (age= 41.2 years old, SD= 5.1) of premenopausal, chronically stressed maternal caregivers (n=35) and low stress female controls (n=36). As expected, high stress maternal caregiver reported greater perceived stress, more depressive symptom, and generally less mindfulness (i.e., FFMQ facets: describing, act with awareness, and non-judging) compared to low stress women. Analyses to test the extent to which FFMQ facets moderated the effects of chronic stress on depressive symptoms revealed that, independent of age and antidepressant use, non-judging subscale buffered the effects of caregiver status on depressive symptoms (interaction b=0.56, SE=0.26, p=0.03), such that chronically stress caregivers who reported high scores on the non-judging facet reported fewer depressive symptoms than those with lower scores on this facet. In contrast, being high on the observing subscale potentiated the link between caregiving stress and depressive symptoms (interaction b=-0.81, SE=0.37, p=0.03). There were no other significant moderating effects. While preliminary and cross-sectional, these findings provide initial evidence for specific aspects of mindfulness, namely non-judging, as a possible target for mitigating the effects of high stress on depression risk.

CORRESPONDING AUTHOR: Aric A. Prather, PhD, Psychiatry, University of California, San Francisco, San Francisco, CA, 94118; aric.prather@ucsf.edu

B-214f

EFFECTIVENESS OF HUMOR ON SHORT TERM MEMORY FUNCTION IN AGE MATCHED ELDERLY AND DIABETIC SUBJECTS VS. CONTROL GROUP

Gurinder S. Bains, MD,[1] Lee Berk, DrPH,[1,2] Noha Daher, DrPH,[1] Pooja Deshpande, PT,[1] Everett Lohman, DSc,[1] Jerrold Petrofsky, PhD[1] and Ernie Schwab, PhD[1]

[1]Allied Health, Loma Linda University, Loma Linda, CA and [2]School of Medicine, Loma Linda University, Loma Linda, CA.

With ageing, the damaging effects of stress can impair the ability to learn and sustain memory. The purpose of this study was to examine the effect of watching a humor video on short term memory in three age matched elderly groups: elderly (68.7 ± 5.5 years), diabetic (69.9 ± 3.7 years), and control (67.1 ± 3.8 years) (no video). Humor and the associated mirthful laughter can reduce stress by decreasing the stress hormones, cortisol and catecholamines. Excess cortisol can damage hippocampus neurons leading to impairment of learning and memory. The standardized neuropsychological memory assessment tool, Rey Auditory Verbal Learning Test (RAVLT) was used to assess for 1) learning ability, 2) delayed recall ability, and 3) delayed visual recognition ability. RAVLT was given to 30 elderly individuals before and after watching a humor video of their choice for 20 minutes vs. no humor video. Results from the Kruskal-Wallis Test showed that 1) learning ability improved by 38.45% , 33.38%, and 23.96% in the elderly, diabetic, and control groups respectively (p=.03); 2) delayed recall improved by 43.61%, 48.10%, and 20.25% in the elderly, diabetic, and control groups respectively (p=.06); and 3)visual recognition increased by 12.55%, 16.72%, and 8.33% in the elderly, diabetic, and control groups respectively (p=.32). In conclusion, elderly and diabetic elderly individuals that watch a humor video that induces mirthful laughter vs. not watching a humor video can have a greater enhancement in: 1) capability to learn, 2) have greater recall, and 3) improve visual recognition in short term memory function. Further research will be done to expand these positive findings.

CORRESPONDING AUTHOR: Gurinder S. Bains, MD, Allied Health, Loma Linda University, Loma Linda, CA, 92373; gbains@llu.edu

B-221a

SUBSTANCE-RELATED AND SUBSTANCE-FREE REINFORCEMENT IN COLLEGE DRINKERS AND DRUG USERS

Lidia Meshesha, BA, Alison M. Pickover, BS and James G. Murphy, PhD

Psychology Department, University of Memphis, Memphis, TN.

Substance use is reinforced by a drug's direct effects as well as any associated secondary reinforcement (e.g., enhancing social activities). While some studies indicate that heavy drinkers report deficits in substance-free sources of reinforcement (in particular academic activities), other studies show substance abuse is associated with greater substance-free reinforcement from peer, dating, and sexual activities. However, the relationship between polysubstance use and substance-related and substance-free reinforcement has not been examined. We hypothesize that substance-related reinforcement will be greater among polysubstance users than alcohol only users and that polysubstance use will be associated with greater peer and dating substance-free reinforcement, but lower academic reinforcement.

Two hundred and five heavy drinking college students (men/women who had 5/4 drinks on one or more occasions in the past month) completed the Adolescent Reinforcement Survey Schedule-Substance Use Version (ARSS-SUV) measure of substance-related and substance-free activity participation and enjoyment.

In the past six months, 39% reported alcohol use only, 30% had alcohol and marijuana use, and 30% reported polystubstance (alcohol, marijuana, and other illicit drug) use. A Kruskal-Wallis Test revealed significant differences in substance-related reinforcement ($\chi 2(2, n=205)=21.5$, $p<.001$), with polysubstance users reporting higher total reinforcement. There were no significant differences in substance-free total, peer, dating, or academic reinforcement.

Our findings suggest that polysubstance use among college students is associated with enhanced reinforcement from a variety of different activities, above and beyond heavy drinking and is not associated with decrements in substance-free reinforcement. Contrary to our hypothesis, polysubstance users did not report decrements in academic or other substance-free reinforcement. These results may in part explain the limited efficacy of prevention and intervention efforts that target college drug use.

Funding: The Alcohol Research Foundation (ABMRF)

CORRESPONDING AUTHOR: Lidia Meshesha, BA, Psychology Department, University of Memphis, Memphis, TN, 38103; lidia.meshesha@gmail.com

B-221b

A PILOT STUDY OF A COMPUTER-BASED RELATIONAL AGENT TO SCREEN FOR SUBSTANCE-USE PROBLEMS IN PRIMARY CARE

Sarah S. McNair, BS,[1,2] Kyle Checchi, BS,[1,2] Amy Rubin, PhD,[3,4] Thomas Marcello, BS,[1,5] Timothy Bickmore, PhD[6] and Steven R. Simon, MD, MPH[1,5]

[1]Section of General Internal Medicine, VA Boston Healthcare System, Boston, MA; [2]Harvard Medical School, Boston, MA; [3]VA Boston Healthcare System, Boston, MA; [4]Department of Medicine, Boston University School of Medicine, Boston, MA; [5]Division of General Internal Medicine, Brigham and Women's Hospital, Boston, MA and [6]College of Computer and Information Science, Northeastern University, Boston, MA.

Relational Agents-computer characters that simulate face-to-face conversation using voice, hand gesture, gaze cues and other nonverbal behavior-may be suitable for "discussing" sensitive topics. We conducted a pilot study-the first in the Veterans Health Administration-using this technology to screen for substance use problems in primary care. We administered a standardized questionnaire for substance use (NIDA-modified ASSIST) via live interviewer and via Relational Agent to 24 Veterans. We collected Veterans' perceptions of the Relational Agent and carried out a content analysis of the transcribed interview notes. Among the 24 participants, 19 expressed positive impressions of answering the NMAssist with a Relational Agent, while 3 were neutral and 2 were negative. Only 6 participants indicated that they preferred the Relational Agent over a live interviewer. Live interviewer was generally preferred because of greater depth of interaction, ability to clarify questions and responses or unease with technology; in contrast, participants who favored the Relational Agent appreciated its ease and efficiency of use, privacy and lack of judgmentalism, and clear answer choices. Among 18 Veterans expressing an opinion, most favored the use of Relational Agents to ask questions about other sensitive topics such as sexual history (15/18). Conclusion: Although participants preferred live interview to interaction with a Relational Agent, a majority of Veterans were comfortable with the Relational Agent and would be willing to engage with it regarding sensitive topics such as substance use and sexual history.

CORRESPONDING AUTHOR: Steven R. Simon, MD, MPH, Section of General Internal Medicine, VA Boston, Boston, MA, 02130; steven.simon2@va.gov

Rapid Communications Poster Session C

Friday, March 22, 2013

6:30 PM-8:00 PM

C-038a

SURVIVORSHIP CARE PLANNING AMONG CANCER SURVIVORS IN THE UNITED STATES

Albert J. Farias, MPH[1] and Steven Zeliadt, PhD[1,2]
[1]Health Services, University of Washington, School of Public Health, Seattle, WA and [2]Veterans Affairs Puget Sound Health Care System, Seattle, WA.

Objective: To describe how frequently cancer survivors are provided with a written survivorship plan and given advice about where to receive follow-up care following initial treatment.

Methods: We used data from the 2010 cancer control supplement on cancer survivorship from the National Health Interview Survey (NHIS) for 593 breast, cervical, ovarian, prostate, and colon cancer survivors who were within 10 years of diagnosis. We used survey weights to make estimates on the entire US population. Logistic regression was used to identify factors associated with the likelihood of receiving follow-up advice.

Results: Approximately 80% of US cancer survivors received advice on where to go for follow-up cancer care and 39% received written documentation of their cancer treatment. Survivors who have survived from 5 to 10 years at the survey assessment were less likely to receive advice about where to go for follow-up cancer care compared to those who were diagnosed less than 1 year from the time of survey assessment (OR: 0.51; 95% CI: 0.27-0.96). Survivors who received written documentation of their cancer treatment were more likely to have received advice about where to go for follow-up cancer care (OR 2.08; 95% CI: 1.21 to 3.59). Lung cancer survivors were significantly less likely to receive written documentation of their cancer treatment compared to breast cancer survivors (OR: 0.31; 95% CI: 0.11 to 0.93), while colon cancer survivors were more likely (OR: 2.85; 95% CI: 1.46-5.57).

Conclusion: A great majority of cancer survivors receive advice about where to go for follow-up care from a physician or nurse, however differences exists in time since cancer diagnosis. Even fewer patients receive written documentation of cancer treatment and differences in rates exist by cancer type. As survivorship increases the goal should be to have both written documentation and advice on where to receive care for all cancer survivors.

CORRESPONDING AUTHOR: Albert J. Farias, MPH, Health Services, University of Washington, School of Public Health, Seattle, WA, 98125-5502; afarias@uw.edu

C-038b

TREATMENT DISPARITIES IN FEMALE BREAST CANCER PATIENTS ACCORDING TO RACE, ETHNICITY AND SOCIOECONOMIC STATUS

Christopher S. Bartlett, BS, Tulay Koru-Sengul, PhD, Feng Miao, MS, Stacey L. Tannenbaum, PhD, David J. Lee, PhD and Margaret M. Byrne, PhD
University of Miami Miller School of Medicine, Miami, FL.

Introduction:

Curbing breast cancer disease burden requires deeper understanding of likely links between race, ethnicity and socioeconomic status (SES) and patient treatment plans, and whether disparities exist. Our objective was to explore and assess these complex relationships.

Methods:

Retrospective data were used from the 1996-2009 Florida Cancer Data System Registry, Agency for Health Care Administration and US Census. Race was classified as White, Black, Native American, Asian, Pacific Islander (PI), Asian Indian or Pakistani (AIP), or Other. Ethnicity was Hispanic or Non-Hispanic. SES was defined by percent of the population living in poverty: Lowest ≥20%, Middle-Low <20% and ≥10%, Middle-High <10% and ≥5% or Highest <5%. Treatments included surgery, radiation, chemotherapy (chemo) and hormone replacement therapy (HRT). We fit univariate and multivariate logistic regression models, controlling for demographic, clinical and pathologic variables.

Results:

Multivariate analysis showed that compared with Whites, Blacks were less likely to undergo radiation (odds ratio [OR]=.7; P<.001) and HRT (OR=.85; P<.001), but more likely to receive chemo (OR=1.2; P<.001), while Asians, PIs and AIPs were less likely to undergo surgery (OR=.34; P<.001; OR=.23; P<.001; OR=.19; P<.001)., Hispanics were less likely to receive surgery (OR=.72; P<.001), more likely to have chemo (OR=1.11; P=.007) and HRT (OR=1.08; P=.039), and equally likely to undergo radiation when compared to non-Hispanics. Middle-High and Highest were more likely to receive chemo (OR=1.07; P=.009; OR=1.07; P=.009) than Lowest SES.

Conclusion:

We found that race, ethnicity and SES affected the propensity to undergo different kinds of treatments. The reasons for these disparities are unclear, as insurance status and many other variables were included as controlling variables. Additional investigations are needed to clarify the underlying causes of these disparities.

CORRESPONDING AUTHOR: Stacey L. Tannenbaum, PhD, Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL, 33136; STannenbaum@med.miami.edu

C-038c

STAKEHOLDERS' PERSPECTIVES ON BARRIERS AND FACILITATORS TO RECOMMENDED BREAST CANCER SURVIVORSHIP CARE

Coralia Vázquez-Otero, JD, MPH,[1,2] Gwendolyn P. Quinn, PhD,[2,1] Maria I. Rivera, MPH,[1,2] Christine Laronga, MD,[2,1] Branko Miladinovic, PhD,[1] Richard G. Roetzheim, MD, MPH[1,2] and Kristen J. Wells, PhD, MPH[1,2]
[1]University of South Florida, Tampa, FL and [2]Moffitt Cancer Center, Tampa, FL.

Background: Despite life-saving benefits of anti-hormonal medications, surveillance mammography, and physical exams, many breast cancer survivors (BCS) do not adhere to these recommendations and experience decreased quality of life. BCS stakeholders, or persons who provide services and regularly interact with BCS (e.g., nurses, advocates), have valuable information that can inform an intervention to assist BCS in getting recommended care. One purpose of this formative study was to examine barriers and facilitators to recommended survivorship care as identified by BCS stakeholders.

Methods: Qualitative interviews were conducted with 15 female BCS stakeholders (mean age: 48; 33% Hispanic ethnicity; 73% White race; 13% African-American race) using a semi-structured interview guide based on the National Institutes of Health Centers for Population Health and Health Disparities Model initiatives. The constant comparative method was used to code the verbatim transcript by creating a list of a priori themes. Two authors independently reviewed and coded all transcripts for both a priori and emerging themes.

Results: Stakeholders reported family support, a sense of spirituality, and support drawn from other BCS as potential facilitators for adherence to survivorship care. Respondents' perceptions about barriers to care included financial difficulties, lack of health insurance, medication side effects, and language barriers. BCS stakeholders identified several important community resources that may facilitate adherence to recommended survivorship care.

Conclusion: It is critical to assess stakeholders' perceptions when creating an intervention. Information gathered through stakeholders' interviews will guide us developing a culturally relevant and practical intervention for underserved BCS.

Acknowledgements: Research supported by National Cancer Institute (R21CA161077; 3R21CA161077-01A1S1) and Bankhead Coley Cancer Research Program, Florida Department of Health (2BN05).

CORRESPONDING AUTHOR: Coralia Vázquez-Otero, JD, MPH, Center for Evidence-Based Medicine and Health Outcomes Research, University of South Florida, Tampa, FL, 33612; cvazquez@health.usf.edu

C-038d

MEDIATING EFFECTS OF EXPERIENTIAL AVOIDANCE BETWEEN MINDFULNESS, VITALITY AND GENERAL HEALTH IN ADULT CANCER SURVIVORS

Eleni Romano, MA, Kendra Campbell, PhD, Sarah Welton, PhD and Jay Skidmore, PhD
Clinical Psychology, Seattle Pacific University, Seattle, WA.

Background: A large body of research has explored the benefits of mindfulness for cancer survivors. Although a number of studies have demonstrated a positive relationship between mindfulness and greater perceived health for those who have been diagnosed with cancer, few have explored potential mechanisms in this relationship. Purpose: This cross-sectional research explored a potential mechanism of mindfulness, experiential avoidance, in the relationships among mindfulness and two health outcomes, general health and vitality, for cancer survivors. Methods: Participants were utilizers of support services at an outpatient, non-profit organization for cancer survivors. A sample of 76 adults (92% women; mean age = 57) with heterogeneous cancer diagnoses (66% breast cancer) completed measures of mindfulness (Mindful Attention Awareness Scale), experiential avoidance (Acceptance and Action Questionnaire- II), and health outcomes (SF-36 v2 Health Survey). Path analysis using AMOS with bootstrapping was used to examine the hypothesized model. Results: Model fit statistics indicated adequate fit of the hypothesized model (GFI = .95; CFI = .93; NFI = .92; IFI = .93). The relationship between mindfulness and general health was mediated by experiential avoidance, and the relationship between mindfulness and vitality was partially mediated. Greater mindfulness was associated with decreased utilization of experiential avoidance as a coping strategy and greater perceived general health and vitality. Conclusions: These findings suggest that experiential avoidance may further explain the positive relationship between mindfulness and self-report health variables among cancer survivors.

CORRESPONDING AUTHOR: Eleni Romano, MA, Clinical Psychology, Seattle Pacific University, Cleveland, OH, 44113; romane1@spu.edu

C-038e

WEIGHT FLUCTUATION DURING ADULTHOOD CAN BE DETRIMENTAL TO BREAST CANCER SURVIVORS' PSYCHOLOGICAL WELL-BEING

Jennifer Brunet, PhD,[1] Samantha Taran, BSc[2] and Catherine M. Sabiston, PhD[3]
[1]School of Human Kinetics, University of Ottawa, Ottawa, ON, Canada; [2]McGill University, Montreal, QC, Canada and [3]University of Toronto, Toronto, ON, Canada.

Many women experience repeated episodes of weight loss and regain throughout adulthood. These weight fluctuations may have harmful effects on women's mental health, especially when diagnosed with breast cancer, when weight gain may occur at a faster rate than would be seen with normal aging. Greater distress may be observed among breast cancer survivors (BCS) who have struggled with their weight throughout their adult life and who are overweight or obese post-treatment. In this study, we aimed to describe the prevalence of weight-maintainers and -fluctuators in a sample of 190 BCS (Mage = 55.04 years, SD = 11.13; range = 28 - 79 years), (2) examine the association between history of weight fluctuation in adulthood and depressive symptoms post-treatment, and (3) determine if this association is moderated by post-treatment weight status. We observed that 38.4% of the sample were characterized as weight-fluctuators. We also found that history of weight fluctuation was associated with depressive symptoms as measured using the Center for Epidemiological Studies Depression (CES-D) scale (β = .18, p = .01, 95% CI = .42;3.48), but that weight status post-treatment was not an effect modifier (β = -.09, p = .22, 95% CI = -5.01;1.14). Findings confirm earlier reports that a history of weight fluctuation, regardless of current weight status, is associated with long-term adverse mental health consequences. Considering that both obesity and depression greatly increase the risk of developing chronic and noncommunicable diseases for BCS, researchers should seek to develop and evaluate intervention strategies focused on maintenance of weight loss in women who are at increased risk of gaining weight.

Funding source: This study was supported by a Canadian Institutes of Health Research grant awarded to the last author.

CORRESPONDING AUTHOR: Jennifer Brunet, PhD, School of Human Kinetics, University of Ottawa, Ottawa, ON, K1N 6N5; jennifer.brunet@uottawa.ca

C-038f

PSYCHOSOCIAL OUTCOMES OF AN EQUINE-FACILITATED CANCER SURVIVORSHIP PROGRAM (EFCSP): A PILOT STUDY

Jennifer L. Kilkus, MS,[1] John W. Hayslip, MD[2] and Jamie L. Studts, PhD[1]
[1]Department of Behavioral Science, Univ of Kentucky, Lexington, KY and [2]Department of Internal Medicine, Univ of Kentucky, Lexington, KY.

Following treatment, young adult cancer survivors (YACS) remain at risk for psychological distress, poor quality of life (QOL), and other unique survivorship challenges. These unique challenges highlight the need for targeted survivorship interventions that specifically focus on YACS. This pilot study examined the impact of a six-week intervention that combined equine therapy exercises with group discussion on psychological distress, QOL, and benefit finding in a sample of young adult lymphoma and breast cancer survivors. Participants (N = 13) completed the IES-R, HADS, FACT-G, and BFQ at three time points: baseline, post-intervention, and three-month follow-up. Repeated measures analysis of variance (RMANOVA) revealed statistically significant reductions in cancer-specific distress across the three time points, ($F(2,22)=7.54$, $p=.003$, partial $\eta 2=.41$), as measured by the IES-R. Mean scores on the intrusion, ($F(2,22)=6.18$, $p=.007$, partial $\eta 2=.36$) and avoidance ($F(2,22)=5.67$, $p=.010$, partial $\eta 2=.34$) subscales revealed similar results. Reductions in general distress approached significance across time points, ($F(2,22)=3.19$, $p=.061$, partial $\eta 2=.23$). The mean anxiety score at three-month follow-up was significantly different than the mean at baseline, ($F(1,11)=5.34$, $p=.041$, partial $\eta 2=.33$). There were no significant differences on the depression subscale, ($F(2,22)=0.87$, $p=.432$, partial $\eta 2=.07$). No significant differences were found on global QOL scores, ($F(2,22)=1.44$, $p=.257$, partial $\eta 2=.12$), or benefit finding, ($F(2,22)=0.85$, $p=.440$, partial $\eta 2=.07$), across the three time-points. Despite the small sample size, this pilot study revealed statistically significant reductions in cancer-specific distress and anxiety. Future research should investigate the use of EFCSP in a larger group of survivors and continue to refine program content.

CORRESPONDING AUTHOR: Jennifer L. Kilkus, MS, Department of Behavioral Science, Univ of Kentucky, Lexington, KY, 40536; jlkilk2@uky.edu

C-038g

A MULTIDIMENSIONAL SCALE TO MEASURE THE REPRODUCTIVE CONCERNS OF YOUNG ADULT FEMALE CANCER SURVIVORS

Jessica R. Gorman, PhD, MPH,[1] H. Irene Su, MD, MSCE,[1] Samantha C. Roberts, MPH,[1] Sally A. Dominick, MPH,[1] John P. Pierce, PhD[1] and Vanessa Malcarne, PhD[2]
[1]University of California, San Diego, La Jolla, CA and [2]Psychology, San Diego State University, San Diego, CA.

Concerns about fertility and parenthood are important to many young adult (YA) cancer survivors and are associated with poorer quality of life, yet these concerns are not adequately addressed. The purpose of this study was to develop a new scale to comprehensively measure the reproductive concerns of YA female cancer survivors. Scale development involved: 1) conducting focus groups to identify reproductive concerns and develop potential scale items, followed by pilot testing and cognitive interviews to refine items, 2) principal components analysis with oblique rotation to identify underlying factors, and 3) demonstrating preliminary evidence of validity. We administered a Web-based survey, including 46 potential scale items, to 204 YA female cancer survivors (age 18-35). We discarded nine items with extreme means, skewed or limited variances and confusing wording. We subjected the remaining 37 items to exploratory factor analysis, which indicated a 6 factor solution. After removing low-loading (≤ 0.60) and cross-loading (≥ 0.30) items, we selected the three top loading items representing each factor. The Reproductive Concerns After Cancer (RCAC) Scale is an 18-item scale ($\alpha = 0.82$) with six sub-scales: fertility potential, partner disclosure, child's health, personal health, acceptance, and becoming pregnant ($\alpha = 0.78$-0.91). As evidence of divergent validity, we found scores to correlate at low to moderate levels in the expected direction with related but conceptually distinct measures of social support ($r = -0.25$), health-related quality of life ($r = 0.32$), satisfaction with life ($r = -0.32$), and depression ($r = 0.37$). Using the known groups method, we found that women who wanted to have a baby ($p < 0.001$) and those for whom having a biological child was very important ($p < 0.05$) had higher mean scores. The RCAC Scale measures important issues that are not included in existing instruments and will be an asset for future clinical and research applications.

CORRESPONDING AUTHOR: Jessica R. Gorman, PhD, MPH, University of California, San Diego, La Jolla, CA, 92093-0901; jgorman@ucsd.edu

C-038h

IMPACT OF PSYCHOSOCIAL DISTRESS AND INTRUSIVE IDEATION ON REQUEST FOR COMMUNITY-BASED SUPPORT

Joanne S. Buzaglo, PhD, Melissa F. Miller, PhD, MPH, Christopher Gayer, PhD, Anne Morris, MPH, Vicki Kennedy, LCSW and Mitch Golant, PhD
Research & Training Institute, Cancer Support Community, Philadelphia, PA.

Background: Cancer-related psychosocial problems can cause additional suffering, weaken treatment adherence, and threaten the patient's ability to maximize recovery. Yet many cancer survivors experiencing high levels of distress do not ask for help. We measured the relationship between level of distress and requests for help and investigated factors that may reduce the likelihood of requesting help with increasing levels of distress.

Methods: Participants (N=89) were screened for psychosocial distress using CancerSupportSource, a web-based validated screening program. Participants rated 25 psychosocial concerns using a 5-point scale (0 not at all to 4 very seriously concerned) and indicated if they wanted to talk with a staff member, receive print information, or receive online information. The survey also included the Impact of Event Scale (intrusion only), a cancer-related health worry scale ($\alpha = 0.79$), and a measure of information seeking efficacy ($\alpha = 0.77$).

Results: Level of distress was significantly associated with requesting to talk with a staff member (OR=1.08, $p = 0.001$). Having intrusive thoughts decreased the likelihood of requesting to talk to staff with increasing distress ($p = 0.047$) such that having intrusive thoughts negated the relationship between distress and requesting staff help (OR=1.03, $p = 0.36$). However, there was a significant relationship between level of distress and requesting staff help (OR=1.14, $p = 0.004$) for individuals without intrusive thoughts. Worry ($p = 0.10$) and information-seeking efficacy ($p = 0.058$) also modified the relationship between level of distress and requesting help.

Conclusion: Level of psychosocial distress was significantly associated with requests to talk with staff unless coupled with intrusive thoughts. Future research needs to evaluate effective methods to identify individuals at risk for heightened psychological distress that may be less likely to ask for help to ensure that individuals at greatest need have access to support.

Funding: Genetech, Pfizer

CORRESPONDING AUTHOR: Anne Morris, MPH, Research & Training Institute, Cancer Support Community, Philadelphia, PA, 19131; anne@cancersupportcommunity.org

C-038j

BODY IMAGE AS A MEDIATOR OF THE RELATIONSHIP BETWEEN CANCER-RELATED CHANGES IN APPEARANCE AND SEXUAL ADJUSTMENT IN BREAST CANCER SURVIVORS

Lindsey Rosman, BA and Heather Littleton, PhD
East Carolina University, Greenville, NC.

For breast cancer survivors, physical changes in appearance as a result of treatment are common and potentially influence how women perceive themselves and their bodies, which may increase risk for long-term sexual problems. Although general body image concerns have been documented among survivors, the extent to which these relate to treatment-induced changes in appearance and sexual adjustment, has garnered little attention. Therefore, the current study examined three body image variables (body shame, concern about the obviousness of changes in appearance, and dysmorphic appearance concern) as mediators of the relationship between number of cancer-related changes in appearance and sexual satisfaction and sexual dysfunction in a sample of 219 breast cancer survivors who completed an online survey on the topic. Participants' mean age was 47.3 years, (SD=11.1 years) with an average time since diagnosis of 4.4 years (SD=4.4 years). Women were predominantly European American, married, diagnosed with Stage I or II breast cancer, had a lumpectomy and/or mastectomy, and received adjuvant treatment. A 13-item summed measure of cancer-related appearance changes assessed changes in the breast(s), hair, finger nails, weight, skin, and genitals. Bootstrapping was used to evaluate potential mediated relationships. Results indicated that higher levels of body shame, concern about the obviousness of changes in appearance, and dysmorphic concern all mediated the relationship between having a higher number of changes in appearance and lower levels of sexual satisfaction. Higher levels of body shame and dysmorphic concern also significantly mediated the relationship between having a higher number of changes in appearance and risk for sexual dysfunction. Results suggest that cancer-related changes in appearance may lead to the development and persistence of body image concerns and in turn, increase risk for long-term sexual problems. This study highlights the need for further research as well as the need for routine assessment and treatment for these difficulties among survivors.

CORRESPONDING AUTHOR: Lindsey Rosman, BA, Psychology, East Carolina University, Greenville, NC, 27858; Rosmanl09@students.ecu.edu

C-038k

CHANGE IN QUALITY OF LIFE AND PSYCHOSOCIAL DISTRESS AMONG CANCER SURVIVORS ENROLLED IN A COMMUNITY SURVIVORSHIP PROGRAM

Rachel Funk, BS,[1] Heidi Hamann, PhD,[1,2] Paula R. Anderson, RN, MN, OCN,[3] Elsa Chavez Inman, MSW, LBSW,[3] Bonnie Rose, RN, BSN, OCN,[3] Joanne Sanders, MS,[2] Caroline Mejias, BA[2] and Keith E. Argenbright, MD[3,2]
[1]Psychiatry, UT Southwestern Medical Center, Dallas, TX; [2]Clinical Sciences, UT Southwestern Medical Center, Dallas, TX and [3]Moncrief Cancer Institute, UT Southwestern Medical Center, Fort Worth, TX.

With nearly 12 million cancer survivors in the US, there is a growing need to provide psychosocial and behavioral services to address emotional adjustment, health behavior goals, and other support needs. However, the effectiveness of such cancer survivorship programs is not well-documented. The Fort Worth Program for Community Survivorship (ProComS) is a unique, community-led effort developed to address psychosocial and behavioral needs of regional cancer survivors. The goal of the current analysis was to assess changes in quality of life (QOL) and psychosocial distress among ProComS participants. We focused on baseline and 3-month follow-up data from the first 77 program participants who completed assessments at both timepoints. The majority of participants were female with a history of breast cancer; their mean age was 57 years old. The Functional Assessment of Cancer Therapy-General version (FACT-G) and the Brief Symptom Inventory (BSI-18) were used to assess Health-related QOL and psychosocial distress, respectively. We observed a statistically significant improvement in overall QOL scores for ProComS enrollees ($p < .01$). Mean QOL scores rose from 79 to 83 after 3 months of participation in the program. Overall psychosocial distress decreased over time (Baseline $M = 11.4$; 3-month follow-up $M = 10.1$), although changes fell short of statistical significance ($p < .08$). Overall, these preliminary data are good indicators that after 3 months of enrollment in ProComS, cancer survivors reported better QOL and were less distressed. We cannot attribute, with certainty, these improvement to survivorship activities and referrals. However, these findings suggest that evidence-based, multidisciplinary services targeting the unmet needs of cancer survivors may offer meaningful and measureable benefits.

CORRESPONDING AUTHOR: Rachel Funk, BS, Division of Psychology, UT Southwestern Medical Center, Dallas, TX, 75390; rachel.funk@utsouthwestern.edu

C-038l

HOME PRACTICE OF YOGA AND MEDITATION AMONG BREAST CANCER PATIENTS IN A MINDFULNESS-BASED STRESS REDUCTION PROGRAM: BASELINE CHARACTERISTICS AND POST-INTERVENTION EFFECTS

Rie Tamagawa, PhD,[1] Michael Speca, PsyD,[1] Richard Doll, PhD,[2] Joanne Stephen, PhD[2] and Linda E. Carlson, PhD[1]
[1]Oncology, University of Calgary, Calgary, AB, Canada and [2]BC Cancer Agency, Vancouver, BC, Canada.

While previous studies have demonstrated health benefits of Mindfulness-Based Stress Reduction (MBSR) programs among cancer patients, few studies have examined the role of home practice during the program. Also, little is known about individual characteristics that are associated with actual home practice.

This study investigated individual characteristics associated with yoga and meditation practice at home during a MBSR program and psychosocial correlates of yoga and meditation practice following MBSR.

This study used pre- and post-intervention questionnaires and a home practice log submitted by 34 participants who were part of a randomized clinical trial examining psycho-biological effects of MBSR and supportive expressive therapy.

No associations were found between home practice time and age, employment status, severity of cancer, or physical activity levels prior to MBSR. However, patients who were married or cohabitating reported significantly longer yoga and meditation practice compared to those without a partner. Greater baseline social support, extraversion, and lower depression scores were correlated with greater yoga practice, while higher levels of anxiety were correlated with greater meditation practice. Both yoga and meditation practice were positively associated with post-traumatic growth and spiritual well-being following MBSR after adjusting for the baseline levels. Yoga practice was also associated with greater vigor.

These results suggest that supportive social environments help patients engage in home practice during MBSR. Outgoing patients practiced more yoga while anxious patients practiced more meditation. Both yoga and meditation were similarly useful to gain positive outlook on life. Adherence to home practice should be strongly encouraged in future MBSR programs, perhaps with more support for potentially lonely participants.

CORRESPONDING AUTHOR: Rie Tamagawa, PhD, Oncology, University of Calgary, Calgary, AB, T2S3C1; rie.tamagawa@albertahealthservices.ca

C-038m

NON-NORMAL SCREENING MAMMOGRAPHY RESULTS, LUMPECTOMIES & BREAST CANCER REPORTED BY CALIFORNIA WOMEN, 2001-2009

Veronica L. Irvin, PhD, MPH,[1,2] Meissner I. Helen, PhD,[2] Nancy Breen, PhD[3] and Robert M. Kaplan, PhD[1,2]
[1]Clinical Center, Dept of Rehabilitation Medicine, National Institutes of Health, Bethesda, MD; [2]Office of Behavioral & Social Science Research, National Institutes of Health, Bethesda, MD and [3]National Cancer Institute, Division of Cancer Control & Population Sciences, National Institutes of Health, Bethesda, MA.

Background. Although screening may contribute to lower breast cancer mortality, screening may increase the risks of false positives, anxiety & unneeded medical procedures. We report trends of non-normal screening mammography results, lumpectomies & breast cancer reported by California women.

Methods. Data were obtained from the California Health Interview Survey (CHIS), years 2001, 2005 & 2009. CHIS employed a multi-stage sampling design where telephone surveys were administered in 6 languages. The sample was restricted to women 40 years & older who had a screening mammogram in the past 2 years. Sample sizes were 16,406 in 2001, 14,689 in 2005 & 18,557 in 2009. Women with non-normal results were asked if they had an operation to remove the lump & if the lump was confirmed as cancer. Results were weighted to the California population.

Results. Between 2001- 2009, there was no increase in the percent of women in the population who self-reported as diagnosed with cancer. In 2001, the percent of non-normal results ranged from 13% to 22% for women 40 and older. By 2009, the percent of non-normal results significantly increased across all age groups 2% to 8% with the largest gain seen in women aged 60-69. In 2001, the percentage of lumpectomies was 28%, 32%, 43%, & 55% across the age groups. The percent of lumpectomies significantly dropped 5-10% between 2001-2009 with the largest drop seen in women 40-49 & 70+. For every woman with a self-reported diagnosis of breast cancer, 3 women had a lumpectomy that turned out to not be cancer. This differential was larger for younger women & smaller for older women.

Conclusions. The percent of non-normal results increased from 2001-2009 among California women. Lumpectomies declined over the same period of time. Possible reasons for these changes will be explored.

CORRESPONDING AUTHOR: Veronica L. Irvin, PhD, MPH, Dept of Rehabilitation Medicine, Clinical Center & Office of Behavioral and Social Science Research, National Institutes of Health, Bethesda, MD, 20892; veronica.irvin@nih.gov

C-038n

QUANTITY BUT NOT QUALITY OF SLEEP IS RELATED TO HEART RATE VARIABILITY IN WOMEN WITH CANCER

Salene M. Wu, MA,[1] Labarron K. Hill, MA,[1] John J. Sollers, PhD,[2] Julian F. Thayer, PhD,[1] Charles L. Shapiro, MD[3] and Barbara L. Andersen, PhD[1]
[1]Psychology, The Ohio State University, Columbus, OH; [2]University of Auckland, Auckland, New Zealand and [3]Medicine, The Ohio State University, Columbus, OH.

Introduction: Sleep problems are common in cancer patients and are associated with alterations in physiological and psychological function. A large literature connects sleep disturbances to vagally-mediated changes in heart rate variability (HRV), a measure of central and autonomic nervous system integration and overall health. However, this literature has not been extended to women with cancer. The current study replicated previous research by examining the relationship of sleep to HRV and extended previous work by studying women with advanced breast cancer.

Methods: 28 women with recurrent or metastatic breast cancer completed questionnaires about their sleep, psychological and physical function. Resting heart rate data was collected and measures of basal/tonic HRV were derived. Multiple regressions were used to determine the relationship of sleep disturbance (quality) and whether a woman slept the optimal hours of sleep (7-8 hrs/night) to HRV. Covariates were empirically selected to control for individual differences.

Results: Optimal sleep was significantly related to decreased resting heart rate (p=.002) and increased vagally-mediated HRV in the time (RMSSD, p=.010) and frequency (p=.013) domains. Overall sleep disturbance was not significantly related to any measure of HRV. Controlling for depression or physical functioning did not affect the results.

Discussion: This study replicated previous research in demonstrating a positive association between optimal sleep and better autonomic nervous system control/functioning and extended this association to cancer patients. This relationship was independent of any association with depression or overall health status. These data further support the notion that optimal sleep is an important mechanism in maintaining psychological and physiological health in cancer patients.

CORRESPONDING AUTHOR: Salene M. Wu, MA, Psychology, The Ohio State University, Columbus, OH, 43210; salenewu@gmail.com

C-038o

ANXIETY AND WORRY ARE RELATED TO INFLAMMATORY CHANGES IN WOMEN WITH ADVANCED CANCER

Salene M. Wu, MA,[1] Charles L. Shapiro, MD,[2] Jeffrey M. Fowler, MD,[2] William E. Carson, MD[2] and Barbara L. Andersen, PhD[1]
[1]Psychology, The Ohio State University, Columbus, OH and [2]Medicine, The Ohio State University, Columbus, OH.

Background: Cancer diagnosis and treatment can provoke anxiety. Anxiety is often accompanied by worry, which is the continual rehearsal of potential future negative consequences. Anxiety and worry in cancer patients are related to worse outcomes including decreased quality of life and increased sleep disturbance. However, the link between anxiety, worry and inflammation is understudied and inflammation may be one venue through which anxiety and worry adversely affect cancer surivivors. The current study examined the relationship of anxiety, worry and health anxiety to inflammation in cancer patients.

Methods: Women with recurrent or metastatic cancer of the breast or ovary (N=56) completed questionnaires measuring anxiety, health anxiety and worry and blood was drawn to measure inflammation, including interleukins (IL), interferons (IFN) and tumor necrosis factor α (TNF- α, IL-2, IL-4, IL-6, IL-10, IL-12, IFN-γ, Granulocyte Macrophage Colony Stimulating Factor, Vascular Endothelial Growth Factor). Multiple regressions were used to determine the relationship of worry and anxiety to inflammation. Covariates were empirically selected to control for individual differences.

Results: Anxiety was positively related to humoral inflammatory markers, IL-4, while worry was positively related to IL-4 and showed a quadratic relationship to TNF-α. Health anxiety was unrelated to inflammation.

Discussion: High levels of anxiety and worry may be related to a shift away from anti-tumor immunity and towards humoral immunity. Mild to moderated levels of worry were associated with increased inflammation, while the highest levels of worry were associated with overall exhaustion of the inflammatory response as indicated by decreases in TNF-α. This study suggests worry as a future intervention target in cancer patients as well as an important factor in models of adaptation to the stress of cancer.

CORRESPONDING AUTHOR: Salene M. Wu, MA, Psychology, The Ohio State University, Columbus, OH, 43210; salenewu@gmail.com

C-038p

DIFFERENCES IN SURVIVAL OF NON-SMALL CELL LUNG CANCER BY RACE/ETHNICITY/SES

Stacey L. Tannenbaum, PhD, Tulay Koru-Sengul, PhD, Wei Zhao, PhD, Feng Miao, MS and Margaret M. Byrne, PhD
University of Miami Miller School of Medicine, Miami, FL.

Introduction

Lung cancer is the leading cause of cancer death in the US, with

160,340 deaths estimated for 2012. Disparities in survival after lung cancer diagnosis exist as Blacks have higher incidence and mortality than Whites. However, it is not clear whether there are survival disparities in patients with non-small cell lung cancer (NSCLC) by race/ethnicity and socioeconomic status (SES).

Methods

Data were obtained from linkage of the 1996-2007 Florida Cancer Data System, a population-based cancer registry, to the Florida Agency for Health Care Administration database providing procedure and diagnoses codes. Survival time was time from date of diagnosis to date of death. Race was categorized as White, Black, Native American, Asian, Pacific Islander, Asian Indian or Pakistani, or other. Ethnicity was defined as non-Hispanic or Hispanic. SES was categorized by percent of the population living in poverty: 1) lowest (≥20%), 2) middle-low (≥10% and <20%), 3) middle-high (≥5% and <10%), and 4) highest (<5%). Cox proportional regression models were used to predict survival; demographic/clinical/treatment factors and comorbidities were included in adjusted models.

Results

The majority of patients (n= 98,541) were White (91.9%), and non-Hispanic (94.1%). Independent predictor of worse survival in the unadjusted model was Black compared to White (hazard ratio [HR] 1.21; P<.001). Compared to lowest SES, improved survival was seen in middle-low (HR .89), middle-high (HR .82), and highest SES (HR .75; P<.001 for all). In the adjusted model, controlling for extensive variables and comorbidities, Asians had improved survival (HR .79; P<.001) but Blacks no longer had worse survival compared with Whites; Hispanic ethnicity became protective (HR .90; P<.001). A monotonic improvement in survival for each higher SES category was maintained at a lower effect size.

Conclusion

Our results show that disparities in outcomes exist for NSCLC patients; being Asian or Hispanic, or having higher SES confers improved survival.

CORRESPONDING AUTHOR: Stacey L. Tannenbaum, PhD, Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL, 33136; STannenbaum@med.miami.edu

C-038q
30-DAY POSTOPERATIVE MORTALITY DISPARITIES AMONG LUNG CANCER PATIENTS

Jared M. Tannenbaum, BS, Tulay Koru-Sengul, PhD, Wei Zhao, PhD, Stacey L. Tannenbaum, PhD, Feng Miao, MS and Margaret M. Byrne, PhD
University of Miami Miller School of Medicine, Miami, FL.

Introduction

Scarce research exists on 30-day postoperative mortality (POM) disparities for lung cancer patients by racial/ethnic/socioeconomic status (SES). The goal of this study was to determine if differences exist in POM using a broad population-based dataset.

Methods

We used linked data from the 1996-2009 Florida Cancer Data System Registry, the Agency for Health Care Administration and the US census. Our dichotomous outcome variable was 30-day POM. Race was categorized as White, Black, or Other and ethnicity was Hispanic or non-Hispanic. SES was percent of the neighborhood population living in poverty: lowest (≥20%), middle-low (<20% and ≥10%), middle-high (<10% and ≥5%), and highest SES (<5%). We fit unadjusted and adjusted logistic regression models controlling for demographics, clinical/pathological characteristics, and comorbidities.

Results

Our sample (n=38,335) were mainly White (94.3%), non-Hispanic (93.8%), and in middle-high to highest SES (60.5%). In the unadjusted model, Blacks were more likely to have 30-day POM (odds ratio [OR] 1.42; P<.001) compared with Whites. No difference in 30-day POM was seen between non-Hispanics and Hispanics. In the unadjusted model compared with lowest SES, middle-low (OR .81; P=.023), middle-high (OR .71; P<.001), and highest (OR .63; P<.001) patients were less likely to have 30-day POM, showing a linear trend with increasing SES. In the adjusted model controlling for extended confounding variables, Blacks compared with Whites had worse 30-day POM (OR 1.45; P=.048). Hispanics were more likely to be alive at 30-days (OR .61; P=.048) compared with non-Hispanics, but the 30-day POM was now similar among SES classifications.

Conclusion

To the best of our knowledge, this was the first study to explore differences in 30-day POM by race/ethnicity/SES while controlling for extensive confounders. Blacks and non-Hispanics had worse 30-day POM than Whites and Hispanics, respectively. Future research should determine the root cause in 30-day POM disparities.

CORRESPONDING AUTHOR: Stacey L. Tannenbaum, PhD, Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL, 33136; STannenbaum@med.miami.edu

C-038r
ACCESSIBLE TECHNOLOGY: AN ELECTRONIC CANCER INFORMATION TOOLKIT FOR INDIVIDUALS WITH AND WITHOUT INTERNET ACCESS

Tania M. Fitzgerald, MSW,[1] Douglas Rupert, MPH[1] and David Driscoll, PhD[2]
[1]RTI International, Research Triangle Park, NC and [2]University of Alaska, Anchorage, AK.

Background: Technology provides innovative platforms for seeking health information. However, nearly 20% of American adults and half of older adults do not regularly use the Internet. Many Americans also are uncomfortable navigating Websites and assessing the credibility of online health information.

Objective: The study's goal was to create an electronic hematologic cancer information toolkit, using health communication best practices, that could be available regardless of age or Internet access.

Research Design: We created cancer information materials customized by role (patient, caregiver, or family/friend) and cancer phase. The materials had a low literacy structure and were packaged in a CD-ROM toolkit that included a glossary, resource guide, internal links to other toolkit materials, and external links for more in-depth information online. We conducted three iterative interview waves (n=99) to test material content, toolkit structure, and accessibility, and we analyzed qualitative responses for trends across participants and roles.

Results: Participants were able to find desired materials easily when topics were organized by role/phase and had role-specific color schemes. Most participants found the low literacy structure easy to follow, rated materials as highly readable, and liked the CD-ROM accessibility. Participants were likely to click hyperlinks to external resources but also appreciated having offline contact information available. The glossary and resource guide were accessed by most participants, who stated a preference for citing multiple support organizations in the guide.

Conclusions / Future Plans: The findings suggest that the toolkit's format and evidence-based design strategies can be applied to make other cancer information resources easier to navigate and accessible to a wider audience. Future studies should test the format and design principles more rigorously and with more diverse populations.

CORRESPONDING AUTHOR: Tania M. Fitzgerald, MSW, RTI International, Research Triangle Park, NC, 27709; tfitzgerald@rti.org

C-049a

QOL IN CHILD LQTS PATIENTS COMPARED TO CARDIAC PATIENTS

Elizabeth A. Waldron, MS,[1] S. H. Felgoise, PhD,[1] C. Tress, MS,[1] K. Lawrence, EdS[1] and V. L. Vetter, MD[2,3]
[1]Philadelphia College of Osteopathic Medicine, Philadelphia, PA; [2]Children's Hospital of Philadelphia, Philadelphia, PA and [3]University of Pennsylvania, Philadelphia, PA.

Introduction: Long QT Syndrome (LQTS) is a life-threatening genetically-inherited cardiac

arrhythmia disorder affecting 1:2500 persons (Quaglini et al., 2006), often diagnosed in childhood. Management of LQTS changes patients' lifestyles which can affect quality of life (QoL). Patients have restrictions in physical activity, diet, travel, treatment of noncardiac conditions; take daily doses of medicine and/or have implantable cardiac devices (pacemaker/defibrillator). Other cardiac patients show significantly worse QoL in comparison to healthy controls (Uzark et al., 2003, 2008). Unlike other cardiac conditions, LQTS causes few symptoms. Because LQTS patients look and feel well, they are not typically assessed for psychological symptoms. Little research on QoL in pediatric LQTS patients has been conducted to determine if psychosocial interventions are warranted.

Method: 24 children (mean age 13.4; 58.3% female; 95.8% Caucasian) with LQTS completed questionnaires as part of a larger study on the psychosocial impact of LQTS (Felgoise et al.). Questionnaires were completed an average of 5.59 years post-diagnosis; 39.1% of patients have been symptomatic. Z scores were used to compare the dimensional scores for children diagnosed with LQTS to the norms for the Cardiac Module of the PedsQL (Uzark et al., 2003).

Results: There were no significant differences between the norm group of general cardiac

patients and LQTS patients on Heart Problems (z=.0201, p=.492), Physical Appearance (z=.2105, p=.416), Treatment Anxiety (z=-1.35, p=.088), and Cognitive Problems (z=-.157,

p=.44) dimensional scores. The Communication dimensional scores (z=-1.744, p=.04) showed a significant difference between groups.

Conclusion: Due to similarity in QoL scores between the general cardiac and LQTS pediatric

patients, similar treatment plans may be warranted. Pediatric LQTS patients could benefit from a multidisciplinary biopsychosocial treatment team approach, with attention to the impact of LQTS on QoL.

CORRESPONDING AUTHOR: Elizabeth A. Waldron, MS, Department of Psychology, Philadelphia College of Osteopathic Medicine, Philadelphia, PA, 19131; liz.waldron@yahoo.com

C-049b

PUTTING SELF-MANAGEMENT EDUCATION IN THE HANDS OF PATIENTS: IPAD DELIVERED POSTOPERATIVE EDUCATION FOLLOWING CARDIAC SURGERY

David Cook, MD,[1] Julie Hathaway, MS,[2] Sharon Prinsen, RN,[3] Erin Fischer, MSN,[2] Anilga Moradkhani, PhD[4] and Kristin Vickers Douglas, PhD[4,2]
[1]Anesthesiology, Mayo Clinic, Rochester, MN; [2]Patient Education, Mayo Clinic, Rochester, MN; [3]Nursing, Mayo Clinic, Rochester, MN and [4]Psychiatry and Psychology, Mayo Clinic, Rochester, MN.

Traditional postoperative education is limited by educator availability and patient barriers to learning (e.g., pain, fear, confusion). The Mayo Clinic Health Connection application was delivered via iPad to 149 patients (mean age 68) following cardiac surgery. Developed by clinicians, nurses and educators, the app integrates patient education, physical recovery and discharge planning, linked to clinical care processes. Patients engage in self-directed learning through multimedia educational modules organized by day of hospitalization and the care events of each day. This qualitative study involved interviews with 10 patients (30% female), 12 family members (50% female), and 4 nurses (100% female). Qualitative data was coded using methods of content analysis. The predominant patient theme was increased appreciation for the intensity and complexity of self-management requirements for recovery and the need for patient activation ("You have to work to get better, you can't just expect it all to happen on its own"). Patients were not overwhelmed by the amount of information and varied in preference for media type within the app. Some patients perceived an inability to fully benefit from education due to postoperative physical status ("It's a lot when you are tired"). Support people engaged with the education and appreciated its availability. Nurses described increased patient sense of control associated with self-directed education at a time when they have little control. Findings suggest this educational approach enhances patient activation and self-management knowledge. Further research should assess impact of postoperative education on self-management behavior and impact of education with patients at differing levels of health literacy, motivation, and confidence with technology.

CORRESPONDING AUTHOR: Julie Hathaway, MS, Patient Education, Mayo Clinic, Rochester, MN, 55905; hathaway.julie@mayo.edu

C-049c

CONSTRUCT VALIDITY OF THE BLOOD DONATION REACTIONS INVENTORY OUTSIDE THE BLOOD DONATION CONTEXT

Philippe T. Gilchrist, MA,[1] Corrine I. Voils, PhD[2,3] and Blaine Ditto, PhD[1]
[1]Psychology, McGill University, Montreal, QC, Canada; [2]Health Services Research, Durham Veterans Affairs Medical Center, Durham, NC and [3]Medicine, Duke University, Durham, NC.

The Blood Donation Reactions Inventory (BDRI; France et al., 2008) was developed to assess subjective vasovagal reaction (VVR) symptoms in the blood donation context. It is well-validated in that context, e.g., scores are associated with objectively observed fainting and nurse-initiated treatment. However, there is less information about the association between BDRI items and physiological mechanisms underlying the VVR, such as blood pressure (BP), heart rate (HR), or heart rate variability (HRV) (e.g., France et al., 2008; Gilchrist & Ditto, 2012; Gilchrist, McGovern, & Ditto, 2012; Meade, France, & Peterson, 1996). Additionally, the validity of the BDRI outside of the blood donation context is largely unknown, despite its use in such contexts. Data for this study were combined from two previous experiments (N = 148) (Gilchrist & Ditto, 2012; Gilchrist, McGovern, & Ditto, 2012). In both experiments, BP, HR, and HRV were assessed prior to and during exposure to medical videos known to elicit VVR symptoms; the BDRI was administered after exposure to the videos. Multiple regressions were conducted with physiological baseline-stress change scores as the outcome, BDRI as the independent variable, and the following known predictors of VVR as co-variates: age, sex, state anxiety, blood and mutilation fears, and baseline physiological scores. The videos elicited reports of BDRI symptoms in a significant percentage of participants (56%). However, in general, BDRI score was not associated with the magnitude of physiological change except for decrease in diastolic BP ($\beta = -.23$, $p = .02$). While it is possible that the profile of symptoms is different in the laboratory, the findings are consistent with other current results indicating that symptoms are driven more by specific changes in cerebral blood flow than broad changes in peripheral cardiovascular activity.

CORRESPONDING AUTHOR: Philippe T. Gilchrist, MA, Psychology, McGill University, Montreal, QC, H3A 1B1; philippe.gilchrist@mail.mcgill.ca

C-049d

PROBLEM-FOCUSED COPING IS ASSOCIATED WITH SLOWER PROGRESSION OF SUBCLINICAL ATHEROSCLEROSIS IN DEMENTIA CAREGIVERS

Susan K. Roepke-Buehler, PhD,[2,1] Elizabeth Chattillion, MS,[1] Brent Mausbach, PhD,[1] Roland von Kanel, MD,[1] Paul Mills, PhD,[1] Joel Dimsdale, MD,[1] Thomas Patterson, PhD,[1] Matthew Allison, MD,[1] Michael Ziegler, MD,[1] Sonia Ancoli-Israel, PhD[1] and Igor Grant, MD[1]
[1]University of California, San Diego, La Jolla, CA and [2]Psychiatry, University of Illinois at Chicago, Chicago, IL.

Caring for a loved one with dementia can take a considerable toll on the caregiver's mind and body. Recent research suggests that caregiving stress can have particularly adverse effects on cardiovascular health. However, problem-focused coping (PFC) strategies have been shown to mitigate the relationship between stress and physiological markers of acute stress. As such, the purpose of the current study was to determine if PFC might also be associated with slower progression of subclinical atherosclerosis over time. Sixty-nine elderly dementia caregivers (mean age 74 ± 8 years, 71% female) participated in a 5-year longitudinal study examining the impact of caregiving stress on physical and mental health. The current study examined available data spanning 24 months. PFC and self-efficacy for PFC were assessed at baseline. Participants also underwent annual in-home assessment of carotid artery intima-media thickness (IMT) via B-mode ultrasonography. Mixed regression modeling was used to determine the effect of baseline PFC on IMT over 24 months (baseline, 12-month, and 24-month assessments). Overall, IMT significantly increased over 24 months (coefficient(df) = 0.04 mm(38), $t = 5.03$, $p < 0.001$). There was a significant PFC-by-time interaction on IMT (coefficient(df) < -0.01mm(41), $t = -2.80$, $p = 0.008$). Post-hoc probing of this interaction indicated that caregivers with lower use of PFC at baseline had a steeper rate of change in IMT over time (i.e., increased IMT progression) while those reporting higher PFC had slower IMT progression. There was a similar, marginally significant relationship observed with self-efficacy for using PFC (coefficient(df) < -0.01mm(38), $t = -1.81$, $p = 0.078$). These findings corroborate previous work demonstrating the beneficial impact of PFC strategies on cardiovascular outcomes and highlight potential targets for psychotherapeutic intervention for stressed dementia caregivers.

CORRESPONDING AUTHOR: Susan K. Roepke-Buehler, PhD, Psychiatry, University of Illinois at Chicago, Chicago, IL, 60612; sroepke@gmail.com

C-058a

PSYCHIATRIC COMORBIDITY AND CHRONIC PAIN IN A CLINICAL SAMPLE OF ADULTS WITH TYPE 2 DIABETES

Jennifer Averyt, PhD,[1] Bernadette Heckman, PhD,[2] Jay Shubrook, DO[3] and Frank Schwartz, MD[3]
[1]Tripler Army Medical Center, Honolulu, HI; [2]University of Georgia, Athens, GA and [3]College of Osteopathic Medicine, Ohio University, Athens, OH.

Background: Most individuals with type 2 diabetes (T2DM) also have at least one comorbid medical condition which can significantly increase symptom burden and health care utilization. The presence of comorbid chronic pain has significant implications for the medical and psychosocial outcomes of T2DM patients. The current study sought to assess psychiatric comorbidity in a clinical sample of adults with T2DM in order to determine if the presence of chronic pain was associated with higher rates of depression and anxiety.

Methods: Participants (n=94) were adults with T2DM (57.4% female; 97.9% Caucasian) with a mean age of 62 years (S.D. 10.7) who were recruited from endocrinology clinics in southeast Ohio. Participants completed an interview and self-report questionnaires to assess chronic pain, anxiety, and depression symptoms.

Results: Seventy-two percent of participants met criteria for chronic pain. Depression diagnoses were more common for those with chronic pain, $\chi 2(1, n=94) = 4.9$, $p=.026$, Cramer's $V=.229$. Only 7.7% of patients without pain met criteria for a depressive disorder versus 26.8% of those with non-neuropathic pain and 34.8% of those with neuropathic pain. Anxiety disorder diagnosis also differed by chronic pain presence, $\chi 2(1, n=94) = 5.8$, $p=.016$, Cramer's $V=.248$. None of the patients without pain met criteria for an anxiety disorder compared to 12.2% of those with non-neuropathic pain and 30.4% of those with neuropathic pain.

Conclusions: The current study demonstrated that within a clinical sample of adults with T2DM, psychiatric comorbidity is more prevalent in patients with chronic pain than in patients without chronic pain. The presence of psychiatric comorbidity may have a significant impact on patient outcomes and self-care behaviors in terms of both diabetes and chronic pain. Assessment of chronic pain, anxiety, and depression within this population may help to guide recommendations for treatment and self-management of comorbid type 2 diabetes and chronic pain.

CORRESPONDING AUTHOR: Jennifer Averyt, PhD, Tripler Army Medical Center, Honolulu, HI, 96859; jenaveryt@gmail.com

C-058b

REGIMEN COMPLEXITY PREDICTS MEDICATION KNOWLEDGE AMONG OLDER ADULTS WITH DIABETES

Lisa Belter, MPH,[1] Laura Curtis, MS,[1] Anna Madison, BS,[2] Daniel Morrow, PhD,[2] Michael Wolfe, PhD, MPH,[1] Thembi Conner-Garcia, MD[3] and James Graumlich, MD[3]
[1]Northwestern University, Chicago, IL; [2]University of Illinois, Urbana, IL and [3]University of Illinois College of Medicine, Peoria, IL.

Older adults must manage complex medication regimens due to chronic illness. Regimen complexity reflects number of medications, daily doses, dose form, special instructions, and other factors that impose demands on patient abilities [1]. While complexity is associated with adherence [2], reasons for this relationship are unclear. We examined if regimen complexity related to patient medication knowledge, which has been found to predict adherence [3], by analyzing baseline measures from a study that evaluates whether an EHR-based collaborative tool improves outcomes in patients with diabetes.

230 older adults (mean age=63.5) participated. Complexity was measured by the Medication Regimen Complexity Index (MRCI), medication knowledge was measured both verbally (questions about each medication) and by demonstration (placing the correct number of pills into a pill box). Verbal and demonstration medication knowledge scores were analyzed by multi-variable regressions with age, education, health literacy (REALM), and MRCI measure entered as predictors.

Regressions showed that regimen complexity was significantly associated with the demonstration but not verbal knowledge measure. Simple correlations suggested the MRCI was more predictive of knowledge than a simple medication count, and the dose frequency MRCI component was more important than dose form or special instructions for predicting knowledge. The findings shed light on how aspects of medication regimens influence patient knowledge and how to measure knowledge.

1. George, J. et al. (2004). Development and Validation of the Medication Regimen Complexity Index. Ann Pharmacother, 38(9), 1369-76.

2. Mansur, N. et al. (2012). Looking Beyond Polypharmacy: Quantification of Medication Regimen Complexity in the Elderly. Am J Geriatr Pharmacother, 10(4), 223-9.

3. Schillinger, D. et al. (2006). The importance of establishing regimen concordance in preventing medication errors in anticoagulant care. J Health Commun,11(6), 555-567.

CORRESPONDING AUTHOR: Daniel Morrow, PhD, University of Illinois, Urbana, IL, 61801; dgm@illinois.edu

C-058c

DISSEMINATING DIABETES INFORMATION THROUGH TEXT MESSAGES: RESULTS FROM THE MESSAGE REFINEMENT PHASE OF THE MDIABETES INITIATIVE

Mallory A. Waters, MPH and Linelle M. Blais, PhD
Rollins School of Public Health, Emory University, Atlanta, GA.

Currently 50 million people in India live with diabetes and the disease claims 1 million lives per year. By 2030 it is estimated that 87 million Indians will have diabetes. According to the World Health Organization, a healthy diet, exercise and avoiding tobacco can prevent 80% of cases of type 2 diabetes. In the Diabetes Prevention Program, changes in diet- and physical activity-related behaviors reduce risk of diabetes by 58% in those at high risk. Furthermore, there are over 900 million mobile phone subscribers in India (73% of the population), suggesting cell phones as a promising avenue for fostering health behavior change. In partnership with Arogya World's mDiabetes Initiative, Emory University's Diabetes Training and Technical Assistance Center (DTTAC) was asked to develop six months of mobile text messages for Nokia phone users in India. Messages were limited to 180 characters, addressed one of five content areas (medical, fitness, nutrition, lifestyle, reflection), and were designed for a general audience who choose to receive diabetes messages. Messages were designed across the stages of change, with greater emphasis on contemplation and action stages. As part of the message refinement phase, a user acceptability study of 25 text messages of the mDiabetes initiative was conducted with 791 respondents via telephone survey. Five hundred and six (64%) respondents recalled the messages. Strong clarity and comprehension of messages was confirmed by key takeaways reported by 478 (60%) respondents. Eighty-six percent of respondents reported willingness to share information and 52% reported making diet- or fitness-related changes. A vast majority (84%) of participants found messages extremely easy to understand; only 2% reported that any of the messages were difficult to understand. In summary, the text messages appear to be clear, comprehensible, and useful to Indian consumers. As of December 2012, one million Indian consumers have received the diabetes messages.

CORRESPONDING AUTHOR: Mallory Waters, MPH, Rollins School of Public Health, Emory University, Atlanta, GA, 30322; mwater4@emory.edu

C-058d

COUNTERFACTUAL COMMUNICATION OF DIABETES INFORMATION INFLUENCES PERCEPTIONS AND CHARITABLE BEHAVIOR

Mary T. DePalma, PhD, Zachary Green, BS and Rebecca Copek, BA
Psychology, Ithaca College, Ithaca, NY.

A rich empirical history exists concerning the effects of counterfactual thinking (thinking about 'what might have been') on a host of intrapersonal variables (e.g., attitudes and behavior). More recent work has examined the interpersonal effects of counterfactual statements.The present study examined how these counterfactual communications might influence patient perception and subsequent charitable behavior. Undergraduate participants' (N = 85) assessed the suitability of two candidates for an undergraduate teaching assistantship (TA). They read transcribed interviews of a candidate who described an academic transition at college, while a second candidate described a transition related to coping with diabetes. The interviews of the latter target were systematically manipulated by whether the target had type 1 or type 2 diabetes, and whether they concluded their interview with an upward (ways things could have been better) or downward counterfactual (ways things could have been worse). In a control condition no counterfactual was presented. Participants then assessed each candidate and provided an overall suitability rating. Finally, participants went to a separate location to secure their extra credit for their study participation. At this location, participants were asked to vote for whether a donation should be given to the American Heart Association (AHA) or the American Diabetes Association (ADA). TA suitability ratings were significantly lower for the diabetes transition target [$t(84)=2.60$, $p<.025$]. Emphasizing how things could have been better (generating an upward counterfactual statement), increased blame ratings for targets with type 2 diabetes [$F(3, 74)= 3.36$, $P<.025$], and blame ratings predicted lower TA suitability ratings [$F(1, 73)=4.66$, $p<.05$]. While most participants (71%) elected to vote for the AHA, participants exposed to the upward counterfactuals were more likely to vote for the ADA ($p<.025$). These data suggest that individuals' communication of disease-related counterfactual information may- in very complex ways- influence interpersonal perception and subsequent behavior.

CORRESPONDING AUTHOR: Mary T. DePalma, PhD, Psychology, Ithaca College, Ithaca, NY, 14850; depalma@ithaca.edu

C-072a

DISTINCT COPING COMBINATIONS MODERATE THE RELATION BETWEEN DEPRESSION AND SUPPORT SERVICE UTILIZATION FOR HIV-POSITIVE MEN WHO HAVE SEX WITH MEN

Brian A. Rood, MA, MPH[1] and David W. Pantalone, PhD[2]
[1]Suffolk University, Boston, MA and [2]University of Massachusetts, Boston, MA.

HIV-positive men who have sex with men (MSM) frequently experience disease-related stress, which can place them at risk for mental health problems, including depression. To manage this stress, HIV-positive MSM employ different coping strategies, and some—when the stressor is too cumbersome—actively seek out crucial support services (e.g., counseling, housing assistance, etc.). Although previous studies have explored the relations between specific coping strategies and health status in HIV-positive MSM, none have explored the impact of different combinations of coping strategies—both functional and dysfunctional—on those associations.

Thus, we (1) explored how a commonly used measure of coping, the Brief COPE, can be conceptualized and grouped into different coping combinations consistent with the lived experiences of HIV-positive MSM; and (2) investigated how these coping combinations may moderate the relation between depression severity and support service utilization.

Our sample consisted of 171 HIV-positive MSM (M age = 44.0) recruited from two HIV clinics, who filled out one-time CASI surveys.

Principal component analysis of the Brief COPE revealed two components: functional coping and dysfunctional coping. Using hierarchical multiple regression, we found that coping moderated the relation between depression severity and the use of support services (interaction $\beta = 0.34$; $p < .05$). We found non-significant, though meaningful (when graphed), differences between the coping combinations and their impact on support service utilization.

Findings indicate that coping is a multidimensional process and that the Brief COPE is a valid measure of coping in HIV-positive MSM. Further, the data suggest that individuals who frequently engage in functional coping strategies, despite the frequency of concurrent dysfunctional coping, access services at about the same rate. It appears especially important for providers and clinics to offer skills-bolstering interventions, to strengthen functional coping abilities.

CORRESPONDING AUTHOR: Brian A. Rood, MA, MPH, Suffolk University, Boston, MA, 02127; brian.a.rood@gmail.com

C-072b

THE IMPACT OF A CBT TREATMENT FOR MOOD DISORDERS ON SYMPTOM BURDEN REPORTS IN HIV-INFECTED SUBSTANCE USERS WITH DEPRESSION

Janna Gordon, BA,[1] Conall O'Cleirigh, PhD,[1,2] Jonathan Lerner, PhD[1,2] and Steven A. Safren, PhD[1,2]
[1]Massachusetts General Hospital, Boston, MA and [2]Harvard Medical School, Boston, MA.

Individuals living with HIV experience a range of impairing physical symptoms due to antiretroviral drug treatments (ART) as well as advancing HIV disease. HIV-related symptoms are distressing to patients and detrimental to mental health and health-related quality of life, with additional implications for ART adherence. Previous work comparing cognitive behavioral therapy for adherence and depression (CBT-AD) to enhanced treatment as usual (ETAU) in triply comorbid individuals (HIV, depression, intravenous drug use [IDU]) receiving substance abuse treatment found the CBT-AD intervention to be efficacious at reducing depression symptoms and increasing adherence (Safren, O'Cleirigh, Bullis, et al., 2012). The sample (N = 89) was 61% male, 48% Caucasian, and had a mean age of 47 (SD = 7.2). In the current analysis, we assessed the impact of CBT-AD on reports of HIV-related symptom burden. Participants in both conditions received a single-session adherence intervention, while those in the CBT-AD condition received 9 additional sessions of individual CBT. Symptom report was measured at baseline (BL) and 3-month follow-up (3MFU) with the ACTG Symptoms Distress Module (SDM). Analyses revealed that CBT-AD significantly decreased symptom burden reports at 3MFU when controlling for significant baseline differences between the randomized conditions in CD4 count (beta = -.24; $t(76) = -2.30$; p = .02). To rule out the possibility that this effect could be explained by treatment-related changes in depression (the principal target of the intervention), we ran a subsequent model to control for changes in depression (Beck Depression Inventory; BDI) from BL to 3MFU. The treatment effect for symptom burden reports remained, although it was attenuated slightly (beta = -.22; $t(76) = -2.11$; $p < .04$). These findings show that a psychosocial intervention designed to decrease depression and increase ART adherence also improved symptom burden reports in a sample of triply comorbid individuals, as evidenced by decreasing SDM scores at 3MFU.

CORRESPONDING AUTHOR: Janna Gordon, BA, Behavioral Medicine, Massachusetts General Hospital, Boston, MA, 02114; jrgordon@partners.org

C-072c

ACCULTURATION MODERATES THE ASSOCIATION BETWEEN PHYSICAL FUNCTIONING AND DEPRESSION IN LATINOS LIVING WITH HIV

Saul A. Duenas, Psychology, John S. Wiebe, PhD and John A. Sauceda, MA
Psychology, The University of Texas at El Paso, El Paso, TX.

A rich theoretical and empirical literature links helplessness and depression. In addition, pain and physical impairment have been associated with feelings of helplessness, especially among Latinos. We hypothesized a moderated mediation model in which acculturation moderates the path from pain to helplessness and eventual depression. We administered the Patient Health Questionnaire-9, the AIDS Clinical Trials Group pain and role functioning scale, a self-rating of physical health, and the Helplessness subscale of the Multidimensional Fatalism Scale to patients at an outpatient HIV treatment clinic, and we used language preference as a proxy for acculturation. Our primary study included 99 HIV+ Latino men who have sex with men (mean age=43.7, SD=12.1; median household income=$11,376, SIQR=$4,900). As predicted, the association between pain and depression was mediated by helplessness only for Spanish-speaking participants (average indirect effect=-.533, 95% CI=-1.35, -0.05). In addition, among Spanish speakers, role functioning deficits were significantly associated with helplessness (r=.50, p<.01) while the same was not true in English speakers (r=.16, ns). These findings were bolstered by reanalysis of an earlier dataset including 291 HIV+ Latinos (mean age=48.0, SD=10.6; 79.3% male; median household income=$9,888, SIQR=$5,592). In this group, there was a significant correlation between physical functioning and helplessness (r=-.22, p<.01) in Spanish speakers but not English speakers (r=-.16, ns). In neither group did pain or helplessness scores differ as a function of language preference. One explanation may be that for both men and women in traditional, collectivist Mexican culture, physical function plays a substantial part in social role definition. Thus, physical impairments have central social and psychosocial impact. Those providing physical care to Latinos living with HIV should be particularly alert to potential mental health concerns among physically impaired patients with low acculturation.

CORRESPONDING AUTHOR: Saul A. Duenas, Psychology, Psychology, The University of Texas at El Paso, El Paso, TX, 79968; saduenas2@miners.utep.edu

C-087a

DEPRESSION, SOCIAL AND PHYSICAL ACTIVITIES, AND RISK OF ALL-CAUSE MORTALITY: A 23-YEAR STUDY

Andrea Finlay, PhD,[1,2] Elizabeth Oliva, PhD,[1] Christine Timko, PhD[1,2] and Ruth Cronkite, PhD[1,2]
[1]Center for Health Care Evaluation, VA Palo Alto Health Care System, Menlo Park, CA and [2]School of Medicine, Stanford University, Palo Alto, CA.

Higher rates of depression and lower rates of social and physical activities are independently associated with mortality; however, no studies that we know of examine depression and both types of activities together. We aim to examine depression and activities (social and physical) as time-varying predictors of mortality over a 23-year period among individuals representing a wide continuum of depressive symptoms. Using a prospective sample of 848 individuals (55% female, 86% white, 42% married, 35% unemployed, 36% with a high school education or less, average age 40 years old [SD = 15]); half were clinically depressed at baseline and the others composed a community sample matched on census tract, gender, and marital status. Baseline measures included demographic information, any alcohol use (81%), any smoking (42%), and any medical conditions (42%). Follow-up measures (1, 4, 10, and 23 years) included depressive symptoms, and past-month social (up to 8; e.g., meeting of club or organization) and physical (up to 4; e.g., going on a hike or long walk) activities; mortality was also documented. Multiple imputation was conducted due to missing data and Cox proportional hazards regression was used to test the aim. Older age (hazard ratio [HR] = 2.94), smoking (HR = 1.58) and medical conditions (HR = 1.22) were significantly associated with a higher risk, and female gender (HR = 0.64) and less education (HR = 0.87) were associated with a lower risk, of mortality. Controlling for all other variables, participation in more social activities (HR = 0.98) was associated with a significantly lower risk of mortality, whereas depressive symptoms and physical activities were not. Social activities may be a potentially valuable tool to promote health and delay mortality. Future research should investigate whether older males may benefit from community and/or technological interventions to bolster social resources.

CORRESPONDING AUTHOR: Andrea Finlay, PhD, Center for Health Care Evaluation, VA Palo Alto Health Care System, Menlo Park, CA, 94025; Andrea.Finlay@va.gov

C-087b

RAPID ACCESS TO INTEGRATED HEALTHCARE WITHIN AN URBAN VA MEDICAL CENTER

Daniel Baughn, PhD, Kendra Campbell, PhD, Ayesha Delany-Brumsey, PhD, Jamie Ratner, PsyD and Charles A. Filanosky, PhD, EdM
Mental Health Service (116B), Veterans Affairs San Francisco Medical Center, San Francisco, CA.

The integration of behavioral health into primary care is designed to address the behavioral health needs of patients who may not be seen in a specialty mental health clinic. Integrated care has been shown to reduce patient barriers to accessing mental health services, improve patient health outcomes, and facilitate interprofessional dialogue. At SFVAMC, primary care psychologists and their trainees serve as valued members of the primary care clinic and serve patients' behavioral health needs through warm handoffs and referrals between primary care and behavioral health providers. Patients completed a satisfaction survey about their access to co-located behavioral health services within a primary care visit. Primary care providers were also surveyed about their satisfaction with the behavioral health services. Twenty-three veterans ages 28 to 84 (mean = 56, SD = 14) and 21 primary care providers responded to the respective surveys. Findings indicated that 35% of patients identified this encounter as their first contact with a behavioral health provider. This co-located primary care-behavioral health model facilitated rapid access to care with over 90% of patients waiting 20 minutes or less to see a provider on the same day as their primary care appointment. Furthermore, 95% of patients expressed satisfaction with the quality of the behavioral health care. The provider satisfaction survey indicated similarly high levels of satisfaction with the co-located behavioral health model with 95% or more of providers indicating that they found the integrated clinic to be very helpful in facilitating behavioral health services and for patient consultation. Integrating behavioral health into primary care as a co-located model at the San Francisco VA is reducing barriers and increasing access to mental health for patients. Moreover, both patients and providers appear to be satisfied with this emerging model, which suggests further incentive for the development of integrated healthcare within VA.

CORRESPONDING AUTHOR: Daniel Baughn, PhD, Mental Health Service (116B), Veterans Affairs San Francisco Medical Center, San Francisco, CA, 94121; Daniel.Baughn@iCloud.com

C-087c

MEDIATORS OF SELF-RATED HEALTH IN OLDER-ADULTS WITH A DIAGNOSIS OF SCHIZOPHRENIA

Denisse Tiznado, Bachelors of Arts in Psychology,[1] Erika Roman, Associate Degree,[2] Paula Helu, Masters of Science,[3] Veronica Cardenas, PhD[2] and Brent Mausbach, PhD[2]
[1]Psychology, The University of Missouri Kansas City, Kansas City, KS; [2]The University of California San Diego, San Diego, CA and [3]The University of Southern California, Los Angeles, CA.

Higher mortality and lower rates of health promoting behaviors have been found in people with schizophrenia compared to the general population. Self-rated health is a construct that has been found to predict disability, overall health status, and mortality in different populations. Specifically, self-rated health in people with schizophrenia has been found to have a negative impact in their health self-management behavior. However, little is known about the relationship of self-rated health to psychosocial variables (e.g., symptoms of depression, perceived recovery). We hypothesized that perceived recovery would mediate the relationship between symptoms of depression and self-rated health in a sample of 180 middle-aged or older persons with schizophrenia (M age= 51.3 ± 7.1). A mediational model was tested to determine whether perceived recovery mediates the relationship between depression and self-rated health. Significance of mediation was tested using bootstrapping procedures with a 95% confidence interval. Regression analyses indicated that higher symptoms of depression were associated with lower levels of perceived recovery ($B = -1.40 \pm 0.19$, $t(178) = -7.37$, $p < .001$). Also, perceived recovery was significantly associated with self-rated health ($B = 0.025 \pm 0.007$, $t(177) = 3.59$, $p < .001$). Finally, the total effect of depressive symptoms on self-rated health ($B = -0.091 \pm 0.018$, $t(178) = -5.00$, $p < .001$) was significantly lower ($B = -0.056 \pm 0.020$, $t(177) = -2.79$, $p < .01$) after recovery was included in the model ($c - c' = -0.035$, 95% CI = -0.064, -0.012). Because our data are correlational, caution should be used when interpreting causality of these effects. However, depressive symptoms may indirectly influence patient well-being influencing recovery constructs (e.g., willingness to ask for help, more difficulty identifying health warning signs, and pursuit of goals). This research was supported by Grant NIMH R01MH084967.

CORRESPONDING AUTHOR: Denisse Tiznado, Bachelors of Arts in Psychology, Psychology, The University of Missouri Kansas City, Kansas City, KS, 64110; dtp64@mail.umkc.edu

C-087d

FUTURE ORIENTATION MEDIATES THE RELATION BETWEEN PAIN SEVERITY AND INTERFERENCE AND DEPRESSION

Jameson K. Hirsch, PhD,[1] Fuschia M. Sirois, PhD,[2] Ross B. Wilkinson, PhD[4] and Edward C. Chang, PhD[3]
[1]Department of Psychology, East Tennessee State University, Johnson City, TN; [2]Department of Psychology, Bishop's University, Sherbrooke, QC, Canada; [3]Department of Psychology, University of Michigan, Ann Arbor, MI and [4]Research School of Psychology, Australian National University, Canberra, ACT, Australia.

Pain is a primary reason that patients seek medical care, and is associated with poor physical and emotional quality of life. Both pain severity and interference may contribute to depression, yet little is known about potential mechanisms of this association. Future orientation, conceptualized as an ability to envision and work toward meaningful personal goals, may be a linkage. We examined the potential mediating effect of future orientation on the association between pain and depressive symptoms. Our sample of 101 primary care patients (71% female; mean age=42.19 [SD=12.83]) completed the SF-36v2 Bodily Pain Subscale, Brief Pain Inventory, Future Orientation Scale, and Center for Epidemiological Studies Depression Scale. Non-parametric bootstrapping mediation analyses, covarying age and sex, were conducted. Overall pain (SF-36v2 BP) was a partial mediator (CI: lower 95%= -.32, upper 95%= -.07); pain severity was a full mediator (CI: lower 95%=.16, upper 95%=1.30); and, pain interference was a partial mediator (CI: lower 95%=.17, upper 95%=1.15). In sum, greater pain was related to less future orientation which, in turn, was related to greater depression. Therapeutic promotion of future orientation, perhaps through Cognitive-Behavioral or Motivational Interviewing strategies, may reduce depression in patients experiencing pain; likewise, pain management therapies may enhance engagement in future-oriented health behaviors and interpersonal functioning, reducing depression.

CORRESPONDING AUTHOR: Jameson K. Hirsch, PhD, Department of Psychology, East Tennessee State University, Johnson City, TN, 37614; hirsch@etsu.edu

C-087e

BARRIERS TO MENTAL HEALTH SERVICES AMONG A SAMPLE OF DEPRESSED INDIVIDUALS: ONLINE TREATMENT AS AN ALTERNATIVE

Michelle L. Chan, BS and Alinne Z. Barrera, PhD
Palo Alto University, Palo Alto, CA.

This study focused on participants' self-identified barriers to mental health services, as well as web use for depression resources among currently depressed web users. Data were extracted from an anonymous web-based health survey. Participants were 948 individuals from 69 countries (mainly Spain, Mexico, Argentina, Chile, and UK) who completed the survey between November 2006 and October 2012 and who endorsed symptoms consistent with DSM-IV criteria for a current major depressive episode. Participants were, on average, 32 years old (SD=11.9), predominantly female (73.7%), self-identified as Latino (51.3%), and Spanish speaking (70.3%). Participants were categorized into mild (n=29), moderate (n=123), or severe (n=796) levels of depression, determined by CES-D cut-off scores (total scores of 16-20, 21-25, and 26 or more, respectively). Despite depression severity, less than half (46%) of the participants indicated ever seeking help for depression. Of those who indicated reasons for not seeking services, primary barriers included lack of services, lack of knowledge of where to obtain treatment, lack of transportation, cost of treatment, inconvenient service hours, long waits, and disruptions in work schedules. Therefore, alternative treatments for depressed individuals should be explored. Among depression severity, significant group differences (p <.001) were found in participants' use of the internet for depression information. Participants with severe depression were more likely to use the web to seek information on depression compared to those with mild or moderate depression. Significant group differences were not found when comparing willingness to participate in online depression resources. In fact, a majority of participants (89.5%), regardless of symptom severity, indicated they would utilize web-based depression interventions if they knew where and how to access them. Thus, regardless of depression severity, web based depression resources may be a valuable alternative or adjunct service to standard in person mental health services given the global public health impact of depression.

CORRESPONDING AUTHOR: Michelle L. Chan, BS, Palo Alto University, Emeryville, CA, 94608; mchan@paloaltou.edu

C-087f

MINDFUL EATING AND EATING ATTITUDES OF YOGA PRACTITIONERS

Rachel Levenson, MA[1] and Charles Swencionis, PhD[1,2]
[1]Ferkauf Graduate School of Psycholgoy, Yeshiva University, Bronx, NY and [2]Departments of Epidemiology/Population Health, and Psychiatry, Albert Einstein College of Medicine, Bronx, NY.

Yoga has been identified as an intervention for reducing disordered eating. Yoga is hypothesized to decrease disordered eating by promoting awareness of and responsiveness to one's body. Its principles involve regulating food intake based on bodily need, rather than emotional or situational factors. The present study examined mindful eating (i.e., a nonjudgmental awareness of physical and emotional sensations while eating or in a food-related environment) and eating attitudes among yoga practitioners. Participants were assessed for intensity and duration of yoga and exercise use. Recruitment centered on yoga studios in the NYC metropolitan area and email listserves. All participants (N=103; M age= 33.05, SD=10.98; 80% female; 88% Caucasian) completed online questionnaires including demographics, Mindful Eating Questionnaire (MEQ), and Eating Attitudes Test (EAT-26). Individuals endorsing current yoga practice reported higher levels of mindful eating (M=3.04, SE=.07) compared to individuals endorsing no current yoga practice (M=2.86, SE=.03). This was a significant difference (t(99)=-2.57, p=.012), representing a medium-sized effect (r =.25). Mindful eating was positively associated with intensity (r=.24, p=.047), but not duration of yoga practice. There were no significant differences observed in mindful eating among participants endorsing exercise use compared to no exercise use. Findings suggest that yoga facilitates mindful eating, with higher mindful eating observed in those who practice more intensely. Because improved mindful eating was observed in yoga users but not in exercise users, findings further suggest that some aspect of yoga other than its physicality facilitates a healthy awareness of and responsiveness to bodily sensations (e.g., hunger and satiety). The results indicate yoga and mindfulness are teachable skills, which may be effective adjunctive interventions for clients with disordered eating.

CORRESPONDING AUTHOR: Rachel Levenson, MA, Ferkauf Graduate School of Psycholgoy, Yeshiva University, New York, NY, 10011; rachel.levenson@gmail.com

C-087g

IMPLICATIONS OF TEXT MESSAGING FOR SOCIAL RELATIONSHIPS AND WELLBEING

Susan Holtzman, PhD, Megan Shallow, BA candidate, Karmen McDivitt, BA candidate and Kara Turcotte, BA
Psychology, University of British Columbia (Okanagan), Kelowna, BC, Canada.

A vast body of literature has demonstrated that strong social relationships are associated with greater emotional and physical wellbeing. However, the majority of this research has been conducted prior to the recent surge in the use of text messaging as a means of social communication. As a result, little is known about the extent to which this technology may be a source of stress, how text messaging may affect the quality of our social relationships, and whether there are individual differences in these effects. The current study involved an exploratory cross-sectional survey that was administered to a sample of 196 emerging adults. The survey contained specific questions related to text messaging (e.g., frequency and reasons for use and texting-related stressors), as well as standardized measures of perceived social support, social anxiety, and the Big Five personality traits. Findings revealed that the most stressful aspect of text messaging was that responses are not provided quickly enough, followed by the interpersonal conflict that arises due to miscommunications via text messaging. High rates of text messaging were unrelated to levels of perceived social support. However, social anxiety was related to a greater use of text messaging to avoid face-to-face communication and to pass the time. Not surprisingly, those high on social anxiety reported significantly greater feelings of being ignored, criticized, and misunderstood via text messaging. Gender differences in the purposes of text messaging emerged (e.g., females reported greater use to stay connected with others). However, males and females reported similar levels of texting-related stress. Associations between personality and text messaging will also be reported. The present study adds to a growing body of literature regarding the mental health correlates of text messaging. Implications for the use of text messaging in health behaviour interventions, as well as the potential need for interventions to encourage healthy use of text messaging will be discussed.

CORRESPONDING AUTHOR: Susan Holtzman, PhD, UBC-O User, University of Victoria, Kelowna, BC, V1V1V7; susan.holtzman@ubc.ca

C-094a

EXAMINING THE IMPACT OF FUTURE TIME PERSPECTIVE ON THE PERSUASIVENESS OF HEALTH MESSAGES

Lindsay R. Duncan, PhD,[1] Susan E. Rivers, PhD,[1] Amy E. Latimer, PhD,[2] Kirti U. Parmar, BS in prgress,[1] Kimberly A. Embacher, BA[1] and Peter Salovey, PhD[1]
[1]Yale University, New Haven, CT and [2]Queen's University, Kingston, ON, Canada.

The purpose of this study was to determine if socioemotional selectivity theory (SST) can inform the development of messages promoting healthy-lifestyle behaviors. SST asserts that individuals' perceptions of time play a critical role in their selection of specific goals; when individuals perceive time as expansive they pursue knowledge-related goals (e.g., networking with new people), but when they perceive time as limited, they prioritize emotionally-meaningful goals (e.g., strengthening relationships with loved ones). We tested the hypothesis that individuals with more limited time perspectives would rate messages highlighting emotionally-meaningful goals as more persuasive than messages highlighting knowledge-related goals, and, that individuals with more expansive time perspectives would have the opposite pattern of ratings. We created three pairs of messages encouraging two healthy-lifestyle behaviors - healthy eating and sleep. Each pair consisted of one message highlighting emotionally-meaningful goals and one highlighting knowledge-related goals. We tested the message pairs using convenience samples of adults in an urban community ($N = 174$, $Mage = 46.59$, $SD = 21.10$). The participants read both versions of each message pair and indicated which message they thought would be more effective for encouraging the target behavior. Logistic regression analyses revealed that future time perspective was a significant predictor of message selection in all three message pairs ($ps < .003$). Consistent with our predictions and SST, individuals with more limited time perspectives were more likely to select the message highlighting emotionally-meaningful goals and individuals with more expansive time perspectives were more likely to select the messages highlighting knowledge-related goals. The results suggest that the tenets of SST could be leveraged to create effective health messages for individuals with varying time perspectives.

CORRESPONDING AUTHOR: Lindsay R. Duncan, PhD, Yale University, New Haven, CT, 06520; lindsay.duncan@yale.edu

C-100a

DISSEMINATING EVIDENCE-BASED NUTRITION INFORMATION TO PCPS

Marissa Burgermaster, MAEd, MS,[1,2] Amanda Birnbaum, PhD, MPH,[1] Jennifer Brown Urban, PhD[1] and Doreen Liou, PhD, RD[1]
[1]Montclair State University, Montclair, NJ and [2]Teachers College Columbia University, New York, NY.

Primary care practitioners (PCPs) have a role in preventing chronic disease through nutrition assessment, education and referral. PCPs tend to have positive attitudes about nutrition, but many do not engage in these nutrition-related practice behaviors. Improving PCPs' access to evidence-based nutrition information may increase their nutrition practice behaviors and improve patient outcomes. We used concept mapping to systematically explore PCPs' ($n=14$) and nutrition researchers' ($n=30$) ideas about the importance and feasibility of methods to disseminate such information to PCPs. We first asked participants to independently brainstorm dissemination methods, then asked them to sort 69 compiled statements into clusters and rate each cluster on importance and feasibility. We used CS Core concept-mapping software to generate six types of maps that graphically represent relationships between both individual statements and clusters, comparing researchers' and PCPs' responses: (1) point maps using multidimensional scaling to represent similarity of statements on a 2-D map; (2) cluster maps using hierarchical clustering to group similar statements on the point map; (3) and (4) point and cluster rating maps showing average ratings for each statement or cluster, respectively; (5) pattern matching graphs comparing how important and feasible PCPs and researchers rated each cluster; and (6) go-zone graphs, plotting each statement on X,Y (importance, feasibility) axes. The final solution yielded 8 clusters such as practice tools, policy and continuing education. Despite strong agreement between researchers' and PCPs' feasibility ratings ($r=.94$, $p<.01$), we found discrepancies in the perceived importance of different approaches, suggesting a disconnect between PCPs and nutrition researchers that warrants further research. Using go-zone graphs, this exploratory study also identified areas for future research and potential dissemination methods, particularly practice tools and education.

CORRESPONDING AUTHOR: Marissa Burgermaster, MAEd, MS, Nutrition and Health Sciences, Montclair State University, Maplewood, NJ, 07040; burgermastm1@mail.montclair.edu

C-100b

RESULTS OF A RANDOMIZED STUDY OF CALORIFIC--A COMMERCIALLY AVAILABLE, DIET-TRACKING SMARTPHONE APPLICATION

Eric B. Hekler, PhD,[1] Lauren Grieco, PhD,[2] Sandra Winter, PhD,[2] Jylana Sheats, PhD,[2] Matthew Buman, PhD[1] and Abby C. King, PhD[2]
[1]ASU, Phoenix, AZ and [2]Stanford University, Stanford, CA.

The proliferation of smartphone applications (apps) focused on health is astounding but few have been evaluated. We tested whether a commercially available app focused on diet (i.e., Calorific) improved healthful eating relative to apps focused on physical activity. Data were from a randomized study (Mobile Interventions for Lifestyle Exercise and Eating at Stanford; MILES) in which 93 inactive adults ages 45 years and older (60.0±9.3 years of age, BMI m=28.8±5.8, 73.1% female, 84.6% white, 77.4% bachelors degree or higher) were randomized to 1 of 4 apps; a commercially-available and evidence-informed app focused on promoting improved diet (i.e., Calorific) via Epstein's Traffic Light Concept, or 1 of 3 theoretically-based custom apps targeting physical activity. The physical activity applications were collapsed into one group (n=68; Calorific intervention group n=25). Healthful eating was assessed at baseline and after the 8-week intervention using an adaptation of the Harvard Food Frequency Questionnaire. Servings per week of food categories (i.e., vegetables, fruits, high fat dairy, high fat meats, processed foods, and sweets) were identified. After controlling for baseline consumption, ANCOVA revealed significant group differences in processed foods (d=0.64), sweets (d=0.69), and high fat dairy (d=0.72; ps<.01) and trend differences in vegetable consumption (d=0.42, p=.066) and high fat meat (d=0.39, p=.086). All differences were in the direction of improved diet among those using Calorific except vegetables as those using the physical activity apps trended towards slightly more vegetables at follow-up. Results suggest Calorific may be effective at promoting improved diet via reductions in eating processed foods, candies and sweeties, high fat dairy, and and higher fat meats among mid-life and older adults over two months of use. Future research should explore longer-term use of the app, its comparative effectiveness to other research and commercial apps, and its potential utility as a component of weight-loss interventions.

CORRESPONDING AUTHOR: Eric B. Hekler, PhD, ASU, Phoenix, AZ, 85003; ehekler@asu.edu

C-100c

GENDER DIFFERENCES IN THE RELATIONSHIP BETWEEN NEIGHBORHOOD CHARACTERISTICS AND FRUIT AND VEGETABLE CONSUMPTION AMONG OLDER AFRICAN AMERICANS

Janelle Armstrong-Brown, PhD,[1] Eugenia Eng, DrPH,[2] Wizdom Powell Hammond, PhD,[2] Catherine Zimmer, PhD[3] and J. Michael Bowling, PhD[2]
[1]Institute on Aging, University of North Carolina at Chapel Hill, Chapel Hill, NC; [2]Health Behavior, UNC Gillings School of Global Public Health, Chapel Hill, NC and [3]Odum Institute, University of North Carolina at Chapel Hill, Chapel Hill, NC.

Background: Neighborhood characteristics have been shown to be associated with diet. Few studies have examined whether the influence of neighborhood characteristics on health behaviors varies by gender. The objective of the current study was to examine how neighborhood characteristics are associated with fruit and vegetable (fv) consumption among older African Americans.

Methods: Participants were 472 older African Americans, aged 52-99 years, living in urban counties of NC who were assessed by questionnaire between 2008-2009. Geocoded addresses from 151 men and 321 women were used for the analysis. The following neighborhood characteristics were examined: racial residential segregation, education, and poverty. Multilevel regression analyses were conducted to determine bivariate relationships among variables.

Results: When examining the sample as a whole, neighborhood education was associated with fv consumption. However, this association became insignificant when examining men alone. For women, neighborhood education was significantly associated with lower levels of fruit and vegetable consumption ($\beta=-.106$ $p<.01$). For men, neighborhood poverty was significantly associated with lower levels of fruit and vegetable consumption ($\beta=-.065$, $p<.05$), while no significant association was observed among women.

Conclusion: The association between neighborhood characteristics and fruit and vegetable consumption among older African Americans varies by gender. Future research should consider disentangling neighborhood factors when examining their association to health behaviors and outcomes. Additionally, in the development of interventions, researchers should recognize the differential impact of neighborhood characteristics on men and women.

CORRESPONDING AUTHOR: Janelle Armstrong-Brown, PhD, Institute on Aging, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599-1030; jab@unc.edu

C-121a

EVALUATION OF PHONE COACHING QUALITY IN AN OBESITY PREVENTION INTERVENTION

Alison M. Roeder, BA, Meghan M. Senso, MS and Nancy E. Sherwood, PhD
HealthPartners Institute for Education and Research, Bloomington, MN.

Many pediatric obesity interventions involve one-on-one coaching sessions with parents; however, session quality is rarely evaluated or reported. The purpose of this study was to test the feasibility of assessing phone coaching quality in Healthy Homes/Healthy Kids-Preschool, a parent-targeted obesity prevention trial for children ages 2-4. To assess the overall session quality (i.e. parent-coach relationship, parent engagement) and quality of goals set during sessions, survey items were coded on a 5-pt Likert scale, with 5 being the best. Percent of time spent discussing target areas (healthy meals/snacks, active play, media, and sweetened beverages) was also coded. Goal quality and session content were coded by coaches immediately following the session. These constructs and overall session quality were also scored by trained and certified coders. ICC for certification of coders ranged from 0.84 - 0.93 (N=5 sessions). A total of 88 sessions were coded by both coaches and coders (N=27 participants). As reported by coders, 36% of sessions focused on healthy meals/snacks, 20% on active play, 11% on media, and 8% on sweetened beverages. Parents talked the majority of the time in 78% of the sessions and were "very engaged" in 65% of sessions. The sessions were "on task" for the entire duration in 98% of the calls. Parents set a goal in 84% of the sessions. Overall ICC between coaches and coders was 0.46. Goal specificity was rated as at least "somewhat specific" for 34% of goals by coders and 86% by coaches. The extent to which barriers were anticipated was rated as at least "anticipated somewhat" for 25% of goals by coders and 68% by coaches. All goal quality items were rated higher by coaches than coders (p<.0001). Assessing the quality of obesity prevention phone coaching is feasible and may be more accurate using independent coders. Additionally, there was sufficient variability in session content and quality allowing for future examination of the relationship between call quality and outcomes in parent-centered pediatric obesity prevention interventions.

CORRESPONDING AUTHOR: Alison M. Roeder, BA, HealthPartners Institute for Education and Research, Bloomington, MN, 55440-9840; alison.m.roeder@healthpartners.com

C-121b

APPLYING THEORY-DRIVEN BEHAVIOR CHANGE PRINCIPLES TO FACEBOOK CAMPAIGNS FOR WEIGHT LOSS

Anjali Gupta Kansagara, MS, Gina Merchant, MPH, Simon J. Marshall, PhD, James H. Fowler, PhD, Karen J. Calfas, PhD and Kevin Patrick, MD, MS
CalIT2, UC San Diego, La Jolla, CA.

Using theory-driven, evidence-based behavior change strategies in weight-loss campaigns may increase their effectiveness. A recent meta-regression identified five self-regulatory strategies important for changing physical activity and dietary habits: intention formation, goal setting, self-monitoring, feedback, and goal review. We describe the systematic application of these strategies to a series of Facebook campaigns embedded in a randomized control trial to promote weight-loss in overweight/obese college students. Participants include 202 18-35 year old overweight/obese college students from three Southern California universities (mean age = 22(±4) yr; mean BMI=29(±2.8); 70% female). Specific intervention activities were abstracted from each strategy for two FB Campaigns: No candy until Halloween and Mindful eating for Thanksgiving. The reach, adoption, and effectiveness of these campaigns were measured using aggregated FB data including "likes," posts (comments, photos, videos), polls, and shares. For both campaigns, participants were invited via email to participate and engage with the campaign on FB. Participants responded to FB posts/polls to make a behavioral resolution, set goals, outline how to achieve those goals, self-monitor goal progress, and utilize existing social networks to help reach goals. A health coach provided feedback on FB throughout both campaigns. For the Halloween campaign, 32 (16%) pledged to participate (intention formation) but only 12 (38%) completed the goal. In the Thanksgiving campaign, 19 (9%) pledged, with 7 (37%) completing the goal. Adoption rate was low for both campaigns (6% and 3.5% of total) although retention rates were similar (38% vs. 37%). To the best of our knowledge, this represents the first study to apply theory-driven strategies of behavior change in Facebook campaigns designed for weight-loss among young adults. Further research is needed to identify barriers using evidence-based behavior change strategies for weight-loss in a social network context.

CORRESPONDING AUTHOR: Anjali Gupta Kansagara, MS, UC San Diego, La Jolla, CA, 92093-0811; akansagara@eng.ucsd.edu

C-121c

UNDERSTANDING WEIGHT LOSS ATTEMPTS AND BODY IMAGE PERCEPTIONS AMONG AFRICAN AMERICAN, LATINO, AND WHITE CHILDREN

Anna E. Epperson, BA, Anna V. Song, PhD and Jan L. Wallander, PhD
Psychological Sciences, University of California, Merced, Merced, CA.

Weight loss and its associated behaviors are a complex issue, and despite their importance for combating the obesity epidemic, are not well understood even in adults. Children increasingly are initiating weight loss behaviors, yet little is known what may influence their efforts. We test the hypotheses that both perception and size of one's body predict these behaviors, and that body perceptions mediate the association between body size and weight loss behaviors. We also examine potential differences among racial/ethnic groups in these relationships. Using complex sampling, data were collected from 5th grade students (N = 4,010) in Los Angeles, CA, Houston, TX, and Birmingham, AL who were approximately evenly distributed among African American, Latino, and White. Body size was measured by body mass index (BMI) and waist circumference, and body perceptions with a psychometric scale and a figure drawing comparison test. Structural equation modeling (SEM) was used to test the model and fit statistics indicated a good model fit (CFI = 0.98; TLI = 0.97; RMSEA = 0.04), which was invariant across sex as well as race/ethnicity. Body size ($p < .01$) and body perceptions ($p < .01$) predicted weight loss attempts. Perception of one's body mediated the association between body size and weight loss attempts ($p < .01$). No significant differences in weight loss attempts between males and females were found. However, Latinos and African Americans reported more weight loss attempts than Whites. Latinos also reported a poorer body image compared to Whites and African Americans. Lower socioeconomic status (SES) was associated with poorer body perceptions, but not with weight loss attempts. For children, both body size and body perception appear to be important factors in weight loss attempts, which can be useful information for planning obesity prevention programs.

CORRESPONDING AUTHOR: Anna E. Epperson, BA, Psychological Sciences, University of California, Merced, Merced, CA, 95343; aepperson@ucmerced.edu

C-121d

WEIGHT OUTCOMES IN CHILDREN: AN EXAMINATION OF EATING TRAITS AND SELF-REGULATION CAPACITIES

Brooke Blocker, BS, Kevin Prybol, BS, Anna Uehara, BS and Bernard F. Fuemmeler, PhD
Department of Community and Family Medicine, Duke University Medical Center, Durham, NC.

Purpose: Relationships between eating traits, self-regulation, and weight outcomes in children have been reported in a number of studies. However, few studies have examined which of these temperament vulnerabilities (food related vs. general cognitive functioning) better predict weight outcomes. In this study, we examined the association between eating traits, executive functioning and BMI z-score among children ages 2 to 5.5 years.

Methods: Parents and children (n=126) were recruited from an ongoing birth cohort study. Mothers reported their child's level of executive functioning using the Behavior Rating Inventory of Executive Function-Preschool Version (BRIEF-P), their child's eating traits using the Children's Eating Behavior Questionnaire (CEBQ), and their child's weight and height. Bivariate and regression models were used to examine the unadjusted relationship between variables and the relationship adjusting for race, age, sex, maternal education, and maternal BMI.

Results: Significant correlations were observed between BMI z-score and Executive Functioning ($r = .161, p < .05$). After controlling for the above covariates Executive Functioning and Food Responsiveness remained significant predictors of children's BMI z-score ($\beta = .194$, SE = .005, $p < .05$ and $\beta = .215$, SE = .213, $p < .05$) respectively. There were no significant interactions observed between indicators of eating traits and executive functioning predicting BMI z-score.

Conclusion: These data contribute to a growing consensus that research is needed examining differential relations between eating behavior dimensions, and weight and dietary outcomes in young children.

CORRESPONDING AUTHOR: Victoria B. Blocker, BS, Community and Family Medicine, Duke University, Durham, NC, 27707; brooke.blocker@duke.edu

C-121e

PHYSICAL ACTIVITY PROVIDES DIFFERENTIAL PROTECTION AGAINST OBESITY RISK AMONG AFRICAN AMERICAN, HISPANIC, AND WHITE YOUTH DURING EARLY ADOLESCENCE

Chris Fradkin, MA and Jan L. Wallander, PhD
University of California, Merced, Merced, CA.

Past research has described the relationship between physical activity and obesity in adolescents as "controversial." Some studies have found an inverse relationship between the two variables, others have found a positive relationship, and still others have found no relationship at all. The present research further examined the role of physical activity in obesity risk in adolescents in a longitudinal cohort design and by considering the moderating influences of race/ethnicity and gender.

A multi-site study enrolled 4,414 children from one of the three major racial/ethnic groups in the U.S. (Hispanic = 37%, African American = 36%, White = 27%), who were assessed longitudinally in both 5th and 7th grade. Direct measurements of height and weight were used to calculate body mass index (BMI) and classify participants into obese vs. non-obese. Children provided information on their physical activity including effort and time and physical education, and sports participation.

Complex sampling analysis, controlling for household socioeconomic status, revealed significantly lower prevalence of physical activity among African American and Hispanic youth when compared to white youth, in both 5th and 7th grade. Findings also revealed lower prevalence of physical activity among females compared to males in 7th grade. In both 5th and 7th grade, there was an inverse relationship between physical activity and obesity risk only among white and Hispanic males; there was no relationship between the two variables among females of any racial/ethnic group or African American males.

These findings suggest that there are racial/ethnic and gender differences in the relationship between physical activity and obesity risk in young adolescents. These findings provide basis for further exploration of the complicated and controversial relationship between physical activity and obesity risk among youth across adolescence and underscore the necessity to consider race/ethnicity and gender.

CORRESPONDING AUTHOR: Chris Fradkin, MA, University of California, Merced, Merced, CA, 95340; chrisfradkin@gmail.com

C-121f

ARE PARENTAL PERCEPTIONS OF CHILD WEIGHT RELATED TO PARENTAL WEIGHT-RELATED BEHAVIORS?

Elisabeth M. Seburg, BA, Meghan M. Senso, MS, Alicia S. Kunin-Batson, PhD and Nancy E. Sherwood, PhD
HealthPartners Insitute for Education and Research, Bloomington, MN.

Although improving parental recognition of child overweight is a common component of parent-focused pediatric obesity prevention efforts, research on its relationship with specific parental weight-related behaviors is limited. We investigated the association of parental perceptions of child weight (assessment of weight status and concern about overweight) with the following parental weight-related factors: family rules about TV and media; TV viewing at meals; family meals; restaurant use; physical activity with child; and self-efficacy to help children be physically active and eat healthy. Relationships between parental perceptions of child weight and household food availability were also assessed. We used baseline data from Healthy Homes/Healthy Kids 5-10, an ongoing obesity prevention intervention study. Because we were interested in parental recognition of child overweight, only children who were overweight (85-95 BMI percentile) were included in this analysis (N=215 child-parent dyads, child BMI percentile=90.7 ± 2.8, age=6.6 ± 1.7, 51.2% female, 78.7% white). Most parents (87.6%) reported their child was average weight, while almost half (48.3%) were concerned about their child becoming overweight. In regression analyses controlling for parent and child demographic characteristics, parental concern about child weight was associated with lower parental confidence to increase daily child vegetable consumption (OR=0.45, 95% CI 0.24-0.86). Parental recognition of child overweight was associated with lower odds of parental self-efficacy to reduce child fast food intake (OR=0.20, 95% CI 0.05-0.73). No other significant relationships were found. Findings suggest an inverse relationship between parental perceptions and concern about child weight status and self-efficacy to make healthy diet-related changes among parents of overweight children. These findings do not indicate associations with other parental weight-related behaviors. Longitudinal analyses are needed to investigate the effects of parental perceptions on these behaviors over time.

CORRESPONDING AUTHOR: Elisabeth M. Seburg, BA, HealthPartners Insitute for Education and Research, Bloomington, MN, 55440; Elisabeth.M.Seburg@HealthPartners.com

C-121g

INFLUENCES ON HEALTHY EATING AMONG LOW-INCOME AFRICAN AMERICAN ADOLESCENTS, PERSPECTIVES OF YOUTH AND ADULT CAREGIVERS

Elizabeth Anderson Steeves, MS, RD,[1] Katherine A. Johnson, MS,[2] Suzanne L. Pollard, MSPH[3] and Joel Gittelsohn, PhD, MS[1]
[1]Johns Hopkins Global Center on Childhood Obesity and Center for Human Nutrition, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; [2]Department of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD and [3]Department of International Health, Global Disease Epidemiology and Control, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.

Eating behaviors shift in adolescence due to increased autonomy in food-related decisions. High rates of obesity, coupled with nutritional inadequacy often seen in this population indicate that healthy influences are needed. In-depth interviews were conducted with low-SES Baltimore youth ages 10-15 (n=18, 8 males, 10 females) and their adult caregivers (n=9) as formative research for B'More Healthy: Communities 4 Kids, a multi-level youth obesity prevention trial. The purpose of these interviews was to identify appropriate communication channels for delivery of nutrition messages to youth, including identification of individuals within their social network that influence food-related decisions.

While most youth were aware of their peers' eating behaviors, stating that they frequently discussed food choices and ate similar foods to their peers, the youth often found the influence of peers on their food choices or eating patterns to be minor. Contrarily, parents of these youth often identified the youths' peers as influencing both their eating and activity habits- especially with respect to exposure to new foods.

On the other hand, youth cited adult family members such as parents or grandmothers as the primary individuals from whom they would ask advice, with teachers and counselors also mentioned. Having life experience and the youth's best interest in mind, and being honest/not sugar-coating responses were provided by youth as rationale for seeking advice from these individuals over others. These results indicate that peers and adults both provide significant influence on youths' eating behaviors and must be dually considered when designing interventions for youth. Supported by NICHD U54HD070725

CORRESPONDING AUTHOR: Elizabeth Anderson Steeves, MS, RD, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, 21205; etanders@jhsph.edu

C-121h

INTERACTIVE EFFECTS OF CHILDHOOD ADVERSITY AND ACUTE STRESS ON FOOD INTAKE

Ezequiel M. Galarce, PhD,[1] Barbara Laraia, PhD, MPH, RD,[1] Nancy Adler, PhD,[1] Leonard H. Epstein, PhD,[2] Kiernan Michaela, PhD,[3] Boggiano M. Mary, PhD,[4] Lustig H. Robert, MD,[1] Dallman F. Mary, PhD,[1] Marin E. Thompson, MA[1] and Elissa Epel, PhD[1]
[1]UCSF, San Francisco, CA; [2]SUNY at Buffalo, Buffalo, NY; [3]Stanford University, Palo Alto, CA and [4]University of Alabama at Birmingham, Birmingham, AL.

Background:

A substantial human and animal literature shows a causal relationship between acute stress and increased caloric intake. More recently, an association between early trauma and obesity has been established. This study aims to examine the interactive effects of childhood adversity and acute perceived stress on caloric intake in the laboratory.

Methods:

Forty obese pre-menopausal women were recruited for a study on stress and food addiction. During the baseline interview, they completed a seven-item early adversity questionnaire (STRAIN) and two demanding cognitive tasks to increase cognitive load and stress. They were subsequently asked to rate how stressful the tasks had been. This was immediately followed by free access to chocolate chip cookies. Analyses controlled for BMI.

Results:

No main effects of early childhood adversity or acute perceived stress on food intake were found but there was a significant interaction between the two ($p<0.05$). Among women who had experienced high levels of childhood adversity (>2 adverse events), greater perceived acute stress was associated with increased food intake. In contrast, among women who reported low levels of childhood adversity, greater perceived acute stress was associated with reduced food intake.

Conclusion:

It is currently unknown why some people eat more and others eat less under stress. We found both patterns in this study. Our data suggests that childhood adversity may be an important moderator in promoting vulnerability to stress-eating —increased food intake after episodes of acute stress related to cognitive load. More research examining the long-term consequences of early stress on neural responses to food and actual food intake may shed light on individual and group differences in risk for obesity.

CORRESPONDING AUTHOR: Ezequiel M. Galarce, PhD, Center for Health & Community, UCSF, San Francisco, CA, 94118; galarcee@chc.ucsf.edu

C-121i

A RANDOMIZED CONTROLLED TRIAL OF MATCHING OF DEPOSIT CONTRACTS TO PROMOTE WEIGHT LOSS

Jeffrey T. Kullgren, MD, MS, MPH,[1,2] Andrea B. Troxel, PhD,[3] George Loewenstein, PhD,[4] Laurie A. Norton, MA,[3] Dana Gatto, BS,[3] Yuanyuan Tao, MS,[3] Jingsan Zhu, MS, MBA,[3] Heather Schofield, MS,[5] Judy A. Shea, PhD,[3] David A. Asch, MD, MBA,[6,3] Thomas Pellathy, PhD,[7] Jay Driggers, MBA[8] and Kevin G. Volpp, MD, PhD[6,3]
[1]Ann Arbor VA Healthcare System, Ann Arbor, MI; [2]University of Michigan, Ann Arbor, MI; [3]University of Pennsylvania, Philadelphia, PA; [4]Carnegie Mellon University, Pittsburgh, PA; [5]Harvard University, Cambridge, MA; [6]Philadelphia VA Medical Center, Philadelphia, PA; [7]McKinsey & Company, Pittsburgh, PA and [8]Horizon Healthcare Innovations, Newark, NJ.

Background: Deposit contracts are behavioral economic devices that ask people to put their own money at risk that they forfeit if they do not meet a goal. We tested whether deposit matching could increase participation and weight loss in deposit contracts designed to promote weight loss.

Methods: We randomized 132 employees of Horizon BCBS of NJ to a monthly weigh-in control group or monthly opportunities to deposit $1 to $3 per day with daily feedback. Deposits were either not matched, matched 1:1, or matched 2:1 and refunded for each day a participant was at or below goal weight. The primary outcome was weight loss at 24 weeks. Secondary outcomes included deposit contract participation and weight loss after 12 weeks of follow-up.

Results: After 24 weeks, control participants gained a mean of 1.0 lb (SD 7.6), compared to mean weight losses of 4.3 lbs (SD 8.9; P=.03) in the no match arm, 5.3 lbs (SD 10.1; P=.005) in the 1:1 match arm, and 2.3 lbs (SD 9.8; P=.29) in the 2:1 match arm. Overall, 29.3% of participants in a deposit contract arm made at least one deposit, and there were no significant differences in participation rates across the 3 deposit contract arms. After 12 weeks of follow-up, control participants gained a mean of 2.1 lbs from baseline (SD 7.9), compared to mean weight losses of 5.1 lbs (SD 11.1; P=.008) in the no match arm, 3.6 lbs (SD 9.6; P=.02) in the 1:1 match arm, and 2.8 lbs (SD 10.1; P=.12) in the 2:1 match arm.

Conclusions: Matching of deposits did not increase participation in deposit contracts designed to promote weight loss. Greater weight loss in deposit contract arms may have been mediated by daily feedback these participants received.

CORRESPONDING AUTHOR: Jeffrey T. Kullgren, MD, MS, MPH, Ann Arbor VA Healthcare System and University of Michigan, Ann Arbor, MI, 48113; jkullgre@med.umich.edu

C-121k

MOVE! WEIGHT MANAGEMENT PROGRAM: SURVEY OF PATIENT EXPERIENCE

Kenneth R. Jones, PhD, Leila Kahwati, MD, MPH, Trang Lance, MPH, Sandy Clark, MD and Linda Kinsinger, MD, MPH
National Center for Health Promotion and Disease Prevention, Veterans Affairs, Durham, NC.

Patients served by the Veteran Health Administration have unprecedented levels of overweight/obesity. Since 2006, 450.000 Veterans have participated in the MOVE! Weight Management Program. Patient experience (satisfaction, program perceptions, and health behavior) has not been systematically assessed. A nationally-representative sample of 5,000 MOVE! participants seen during 2010 was assembled using a 2-stage stratified cluster design to represent various levels of facility complexity. As women make up less than 20% of patients, women were oversampled. A 26-item mailed survey was developed by VA investigators and an external consultation team. The survey was fielded using a modified Dillman approach. With a 50% response rate, results were weighted for non-responders and gender to achieve population estimates. Respondents averaged 59 years, were 66% white (18.6% African American, 7% Hispanic), 53% had high school education, and 53% were married. Data from matched clinical records revealed high levels of weight-related illness: diabetes-45%, hypertension-76%, COPD-13%, and sleep apnea-35%. At the time of completion, 42.6% had prematurely discontinued, 15.1% had completed, and 42.4% were still participating. Common reasons for discontinuation were loss of motivation and difficulties in attending sessions. Patients endorsed the following items as "most of the time" or "all of the time": satisfaction with weight change (52%), satisfaction with program organization (66%), and receiving assistance to set dietary (72%) and physical activity change goals (66%). Only 18% reported weighing daily. Those reporting higher satisfaction with weight loss reported engaging in recommended levels of exercise, keeping a dietary log, and attending group as opposed to individual sessions. The findings suggest that addressing motivation and barriers to participating in care may enhance participation. Daily weighing should also be more actively promoted. This study is one of the first to report patient experiences with a real-world clinical weight management program.

CORRESPONDING AUTHOR: Kenneth R. Jones, PhD, National Center for Health Promotion and Disease Prevention, Dept. of Veterans Affairs, Durham, NC, 27705; kenneth.jones6@va.gov

C-121l

REALITY VERSUS PERCEPTION: CURRENT KNOWLEDGE AND UNDERSTANDING OF PERCENT BODY FAT AND BMI AMONG COLLEGE STUDENTS

Lynn Romejko-Jacobs, PhD, Kristen P. McAlexander, PhD and Kelyn Y. Rola, MS
Applied Physiology and Wellness, Southern Methodist University, Dallas, TX.

Although studies have increasingly focused on the prevention and treatment of obesity for over a decade, national efforts to study college populations have decreased, despite a significant increase in the prevalence of overweight and obesity among them. The general population often misperceives their weight status and body composition, yet this level of misperception has not been extensively measured among college students, despite their significant lifestyle changes and an increasing vulnerability to weight gain. Students (N= 414, M age=19.28±1.60) who enrolled in a wellness class at a private southwestern university self reported height, weight and percent body fat and completed demographic and health status questionnaires within the first two weeks of the academic semester. Wellness class instructors measured height and weight to calculate body mass index (BMI) and used skinfold calipers to measure and calculate percent body fat using the 3-site Jackson, Pollock and Ward's age and gender specific formula for women (N=216, 52.2%) and the 3-site Jackson, Pollock's formula for men. Overall, students significantly underestimated their actual BMI (t=-6.637, p=0.000), yet there was no significant difference for perceived and actual percent body fat. Most (89.6%) students preferred using percent body fat rather than BMI to assess their individual health risks because they understood it better. Bivariate analyses and multiple regression suggested that actual BMI and gender were significantly associated with actual percent body fat but ethnicity and age were not F(4,395)=200.657; p=.000. Females significantly underestimated percent body fat (t=-6.155, p=.000), yet males significantly overestimated percent body fat (t=3.852, p=.000). Females did not significantly misperceive their BMI (M actual= 22.21±3.66) yet males did (M actual=23.77±4.30; t=-7.844, p=.000), suggesting that college students may understand and estimate their personal body fat percentage more accurately than BMI but gender may be predictive of these perceptions.

CORRESPONDING AUTHOR: Kristen P. McAlexander, PhD, Applied Physiology and Wellness, Southern Methodist University, Dallas, TX, 75275; kmcalexander@smu.edu

C-142a

WHO SEEKS HEALTH INFORMATION FROM THE INTERNET VERSUS A HEALTH CARE PROVIDER?

Amber Emanuel, MA and John Updegraff, PhD
Kent State University, Kent, OH.

INTRODUCTION: There is an increasing amount of health information on the internet. However, health information on the internet may not always be as valid as health information provided by a physician. Thus, the present study examined the relationship between perceptions of patient-provider interactions, health literacy, and seeking health information to try to understand who would seek health information on the internet versus a physician.

METHODS We analyzed recently released cross-sectional data from Cycle 1 of the 2012 Health Information National Trends Survey. Participants (n = 2,965) answered a number of questions related to their beliefs and behaviors concerning cancer and, in particular, what specific source they would use if they had a strong need for health information. For the analyses presented here, age, education, and income were used as covariates.

RESULTS: More participants reported using the physician (57.01%) as a source if they had a strong need for health information, whereas 42.99% reported they would utilize the internet. In relation to our covariates, those who were younger, more educated, and wealthier were more likely to report seeking health information from the internet versus a physician. After controlling for these covariates, individuals who would seek health information on the internet report less positive interactions with doctors (t = 4.54, p < .001), less trust in their doctor (t=-5.81, p <.001), reporting their doctor doesn't take care of their needs (t = -4.25, p = .010), and higher levels of trust in the internet (t = 7.96, p < .010). There was no significant relationship between health literacy skills and source of health information (t = -1.81, p = 0.076).

DISCUSSION: We found that participants who reported they would seek health information on the internet instead of from their physician were more likely to report dissatisfaction and distrust of their current health care providers. Surprisingly, health literacy skills did not influence information-seeking source. Thus, individuals may seek health information on the internet due to negative health care provider interactions.

CORRESPONDING AUTHOR: Amber Emanuel, MA, Department of Psychology, Kent State University, Kent, OH, 44242; aemanuel@kent.edu

C-142b

CAN HEALTH-RELATED BEHAVIOR EXPLAIN THE BETTER HEALTH STATUS OF MARRIED MEN?

Matthew Hall, MA and Anne Moyer, PhD
Stony Brook University, Stony Brook, NY.

Background: The benefit of marriage on various indices of health has been well established and is often found to be stronger in males. Proposed explanations include healthier habits. This study examined whether this benefit held in a healthy national sample, whether married men actually engaged in healthier habits, and whether women, who may encourage in such habits in men, more often sought health information for another.

Methods: Participants were 7,647 respondents to the nationally-representative Health Information National Trends Survey. Regression analyses examined the effects of marital status (i.e., currently married, no longer married, never married), gender, and their interaction on perceived overall health status and on six potential explanatory variables: frequency of visits to a health care provider, having screening colonoscopy, physical activity, sunscreen use, Body Mass Index (BMI), and seeking health information for another.

Results: The gender x marital status interaction was significant for health status, frequency of visiting a health care provider, having a colonoscopy, and BMI. Although married and never married men had a better health status than no longer married men, married men visited their healthcare provider less often than never married men. Married men were less likely to have colonoscopy than no longer married men but more likely than never married men. Married men had a significantly higher BMI than both no longer and never married men. For main effects, women had higher rates of sunscreen use and lower rates of physical activity. Never married individuals had higher rates of physical activity and lower rates of sunscreen use. Women were more likely to seek health information for another.

Conclusions: Married, and never married, men did have better perceived overall health than no longer married men, but there was insufficient support that married men engaged in consistently healthier behaviors among those examined. Women were, however, more likely to seek health information for another, supporting the notion that they may promote healthy behavior in men.

CORRESPONDING AUTHOR: Anne Moyer, PhD, Stony Brook University, Stony Brook, NY, 11794-2500; anne.moyer@stonybrook.edu

C-142c

INTEGRATING PREVENTION AND BEHAVIORAL HEALTH WITHIN PRIMARY CARE IN SAFETY NET SETTINGS USING EHR TECHNOLOGIES

Beth A. Glenn, PhD,[1] Hector Rodriguez, PhD,[1] Sherry Grace, MPH,[1] Tanya Olmos, MPH,[1] Bridget Hogan Cole, MPH[2] and Roshan Bastani, PhD[1]
[1]UCLA Fielding School of Public Health, Los Angeles, CA and [2]Building Clinic Capacity for Quality, a program of Community Partners, Los Angeles, CA.

Prioritizing prevention and behavioral health within the context of primary care is a key tenet of the Affordable Care Act and is central to Patient-Centered Medical Home implementation. To achieve this goal, methods to accurately capture patient-reported behavioral health data and systematically address problem areas once identified are critical first steps. Patients served by the safety net are at increased risk to engage in risky health behaviors and suffer poor health outcomes. Yet most prior research in this area has been conducted in private clinics. The purpose of this study was to understand current practices with regard to assessment of health behaviors and psychological status and protocols for follow-up among safety net providers in Los Angeles County, with a particular focus on their utilization of electronic health record (EHR) systems. In November 2012, a 2-hour discussion group was held with clinicians and leaders from safety net clinic systems that provide adult primary care services (6 systems; 20 clinics). Current practices were assessed for the following domains: diet, physical activity, tobacco use, alcohol use, illicit drug use, sleep, stress, anxiety, depression. Results revealed that all clinics assessed at least some of the domains, particularly tobacco use and depression. No clinics assessed all domains. Physical activity, diet and stress were not routinely assessed by any clinic. Tobacco use was the only domain routinely collected electronically. Defined protocols for follow-up of patients who screen positive varied widely. Perceived barriers to comprehensive behavioral health assessment via EHR systems included: lack of compensation, concern over data collection duplication given existing requirements from public payors, and the challenges of integrating assessments into the EHR. Integration of prevention and behavioral health into primary care may be particularly challenging in the safety net.

CORRESPONDING AUTHOR: Beth A. Glenn, PhD, UCLA Fielding School of Public Health, Los Angeles, CA, 90095; bglenn@ucla.edu

C-142d

EPISODE-LINKED EMOTIONS AS A PREDICTOR OF CARE SEEKING BEHAVIOR

Hollie B. Pellosmaa, MHuServ,[1] Pablo A. Mora, PhD,[1] Howard Leventhal, PhD[2] and Elaine A. Leventhal, MD, PhD[3]
[1]Psychology, University of Texas at Arlington, Arlington, TX; [2]Institute for Health, Rutgers University, New Brunswick, NJ and [3]Internal Medicine, UMDNJ, New Brunswick, NJ.

There has been a dearth of information that explains how an individual's feeling towards their illness symptoms affects their care seeking behaviors. The purpose of this study was to determine which episode-linked emotions best predicted care seeking amongst individuals when they first experienced illness symptoms and when their symptoms were most severe. We analyzed cross-sectional data from a larger, longitudinal study with older adults. Participants ($N = 267$, mean age=72 years) living in a retirement community in a northeastern state were interviewed. Three episode-linked emotions were analyzed: (1) depression (ELD), (2) anxiety (ELA), and (3) nervousness (ELN). The results partially supported the hypothesis that participants who had higher negative episode-linked emotions would be more likely to seek care. Results showed that participants with higher levels of ELA in regards to their symptoms when first noticed were more likely to seek medical care ($B = .634$, $p = .021$). Participants with ELA were 1.9 times more likely to seek care. However, ELD and ELN were not significant predictors of seeking medical care when symptoms were new. When symptoms were most severe, results showed that participants with lower levels of ELD were more likely to seek care ($B = -.347$, $p = .040$), participants with ELD were 0.7 times more likely to seek care. ELA did not predict care seeking when symptoms were at their worst, however ELN approached significance ($B = .347$, $p = .071$), participants with ELN were 1.4 times more likely to seek care.

Negative emotions may have either auspicious or unfavorable effects on health care seeking among older adults depending on the emotion and the type of symptoms that are experienced. Illness-related anxiety may be beneficial when symptoms are first noticed, but depression may be detrimental when symptoms are severe. Future research should further examine these differential relationships as well as their resultant health outcomes.

CORRESPONDING AUTHOR: Hollie B. Pellosmaa, MHuServ, Psychology, University of Texas at Arlington, Arlington, TX, 76019; Hollie.Pellosmaa@mavs.uta.edu

C-142e

CHANGES IN WEALTH AND HEALTH BEHAVIORS: RESULTS FROM THE PANEL STUDY OF INCOME DYNAMICS, 1999-2009

Jason Q. Purnell, PhD, MPH[1] and Ling Chen, PhD[2]
[1]Brown School/Institute for Public Health, Washington Univ, St. Louis, MO and [2]Division of Biostatistics, Washington University School of Medicine, St. Louis, MO.

While the association of socioeconomic status (SES) with health outcomes and behaviors is well-established, there has been growing interest in wealth as an additional indicator of SES. Very little research has examined the association of wealth with health behaviors or how changes in wealth over time may affect behaviors. Using data from 1999 to 2009 waves of the Panel Study of Income Dynamics, this longitudinal study explored changes in net worth (NW) and the odds of current smoking, heavy drinking, light and heavy physical activity, and overweight and obesity in a sample of 31,770 (Baseline: M age (SD) = 29.5 (20.6); 51.4% female; 38.2% high school or more; 54.5% white; 44.7% income < $35K). A generalized estimating equation (GEE) was used to assess the difference in the odds of risk behaviors and risk factors after adjusting for the correlation of observations within each person. Potential confounding was adjusted with baseline covariates, including age, income, education, gender, and race/ethnicity. NW was divided into sextiles with negative to zero NW followed by quintiles of positive NW. A one sextile increase in NW between 1999 and 2009 was associated with decreased odds of current smoking (OR = .88; 95% CI = .86-90); heavy drinking for men (OR = .82; 95% CI = .79-.84) and women (OR = .88; 95% CI = .85-.90); and obesity (OR = .92; 95% CI = .90-.94), but also decreased odds of light physical activity (OR = .94; 95% CI = .92-.96). Change in NW was not significantly associated with overweight (OR = 1.00; 95% CI = .90-1.02) or heavy physical activity (OR = 1.01; 95% CI = 1.00-1.03). These results suggest that changes in household wealth influence important health behaviors and risk factors for disease even after accounting for traditional measures of SES and other demographic factors. It is possible that financial interventions addressing household net worth may positively impact health behaviors associated with leading causes of morbidity and mortality in the United States.

CORRESPONDING AUTHOR: Jason Q. Purnell, PhD, MPH, Brown School/Institute for Public Health, Washington Univ, St. Louis, MO, 63130; jpurnell@gwbmail.wustl.edu

C-142f

IS THERE AN APP FOR THAT? MOBILE TECHNOLOGY, SELF-HELP, AND EATING DISORDERS

Jessica Yu, BA[1] and Marianne T. Rizk, BA[2]
[1]Institute for Health, Health Care Policy, and Aging Research, Rutgers University, New Brunswick, NJ and [2]Psychology, The University of Iowa, Iowa City, IA.

With up to 24 million Americans suffering from some eating disorder (ED), those specializing in ED prevention and treatment have become keen on developing and disseminating treatment via innovative delivery methods, including mobile health ("mHealth") and self-help. Several mobile phone applications (apps) have been developed to support individuals with EDs; a number of these are available as self-help apps. However, it is unclear whether such apps follow evidence-based guidelines. Thus, the aim of this study was to use evidence-based guidelines to describe and review existing iPhone apps for ED self-help. Eighteen (18) unique ED apps were identified through a search in the Apple iTunes Store using the terms "bulimia nervosa", "binge eating disorder", and "eating disorder". Each app was evaluated regarding its general characteristics (e.g., developer type, price, etc.), applicability as a self-help app, and if applicable as a self-help app, inclusion of the eight self-help components recommended by two widely-cited texts. These components were: (1) self-monitoring; (2) weekly weighing; (3) regular eating; (4) problem solving; (5) dieting and food avoidance; (6) relapse prevention; (7) alternative activities; and (8) feeling good about one's body. Of the 18 apps, the majority (55.6%) was created by general app developers and the average price was $1.33 (±2.11). Only 5 (27.8%) were applicable as self-help apps. None of the applicable self-help apps included all of the recommended self-help components. The number of self-help components included in the apps ranged from 0 to 3 out of a possible 8, with self-monitoring being the most commonly included component. Thus, it is concluded that although mobile phone apps have the potential to serve as cost-effective, easily disseminated and accessible, and private methods of ED treatment, there exists a dearth of available and evidence-based self-help apps. The use of mobile technology in the ED field necessitates further development and investigation.

CORRESPONDING AUTHOR: Jessica Yu, BA, Institute for Health, Health Care Policy, and Aging Research, Rutgers University, New Brunswick, NJ, 08901; jessica.yu@rutgers.edu

C-142g

DRAWINGS REPRESENT ILLNESS PERCEPTIONS IN PATIENTS AFTER LONG-TERM REMISSION OF ACROMEGALY

Jitske Tiemensma, PhD,[1,2] Elizabeth Broadbent, PhD,[3] Johannes A. Romijn, MD PhD,[2] Alberto M. Pereira, MD PhD,[2] Nienke R. Biermasz, MD PhD[2] and Adrian A. Kaptein, PhD[4]
[1]Psychological Science, University of California Merced, Merced, CA; [2]Endocrinology and Metabolism, Leiden University Medical Center, Leiden, Netherlands; [3]Psychological Medicine, University of Auckland, Auckland, New Zealand and [4]Medical Psychology, Leiden University Medical Center, Leiden, Netherlands.

Context and objective: Drawings can be used to assess perceptions of patients about their disease. We aimed to explore the utility of the Drawing Test and its relation to illness perceptions and quality of life (QoL) in patients after long-term remission of acromegaly.

Design: Cross sectional study.

Subjects: We included 50 patients after long-term remission of acromegaly. Patients completed the Drawing Test, the Illness Perception Questionnaire-Revised, the Physical Symptom Checklist, the EuroQoL-5D, and the AcroQoL.

Results: Patients perceived a dramatic change in body size during the active state of the disease compared with the healthy state before disease. Patients reported that their body did not completely return to the original size (i.e. before disease) after treatment. In addition, strong correlations were found between the size of the drawings and the perceived negative consequences of acromegaly (P<0.05, larger drawings indicated more negative consequences). Emotional representations and illness identity were also correlated with the size of the drawing. Larger drawings indicated a higher score on emotional representations (P<0.05) and larger drawings also indicated more perceived symptoms that were attributed to acromegaly (P<0.01). The association between the Drawing Test and QoL was less apparent.

Conclusion: The Drawing Test appears to be a novel and relatively easy tool to assess the perception of patients after long-term remission of acromegaly. The assessment of drawings may enable doctors to appreciate the perceptions of patients with long-term remission of acromegaly, and will lead the way in dispelling idiosyncratic beliefs.

CORRESPONDING AUTHOR: Jitske Tiemensma, PhD, Psychological Science, University of California, Merced, Merced, CA, 95343; jtiemensma@ucmerced.edu

C-142h

THE RELATIONSHIP BETWEEN SLEEP AND EXECUTIVE FUNCTIONING IN ADOLESCENTS WITH ADHD

Johanna Schmid, Diploma,[1,2] Lena Guderjahn, Diploma,[1,3] Caterina Gawrilow, PhD[1,2] and Gertraud Stadler, PhD[4]
[1]Center for Research on Individual Development and Adaptive Education of Children at Risk (IDeA), Frankfurt, Germany; [2]German Institute for International Educational Research, Frankfurt, Germany; [3]Goethe University, Frankfurt, Germany and [4]Columbia University, New York, NY.

Background

Sleep quality and duration are associated with cognitive functioning. Emerging evidence suggests that executive functions (e.g. inhibition) might be particularly affected by poor sleep. Adolescents with Attention Deficit/-Hyperactivity Disorder (ADHD) show both impaired executive functioning and poor sleep. Thus far, however, there has been a paucity of research examining the association between sleep and executive functioning in adolescents with ADHD. The current study addresses this research gap.

Methods

On nine consecutive days, 41 adolescents (M-age: 13.73 years, SD = 2.30 years) with ADHD filled out daily diaries on sleep quality, sleep duration and mood (measured with the Profiles of Mood States measure; Cranford, Shrout, Iida, Rafaeli, Yip, & Bolger, 2006). Executive functioning (inhibition) was assessed on the last day of the study with a modified Eriksen Flanker task (Eriksen & Eriksen, 1974).

Results

Partial correlations between measures of sleep and the Flanker task, controlling for morning depression, revealed the following associations: (1) Longer sleep durations were associated with less impulsivity, as indicated by slower reaction times on congruent ($r = .60, p < .001$) and incongruent task trials ($r = .56, p < .001$). (2) Feeling more rested than usual in the morning of the last study day was significantly related to a lower proportion of errors on incongruent task trials ($r = -.33, p < .05$).

Discussion

The results extend previous research by revealing that adolescents with ADHD who had longer sleep durations and who felt more rested responded more cautiously in an inhibition task. Results will be discussed regarding practical implications, taking into account possible influences of ADHD medication.

CORRESPONDING AUTHOR: Johanna Schmid, Diploma, IDeA, Frankfurt, 60486; schmid@dipf.de

C-142i

INTRAGROUP MARGINALIZATION AND HEALTH IN BICULTURAL COLLEGE STUDENTS

Michelle M. Rodriguez Diaz, BA, Amy H. Peterman, PhD and Jennifer B. Webb, PhD
Health Psychology, University of North Carolina at Charlotte, Charlotte, NC.

Background: Research has identified a growing problem of overweight, obesity, metabolic dysregulation, and other health concerns among college populations. Also, there are clear health disparities in these conditions among ethnic minority groups in the United States. The current study examines the relationship between bicultural persons' experience of intragroup marginalization (IM) and metabolic health risk in a sample of college students.

Method: One-hundred twenty-seven undergraduates (75.6% female) who self-identified as bicultural responded to an online survey that included the IM Inventory (IMI) as well as sociodemographic (SD) factors, health behaviors, and health status. The IMI assesses the extent to which acculturating individuals experience interpersonal distancing by family, friends, and other members of their ethnic group as a result of displaying cultural characteristics of the dominant group. It is divided into three subscales: the IMI-Family, the IMI-Friends, and the IMI-Ethnic Group.

Results: After controlling for SD measures, all IMI subscales were significantly associated with BMI, waist circumference, mental health, general health, sleep quality, and fruit and vegetable consumption (ΔR-squared from .03 to .08, p's < .05.) Perceived stress partially mediated most of these relationships.

Conclusion: Overall, the relationships detected in this study suggest that IM may be a clinically significant factor that should be considered when assessing how acculturative experiences affect physiological processes and health behaviors that may contribute to health concerns in ethnic minority populations. The study outcomes also are particularly relevant to addressing gaps in health disparities research. Most significantly, this study appears to be the first of its kind to examine the relationship between intragroup marginalization and health outcomes.

CORRESPONDING AUTHOR: Michelle M. Rodriguez Diaz, BA, Health Psychology, University of North Carolina at Charlotte, Charlotte, NC, 28213; mrodri28@uncc.edu

C-142j

EVALUATION OF A MODEL OF DEPRESSION FOR PATIENTS WITH SLE AND RHEUMATOID ARTHRITIS

Taylor Draper, MA,[1,2] Sarah Ormseth, MA,[1,2] Mara Custodio, BA,[2] Michael Irwin, MD,[2] Michael Weisman, MD[3] and Perry Nicassio, PhD[2]
[1]Loma Linda University, Loma Linda, CA; [2]UCLA, Los Angeles, CA and [3]Cedars Sinai Medical Center, Los Angeles, CA.

This research examined an explanatory framework for understanding relationships among disease activity, illness beliefs, pain, and mood disturbance in rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE) patients. The data of 216 patients (RA=106, SLE=110) were used to evaluate a model in which disease activity (self-perceived disease activity) directly and indirectly predicted mood disturbance (CES-D and SF-36 Emotional Wellbeing) through maladaptive illness beliefs (Arthritis Helplessness Index) and pain (SF-36 Pain and pain VAS). Multigroup structural equation modeling was used to test differences based on the model for RA as compared to SLE. The baseline model showed an excellent fit (CFI=1.00, RMSEA<.001), as did the measurement equivalence model (CFI=1.00, RMSEA<.001). However, a significant decrement in fit (p=.023) was shown in the constrained structural model, suggesting noninvariance of a path. For RA and SLE, greater disease activity directly predicted higher levels of maladaptive illness beliefs as well as higher levels of pain. Moreover, maladaptive illness beliefs were associated with mood disturbance in RA and SLE, though the nature of that relation was different for the two groups: in SLE, illness beliefs directly predicted mood disturbance, while the relation was indirect, through pain, for RA. Additionally, while pain influenced mood disturbance in both groups, the test of invariance indicated that the effect of pain on mood disturbance was stronger in SLE (β=.71, p<.001; for RA: β=.36, p=.010); releasing this noninvariant path significantly improved model fit (final model: CFI=1.00, RMSEA<.001).These findings suggest that illness beliefs and pain may serve as mechanisms through which disease activity contributes to mood disturbance in both RA and SLE. The differences observed in the nature of the influence of intermediary mechanisms between patient groups have important implications for the development of 'targeted' interventions to promote better mood regulation.

CORRESPONDING AUTHOR: Sarah Ormseth, MA, Loma Linda University, Los Angeles, CA, 90095; sormseth@gmail.com

C-142k

FACTORS PREDICTING SUN-PROTECTIVE BEHAVIORS AMONG LIFEGUARDS: A THEORY OF PLANNED BEHAVIOR STUDY

Steve Amireault, MSc,[1] Ariane Bélanger-Gravel, PhD,[2] Gaston Godin, PhD[1] and Milène Arseneault, B Sc[1]
[1]Université Laval, Quebec City, QC, Canada and [2]Université de Montréal, Montreal, QC, Canada.

Background. Intensive exposure to ultraviolet radiation is associated with skin cancers. As such, outdoor lifeguards are particularly at risk. The aim of this study was to investigate the determinants of sun-protective behaviors and intention among lifeguards using the theory of planned behavior (TPB). Methods. A longitudinal Internet survey was conducted among adolescents and young adults aged between 16 and 24 years who were working as lifeguards. At baseline, 297 participants completed a TPB questionnaire and 237 provided a measure of behavior at 2-week follow-up. Intention, attitude, subjective norm and perceived behavioral control (PBC) were assessed. Sun-protective behaviors included covering up with clothing, wearing a hat and seeking the shade. The frequency of adopting these sun-protective behaviors was self-reported at baseline and two weeks later. Scores were dichotomized as low (never/sometimes/about half of the time) and high (often/always) frequency of adopting sun-protective behaviors. Results. At follow-up, 141 participants adopted sun protective behaviors often or always during their working hours in the last two weeks. Hierarchical logistic analysis indicated that past behavior (Odds ratio (OR) = 4.1, 95%CI:2.0, 8.2) and intention (OR = 5.7, 95%CI:2.8, 11.8) predicted sun protective behaviors. Intention was predicted by past behavior (OR = 8.0, 95%CI:4.0, 16.0), attitude (OR = 8.2, 95%CI:4.0, 17.0), subjective norm (OR = 2.7, 95%CI:1.3, 5.5), and PBC (OR = 2.5, 95%CI:1.1, 5.7). Correct classification in behavior and intention was 76.4% and 85%, respectively.

Conclusion. The results suggest that enhancing motivation should be an important component of interventions. To increase motivation, it is recommended to continue to provide information on the advantages of sun-protective behaviors, to reinforce the idea that these behaviors are the current social norm and to provide tips to overcome barriers to their adoption.

CORRESPONDING AUTHOR: Steve Amireault, MSc, Laval University, Quebec City, QC, G1V 0A6; steve.amireault@fsi.ulaval.ca

C-154a

PATIENTS PRESENTING TO THE EMERGENCY DEPARTMENT WITH PAIN: RELATIONSHIP OF PAIN INTENSITY AND VITAL SIGNS WITH PSYCHOLOGICAL VARIABLES

Jessica J. White, BS, Shweta Kapoor, MD, MA and Beverly E. Thorn, PhD
Psychology Department, University of Alabama, Tuscaloosa, AL.

Pain is the most common reason for Emergency Department (ED) visits. It is estimated that between 40% and 78% visits to the ED are primarily due to acute pain complaints or underlying chronic pain conditions. Although previous research has shown that pain intensity is not associated with changes in vital signs, common clinical belief persists that elevated vital signs (blood pressure, heart/respiration rate) are probable biomarkers of one's pain experience. Consequently, the absence of such physiological elevations may undermine acceptance of a patient's report of pain. It is important to examine other related variables affecting the physiological response of the body to pain. The present study hypothesized that vital signs would not be correlated with reported pain intensity, but would be associated with psychological variables: pain catastrophizing and state anxiety in ED patients with pain. Fifty-six participants (59% females, mean age of 37.39 years) with a primary complaint of pain completed demographic questionnaire, Pain Catastrophizing Scale, and State Trait Anxiety Inventory. Data regarding vital signs (systolic/diastolic BP, heart and respiratory rate) were obtained from the ED records. As expected, pain intensity was not associated with vital signs, but was predicted by catastrophizing and anxiety after controlling for age, [F(3,52)=7.264, p<.001] with the model explaining 27.2% of the variance. Catastrophizing and anxiety made unique and significant contributions to the final model. Systolic BP was predicted by anxiety and catastrophizing after controlling for age and previous diagnosis of hypertension [F(4,49)=6.33, p<.001] with the model explaining 34.1% of the variance. Catastrophizing and anxiety made unique and significant contributions. Thus, reported pain intensity and physiological reactivity are influenced by psychological factors. Providing brief psychosocial interventions in ED may help decrease distress associated with the pain experience, potentially improving overall outcome.

CORRESPONDING AUTHOR: Jessica J. White, BS, University of Alabama, Huntsville, AL, 35806; jjwhite2@crimson.ua.edu

C-154b

EMOTIONAL MODULATION OF PAIN IS PRESERVED IN INDIVIDUALS WITH CHRONIC MUSCULOSKELETAL PAIN

Julie A. French, MAPs,[1] Douglas J. French, PhD,[1] Valerie Poulin, BPs,[1] Christopher R. France, PhD,[2] Robert T. Evans, MD,[3] Jamie L. Rhudy, PhD[5] and Richard Dumais, MD[4]
[1]Universite de Moncton, Moncton, NB, Canada; [2]Ohio University, Athens, OH; [3]Atlantic Pain Clinic, Moncton, NB, Canada; [4]Georges-L Dumont Regional Hospital, Moncton, NB, Canada and [5]University of Tulsa, Tulsa, OK.

Introduction: Previous studies employing experimental pain procedures have demonstrated that positive emotions attenuate subjective pain reports while low to moderately intense negative emotions facilitate pain. Although it has been suggested that the development and maintenance of chronic pain syndromes may be due, at least in part, to alterations in central pain modulation, emotional modulation of chronic musculoskeletal pain has received surprisingly little attention. Method: Forty-one (n=41) chronic back pain sufferers with an average history of pain of 163.8 weeks (SD=239.5) and a group of forty (n=40) healthy age- and sex-matched controls completed pain threshold and tolerance assessments involving increasing levels of brief electrodermal stimulations applied to the forearm. Next, while viewing a series of 24 emotionally-charged images, participants received 21 stimulations delivered at 120% of their personal pain threshold. Images were selected from the International Affective Picture System (IAPS) and were categorized as Positive, Negative and Neutral based on established IAPS normative valence and arousal data. Participants also rated valence and arousal immediately after viewing each image and rated the intensity of each electrodermal stimulation on a 0-100 numeric rating scale. Results: A 2 (group) X 3 (image category) ANOVA on pain ratings revealed a significant effect for image category [F (1.40, 110.60) = 17.44, p<.001] and group [F(1, 79) = 4.02, p < .05]. The group x category interaction was not significant (p > .05).

Consistent with previous studies, relative to the neutral images both groups rated the pain as significantly more intense during negative images and significantly less intense during positive images. Conclusion: The current study indicates that emotional modulation of pain appears to be intact in chronic pain sufferers.

CORRESPONDING AUTHOR: Julie A. French, MAPs, Stan Cassidy Centre for Rehabilitation, Fredericton, NB, E3B 0C7; julie.villers@horizonnb.ca

C-154c

PAIN ACCEPTANCE AND SOMATIZATION PREDICT PAIN DISABILITY IN WOMEN WITH CHRONIC PAIN

Mallorie Gordon, BS,[1] Bella Grossman, MA,[1] Ashlee Reilly, BA,[1] Jane Belkin, BA,[2] Jack Chen, MBS[3] and Lara Dhingra, PhD[3]
[1]The New School for Social Research, New York, NY; [2]Goucher College, Baltimore, MD and [3]Beth Israel Medical Center, New York, NY.

Pain acceptance impacts psychological distress and pain disability in many with chronic pain. However, the specific components of psychological distress (anxiety, depression and somatization) and their associations with pain disability require greater clarification. This study evaluated a comprehensive set of potential covariates of pain disability in 78 women with chronic pain. Eligible outpatients (M age = 44.3 years, SD = 12.2; 66.7% Caucasian; 14.1% African American; 7.1% Latina; 2.6% Asian American and 9.0% self-identifying as "other") completed measures on sociodemographics, pain intensity and interference, psychological distress (anxiety, depression and somatization), pain catastrophizing, pain anxiety and pain acceptance. The M worst pain intensity on a 0-10 numeric scale = 8.1 (SD = 1.6) in the past week with 92.3% of patients reporting their worst pain severity at > 7 of 10. In univariate analyses, pain intensity, anxiety, depression, somatization, pain catastrophizing and pain anxiety were positively associated with pain interference, while pain acceptance was negatively associated (all Ps < .05). In multivariate regression analyses, pain intensity (β= .60, p < .001), somatization (β= .40, p < .001) and acceptance (β= -.25, p < .05) explained 55.8% of the variance in pain interference. These data confirm the importance of pain acceptance in predicting pain disability and further suggest that somatization, or the tendency to report distress from somatic symptoms, is also relevant. Future studies should clarify whether specific treatment strategies to improve the management of distress from somatic symptoms are warranted to improve pain management.

CORRESPONDING AUTHOR: Mallorie Gordon, BS, The New School for Social Research, New York, NY, 10011; mallorie.gordon@gmail.com

C-154d

THE ORIGINAL FACTOR STRUCTURE OF THE MULTIDIMENSIONAL PAIN READINESS TO CHANGE QUESTIONNAIRE IS NOT SUPPORTED IN A SAMPLE OF INDIVIDUALS WITH CHRONIC MUSCULOSKELETAL PAIN

Monique Savoie, Master's Degree in Psychology,[1,2] Douglas J. French, PhD[1,3] and R. Thomas Evans, MD[3]
[1]Université de Moncton, Moncton, NB, Canada; [2]The Moncton Hospital, Moncton, NB, Canada and [3]The Atlantic Pain Clinic, Moncton, NB, Canada.

Introduction: The considerable variability observed in multidisciplinary chronic pain treatment outcomes may relate, in part, to individual differences in patients' readiness to adopt new self-management behaviors. The Multidimensional Pain Readiness to Change Questionnaire (MPRCQ) was designed to assess individuals' readiness to adopt a number of common pain self-management strategies. The 46 items of the original questionnaire were logically organised into 9 item-groupings representing discrete strategies (ex., physical exercise, relaxation, etc.). Factor analyses of these 9 item groupings yielded two higher order factors (Active Coping and Perseverance) in a mixed sample of individuals with fibromyalgia, acquired amputation and spinal cord injuries. The 9 item-groupings comprising the MPRCQ have not been verified using factor-analytic methods and the psychometric properties of this measure have yet to be assessed in chronic musculoskeletal pain sufferers. Method: One hundred and fifty-one patients (n = 151) presenting for chronic pain treatment completed the MPRCQ and a measure of clinical pain severity (0-10 Numerical Rating Scale - NRS). A subset of forty-seven patients (n = 47) also completed measures of pain-related disability (Million Visual Analog Scale) and depression (Beck Depression Inventory). Results: Both exploratory and confirmatory factor analyses indicated that 5 correlated self-management factors loading onto a single higher-order general readiness for pain self-management factor provided the best fit to the item response data. Furthermore, higher levels of motivation for adopting self-management strategies as assessed by the general factor were related to lower levels of clinical pain intensity and lower levels of functional disability. Conclusion: Although the original factor structure of the MPRCQ was not supported, the MPRCQ may be considered both psychometrically sound and clinically relevant.

CORRESPONDING AUTHOR: Monique Savoie, Master's Degree in Psychology, Psychology, The Moncton Hospital, Moncton, NB, E1C 6Z8; monique.savoie@horizonnb.ca

C-154e

ROLE OF COGNITIONS IN COMORBID CHRONIC PAIN AND PTSD

Samantha D. Outcalt, PhD,[1,2] Stephanie A. McCalley, AS[1] and Matthew J. Bair, MD[1,3]
[1]HSR&D, RLR VAMC, Indpls, IN; [2]Psychiatry, IUSM, Indpls, IN and [3]Medicine, IUSM, Indpls, IN.

Chronic pain and PTSD co-occur at high rates and are associated with high symptom severity, disability, and rates of health care use. Cognitive behavioral interventions to treat both are warranted, though specific cognitions as potential targets of treatment are not well understood. Pilot study examined the construct of centrality and other cognitions among Veterans with chronic pain and PTSD. Secondary aim was to examine relationship of anxiety sensitivity with pain and PTSD.

Interviewed 56 Veterans with chronic pain and PTSD. Demographics and disability/treatment history were collected. Administered Centrality of Pain Scale, Centrality of Events Scale, Graded Chronic Pain Scale, Brief Pain Inventory, Pain Catastrophizing Scale, PTSD Checklist, Posttraumatic Cognitions Inventory, and Anxiety Sensitivity Index.

Average age was 49.3 (sd=14.3), most were men (92.9%), white (78.6%), married (66.1%), at least some college (78.6%), on VA disability (91.1%), reported pain for 5+ years (73.2%) and PTSD for 5+ years (85.7%). Pain treatment included medications (94.6%), specialty pain clinic (55.4%), pain education (33.9%), and mental health treatment for pain (23.2%). PTSD treatment included medications (76.8%) and mental health treatment (75.0%).

Correlations of centrality with pain (r=.49, p<.001) and with PTSD (r=.44, p=.001) symptom severity were moderately strong. Pain centrality was strongly associated with pain interference (r=.67, p<.001) and catastrophizing (r=.73, p<.001) and trauma centrality with posttraumatic cognitions (r=.63, p<001). Anxiety sensitivity was associated with PTSD severity (r=.54, p<.001) but not with pain severity. Veterans with more severe PTSD showed higher pain and trauma centrality, pain severity, pain interference, catastrophizing, anxiety sensitivity, and posttraumatic cognitions. Additional results and implications to be discussed. While our study lacked non-PTSD/non-pain comparison groups, it provides important information about the role of cognitions in pain-PTSD comorbidity. Future research should untangle the complex relationship between pain and PTSD.

CORRESPONDING AUTHOR: Samantha D. Outcalt, PhD, HSR&D, Roudebush VA Medical Center, Indianapolis, IN, 46202; soutcalt@iupui.edu

C-178c

RELATIONSHIPS BETWEEN WALKING AND DEPRESSION AMONG OLDER ADULTS: WHICH COMES FIRST? RESULTS FROM THE VOISINUAGE STUDY

Dominic Julien, PhD,[1] Lise Gauvin, PhD,[2,3] Lucie Richard, PhD,[1,3] Yan Kestens, PhD[2,3] and Hélène Payette, PhD[4,5]
[1]IRSPUM, Montreal, QC, Canada; [2]CRCHUM, Montreal, QC, Canada; [3]Université de Montréal, Montreal, QC, Canada; [4]Institut universitaire de gériatrie de Sherbrooke, Sherbrooke, QC, Canada and [5]Université de Sherbrooke, Sherbrooke, QC, Canada.

Background. Walking has been associated with lower depression among older people in cross-sectional studies but prospective associations between walking and depression have not been extensively examined. Objective. This study investigated temporal associations between walking and depression scores among older adults in order to determine which variable is a more likely precursor of the other. Method. Participants (n = 498) were older adults (aged 68 to 84 years) from the VoisiNuAge Study, a five-year longitudinal study on nutrition and successful aging. Participants completed the Geriatric Depression Scale and the Physical Activity Scale for the Elderly. Cross-lagged panel analyses were performed to investigate prospective associations between walking and depression, controlling for age, years of education, and number of chronic illnesses. Analyses were also stratified by sex. Results. In the entire sample, higher depression scores predicted fewer walking days in the future, but number of walking days does not predict future depression scores. Sex-stratified analyses revealed that these prospective associations were statistically significant among women but not men. Conclusion. Depression scores more likely explain future walking habits than walking habits are likely to explain future depression scores symptoms among women. Future research may focus on individuals who reach recommendations for physical activity levels.

CORRESPONDING AUTHOR: Dominic Julien, PhD, IRSPUM, Montreal, QC, H2L1M3; dominic.julien@umontreal.ca

C-178d

READY TO EXERCISE? EXERCISE-SPECIFIC COGNITIONS AND EMOTIONS OF YOUNG WOMEN

Gina Merchant, MA[1] and Kim Pulvers, PhD[2]
[1]University of California San Diego, La Jolla, CA and [2]California State University San Marcos, San Marcos, CA.

Most young adult females do not exercise regularly. Promoting exercise as part of healthy living may not motivate this group because young women may be motivated to exercise for abstract goals such as feeling confident rather than for health benefits. The purpose of this study was to test if exercise-specific cognitions, emotions, confidence, and goal setting ability were different among young women at various stages of exercise intention and behavior. Multiple theoretical frameworks may help us better understand this population's relationship with exercise; therefore, constructs from theory of planned behavior, social cognitive theory, and hope theory were brought together. Participants (N=112) were Latina (47%) and White college students (Mage=21+4). Almost half (45%) were overweight/obese. Sixty two percent of the sample was categorized in stages of intention: 4% were Precontemplators, 12% were Contemplators, and 46% were Preparers. Thirty eight percent were categorized in stages of behavioral engagement (as regular exercisers): 18% in Action, and 20% in Maintenance. A one-way multivariate analysis of variance (MANOVA) determined whether the means of six dependent variables (DVs) varied by stage of change (SOC). The overall F test was significant (Wilks' Lambda=.38; F(36,365)=2.99, p<.001; η^2=.22). Using a Bonferroni correction, follow-up ANOVAs showed that affective attitude, cognitive attitude, pros of exercise, self-efficacy for exercise, and goals-specific hope for exercise had significant mean differences across the SOC (range of partial η^2 = .20 to .25). Cons of exercise was not significantly different by SOC, nor were the demographic variables ethnicity, body mass index, and socioeconomic status. Follow-up pairwise comparisons demonstrated that those staged as regular exercisers had higher means for all significant DVs compared to those in stages of intention. The cognitive, affective, and goal-specific constructs tested here could meaningfully add to our understanding of this population's motivation to initiate and maintain regular exercise.

CORRESPONDING AUTHOR: Gina Merchant, MA, University of California San Diego, La Jolla, CA, 92093; gmerchant@ucsd.edu

C-178e

SELF-EFFICACY AND ENJOYMENT MEDIATE THE RELATIONSHIP BETWEEN VIGOROUS PHYSICAL ACTIVITY AND PERCEIVED HEALTH

Karly S. Geller, PhD and Jennifer A. Moore, Undergraduate student
Kinesiology & Health, Miami University, Oxford, OH.

BACKGROUND: Regular physical activity (PA) is strongly associated with improved mental and physical health among both youth and adults. Unfortunately, few young adults participate in enough PA to experience the health benefits, and PA levels decline further across development. To successfully promote regular PA and ultimately improve public health, health promotion researchers must identify and understand the most salient determinants. PURPOSE: The main objective was to assess the mediating variables involved in the association between physical activity and health. It was hypothesized that PA-related self-efficacy and enjoyment would mediate the effect of physical activity on participants' perceived health. METHODS: College-age adults were recruited from a North-Western University. Participants (n=208) were 79% female with a mean age of 20.44 (SD=1.87). Participants were predominantly White, Non-Hispanic (88%), with a body mass index (BMI) of 23.09 (SD=4.18). Following Baron and Kenny methodology, tests for mediation were explored using a series of linear regressions. RESULTS: Covariates included in each linear regression included age, gender, ethnicity, and BMI. After controlling for PA enjoyment, the previous significant association between vigorous PA to perceived health status (β=0.242, p=0.000) was no longer significant (β = 0.117, p=0.097). Similarly, the previously significant association again diminished when controlling for PA self-efficacy (β=0.129, p=0.066). When controlling for both self-efficacy and enjoyment, the previous significant effect from vigorous PA to perceived health status was reduced most dramatically (β = 0.070, p=0.329). IMPLICATIONS: Results supported hypotheses, with enjoyment and self-efficacy mediating the relationship between vigorous PA and college students' perceived health. Future PA promotional efforts among similar populations are strongly encouraged to target PA enjoyment and PA self-efficacy.

CORRESPONDING AUTHOR: Karly S. Geller, PhD, Miami University, Oxford, OH, 45056; gellerks@miamioh.edu

C-178f

PERCEIVED BENEFITS, BARRIERS, AND ENABLERS OF PHYSICAL ACTIVITY AMONG POSTPARTUM WOMEN WHO HAVE EXPERIENCED STILLBIRTH

Katherine A. Rolfsmeyer, MPH[1] and Jennifer Huberty, PhD[2]
[1]UNO, Omaha, NE and [2]Arizona State University, Phoenix, AZ.

The lack of desire to engage in PA after pregnancy may be more prominent in women who have experienced stillbirth (fetal death after 20 weeks gestation), as compared to women who have had a live birth, due to increased anxiety and depression. The purpose of this study was to determine the perceived benefits, barriers, and enablers to PA among postpartum women who have experienced stillbirth. Women were eligible if they were between the ages of 19 and 44 years and experienced stillbirth in the past year. Ten interviews were conducted on the phone or in person and were one hour in length. Data was analyzed using the principles of grounded theory. Most women reported improved mental health and weight loss as perceived benefits to PA after pregnancy. Women stated that their barriers to PA were avoidance, letting go of pregnancy, depressive symptoms, and lack of motivation. Lessening depressive symptoms and becoming pregnant was mentioned by the women who were active as enablers to PA participation. This was the first study to explore the perceived benefits, barriers, and enablers among postpartum women who have experienced stillbirth. This pilot project provides formative information about the perceived benefits, barriers and enablers to PA in an understudied population (mothers of stillborn babies) and may help inform PA interventions for this population in the future.

CORRESPONDING AUTHOR: Katherine A. Rolfsmeyer, MPH, UNO, Omaha, NE, 68182; katherine.rolfsmeyer@unmc.edu

C-178g

ENHANCING WALK SCORE'S ABILITY TO PREDICT OBJECTIVELY-MEASURED PHYSICAL ACTIVITY

Lawrence D. Frank, PhD,[1] Jared Ulmer, MS[2] and James Sallis, PhD[3]
[1]University of British Columbia, Vancouver, BC, Canada; [2]Urban Design 4 Health Inc, Seattle, WA and [3]Behavioral Medicine, University of California at San Diego, San Diego, CA.

Background and Aim

The popular online tool, WalkScore provides an accessible data source for health researchers and practitioners interested in evaluating and comparing how different environments promote or hinder physical activity. The WalkScore algorithm is based on published research, but has never been validated against objective physical activity data. This research identified a variety of potential improvements to WalkScore.

Methods

Walk Score values for the home locations of the 2,199 adults from the NHLBI funded Neighborhood Quality of Life Survey (NQLS) were joined with objectively-measured physical activity (accelerometry), socioeconomic, and detailed parcel based measure of walkability including land use mix, density, street connectivity and retail density. A street network-based distance measurement method (Street Smart Walk Score, or SSWS) was developed. Revisions to the SSWS distance decay function, destination weights, and addition or subtraction of variables from the SSWS formula were calibrated based on associations between the Walk Score and NQLS data including comparison with a range of objectively measured built environment features.

Results

Moderate and Vigorous Physical Activity (MVPA) was more strongly associated with the SSWS than with the standard Walk Score. The association between SSWS was strengthened (from t=2.79 to t=5.17) by modifying the distance decay function, increasing the weight in the SSWS formula for cafes, parks, and book stores while decreasing the weight for restaurants, grocery stores, and shops, adding a street connectivity variable, and removing the school destination. A 1 standard deviation increase in SSWS was associated with a 3.6 minute increase in MVPA for the improved SSWS versus 2 minutes for the unimproved SSWS.

Conclusions

The ability of Walk Score to predict MVPA can be significantly strengthened by replacing the airline with a network-based method and invoking weighting of specific destinations.

CORRESPONDING AUTHOR: Lawrence D. Frank, PhD, University of British Columbia, Vancouver, BC, V6T 1Z3; lawrence.frank@ubc.ca

C-178h

EFFECT OF MODERATE INTENSITY DEMONSTRATION WALK ON SELF-REPORTED MODERATE INTENSITY PHYSICAL ACTIVITY

Lucas J. Carr, PhD,[1] Britta A. Larsen, PhD,[2] Shira Dunsiger, PhD[3] and Bess H. Marcus, PhD[2]
[1]Health and Human Physiology, University of Iowa, Iowa City, IA; [2]University of California San Diego, San Diego, CA and [3]Brown University, Providence, RI.

Accurate and reliable self-report measures of physical activity (PA) are necessary to measure PA prevalence and the efficacy of PA interventions. However, self-report instruments are subject to over reporting due to inaccurate recall or perceptions of PA duration and intensity. This study tested whether administering a 10-minute moderate-intensity treadmill demonstration walk immediately prior to administering the 7 Day Physical Activity Recall Questionnaire (7 Day PAR) changed participant's self-reported moderate to vigorous physical activity (MVPA) compared to administering the 7 Day PAR without the walk. Using generalized linear models, we compared minutes/week of MVPA at baseline between participants enrolled in one of four studies that either did not (Stride I, Activas) or did (Stride II, Saludables) include a 10-minute moderate intensity demonstration walk (3.0-4.0 mph) prior to the 7 Day PAR. Pairwise analysis was used to compare English (Stride I/Stride II) and Spanish (Activas, Saludables) study pairs. As all four studies had one treatment arm in common (6 months Tailored Print), we also compared self-reported MVPA within treatment pairs (walk vs. no walk) at six months, controlling for between-study differences. For both the English and Spanish study pairs, participants who completed the walk reported fewer minutes of MVPA compared to those who did not at baseline (mean difference for English pair=4.7±24.8; $P<0.05$); mean difference for Spanish pair=11.7±18.0; $P<0.05$). At six months, participants who completed the walk reported fewer minutes of MVPA than those who did not amongst the Spanish pair only (mean difference=99.9±32.2; $P<0.05$). Overall, data suggest the demonstration walk reduced participant's self-reported recall of MVPA. These findings may be due to participant's improved understanding of PA duration and/or intensity after completing the walk although further research is needed to determine whether the walk improves recall accuracy.

CORRESPONDING AUTHOR: Lucas J. Carr, PhD, Health and Human Physiology, University of Iowa, Iowa City, IA, 52242; lucas-carr@uiowa.edu

C-178i

A NATURALISTIC STUDY EXPLORING CONTINUED USE OF SMARTPHONES TO PROMOTE LESS SEDENTARY BEHAVIOR OVER TIME

Sandra J. Winter, PhD,[1] Jylana L. Sheats, PhD,[1] Lauren A. Grieco, PhD,[1] Eric B. Hekler, PhD,[2] Matthew P. Buman, PhD[2] and Abby C. King, PhD[1]
[1]Stanford Prevention Research Center, Stanford University, Palo Alto, CA and [2]School of Nutrition and Health Promotion, Arizona State University, Phoenix, AZ.

Increasingly, wireless technologies such as Smartphones are used to promote health behaviors, but studies of sustained use are limited. The MILES study tested 3 theoretically derived custom applications (apps) to promote physical activity and reduce sitting time over 8 weeks in a sample of Smartphone-naïve mid-life and older adults. Only one of the apps provided personal numeric feedback about sitting time. The other two provided feedback in the form of avatars representing activity levels of the user. For a sub-sample of participants (n=12) we examined continued use of the apps over time under natural conditions with no researcher intervention. Participants were invited to continue using the apps for as long as they wanted until researchers ended the post-study period. The original study period was 56 days; the post-study period averaged 182 days (SD=35), and mean total days of participation (across both periods) was 238 (SD=49). Each day participants used the Smartphone to self-report sedentary behaviors. Data were reported for 72% of the study+post-study days (n=169 days, SD=49). Baseline mean hours of sitting/week for the sample was 63 (SD=19). Over the original 8-week study period, mean hours of sitting decreased by 12 hours (p=0.01). During the post-study period, a mean of half of these sitting hours (M=6) were regained (p=0.05). Exploratory within-group analyses indicated that the app delivering personal numeric feedback about sitting time appeared to be particularly effective in reducing sitting time overall and through the post-study period (p=0.05). These exploratory results suggest that personal and specific feedback about sitting time may be important to sustain reductions in sitting behavior, and deserve further study.

CORRESPONDING AUTHOR: Sandra J. Winter, PhD, Stanford Prevention Research Center, Stanford University, Palo Alto, CA, 94305-1334; sjwinter@stanford.edu

C-178j

PHYSICAL ACTIVITY, STRENGTH AND WEIGHT MANAGEMENT IN BREAST CANCER SURVIVORS

Shannon L. Mihalko, PhD,[1,2] Samantha E. Yocke, BS,[1] Greg Russell, MS,[2] Marissa Howard-McNatt, MD[2] and Edward A. Levine, MD[2]
[1]Health and Exercise Science, Wake Forest University, Winston-Salem, NC and [2]Wake Forest School of Medicine, Winston-Salem, NC.

The American Cancer Society estimated that 226,870 women would be diagnosed with breast cancer in 2012, joining the largest group of cancer survivors at 2.9 million. Modifiable risk factors, such as physical activity and body weight, have been found to affect diagnosis and recurrence (Davies et al., 2011). Few longitudinal studies have examined pre- and post-surgery physical activity (PA) patterns, strength, body mass index (BMI), and recurrence in breast cancer survivors. This prospective study of 309 newly diagnosed overweight (BMI=28.9) women (M age=57 years) with biopsy proven breast cancer measured PA levels with the Godin, grip strength, and BMI at pre-surgery, as well as recurrence and change in PA, strength, and BMI at 6 and 12 months post-surgery. Pre-surgery PA levels were below national recommendations. Using repeated measures ANOVA, mild PA decreased from baseline to 6 months (-0.33 (SE=0.23); p=0.14), and significantly decreased from baseline to 12 months (-0.62 (SE=0.19); p=0.001). Moderate PA saw slight but insignificant increases over time. BMI was highly associated with moderate PA (p=0.01), such that with every one unit increase in BMI, moderate PA dropped by .07 days/week. Grip strength on the affected side significantly decreased from baseline to 12 months (-1.34 (SE=0.38); p=.0005). Partial data (n=145) show that participants who recur had a higher level of moderate PA (1.9 +/- 2.4) compared to those who do not (0.8 +/- 1.7; p=0.02). Our findings show that PA levels do not increase post-surgery, as the slight gains in moderate PA do not offset decreased mild PA. Further, significant loss in strength in the first year after treatment is clear. Moderate aerobic activity was important in weight management, but not grip strength, over 12 months. Lifestyle programs immediately post-surgery may prove most effective in promoting PA and weight control in breast cancer survivors and a focus on reversing strength declines is essential.

CORRESPONDING AUTHOR: Shannon L. Mihalko, PhD, Health and Exercise Science, Wake Forest University, Winston-Salem, NC, 27109; mihalksl@wfu.edu

C-178k

IS THE GLASS HALF-EMPTY OR HALF-FULL? THE ROLE OF OPTIMISM IN PROTECTIVE HEALTH BEHAVIORS AND PERCEIVED HEALTH-RELATED QUALITY OF LIFE IN A COLOMBIAN SAMPLE

Susana C. Barradas, MSc, Carolyn Finck, PhD and Diana Agudelo, PhD
Psychology, Universidad de los Andes, Bogota, Colombia.

A growing body of evidence from North America has found dispositional optimism to be an indicator of better health, and associated with taking proactive steps to protect one's health. Given the dearth of research in this area from South America, the aim of this study was to assess relations between physical activity, dispositional optimism, and perceived health status. Data were obtained using a cross-sectional population-derived survey of 1500 randomly selected adults aged 18 years and older, representative of the urban areas of Colombia. Health-related quality of life (HRQoL) instruments were the SF-8 Health Survey and the Physical Activity Stages of Change Questionnaire (PASCQ). The Life Orientation Test-Revised (LOT-R) measured optimism.

The mean score on the optimism scale was 16.1 (SD=4.1) and the median was 16 (range 2-24), indicating higher scores than for other populations described in the literature.

48% of participants reported having generally good HRQoL. Stages of behavior change derived from the PASCQ were consolidated into two major categories (active=action and maintenance; inactive=pre-contemplation, contemplation, and preparation), with 50% of respondents reporting being physically active. As expected, participants who reported higher optimism reported a significantly better physical health status (M=52.8, SD=5.1) relative to participants with lower optimism (M=50.5, SD=6.4) (t[1498]=-7.70 p<0.001), and more optimistic individuals reported a better mental health status (M=53.5,SD=3.9) relative to less optimistic individuals (M= 50.9, SD=6.4) (t[1498]=-9.52,p<0.001). Those who reported being physically active had lower levels of optimism (M=15.8, SD=4.0) compared with inactive individuals (M=16.3,SD=4.0) (t[1498]=2.38,p<0.01). In sum, optimism was positively associated with individuals' perceptions of HRQoL, but, unlike US samples, negatively associated with physical activity. Further work is necessary to better understand the link between optimism bias and physical activity in this population.

CORRESPONDING AUTHOR: Susana C. Barradas, MSc, Psychology, Universidad de los Andes, Bogota, 11001000; sc.pataco54@uniandes.edu.co

C-178l

UNDERSTANDING SOCIAL SUPPORT: QUALITATIVE ANALYSIS OF MESSAGE BOARD INTERACTIONS WITHIN A SMARTPHONE APPLICATION

Susana C. Barradas, MSc,[1] Katie Riley, Psychology,[2] Eric Hekler, PhD,[2] Sandra Winter, PhD,[3] Lauren Grieco, PhD,[3] Jylana Sheats, PhD[3] and Abby King, PhD[3]
[1]Psychology, Universidad de los Andes, Bogota, Colombia; [2]SNHP, Arizona State University, Phoenix, AZ and [3]School of Medicine, Stanford University, PALO ALTO, CA.

Mobile devices and mobile message boards are a promising channel for providing support for health behaviors. The Mobile Interventions for Lifestyle Exercise and Eating at Stanford (MILES) study evaluated the use of three theoretically-derived smartphone applications (apps) designed to increase physical activity. One of the apps--mConnect--targeted social interactions and was found effective in increasing 8-week physical activity (mConnect [n=23]=ages 45 yrs and older, initially underactive, 78.3% women, and smartphone-naive).

This study explored interactions within the message board during the intervention, to determine how this tool was used in impacting social support between participants. Within the message board, confederates posing as participants posted initial comments to spur conversation. These posts were not included in these analyses. Thematic analysis of participant messages was conducted via a content analysis technique. A coding scheme of online interactions (MISC) used in other research by the authors and colleagues and based on the CALO-RE taxonomy was used in this thematic analysis. Twenty-one of the 23 mConnect participants (91.3%) used the message board and 775 messages were posted from April, 2011 to September, 2012. Thirty-three thematic categories were generated from the data. The five most frequent categories were: barriers identification (79% of messages), comments on the use of the app (64%), stating achievements toward a goal (55%), expressing gratitude, support, commitment, or affirmations to the group (52%), and providing validation and support for others' accomplishments (48%). Results suggest the message board was utilized by the majority of participants in ways consistent with regulatory skill-building. Further analyses are being undertaken to better understand the links between message board use, social support, and physical activity.

CORRESPONDING AUTHOR: Susana C. Barradas, MSc, Psychology, Universidad de los Andes, Bogota, 11001000; sc.pataco54@uniandes.edu.co

C-178m

RECEIVING DAILY SOCIAL SUPPORT IS ASSOCIATED WITH HIGHER PHYSICAL ACTIVITY

Yaena Song, MA,[1] Elizabeth E. Moulton, BA,[2] Xi Wang, BA,[3] Brendan C. Doohan, MA[4] and Gertraud Stadler, PhD[5]
[1]Columbia University, New York, NY; [2]Columbia University, New York, NY; [3]Columbia University, New York, NY; [4]Columbia University, New York, NY and [5]Columbia University, New York, NY.

Objectives: The objective of this study is to measure how daily received social support is associated with physical activity.

Background: Identifying the psychosocial factors associated with physical activity is a critical objective in the health sciences (Sallis et al., 2000; Trost et al., 2002). Correlations have been found between social support and increased physical activity in adults and adolescents (Bauman et al., 2012). The current study examined the link between received daily social support and physical activity both between and within persons. This study combined daily online diaries with actigraphy to explore the relationship between social support and physical activity in daily life.

Methods: For six days, young adults (N = 64) wore accelerometers and reported the amount of exercise-related social support they received in an online diary.

Results: Individuals who received more social support were more physically active overall and on a daily basis, indicating that the between-person and within-person link between social support and physical activity are of comparable importance. Between persons, higher levels of social support were associated with more physical activity ($t = 2.41$, $p = .02$). Participants who received an additional unit of social support walked 922 accelerometer-recorded steps more than the average participant. Within participants, higher levels of physical activity occurred on days when participants received more social support ($t = 2.70$, $p = .01$). On days when participants received an additional unit of social support they walked 621 accelerometer-recorded steps more than usual.

Conclusions: Daily received social support promotes physical activity. Further research should examine how social networks can be created to provide support for physical activity. We will discuss implications of our findings for environmental and contextual factors in health and behavior change.

CORRESPONDING AUTHOR: Yaena Song, MA, Columbia University, New York, NY, 10024; yena1004@gmail.com

C-182a

SELF-EFFICACY MEDIATES THE INFLUENCE OF ORAL HEALTH KNOWLEDGE ON PERCEPTIONS AND PRACTICES

Dolores Cannella, PhD,[1] Marci Lobel, PhD[2] and Alan Monheit, MD[3]
[1]General Dentistry, Stony Brook University, Stony Brook, NY; [2]Psychology, Stony Brook University, Stony Brook, NY and [3]Obstetrics and Gynecology, Stony Brook University, Stony Brook, NY.

Multiple factors contribute to the adoption, engagement and maintenance of oral health behaviors. Oral health knowledge is one such factor that has received much attention; however, studies show that it is not consistently associated with oral health behaviors and little is known about what might explain its benefits. Oral health is particularly critical during pregnancy because women are more susceptible to dental diseases during this time, and these diseases are believed to contribute to the risk of pregnancy complications and adverse birth outcomes. The purpose of this study was to examine the mechanisms by which oral health knowledge is associated with oral health perceptions and behaviors during pregnancy, and to explore potential moderating influences. 243 socioeconomically diverse pregnant women completed a questionnaire assessing health literacy, self-efficacy, oral health knowledge, perceptions and behaviors. Using structural equation modeling, we found that oral health knowledge was indirectly associated with oral health perceptions, greater flossing frequency, and less time since the last dental visit through self-efficacy. In addition, we found that the association between self-efficacy and time since last dental visit was moderated by health literacy. That is, for women with adequate health literacy, greater self-efficacy was associated with less time since the last dental visit. This association was not significant for women with low health literacy. These results suggest that oral health knowledge influences perceptions and practices through its association with self-efficacy, and some associations may vary depending on one's level of health literacy. Efforts to educate pregnant women should be targeted to particular groups and include specific steps that women can take to improve their oral health during pregnancy that may empower women to take control of their oral health and increase their confidence about their ability to do so.

CORRESPONDING AUTHOR: Dolores Cannella, PhD, General Dentistry, Stony Brook University, Stony Brook, NY, 11794-8706; dolores.cannella@stonybrook.edu

C-186a

HPV VACCINE: THE EFFECT OF UNBALANCED VERSUS BALANCED INFORMATION ON PEOPLE'S RISK UNDERSTANDING AND DECISION MAKING

Odette Wegwarth, PhD
Harding Center for Risk Literacy, Max Planck Institut for Human Development, Berlin, Germany.

Objective. Informed decision making requires balanced and transparent information on the potential benefit and harms of medical procedures. However, in the context of cervical cancer prevention, several German health agencies provided unbalanced views on the benefit of the human papillomavirus (HPV) vaccination. We sought to learn how unbalanced information might influence people's risk understanding and decision making.

Methods. A national sample of 448 German girls and parents were surveyed in a before-after design on the effect of unbalanced (e.g., benefit in relative risks, no mentioning of the ambiguity of current evidence or potential harms) versus balanced (e.g., absolute risks, mentioning of the ambiguity of current evidence etc.) information about HPV vaccination on their understanding of cervical cancer and the effect of the HPV vaccination, risk perception, intention to have the vaccine, and actual vaccination decision. The leaflet of the major German cancer organization served as "unbalanced" source and a leaflet developed by expert in risk communication as "balanced" source.

Results. Participants given the balanced leaflet were less likely to correctly answer questions on the risk of cervical cancer and the benefit of the HPV vaccine after reading the leaflet than they were beforehand. In contrast, the balanced leaflet increased the number of participants who correctly understood the risks and benefit afterwards. Most important, the balanced leaflet did not decrease participants' actual vaccination uptake.

Conclusion. An unbalanced leaflet of the major German cancer organization reduced people's understanding of the risk and benefit involved in HPV prevention. If informed medical decision making is meant to take place, health agencies need to provide people with balanced views on medical procedures.

CORRESPONDING AUTHOR: Odette Wegwarth, PhD, Harding Center for Risk Literacy, Max Planck Institut for Human Development, Berlin, 14195; wegwarth@mpib-berlin.mpg.de

C-190a

GAINS IN CONDOM USE SKILLS MAINTAINED AT ONE YEAR FOLLOW-UP AMONG RURAL AFRICAN AMERICAN COCAINE USERS

Katharine E. Stewart, PhD,[1] Jeff Thostenson, MS,[1] Songthip Ounpraseuth, PhD[1] and Patricia Wright, PhD, MPH, RN[2]
[1]College of Public Health, University of Arkansas for Medical Sciences, Little Rock, AR and [2]College of Nursing, University of Arkansas for Medical Sciences, Little Rock, AR.

Cocaine users in rural communities are at especially high risk for STIs due to low condom use rates and multiple partners. Thus, durability of risk reduction intervention effects is important. We conducted a controlled behavioral trial among 251 sexually-active, not-in-treatment, African American cocaine users in two rural Arkansas Delta counties (49% female, mean age = 38, 67% with annual income <$5000). The trial compared a culturally-tailored sexual risk reduction program based in social cognitive theory to an active control condition enhancing access to social services. The conditions were identical in structure and contact time and led by peer and health educators from the local community. Assessments at baseline, post-intervention, 6 and 12 months were conducted using skilled community-based interviewers and CAPI technology. Follow-up rates at 6 and 12 months were 77 and 71% respectively. Participants who were lost to follow-up did not have significantly different baseline rates of drug use or risky sex compared to other participants. The sexual risk reduction group demonstrated significant improvements at post-intervention in condom use skills as measured by demonstration with a penile model (p<.0001) and in self-efficacy for condom use with main and casual partners (p<.002). Gains in condom use skills were maintained at 6 and 12 months. Although condom skills were not associated with self-reported risky sex, self-efficacy for condom use was strongly and negatively associated with self-reported unprotected vaginal and oral sex at all time points in a repeated measures model (p<.0001 and p<.03, respectively). Implementation of multi-session, community and peer-led interventions can be challenging; however, the robustness of the gains in condom skills and the links between self-efficacy and unprotected sex in this trial support the use and enhancement of peer- and community-led risk reduction interventions in resource-poor environments.

CORRESPONDING AUTHOR: Katharine E. Stewart, PhD, Health Behavior & Health Education, University of Arkansas for Medical Sciences, Little Rock, AR, 72211; kestewart@uams.edu

C-192a

HIGHER CPAP PRESSURE, BETTER ADHERENCE: INTERACTION WITH SELF-EFFICACY

Brian D. Gonzalez, MA,[1,2] Joseph M. Dzierzewski, PhD,[3] Douglas M. Wallace, MD[2] and William K. Wohlgemuth, PhD[2]
[1]Health Outcomes & Behavior, Moffitt Cancer Center, Miami, FL; [2]Sleep Center, Miami VA Medical Center, Miami, FL and [3]GRECC, Greater Los Angeles VA Healthcare System, Los Angeles, CA.

Introduction: Obstructive sleep apnea (OSA) is a common sleep disorder with significant medical risk. OSA is effectively treated with cPAP therapy. However, less than 50% of patients are adherent to their cPAP therapy prescriptions. The current study sought to investigate the relationship among CPAP pressure, CPAP self efficacy and adherence among veterans prescribed CPAP. It was hypothesized that higher CPAP pressure would blunt the effect of self-efficacy on adherence.

Method: Subjects included 239 patients prescribed CPAP for the treatment of their OSA who attended a CPAP adherence clinic at a VA sleep center. At this visit, questionnaires were completed along with CPAP data download, which provided objective adherence information. Additionally, medical charts were reviewed for demographic and psychiatric conditions.

Results: Hierarchical regression analysis predicting % Days with use ≥ to 4 hours (adjusting for days since CPAP prescription, age, education, CPAP pressure, daytime sleepiness, and psychiatric conditions) revealed: (1) CPAP pressure was positively related to adherence(p<.051), (2) CPAP self-efficacy was positively related to adherence(p<.001), and (3) CPAP self-efficacy X CPAP pressure interaction was significant(p<.01). This model accounted for significant variance in CPAP adherence, Adjusted R2=0.24(p<.01). Similar results were obtained for models predicting %

days used and average use over all days.

Discussion: Controlling for numerous covariates, CPAP self-efficacy and CPAP pressure were related to adherence with CPAP. The interaction revealed that the association between self-efficacy and adherence depended on level of CPAP pressure. For those with low self efficacy, adherence was not dependent on PAP pressure. However, unexpectedly, for those with high self efficacy, as the PAP pressure increased, so did adherence. Thus, self-efficacy appears well positioned for future intervention work aimed at improving CPAP adherence.

CORRESPONDING AUTHOR: Brian D. Gonzalez, MA, Health Outcomes & Behaviora, Moffitt Cancer Center, Tampa, FL, 33612; brian.gonzalez@moffitt.org

C-192b

THE ROLE OF POSITIVE/NEGATIVE AFFECT AND MINDFULNESS IN PATIENTS' SLEEP QUALITY IN AN ONLINE CHRONIC ILLNESS SAMPLE

Jessica Geller, MA, Carissa Kinman, MA and Abbie Beacham, PhD
Department of Psychology, University of Colorado Denver, Denver, CO.

At least 40 million Americans suffer from chronic sleep disorders and an additional 20 million experience sleep problems. Poor sleep can also contribute to less than optimal management of Chronic Illness (CI), such as diabetes, pain and cardiovascular diseases. The overarching purpose of this study was to examine mindfulness, positive affect (PA) and negative affect (NA) relative to ratings and measures of sleep quality and daytime dysfunction associated with poor sleep. We examined if differences exist in mindfulness, PA, and NA in terms of subjective sleep ratings (sleep quality, daytime dysfunction) by categories of objective sleep quality ("No Difficulty" to "Severe Difficulty") in a sample of CI ppts. Online CI support group ppts (N=433; Mean age=54.8 years, SD=12.1), who were primarily female (82.8%), Caucasian (85.2%), married/partnered (64.4%), and well educated (M=15.2yrs, SD=2.8), completed online surveys. Ppts completed medical history, Mindful Attention Awareness Scale (MAAS), Positive and Negative Affect Scales (PANAS), and Pittsburgh Sleep Quality Index (PSQI). Notably, total PSQI scores indicate that nearly 30% of our sample met criteria for "poor" sleep and over 40% cited having "moderate" to "severe" sleep difficulty and/or daytime dysfunction. ANCOVAs, controlling for age and education, were conducted with higher scores of PA and mindfulness associated with better sleep quality and less difficulty with daytime dysfunction. Lower NA was associated with less difficulty with sleep quality and higher NA with higher ratings of daytime dysfunction (all p's < .05). Historically, in CI populations, there tends to be a focus on the role of NA in patient function and symptomatology. However, these results - and those of recent studies - suggest that it may be useful to more actively assess for and focus on cultivation of increased levels of mindfulness and PA. Future directions should include prospective evaluation of effects of active behavioral interventions on improved sleep and enhanced function.

CORRESPONDING AUTHOR: Jessica Geller, MA, Department of Psychology, University of Colorado Denver, Denver, CO, 80217; jessica.geller@ucdenver.edu

C-207a

FACILITATING EVIDENCE-BASED TOBACCO CESSATION INTERVENTIONS IN DENTAL CARE SETTINGS WITH QUITADVISORDDS: A FEASIBILITY STUDY

Jamie L. Studts, PhD,[1,2] Hannah K. Knudsen, PhD,[1] Martha Hinchey, MS[1] and George Reynolds, BA[3]
[1]Department of Behavioral Science, University of Kentucky College of Medicine, Lexington, KY; [2]Cancer Prevention and Control Program, Lucille P. Markey Cancer Center, Lexington, KY and [3]Health Decision Technologies, LLC, Sheboygan, WI.

The Treating Tobacco Use and Dependence clinical practice guideline (Fiore et al., 2008) recommends that all healthcare providers offer evidence-based tobacco cessation strategies designed to reduce morbidity and mortality among tobacco users. However, research has revealed suboptimal implementation of tobacco cessation interventions in dental/oral healthcare settings. To facilitate integration of evidence-based interventions into dental care, we developed and evaluated QuitAdvisorDDS, a web- and smart-phone-based point-of-care tobacco cessation tool based on the 5As (Ask, Advise, Assess, Assist, Arrange) and motivational interviewing principles. As part of a feasibility study, ten dentists and six dental hygienists used QuitAdvisorDDS in their clinical practice for two months. Participating providers completed baseline and follow-up surveys about knowledge, attitudes and practices regarding tobacco cessation interventions. One provider did not complete the follow-up survey. After using QuitAdvisorDDS for two months, participants reported significantly increased tobacco cessation knowledge t(14)=4.94, p<.001, d=.86, more favorable attitudes toward tobacco cessation interventions t(14)=2.25, p=.041, d=.58, and increased implementation of the 5As, t(14)=2.35, p=.034, d=.61. Nearly all dental providers indicated that they would like to continue to use the tool in their practice (N=13, 81%) and would recommend it to other dental professionals (N=14, 88%). Preliminary evidence supports the feasibility and potential utility of QuitAdvisorDDS as a point-of-care practice aid to facilitate implementation of evidence-based tobacco cessation practices in dental care settings. A group-randomized clinical trial is planned to test the efficacy of QuitAdvisorDDS in promoting quit attempts and tobacco cessation.

CORRESPONDING AUTHOR: Jamie L. Studts, PhD, Department of Behavioral Science, University of Kentucky College of Medicine, Lexington, KY, 40536-0086; jamie.studts@uky.edu

C-207b

THE JOINT EFFECTS OF WORK AND NON-WORK PHYSICAL ACTIVITY ON SMOKING IN YOUNG ADULTS

Melanie J. Richmond, MA, Robin Mermelstein, PhD and David X. Marquez, PhD
Univ of Illinois at Chicago, Chicago, IL.

The protective effects of physical activity (PA) on smoking initiation, escalation, and cessation have been well-established. However, not all types of daily PA, such as those derived from work vs. leisure activities, may be equally beneficial. Developing a nuanced understanding of how varying types of PA differentially predict smoking levels is needed in order to strengthen intervention efforts. This study examined how work-related PA (WPA; hours of occupational and household PA) and non-work-related PA (NWPA; hours of leisure time and transportation PA) independently and interactively predicted smoking intensity among young adults at high-risk for smoking escalation. Data come from the 5-year assessment wave of a longitudinal study examining the context of youth smoking. Participants were 178 ethnically diverse young adults (53.9% female; mean age of 21.3; 79.2% current smokers) who completed a 7-day PA Recall interview to obtain a detailed assessment of daily PA. They also completed self-report questionnaires to obtain demographics, body mass index (BMI), and smoking intensity (average cigarettes/day in the last week). On average, they smoked 5.32 cigarettes/day (range: 0-25). Moderated regression examined how WPA, NWPA, and their interaction predicted smoking intensity, after controlling for gender, BMI, educational status, and work status. Results revealed no main effect of WPA, but NWPA was negatively associated with smoking (p<.05). This main effect was qualified by an interaction between NWPA and WPA (p<.05). Follow-up analyses showed that among those low in NWPA, higher WPA was associated with higher smoking (p <.01). Among those high in NWPA, WPA was not associated with smoking. Findings suggest that involvement in a physically active job is associated with higher smoking intensity for otherwise inactive young adults, but those who engage in more NWPA may be protected. Potential mechanisms of this effect and implications for developmentally-tailored interventions will be discussed. This project was supported by the National Cancer Institute Grant P01CA098262.

CORRESPONDING AUTHOR: Melanie J. Richmond, MA, Psychology, Univ of Illinois at Chicago, Chicago, IL, 60608; mrichm4@uic.edu

C-207c

CONSUMER PERSPECTIVES ON ELECTRONIC CIGARETTES: A CONTENT ANALYSIS

Michael G. Mejia, BA, Ellen J. Hahn, PhD, Donald Helme, PhD, Hannah K. Knudsen, PhD and Jamie L. Studts, PhD
University of Kentucky, Lexington, KY.

Little is known about the health impact or consumer perspectives regarding with the use of electronic cigarettes (e-cigs). Despite limited data regarding the constituents or long-term effects of e-cigs, the marketing and use of this product has increased dramatically. To understand consumer perspectives and decision making about using e-cigs, we conducted a content analysis of online reader responses to an editorial published (print and online) in a regional newspaper in a tobacco-producing state (July, 2012). The editorial addressed the emergence of e-cigs and raised questions concerning their health impact. Data for the content analysis included 97 online comments posted within one week of the editorial's publication. Adapting a codebook from previous studies, the investigative team developed 71 codes addressing 15 general themes, including negative effects of conventional tobacco product use, perceived effectiveness of e-cigs as tobacco cessation or reduction method, and functional health improvements. Online comments about the editorial were then coded by trained graduate students. The 97 responses varied significantly in length with an average of 195 (±336) words. The most striking aspect of the data was the near universal support for e-cigs, with only 1 of the 97 posts modestly questioning the health benefits of e-cig use. The most commonly mentioned codes included: (1) confrontational tone or disagreement with the editorial (n=69; 71%); (2) referencing external websites (n=27; 28%); and (3) comparisons to the risks of smoking conventional tobacco products (harm reduction; n=18; 19%). Despite the lack of rigorous scientific data that e-cigs are less harmful, consumers responding on this online comment section seemed highly dedicated to this emerging tobacco product. Consumer perspectives demonstrated substantial enthusiasm for using e-cigs as a harm reduction approach as compared to smoking conventional cigarettes. Combined with data regarding health risks, knowledge of consumer perspectives on e-cigs will be important for informing FDA regulatory efforts and other tobacco control initiatives.

CORRESPONDING AUTHOR: Michael G. Mejia, BA, Department of Behavioral Science, University of Kentucky, Lexington, KY, 40536-0086; m.mejia@uky.edu

C-207d

SMOKERS WITH SERIOUS MENTAL ILLNESS: SYMPTOM SEVERITY AND CESSATION GOALS

Nicole E. Anzai, BS,[1] Sebastien Fromont, MD,[2] Stephen Hall, MD,[2] Sharon Hall, MD[2] and Judith Prochaska, PhD, MPH[1,2]
[1]Stanford University, Stanford, CA and [2]University of California, San Francisco, San Francisco, CA.

Smokers with serious mental illness (SMI) are oft believed to be unmotivated to quit and hindered in quitting by symptom severity. This study examined the relationship between symptom severity and thoughts about abstinence in a sample of smokers with SMI.

Adult smokers (N=733; 51% male; 51% Caucasian, 26% African American) diagnosed with bipolar disorder (46%), unipolar depression (25%), PTSD (42%), and psychotic disorder (40%) were interviewed during a smoke-free psychiatric hospitalization. Intention to quit smoking was not required and 76% of eligible patients participated. The sample averaged 17 cigarettes/day (sd=10) and smoked for a mean of 19 years (sd=14). Most intended to quit smoking in the next 6 months (43%) or next 30 days (27%). Assessments covered psychiatric (BASIS24) and physical (SF12) symptoms, nicotine dependence (FTND), and thoughts about abstinence.

With correlations ranging from $|r| = 0.07$ to 0.15 with all p<.05, greater psychiatric severity (BASIS24 scales of depression, emotional lability, self-harm, psychosis, substance abuse) was associated with greater desire to quit smoking, yet also greater nicotine dependence, less perceived success with quitting, and greater anticipated difficulty with staying quit. With correlations ranging from $|r| = 0.10$ to 0.17 with all p<.05, poorer physical functioning on the SF12 was associated with greater desire to quit and greater expectation of success, but also greater nicotine dependence and greater anticipated difficulty staying quit. Having more severe psychiatric and physical symptoms was associated with being in a later stage of change (contemplation or preparation vs. precontemplation, p<.05).

Significant, though weak, findings indicate greater symptom severity is associated with greater, rather than lesser, motivation and intention to quit smoking, but also greater nicotine dependence and less confidence of quitting successfully. Attention to physical and mental health symptoms during the cessation process is warranted.

Funded by NIMH #R01MH083684

CORRESPONDING AUTHOR: Nicole E. Anzai, BS, Preventitive Medicine, Stanford University, Berkeley, CA, 94704; nanzai@stanford.edu

C-215a

PREDICTORS OF STRESS IN INFLAMMATORY BOWEL DISEASE

Anilga Moradkhani, PhD,[1] Linda J. Beckman, PhD[2] and James H. Tabibian, MD[3]
[1]Department of Psychiatry and Psychology, Mayo Clinic, Rochester, MN; [2]Clinical Psychology, California School of Professional Psychology, Los Angeles, Los Angeles, CA and [3]Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN.

Introduction: Inflammatory bowel disease (IBD), which encompasses ulcerative colitis (UC) and Crohn's disease (CD), is a chronic characterized by inflammation of the gastrointestinal tract. The unpredictable clinical course of IBD can impact an individual's ability to cope, leading to increased perceived stress, disease-related worries, anxiety and depression. Perceived stress has been found to be a strong predictor of lower health-related quality of life in patients with IBD. The objective of this study was to identify demographic, clinical, and psychosocial predictors associated with perceived stress in patients with IBD.

Methods: A total of 134 adults with IBD were recruited from national IBD support groups online. Inclusion criteria were: age >18 years, residence in the United States, and a diagnosis of IBD. Perceived stress was measured using a standardized questionnaire. Univariate analyses were conducted to determine which predictors were associated with perceived stress, and those that were statistically significant ($p<0.05$) were entered into a multivariate regression model.

Results: Univariate analyses revealed significantly higher perceived stress in individuals who: reported lower perceived social support, higher number of previous relapses, had lower levels of education, and were younger. Multivariate analyses revealed that the predictors most strongly associated with higher perceived stress were lower perceived social support ($p < 0.01$), lower level of education ($p < 0.01$), and younger age ($p < 0.05$).

Conclusion: IBD patients with lower perceived social support, lower level of education, and younger age may be at particular risk for higher perceived stress. Future studies should assess the benefit, particularly in this subset of patients, of offering: 1) psychological screeners for stress and 2) targeted, brief psychological interventions early in the course of disease to decrease perceived stress and facilitate more effective coping in IBD.

CORRESPONDING AUTHOR: Anilga Moradkhani, PhD, Department of Psychiatry and Psychology, Mayo Clinic, Rochester, MN, 55905; moradkhani.anilga@mayo.edu

C-215b

PROMOTING RESILIENCY AMONG PALLIATIVE CARE CLINICIANS: STRESSORS, COPING STRATEGIES, AND TRAINING NEEDS

Giselle K. Perez, MA, Vivian Haime, BS, Vicki Jackson, MD, MPH, Darshan Mehta, MD, MPH and Elyse R. Park, PhD, MPH
Massachusetts General Hospital, Boston, MA.

Palliative care medicine is a medical specialty that focuses on caring for patients with serious and life-threatening illness. Palliative care clinicians (PCC) are susceptible to burnout, as they regularly witness immense patient and family suffering; however, little is known about the specific challenges and training needs to enhance their long-term sustainability. This qualitative study explored common stressors, coping strategies, and training needs among 15 PCCs (mean age 44; 80% female; 86.7% Caucasian) at the Massachusetts General Hospital. In order to tailor a relaxation response resiliency program to the needs of PCCs, we conducted in-depth individual interviews. Content analysis highlighted three main areas of stressors: 1) environmental challenges related to managing large, emotionally demanding caseloads within time constraints; 2) personal challenges related to delineating emotional and professional boundaries, such as balancing work and family and setting limits on time spent with patients and at work, and 3) patient factors, such as addressing patients' mutable needs, managing family dynamics, and meeting demands and expectations from patients and their families. Engaging in healthy behaviors and hobbies and seeking emotional support from colleagues and friends were among the most common methods of coping with stressors. In terms of programmatic topics, PCCs desired training in relaxation skills (e.g., breathing, yoga, meditation), health education about the effects of stress, and cognitive strategies to help reduce ruminative thoughts and negative self-talk. Above all, a majority of clinicians stressed the need for brief strategies that could be readily integrated in the workplace. These results suggest that an intervention aimed to enhance PCC sustainability should focus on utilizing a multimodal, skill-building approach to stress reduction that imparts skills that can be readily utilized during work hours.

CORRESPONDING AUTHOR: Giselle K. Perez, MA, Psychiatry, Massachusetts General Hospital, Boston, MA, 02114; gperez-lougee@partners.org

C-215c

THE FEASIBILITY OF A SPIRITUALITY-BASED WELLNESS PROGRAM ON STRESS REDUCTION AND HEALTH BEHAVIOR CHANGE

Jenelle R. Walker, PhD,[1,2] Pamela Swan, PhD,[2] Julie Fleury, PhD,[1] Barbara Ainsworth, PhD,[2] Jack Chisum, PhD,[2] Steven Hooker, PhD[2] and Colleen Keller, PhD[1]
[1]College of Nursing and Health Innovation, Arizona State University, Phoenix, AZ and [2]School of Nutrition and Health Promotion, Arizona State University, Phoenix, AZ.

Introduction: Faith-based programs have focused on the physical dimension of health for improvement in health and healthy behaviors (e.g. exercise and diet). Few have specifically intervened on the mental dimension (e.g. distress/stress) in conjunction with the spiritual and physical dimensions. Purpose: To evaluate the feasibility of a spirituality-based stress reduction and health behavior change program (Optimal Health) using the Spiritual Framework of Coping (SFC) model. The program was designed to target multiple dimensions of wellness/well-being. Methods: This study was a quasi-experimental one group pretest-posttest design. The study lasted 12 weeks and was conducted at a non-denominational Christian church. The program met for 8 weeks, once a week for 1.5 hours. Weekly phone calls were made during a four week follow-up period. Feasibility was assessed by the acceptability, demand, implementation, practicality, integration, and limited efficacy [(SF-12 (well-being), Brief RCOPE (spiritual coping), PSS-10 (perceived stress), IPAQ and accelerometer wear (physical activity), NCI Fruit & Vegetable Screener (dietary intake), body composition, blood pressure] of the program. Analysis: Objectives were assessed by frequencies of responses to evaluations and limited efficacy of pretest-posttest measures were conducted by paired t-test ($p <.05$). Results: The program was positively accepted. The demand for the program was shown with average attendance of 78.7% and was successfully implemented as shown by meeting session objectives and 88% homework completion. The program was practical for the intended participants and was successfully integrated within the existing environment. Limited efficacy measures showed no pre-post changes. Conclusion: This study addressed the feasibility of a faith-based program and provided preliminary support for the design and further testing of the theoretical components of the SFC model.

CORRESPONDING AUTHOR: Jenelle R. Walker, PhD, Arizona State University, Phoenix, AZ, 85004; jenelle.walker@asu.edu

C-215d

A CAREGIVER'S HEARTACHE: THE EFFECT OF STRESS AND UNHEALTHY BEHAVIORS ON CARDIOVASCULAR DISEASE RISK

Margaret Bevans, PhD,[1] L. Yang, MS,[1] L. Wehrlen, BSN,[1] S. Klagholz, BS,[1] A. Ross, PhD,[1] S. Flynn, MS[1] and R. Shamburek, MD[2]
[1]Clinical Center, NIH, Bethesda, MD and [2]NHLBI, NIH, Bethesda, MD.

The relationship between perceived stress and markers of CVD has not been well studied. This analysis examines the relationship between perceived stress and factors predicting risk of CVD [fasting glucose, blood pressure, triglycerides, high density lipoprotein (HDL), waist circumference (WC), C-reactive protein (CRP)]. Baseline data from a longitudinal study exploring stress and markers of CVD in caregivers and non-caregiver controls were analyzed. Surveys included perceived stress scale (PSS) and Health Promoting Lifestyle Profile-II (HPLP) where higher scores equal higher stress or more healthy behaviors. Parametric statistics were computed. Adult (M-51.3 SD-12.1 years) subjects (N=46) were primarily female (63%) and White (61%). 50% had WC above gender norms; 61% had a body mass index (BMI) >25, 30.4% had HDL below gender norms. Results: No significant correlations were found between PSS and CVD risk factors. Higher PSS was related to lower HPLP scores (r=-0.48; p=0.001); lower HPLP scores were related to lower HDL (r=0.42; p=0.004). Subjects with lower HDL had higher WC, glucose, CRP and triglycerides. After controlling for gender and BMI (<25 vs. >25) the relationship between HPLP scores and HDL was non-significant (p=0.09); BMI further mediates the affect of healthy behaviors on CVD risk factors. More specifically, subjects with high PSS scores; [caregivers, n=23 (M-25.96 SD-8.6); versus non-caregivers, n=23 (M-13.09 SD-5.46; p<0.001)] reported fewer healthy behaviors (p=0.001) including health responsibility (p=0.005), physical activity (p=0.002), interpersonal relations (p=0.03), spiritual growth (p=0.003) and stress management (p=0.001). These findings suggest that stress, specifically from caregiving, is likely to affect healthy behaviors and may influence CVD risk factors in individuals who are or become overweight. Clinical markers (e.g. BMI) might help identify individuals who could benefit from targeted interventions to improve healthy behaviors during stressful events. Funding: NIH Intramural Program

CORRESPONDING AUTHOR: Margaret Bevans, PhD, NIH, Bethesda, MD, 20892; mbevans@cc.nih.gov

C-221a

ASSOCIATIONS BETWEEN DEPLOYMENT EXPERIENCES AND ALCOHOL USE AMONG OEF/OIF VETERANS: EXPLORING THE EFFECT OF PTSD

Matthew T. Luciano, BA,[1] Amy E. Street, PhD[1,2] and Jaimie L. Gradus, DSc, MPH[1,2]
[1]VA Boston Healthcare System, Boston, MA and [2]Boston University School of Medicine, Boston, MA.

As military personnel return from Operation Enduring Freedom and Operation Iraqi Freedom (OEF/OIF), increased attention has focused on factors associated with the misuse of alcohol in this cohort. We examine if stressful deployment events are associated with clinically significant alcohol use among OEF/OIF Veterans and then examine the impact of PTSD symptomotology on these associations.

A national sample of male (n=1139) and female (n=1209) OEF/OIF Veterans completed a mail survey assessing deployment combat exposure and military sexual harassment (Deployment Risk and Resilience Inventory), PTSD symptoms (PTSD Checklist - Military Version) and alcohol use following deployment (CAGE Questionnaire). Using logistic regression we examined associations between these two deployment stressors and clinically significant alcohol use, stratified by gender. We then examined these same associations, while controlling for PTSD symptoms.

As predicted, combat exposure was significantly associated with problematic alcohol use among women (OR = 1.04, 95% CI: 1.02, 1.07) and men (OR = 1.05, 95% CI: 1.03, 1.06) . Military sexual harassment was significantly associated with alcohol use among women (OR = 1.10, 95% CI: 1.07, 1.14), but not among men (OR = 1.15, 95% CI: .99, 1.33). Including PTSD symptoms in our model reduced associations between combat exposure and alcohol use among women (aOR = 1.00, 95% CI: .97, 1.02) and men (aOR = 1.01, 95% CI: .99, 1.03) In regards to experiences of sexual harassment, however, among women a small but significant association remained between harassment and alcohol use (aOR = 1.05, 95% CI: 1.01, 1.09) even after controlling for PTSD symptoms.

Our findings suggest that, while combat experiences are associated with problematic alcohol use, PTSD symptoms account for much of these associations. However, among female Veterans a thorough assessment of military sexual harassment experiences, even in the absence of PTSD symptoms, may help identify those at risk for developing alcohol problems.

CORRESPONDING AUTHOR: Matthew T. Luciano, BA, National Center for PTSD, VA Healthcare System, Boston, MA, 02130; Matt.T.Luciano@gmail.com

Rapid Communications
Poster Session D

Saturday, March 23, 2013

10:15 AM-11:45 AM

D-037a

BREAST CANCER SCREENING AMONG MEXICAN WOMEN

Alma I. Behar, BA,[1] Rina M. Sobel, MS,[2] Martha T. Solorzano, MPH,[3] Carolina A. Talavera, MA,[3] Vanessa L. Malcarne, PhD[2,3] and Georgia R. Sadler, BSN, MBA, PhD[1,2]
[1]Moores UCSD Cancer Center, La Jolla, CA; [2]SDSU/UCSD Joint Doctoral Program in Clinical Psychology, San Diego, CA and [3]San Diego State University, San Diego, CA.

The American Cancer Society (ACS) recommends that women begin receiving regular clinical breast exams and mammograms starting at ages 20 and 40, respectively. According to ACS's Cancer Facts & Figures for Hispanics/Latinos 2012-2014 report, Mexican women are less likely than women of all other Hispanic subgroups to be in compliance with these guidelines. The literature shows that women who do not receive regular mammograms are more likely to be diagnosed with advanced stage breast cancer. Few studies have focused on specific regional Hispanic subgroups. This study is focused on self-identified Mexican and Mexican American women aged 21 years or older (N = 369) residing in San Diego County. As part of a larger study, participants completed a packet of questionnaires in their preferred language (English or Spanish). Self-report questions measured health care access and breast cancer screening behaviors. Hierarchical linear regressions demonstrated that, after controlling for personal and family history of breast cancer, age, health insurance status, time since last doctor's visit, and education significantly predicted the experience of ever having had a breast cancer screening test, as well as compliance with ACS's breast cancer screening guidelines. This is consistent with the barriers to mammography use identified in the scientific literature. These findings build upon previous literature by highlighting the impact of structural, versus cultural, barriers for this community and extending these results to previously unexamined communities. These findings emphasize the need to establish policies that provide women with regular access to preventive healthcare. Similarly, it is important to reach out to uninsured women who receive healthcare services at facilities other than physicians' offices, as the present findings suggest that such women are underutilizing mammography services. Such outreach may subsequently improve mammography use by Mexican women living in the United States.

CORRESPONDING AUTHOR: Alma I. Behar, BA, Community Outreach, Moores UCSD Cancer Center, La Jolla, CA, 92093-0850; abehar@ucsd.edu

D-037b

INTERVENTION STRATEGIES FOR MULTIPLE HEALTH BEHAVIOR CHANGE IN CANCER PATIENTS AND THOSE AT HIGH RISK: A SYSTEMATIC REVIEW OF THE LITERATURE

Amanda C. Green, MSN, PHCNS-BC,[1] Mary E. Cooley, PhD, RN, FAAN[1,2] and Laura L. Hayman, PhD, RN, FAAN[1]
[1]College of Nursing and Health Sciences, University of Massachusetts Boston, Dorchester, MA and [2]Dana-Farber Cancer Institute, Boston, MA.

Background. While the etiology of some cancers remains to be fully explicated, research suggests making changes in multiple adverse health behaviors may decrease the morbidity and mortality associated with cancer. This systematic review was designed to identify components of efficacious interventions for multiple behavior change in cancer patients and individuals at high risk for developing cancer.

Methods. A systematic review of literature was conducted using the Preferred Reporting Items for Systematic reviews and Meta-Analyses. Databases searched between 1990 and 2012 included Medline, Cumulative Index to Nursing and Allied Health Literature, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews and PubMed. Inclusion criteria for article selection: evidence of more than one health behavior examined; sample includes cancer patients or individuals at high risk for cancer (by family history); and experimental study design.

Results. 583 articles were retrieved; 469 were screened, 70 had full-text assessment and 11 randomized controlled trials (1.8%) met the criteria and were included in the final review. Eight focused on cancer patients (breast, prostate, colorectal and endometrial cancer); 3 included individuals at high risk for cancer.

Conclusions. Interventions targeting positive change in multiple health behaviors in cancer patients and those at high risk are commonly theory-based focused on behavior change (8/11, 73%). Interventions including in-person sessions (5/11) appear to positively affect diet and exercise consistently. Interventions consisting of phone calls and/or personalized mailings (6/10) positively affect exercise and diet with a wide range of dose and duration of the intervention. Effect sizes were calculated for six studies (range 0.09-0.97) and are relatively high for diet change with minimalist interventions. There is need for additional research to validate these positive findings.

CORRESPONDING AUTHOR: Amanda C. Green, MSN, PHCNS-BC, University of Massachusetts Boston, Dorchester, MA, 02125; amanda.green002@umb.edu

D-037c

ADOPTION OF A COLORECTAL CANCER SCREENING PROGRAM BY COMMUNITY ORGANIZATIONS

Annette Maxwell, DrPH, Leda L. Danao, PhD, Reggie Cayetano, MD, MPH, Catherine M. Crespi, PhD and Roshan Bastani, PhD
UCLA, Los Angeles, CA.

Background: Adoption, part of the RE-AIM Evaluation Framework, refers to the proportion and representativeness of settings (such as community organizations) that adopt a given policy or program (Glasgow et al 1999). It is an important issue, since health programs or policies that are widely adopted in a variety of settings have a better chance of dissemination and are likely to have a greater public health impact.

Methods: We conducted telephone surveys with churches and community based organizations (CBOs) that had participated in our prior study (previously exposed to a CRC screening program), new churches identified online, and new CBOs from a Filipino consumer guide directory. Organizations that had at least 150 Filipino American members age 50 and older and were willing to promote CRC screening among their members were invited to participate in a study that has the goal to disseminate CRC screening in the Filipino American community.

Results: Of 45 previously exposed CBOs and churches, only 14 met eligibility criteria and12 of them (86%) adopted the program. We attempted to contact 65 new churches. Only 9 had at least 150 Filipino American members 50 years and older and 3 of them decided to adopt the program. Through systematic random sampling we identified 245 CBOs in the consumer guide, but only 28 of them had valid contact information. Only 9/28 had the required membership and 3 of them decided to adopt the program. Many new churches and CBOs could not be reached or did not provide eligibility information. Of 7 organizations that were referred to our study by community partners, 4 (57%) decided to adopt the program.

Conclusions: Only some community organizations are willing and able to adopt a program to promote CRC screening. Organizations that were referred by community partners or had partnered with us in the past had the highest rate of adoption, underscoring the importance of community resources, community-academic relationships, and partnership in the dissemination process.

CORRESPONDING AUTHOR: Annette Maxwell, DrPH, UCLA, Los Angeles, CA, 90095-6900; amaxwell@ucla.edu

D-037d

PSYCHOLOGICAL VS PHARMACEUTICAL INTERVENTION FOR DEPRESSED HCT SURVIVORS: PATIENT PREFERENCES AND PERCEPTIONS

Arshdeep Kaur, BS,[1] Rachel Kentor, Doctoral Candidate,[1] Flora Hoodin, PhD,[1] Bethany Gourley, Master's Candidate,[1] Corey Spickler, Master's Candidate,[1] Annette Richard, Doctoral Candidate,[1] Jillian Carey, MA,[1] Stephanie Proudfoot, MA,[1] Kristen Waddell, BA[1] and Kevin Alschuler, PhD[2]
[1]Eastern Michigan University, Ypsilanti, MI and [2]University of Washington, Seattle, WA.

Depression is present in a significant minority of patients receiving hematopoietic cell transplant (HCT), for as long as three years afterwards. In the first year post-HCT, 26-36% of patients report moderate to severe depressive symptoms (Mosher et al., 2009). This is a preliminary report on the psychological and pharmaceutical treatments sought for depression in a cross-sectional nation-wide US adult sample of 338 HCT recipients responding to our online survey. They were a mean of 5.7 years post-HCT, predominantly female (58.2%), well-educated (m = 16 years), middle-aged (m = 52.5 years), allogeneic (60.2%) graft recipients.

A subset of 74 retrospectively reported being professionally diagnosed with depression and did not differ demographically from the overall sample. Of this subset, 37.8% reported first diagnosis before HCT; 21.6% during HCT; 28.4% post-HCT; and 12.2% long after HCT (> 731 days). Time of first diagnosis was unrelated to PHQ-9 depression scores at time of survey, though longer time since HCT was associated with lower PHQ-9 scores.

The majority of respondents (51.4%) were treated with both medication and psychotherapy; 23% with psychotherapy only, 13.5% with medication only; and 12.2% received neither. Treatment modalities differed significantly in perceived helpfulness ($p<.001$). Those receiving both psychotherapy and medication reported higher perceived helpfulness than those receiving medication only ($p<.001$). Those receiving psychotherapy only also perceived greater helpfulness than those receiving medication only ($p=.001$).

Our national sample evidenced rates of depression consistent with existing literature, and demonstrated that perceptions of treatment helpfulness differ significantly by modality. Patients perceive psychotherapy, alone or with medication, as most helpful. Hence, treatment centers should integrate more psychological intervention, particularly post-HCT, above and beyond pharmaceutical treatments.

CORRESPONDING AUTHOR: Arshdeep Kaur, BS, Eastern Michigan University, Canton, MI, 48188; akaur2@emich.edu

D-037e

SOCIAL SUPPORT FOR REDUCING TOBACCO AND ALCOHOL CONSUMPTION AMONG HEMATOLOGIC CANCER PATIENTS PREPARING FOR HEMATOPOIETIC CELL STEM CELL TRANSPLANTATION (HSCT)

Carrie Bronars, PhD, Shawna L. Ehlers, PhD, Keagan L. McPherson, BA, Christi A. Patten, PhD, Tabetha Brockman, MA, Christine Hughes, MS and Dennis Gastineau, MD
Mayo Cliniic, Rochester, MN.

Tobacco use in the year prior to HSCT consistently represents higher risk for mortality and prolonged hospitalization. Excessive alcohol use has been linked to increased medical complications such as GVHD, sepsis, and disease reoccurrence. Intervention targets for tobacco and alcohol cessation are not well studied in the context of HSCT. The current study examines the role of social support as a potential intervention target among alcohol and tobacco users undergoing HSCT using Social Cognitive Theory. A total of 496 participants completed a pre-transplant evaluation survey. Participants were predominately partnered (81%), white/Non-Hispanic (95%), men (58%), aged 19-75 years (M = 55.8; SD = 11.9). Approximately 15% of participants reported tobacco use within the past year (n=74) and 9% were consuming alcohol above recommend guidelines (n=47) (>2 drinks per day). Sixty-two percent of tobacco users reported receipt of physician advice to quit and 50% of tobacco users perceived their caregiver as strongly encouraging of cessation. Only seven individuals not meeting guidelines for alcohol consumption reported receipt of advice to reduce use and 34% reported their caregiver as extremely supportive of reducing alcohol intake. These findings suggest the potential role of social support and educational interventions towards helping HSCT patients achieve recommended health behavior guidelines that support optimal HSCT outcomes. Future research might examine appropriate screening and identification systems to promote systematic physician advice and utilization of caregiver support within behavior change interventions.

CORRESPONDING AUTHOR: Carrie Bronars, PhD, Department of Psychiatry and Psychology, Mayo Clinic, Rochester, MN, 55905; bronars.carrie@mayo.edu

D-037f

ADVANCED STAGE LUNG CANCER PATIENTS PERCEPTIONS OF ILLNESS AND COPING SELF-EFFICACY

Doris Howell, PhD, RN,[1] Gerald Devins, PhD,[2] Andrea Bezjak, MD,[3] Natasha Leighl, MD,[4] Lucia Gagliese, PhD,[5] Gary Rodin, PhD[6] and Camille Zimmerman, MD, PhD[7]
[1]Nursing, Princess Margaret Hospital, Toronto, ON, Canada; [2]Psychiatry, University Health Network, Toronto, ON, Canada; [3]Medicine, Princess Margaret Hospital, Toronto, ON, Canada; [4]Medicine, Princess Margaret Hospital, Toronto, ON, Canada; [5]Psychosocial Oncology, Princess Margaret Hospital, Toronto, ON, Canada; [6]Psychiatry, Princess Margaret Hospital, Toronto, ON, Canada and [7]Medicine, Princess Margaret Hospital, Toronto, ON, Canada.

Lung cancer patients experience high symptom distress not fully explained by objective disease or demographic variables. Little research has examined the beliefs (cognitive and emotional representations) activated in response to the threat posed by lung cancer on outcomes. We examined lung cancer patients' perceptions held about cancer and relationship to symptom distress and coping self-efficacy. Methods: As part of a larger path analysis theory testing study, 104 patients with advanced stage lung cancer completed the Brief Illness Perception Questionnaire (IPQ), Memorial Symptom Assessment Scale, and the Cancer Behavior Inventory (CBI-B) that measured self-efficacy for behaviors related to coping with cancer. Results: The mean age (± SD) was 62.8 ± 10.9 years. Patients reported strong beliefs about the negative consequences and the chronicity of lung cancer. Although they reported higher perceived levels of treatment control and coherence (understanding) beliefs, low scores were noted for beliefs about personal control. The degree to which cancer was perceived as having negative consequences was strongly negatively correlated (r=-0.632, p<0.001) to self-efficacy for coping behaviours. Higher levels of symptom distress were also associated with lower symptom management self-efficacy. Discussion: Illness perception including beliefs about the personal consequences of the illness, as well as the extent to which the illness is amenable to personal control or to control by treatment may be influential in health and behavior outcomes and is emerging as an important area for future psychosocial research.

CORRESPONDING AUTHOR: Doris Howell, PhD, RN, Nursing, Princess Margaret Hospital, Toronto, ON, M5G 2M9; doris.howell@uhn.on.ca

D-037g

BARRIERS TO SCREENING MAMMOGRAPHY: A SYSTEMATIC REVIEW

Elizabeth A. Sarma, BA
Psychology, Stony Brook University, Stony Brook, NY.

Although controversy has surrounded some aspects of screening mammography, such as the potential for overdiagnosis, it is still considered the most effective method available for the early detection of breast cancer. As medical knowledge, screening guidelines, and the demographics of underserved populations continue to change, understanding the types of barriers to screening identified in recent literature may help to inform research, policy, and practice aiming to increase mammography adherence. The purpose of this systematic review was to identify and examine barriers that may help to explain nonadherence to mammography screening guidelines. This review considered both qualitative and quantitative studies on screening barriers, which offer different yet complementary information and have not yet been considered in a single review.

A structured search of PsycINFO and PubMed was conducted to identify studies published between 2000 and 2012 that examined barriers associated with reduced mammography adherence. Of the 31 studies included in the review, 17 studies used a quantitative approach and examined the predictive role of barriers to adherence, and 14 studies used a qualitative approach in which women were asked to generate or endorse barriers to mammography. Studies varied in their samples and methodologies, although most studies employed a cross-sectional design and used self-report to ascertain adherence status. Three thematic groups of barriers, based on social ecology, were identified from the literature: individual-level (e.g., cancer knowledge), social (e.g., cultural norms), and healthcare system-level (e.g., lack of a healthcare provider recommendation).

The results of the review suggest that women face concurrent barriers to screening mammography at multiple levels. It is recommended that researchers consider screening behavior in context and should therefore simultaneously consider barriers related to individual women, their social networks, and the healthcare infrastructure when attempting to understand screening behavior and developing interventions to increase mammography adherence.

CORRESPONDING AUTHOR: Elizabeth A. Sarma, BA, Psychology, Stony Brook University, Stony Brook, NY, 11794-2500; elizabeth.sarma@stonybrook.edu

D-037h

THE EFFECTIVENESS OF GROUP CBT FOR CANCER RELATED FATIGUE AND INSOMNIA IN BREAST CANCER SURVIVORS

Gyhye Sung, MA,[1] Ji-Hae Kim, PhD,[1] Youngsook Yook, PhD,[2] Jeongeon Lee, MD, PhD,[3] Seokjin Nam, MD, PhD[3] and Bum-Hee Yu, MD, PhD[1]
[1]Department of Psychiatry, Samsung Medical Center, Gangnam-gu, Republic of Korea; [2]Department of Sports & Leisure, Sungshin Women's University School, Seoul, Republic of Korea and [3]Breast Cancer Center, Samsung Medical Center, Seoul, Republic of Korea.

Many breast cancer survivors experience persistent physical and psychological symptoms such as fatigue, pain, sleep disturbances, various negative emotions and low quality of life during and after the treatment. In this study, we tested the effectiveness of a brief group CBT in improving CRF, insomnia and general function associated with quality of life in breast cancer survivors.

We combined the content of PACE program (CBT for chronic fatigue syndrome) and CBT-Insomnia to treat fatigability and sleep disturbances. The program is condensed into a total of 12 sessions.

We used a yoga-exercise group as a control group, and total of 34 of breast cancer survivors (Mean age = 49.92, SD = 8.58) are included. Treatment session continued for 90 minutes, was performed twice a week for 6 weeks. Post-treatment measure was done at the termination visit and follow-up measure was done 4 weeks after the termination. To assess global QOL, fatigue, general functions, negative emotions, and quality of sleep, the EORTC QLQ-C30, FACT-F, POMS, PSQI were used.

There were no significant differences in demographic data and outcome variables at baseline between the CBT (n=16) and control group (n=18). However, the CBT group showed significant reductions in fatigue (t=2.19, p=.045), sleep disturbances (t=4.52, p=.001), negative emotions such as depression (t=3.42, p=.004), anxiety (t=4.52, p=.001) and anger (t=2.69, p=.017), and significant improvement in the QOL (t=-3.23, p=.005). However, the control group showed significant changes only in quality of sleep (t=5.64, p=.000). At the follow up measurement, all significance of the results was maintained.

In conclusion, this brief version of group CBT for the breast cancer survivors was effective to improve fatigue, insomnia and quality of life, and decrease negative emotions.

CORRESPONDING AUTHOR: Gyhye Sung, MA, Department of Psychiatry, Samsung Medical Center, Gangnam-gu, 135-710; sunggh82@naver.com

D-037i

A QUALITATIVE STUDY OF PSYCHOSOCIAL NEEDS FOR INDIVIDUALS WITH LUNG CANCER

Kevin R. Criswell, MA in Psychology
Psychology, Loma Linda University, Loma Linda, CA.

Introduction: It is evident that lung cancer survivors have a high level of unmet supportive care needs (Sanders et al., 2010), yet it is unknown what their perspectives are regarding their most salient needs if given the opportunity to respond to open questions. Specifically, it is unknown what is the experience of lung cancer survivors' salient psychosocial needs, barriers to needs, and preferred methods of delivering those needs (e.g., via Internet).

Method: Lung cancer patients who completed baseline data in an ongoing study (see Sanders et al., 2010) were sent invitations and consent forms via mail and called to participate in a brief (20-30 min.) interview on the phone. Interviews were transcribed and analyzed using grounded theory (Strauss & Corbin, 1998) to identify emergent themes of psychosocial needs, barriers, and delivery channels.

Results: Twelve lung cancer survivors completed interviews. All participants indicated at least one psychosocial need. In order of the most commonly endorsed themes, needs included disease and treatment-related information, fatigue, anxiety, staying positive, nutrition and exercise information, depressed mood, understanding causes of symptoms, pain management, and forgetfulness. Themes regarding barriers to getting needs met included time, travel, motivation, finance, anxiety, and lacking information (i.e., regarding services available to them). Preferred channels of service delivery included face-to-face, personal effort (i.e., the patient carries out instructions on how to meet a need), telephone, Internet, and support group.

Discussion: These findings suggest that lung cancer survivors consider information, fatigue, and anxiety to be their most salient needs. Services might best meet those needs if they involve face-to-face interaction with a health professional and incorporate clear involvement from the lung cancer survivor. Future research should involve testing the efficacy of interventions that meet the needs of lung cancer survivors and clearly explaining how barriers to service delivery are addressed.

CORRESPONDING AUTHOR: Kevin R. Criswell, MA in Psychology, Psychology, Loma Linda University, Loma Linda, CA, 92350; kcriswell@llu.edu

D-037j

QUALITY AND READABILITY OF ACTIVE SURVEILLANCE INFORMATION ON THE INTERNET

Kristian Stensland, BA, Kai Dallas, BA, Alex Small, BA, Matt Hall, BA, Simon Hall, MD, Michael Palese, MD and Michael Diefenbach, PhD
Icahn School of Medicine at Mount Sinai, New York, NY.

Introduction and Objectives

With the current controversies surrounding different treatment options for low-grade prostate cancer, some physicians advocate for active surveillance (AS) instead of immediate treatment. Often, patients use the Internet for insights to augment the information given by the health care provider. The Internet is a source of immediately accessible health and treatment information but there is a lack of data rating the quality of this information. The purpose of this study was to evaluate the readability and quality of AS information on the Internet.

Methods

On 10/1/2012 we used 4 treatment terms ("active surveillance," "active surveillance and prostate cancer," "watchful waiting and prostate cancer," and "expectant management and prostate cancer") on 3 search engines (Google, Bing and Yahoo!) to collect the first 2 pages of results (240 total), from which we excluded irrelevant and/or duplicated sites. Readibility was assessed with the Flesch-Kincaid indicator (a validated measure of reading ease), DISCERN Plus Score (a validated measure of information quality with max score 80), as well as study-specific content analysis.

Results

A total of 87 sites were analyzed. Average readibility was low, corresponding to a grade level of 11.3. Content quality was poor with median DISCERN score of 47. Only 50 (57.5%) websites explained the concept of AS; only 20 (23%) gave specific eligibility criteria or referenced a specific AS protocol. Overall, only 27 (31.0%) sites gave both the risks and benefits of AS. A total of 67 (77.0%) sites expressed an opinion about AS, with 61 of these endorsing AS as a viable alternative to active prostate cancer treatment).

Conclusions

To understand Internet-based information about AS requires high literacy capability. Sites tend to be highly biased in favor of AS, without providing evidence-based information about risks and benefits. Patients need to be educated to become critical consumers of health information and should insist on compliance with information standards such as the HON code (Boyer et al, 1998).

CORRESPONDING AUTHOR: Kristian Stensland, BA, Icahn School of Medicine at Mount Sinai, New York, NY, 10029; kristian.stensland@mssm.edu

D-037k

PILOT RANDOMIZED EXERCISE TRIAL TESTING INFLAMMATORY MEDIATORS OF SLEEP QUALITY IN BREAST CANCER SURVIVORS

Laura Q. Rogers, MD, MPH,[1] R. Trammell, PhD,[2] S. Vicari, PhD,[2] P. Hopkins-Price, PhD,[2] A. Spenner, MS,[2] A. Fogleman, BS,[1] K. Rao, MD, PhD,[2] K. S. Courneya, PhD,[3] K. Hoelzer, MD,[4] R. Robbs, MS[2] and S. Verhulst, PhD[2]
[1]University of Alabama at Birmingham, Birmingham, AL; [2]SIU School of Medicine, Springfield, IL; [3]University of Alberta, Edmonton, AB, Canada and [4]Springfield Clinic, Springfield, IL.

Background: The mechanistic role of inflammation in mediating exercise (EX) effects on sleep quality in breast cancer survivors (BCS) is not well understood.

Purpose: Determine if serum interleukin (IL)-6, IL-8, IL-10, tumor necrosis factor (TNF)-alpha, and leptin mediate the effect of an EX intervention on sleep quality [hours of sleep per night (self-report), sleep dysfunction (PROMIS), efficiency (accelerometer), and latency (accelerometer)] in BCS. Assessments were done at baseline and immediately post-intervention. Luminex® assays were used.

Study design: 46 BCS (postmenopausal, ≤ Stage II, off primary treatment) with fatigue and/or sleep dysfunction were randomized to a 3-month EX (160 mins/week walking; resistance bands twice weekly) group (EXIn) or control. Retention was 91% (n=42).

Results: EXIn effect sizes were: sleep hours d= -.68 (p<.05), sleep dysfunction d= -.22 (p=.49), efficiency d= -.46 (p=.14), latency d= -.49 (p=.14), IL-6 d=.16 (p=.57), IL-8 d= -.40 (p=.23), IL-10 d= -.17 (p=.59), TNF-alpha d=.50 (p=.12), leptin d= -.21 (p=.54). Using Freedman-Schatzkin difference-in-coefficients tests, the negative effect on sleep hours was mediated by leptin (27%, p<.0001), TNF-alpha (180%, p=.03), and IL-10 (212%, p=.04). The improvement in sleep dysfunction was mediated by leptin (3%, p=.007) with the detrimental effect on efficiency mediated by IL-10 (36%, p=.01). No significant mediation was noted for the improvement in sleep latency.

Discussion: Inflammation mediates EX effects on sleep quality depending on dimension measured. Not all EX effects on inflammation were beneficial suggesting the need to tailor EX interventions to optimize the inflammatory response most likely to mediate EX benefits. Larger trials are needed to confirm this possibility and identify non-inflammatory mediators.

Funding: National Cancer Institute 5R21CA135017

CORRESPONDING AUTHOR: Laura Q. Rogers, MD, MPH, University of Alabama at Birmingham, Birmingham, AL, 35294; rogersl@uab.edu

D-037l

INFLAMMATORY MEDIATORS, EXERCISE, AND FATIGUE IN BREAST CANCER SURVIVORS: PILOT RANDOMIZED TRIAL

Laura Q. Rogers, MD, MPH,[1] R. Trammell, PhD,[2] S. Vicari, PhD,[2] P. Hopkins-Price, PhD,[2] A. Spenner, MS,[2] A. Fogleman, BS,[1] K. Rao, MD, PhD,[2] K. S. Courneya, PhD,[3] K. Hoelzer, MD,[4] R. Robbs, MS[2] and S. Verhulst, PhD[2]
[1]University of Alabama at Birmingham, Birmingham, AL; [2]SIU School of Medicine, Springfield, IL; [3]University of Alberta, Edmonton, AB, Canada and [4]Springfield Clinic, Springfield, IL.

Background: Identifying inflammatory mediators of exercise (EX) effects on fatigue in breast cancer survivors (BCS) can improve interventions to reduce fatigue.

Purpose: Determine if serum interleukin (IL)-6, IL-8, IL-10, and tumor necrosis factor (TNF)-alpha mediate the effect of an EX intervention on fatigue [PROMIS fatigue scale, PSQI daytime somnolence] in BCS. Cytokines (Luminex® assays), fitness (submaximal treadmill), weekly EX mins (≥ moderate intensity; accelerometer), and sleep dysfunction (PROMIS) were assessed pre- and post-intervention.

Study design: 46 BCS (postmenopausal, ≤ Stage II, off primary treatment) with fatigue and/or sleep dysfunction were randomized to a 3-month EX (160 mins/week walking; resistance bands twice weekly) group (EXIn) or control. Retention was 91% (n=42).

Results: EXIn effect sizes were: PROMIS fatigue d= -.49 (p=.13), daytime somnolence d= -.63 (p=.05), fitness d=.37 (p=.23), weekly EX mins d=.92 (p=.004), sleep dysfunction d= -.22 (p=.49), IL-6 d=.16 (p=.57), IL-8 d= -.40 (p=.23), IL-10 d= -.17 (p=.59), TNF-alpha d=.50 (p=.12). Using Freedman-Schatzkin difference-in-coefficients test, TNF-alpha mediated 23% of EXIn effects on daytime somnolence (p=.01). IL-10 enhanced rather than mediated the relationship between PROMIS fatigue and group allocation (-40%; p<.001). EX mins mediated 79% of the EXIn effect on PROMIS fatigue (p<.01). Sleep dysfunction mediated 45% (p<.01) and 34% (p<.01) of EXIn effects on PROMIS fatigue and PSQI daytime somnolence, respectively.

Discussion: Inflammation may mediate EX effects on fatigue in BCS but the increase in EXIn relationship with fatigue by IL-10 suggests mechanistic complexity. Larger trials are needed to better understand inflammatory mechanisms and confirm co-existent mediators (e.g., sleep quality) responsible for EX effects on fatigue.

Funding: National Cancer Institute 5R21CA135017

CORRESPONDING AUTHOR: Laura Q. Rogers, MD, MPH, University of Alabama at Birmingham, Birmingham, AL, 35294; rogersl@uab.edu

D-037m

SOCIAL SUPPORT MODERATES THE EFFECTS OF LIFE EVENT STRESS ON PSYCHOLOGICAL DISTRESS IN OVARIAN CANCER PATIENTS

Lauren Zagorski, BA,[1] Premal H. Thaker, PhD,[2] Frank Penedo, PhD,[3] George Slavich, PhD,[4] Koen DeGeest, MD,[1] Anil K. Sood, MD[5] and Susan Lutgendorf, PhD[1]
[1]University of Iowa, Iowa City, IA; [2]Washington University, St. Louis, MO; [3]Northwestern University, Evanston, IL; [4]University of California, Los Angeles, CA and [5]M.D. Anderson Cancer Center, Houston, TX.

Objective: This study tested the "buffering hypothesis" by examining whether social support interacts with exposure to stressful life events to predict psychological distress in ovarian cancer patients.

Methods: Women with ovarian cancer (N=268) were assessed at pre-surgery, 6-months, and 1-year post-surgery. Depressed mood (CESD subscale), anxiety (Impact of Event Scale), social support (Social Provisions Scale; SPS), and life events (Life Experiences Survey) were measured. Regression models were used to evaluate if social support moderated the effect of life stress on psychological distress at pre-surgery. General linear models examined change in depression and anxiety over time, using baseline measures of life stress and support as predictors.

Results: In cross-sectional models at pre-surgery, total social support and reassurance of worth (RW, a subscale of the SPS) interacted with stressful life events to predict depressed mood; high stress and low support predicted greater depression (total scale: β=-0.01, p=0.03; RW subscale: β=-0.05, p<0.01). High life stress also interacted with low support as measured by the SPS subscales of attachment (β=-0.17, p=0.01), guidance (β=-0.21, p=0.02), and RW (β=-0.18, p=0.04) to predict greater anxiety. In longitudinal models, the interaction between RW and life stress significantly predicted change in depression; high stress and high support predicted greater declines in depressed mood (β=-0.05, p=0.02). Finally, social integration was significant in predicting change in anxiety, such that greater social integration at baseline was associated with a greater decline of anxiety (β=-2.78, p=0.04).

Conclusions: These results support the buffering hypothesis in the context of adjustment to cancer. Life stress is an important predictor of psychological distress in ovarian cancer patients and appears to be moderated by social support.

CORRESPONDING AUTHOR: Lauren Zagorski, BA, Department of Psychology, University of Iowa, Iowa City, IA, 52242; lauren.a.zagorski@gmail.com

D-037n

MARITAL STATUS AND ITS EFFECT ON LUNG CANCER SURVIVAL

Wei Zhao, PhD, Tulay Koru-Sengul, PhD, Stacey L. Tannenbaum, PhD, Feng Miao, MS, David J. Lee, PhD and Margaret M. Byrne, PhD
University of Miami Miller School of Medicine, Miami, FL.

The goal of our study was to determine if marital status affected length of survival in lung cancer patients using a large and comprehensive dataset. Data were obtained from linkage of the 1996-2007 Florida Cancer Data System registry with the Agency for Health Care Administration and the U.S. Census, and used to identify our sample of patients with lung cancer (n=161,228). We defined marital status by 3 categories: married; separated/divorced/widowed; and never married. We compared median survival and 1-, 3-, and 5-year survival rates. Overall, 54.6% were married, 32.7% were divorced/separated/widowed, and 12.7% had never married. Median survival in months was longest for married (9.9) and shortest for never married (4.9). The 5-year survival rate was 14.2% for married, 9.9% for divorced/separated/widowed, and 8.4% for never married. In the univariate Cox regression models, marital status was an independent predictor of better survival for married (HR=0.70; P<0.001) and divorced/separated/widowed (HR=0.89; P<0.001) compared to never married patients. Multivariate models demonstrated sustained survival benefits for married (HR=0.86; P<0.001) and divorced/separated/widowed (HR=0.96; P=0.040), after adjusting for extensive confounders including age, race, ethnicity, gender, socioeconomic status, tumor stage, grade, morphology of the tumor, comorbidities, treatment and smoking status. Our study demonstrated that being currently or previously married increased the lifespan of patients diagnosed with lung cancer compared to patients who were never married. This suggests that patients' social support systems may positively contribute to the treatment regimen. Research to understand the mechanism of this effect, and how the beneficial effect can be extended to those without a current "built in" support system such as marriage, is needed.

CORRESPONDING AUTHOR: Stacey L. Tannenbaum, PhD, Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL, 33136; STannenbaum@med.miami.edu

D-037o

THE IMPACT OF SMOKING STATUS ON BREAST CANCER SURVIVAL AND ASSOCIATION WITH RACE/ETHNICITY AND SES

Alicia Padron, MD, Tulay Koru-Sengul, PhD, Stacey L. Tannenbaum, PhD, Feng Miao, MS, Damien Hansra, MD, David J. Lee, PhD and Margaret M. Byrne, PhD
University of Miami Miller School of Medicine, Miami, FL.

Background

There is some evidence to suggest that female smokers with breast cancer may not survive as long as never smokers. However, little information exists about smoking behavior and survival among different racial, ethnic, and socioeconomic status (SES) groups.

Methods

Data was obtained from linkage of 1996-2007 Florida Cancer Data System, Florida Agency for Health Care Administration, and the U.S. Census. Our sample consisted of 127,754 Florida-residing females ≥18 years, diagnosed with breast cancer. To analyze the association between smoking and survival, we performed multivariate Cox regression models with demographics, clinical variables, and comorbidities for all patients and then in models stratified by race, ethnicity, and SES.

Results

Compared to those who never smoked, worse survival was found in current (hazard ratio [HR] 1.07; P<.001) and former smokers (HR 1.05; P=.011). From the stratified models, among Whites, current and former smokers had worse survival, (HR 1.39; P<.001 and 1.08; P<.001, respectively) than never smokers. Worse survival was found for current and former smokers (HR 1.36; P<.001 and 1.08; P<.001, respectively) than never smokers among non-Hispanics. The association between smoking and survival was not significant for Blacks or for Hispanics. Compared to never smokers, worse survival was observed for current smokers in the highest (HR 1.33), middle-high (HR 1.41), middle-low (HR 1.32), and lowest SES (HR 1.22; P<.001 for all). In former smokers compared to never smokers, worse survival was only found in middle-high and middle-low SES categories (HR 1.09; P<.001 for both).

Conclusions

Current smoking is associated with worse survival in White and non-Hispanic female breast cancer patients and across all SES groups. Smoking cessation strategies may be beneficial for all breast cancer patients who smoke.

CORRESPONDING AUTHOR: Stacey L. Tannenbaum, PhD, Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL, 33136; STannenbaum@med.miami.edu

D-037p

PERSPECTIVES ON CANCER SURVIVORSHIP AMONG LATINO MEN AND WOMEN

Molina Yamile, PhD, Rachel M. Ceballos, PhD and Beti Thompson, PhD
Cancer Prevention, Fred Hutchinson Cancer Research Center, Seattle, WA.

For U.S. Latinos, the burdens of cancer survivorship are often coupled with language and socio-cultural barriers that contribute their having higher levels of distress and lower quality of life after cancer, compared to non-Latino Whites (NLW). However, Latino perspectives on the survivor experience are not well understood. The current study was a pilot project aimed at gaining insight to the survivor experience of rural Latino cancer survivors. Two focus groups (1 men's, 1 women's) with 7 men and 6 women were conducted to examine thoughts and feelings about the survivor experience, roles of social support, health education, health behaviors in improving cancer survivorship, beliefs about long-term needs and reciprocal determinism were identified. Findings suggest a sense of isolation among cancer survivors, but a strong desire to provide support for the newly diagnosed and to build a sense of community among Latino cancer survivors. Perceived ethnic differences in access to health education and the willingness of Latinos to actively seek out health education were discussed. As has been found in previous studies, spirituality was a central belief associated with cancer outcomes for both men and women. However, the impact of lower economic status and academic education among Latinos compared to NLWs was stronger among men than women. The idea of building a community among cancer survivors was strong for both men and women. Additionally, the understanding emerged that one of the primary motivations for attending the focus group was from a desire to help others. Personal motivations for seeking cancer information included the desire to gain "what they needed to heal so they can be there for their families" and share that information with others in their community. The outcomes of this study support the willingness of Latinos engage in health information when provided in a culturally competent manner, the recognition of economic barriers to education and quality of life.

CORRESPONDING AUTHOR: Rachel M. Ceballos, PhD, Cancer Prevention, Fred Hutchinson Cancer Research Center, Seattle, WA, 98109; rceballo@fhcrc.org

D-037q

COMPARISONS AMONG CALCULATIONS OF CORTISOL OUTPUT IN WOMEN UNDERGOING SURGERY FOR SUSPECTED ENDOMETRIAL CANCER

Timothy Sannes, MS,[1] Seema Patidar, MS,[1] Stephanie Smith, MS,[1] Sally Jensen, PhD,[2] Linda Morgan, MD[3] and Deidre Pereira, PhD[1]
[1]Department of Clinical and Health Psychology, The University of Florida, Gainesville, FL; [2]Feinberg School of Medicine, Northwestern University, Chicago, IL and [3]Department of Obstetrics and Gynecology, The University of Florida, Gainesville, FL.

Cortisol dysregulation has been related to poorer clinical outcomes in cancer. Common methods of operationalizing cortisol dysregulation in cancer include area under the curve (AUC), slope, and morning-to-evening (M-E) ratio. Intraindividual cortisol variability (ICV) is a relatively new method of quantifying variability in diurnal cortisol output. Recently we reported greater depressed mood is associated with greater ICV in endometrial cancer. However, it is unclear how ICV may be associated with more common methods of quantifying cortisol dysregulation in cancer samples. This study examined relations between ICV and cortisol AUC increase (AUCi), slope, and M-E ratio in endometrial cancer. Participants were 82 women (Mage=61.8 yrs; SD=8.9) with endometrial precancer or Stages I-III endometrial cancer prior to surgery. ICV was not associated with cortisol slope, r(82)=.016, p=.89, or M-E, r(82)=.002, p=.99. However, greater ICV was significantly associated with greater AUCi, r(83)=.62, p < .001. These results suggest significant shared variance between erratic diurnal HPA-axis functioning (ICV) and diurnal HPA-axis reactivity (AUCi) but not ICV and chronic cortisol rhythm dysregulation (slope, M-E). Future research should examine whether erratic diurnal cortisol output is associated with clinical outcomes in cancer.

CORRESPONDING AUTHOR: Timothy Sannes, MS, The University of Florida, Seattle, WA, 98122; tsannes@phhp.ufl.edu

D-037r

ASSOCIATION OF HOSPITAL VOLUME AND TEACHING STATUS WITH SURVIVAL IN LUNG CANCER PATIENTS

Margaret M. Byrne, PhD, Tulay Koru-Sengul, PhD, Wei Zhao, PhD, Feng Miao, MS and Stacey L. Tannenbaum, PhD
University of Miami Miller School of Medicine, Miami, FL.

The goal of our study was to determine if hospital volume and teaching status have an effect on survival in lung cancer patients. Data for 165,465 patients with lung cancer were analyzed using 1996-2007 Florida Cancer Data System linked to Agency for Health Care Administration and U.S. Census data. High volume facilities (HVF), as compared to low volume (LVF), were defined as those facilities who treated at least 1% of the total patients in the sample; and teaching (TF) vs. non-teaching facilities (NTF) were those identified as such by the 2005 Association of American Medical Colleges.

Overall, 64.4% patients were treated at LVF and 7.4% at TF. Median survival in months was 8.5 for patients at LVF and 7.1 at HVF; 12.4 at TF and 7.8 at NTF. In the univariate Cox regression models, LVF was a predictor of better survival (HR=0.94; P<0.001) and NTF a predictor of worse survival (HR=1.34; P<0.001). After adjusting for extensive confounders including demographics, tumor clinical characteristics, and comorbidities, NTF remained a significant predictor of worse survival (HR 1.20; P=0.014), but LVF remained only marginally significant (HR=0.86; P=0.05). However, we found significant interactions between teaching status and volume; therefore, regressions were run separately by teaching status. In NTF, patients treated in LVF had a survival benefit (HR=0.85; P=0.026) compared to those treated in HVF. Conversely, patients in TF treated in LVF had decreased survival (HR=1.31; P<0.001) compared to those treated in HVF.

Our interesting result, that high-volume non-teaching and low-volume teaching facilities confer more risk to patients than low-volume non-teaching and high-volume teaching facilities, is unique. Different mechanisms may be driving these results. It may be that in NTF, a lower volume of patients allows providers to attend more carefully to each patient. Conversely, in TF, higher volume presents more trainee/mentor encounters and richer experience for treating such patients. More research is needed to validate these speculations.

CORRESPONDING AUTHOR: Stacey L. Tannenbaum, PhD, Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, FL, 33136; STannenbaum@med.miami.edu

D-037s

MESSAGES TO PROMOTE CONSIDERATION OF ACTIVE SURVEILLANCE FOR EARLY STAGE PROSTATE CANCER

Patricia D. Mullen, MLS, DrPH,[1] Yen-Chi Le, PhD,[1] Paul Swank, PhD,[1] Theresa Byrd, DrPH,[2] Stephanie McFall, PhD,[3] Robert Volk, PhD,[4] Scott Cantor, PhD[4] and Jennifer Blumenthal-Barby, PhD[5]
[1]U TX School of Public Health, Houston, TX; [2]Texas Tech U, ElPaso, TX; [3]U Essex, Colchester, United Kingdom; [4]UTX MD Anderson Cancer Ctr, Houston, TX and [5]Baylor College of Medicine, Houston, TX.

Background/aims: Despite growing recognition that active surveillance (AS) is a reasonable management option for many men with localized prostate cancer (CaP), it is infrequently considered to be a valid choice. We developed messages from men who chose AS and tested their importance and impact on survivors' opinions of their impact on treatment decisions of other men. Methods: A Web-based survey of a convenience sample of 317 men who had been diagnosed with early stage CaP recruited through CaP support organizations. Each respondent was randomly assigned to rate 3/9 messages for importance for men to hear when making a treatment decision and influence on choosing AS over immediate treatment. Results: Most respondents were white (89%), married (83%), and had college or higher (78%); mean age was 65 yrs (SD=8). Treatment history included surgery (40%), AS (21%), radiation (20%), and other (19%). The message rated most important for men to hear was about having time to think about options, even though a cancer diagnosis is frightening (83%) and the least important was trust in the AS protocol (37%). The message most frequently rated as influencing a decision for AS (79%) was about AS being a reversible decision that could buy time while treatment options improve; having time to think about options was less frequently rated as influential (60%). Conclusions: Messages related to AS reversibility and to its use in buying time might make AS a more attractive or valid treatment option for some men.

CORRESPONDING AUTHOR: Patricia D. Mullen, MLS, DrPH, Health Promotion/Behavioral Sciences, U TX School of Public Health, Houston, TX, 77030; patricia.d.mullen@uth.tmc.edu

D-048a

SHORT SLEEP DURATION PREDICTS HOSPITALIZATION FOR UNSTABLE ANGINA IN ACUTE CORONARY SYNDROME PATIENTS

Carmela Alcantara, PhD, Karina W. Davidson, PhD and Donald Edmondson, PhD
Medicine, Columbia University Medical Center, New York, NY.

Short sleep duration is associated with incident acute coronary syndrome (ACS) and mortality. However, whether short sleep duration after ACS is associated with recurrent ACS is not known. Our objective was to determine the independent association of sleep duration to later cardiac outcomes among a sample of acute coronary syndrome (ACS) patients. Method: Participants were ACS patients (N=695) enrolled in the Prescription Use, Lifestyle, Stress Evaluation (PULSE) study, a single-site, observational, and prospective study. We conducted a Cox proportional hazards regression with either the composite of myocardial infarction or all-cause mortality (MI/ACM), or hospitalization for unstable angina (UA) event within 386 days of the baseline interview as the end points, and self-reported short sleep duration (i.e., less than 7 hours or more) at baseline as the primary predictor. Our models adjusted for medical comorbidities, socio-demographics, clinical severity, and depressive symptoms. Results: There were 50 MI/ACM events and 84 UA events during the one-year of active follow-up. At baseline, 369 participants reported sleeping less than 7 hours, whereas 326 participants reported sleeping 7 hours or more. Participants with short sleep durations were more likely to be younger, to have elevated depressive symptom scores, and to have more UA events than their longer sleep duration counterparts. Sleep duration was not associated with MI/ACM. Sleeping less than 7 hours was a potent marker of unstable angina hospitalization in unadjusted (Hazard ratio [HR]: 1.87; Confidence interval [CI], 1.16-2.99) and adjusted models (HR, 1.80; CI, 1.12-2.90). Conclusion: Short sleep duration is prevalent among younger ACS patients and predicts increased risk of hospitalization for unstable angina but not other cardiac outcomes, above and beyond clinical factors and depressive symptoms. Future research should examine the mechanisms (e.g., endothelin levels, low-grade inflammation) by which short sleep duration contributes to excess risk of poor cardiac prognosis.

CORRESPONDING AUTHOR: Carmela Alcantara, PhD, Medicine, Columbia University Medical Center, New York, NY, 10032; ca2543@columbia.edu

D-048b

THE EFFECTS OF HOSTILITY AND GENDER ON HEART RATE VARIABILITY IN RESPONSE TO ACUTE LABORATORY STRESSOR

Carrie E. Brintz, BA, Daniel L. Hall, MS, Barry E. Hurwitz, PhD, Charles S. Carver, PhD and Youngmee Kim, PhD
Psychology, Univ Miami, Coral Gables, FL.

Trait hostility has been related to cardiovascular disease that is in part attributed to excessive cardiovascular reactivity to stress, with effects more pronounced in men. Whether these phenomena would be the case in the interpersonal context remained unclear. This study attempted to test this question using the STITCH task that induces acute stress pertaining to close relationships and health-related concerns in a laboratory setting. Heterosexual dating couples (16 men and 21 women included: mean age 22.5) participated and were randomized to be paired with their own partner or a stranger. Participants were asked to imagine a scenario in which one person is hit by a car (listener role) and the partner has no means to provide or seek out help for the victim (speaker role). The experiment consisted of baseline, speech preparation, speech/listen, and resting phases. ECG measured heart rate variability (HRV) throughout phases; hostility (Buss & Perry, 1992) was measured prior to the experiment. Healthy individuals are assumed to have elevated HRV, with some decrease expected during stress. Hierarchical regressions using HRV change scores revealed hostility by gender interaction effects (p's<.09). Ad-hoc simple effect tests showed that higher hostility tended to be associated with greater decrease in HRV from baseline to preparation (β=-.38) and greater increase in HRV from preparation to stress (β=.36) only among men after controlling for task role (speaker/listener) and baseline and preparation HRV, respectively. Decrease in HRV from speech to resting phases tended to be related with higher hostility (β=.24, p<.10). Findings provide preliminary support that trait hostility plays a differential role in one's cardiovascular reactivity to interpersonal and health-related stress by one's gender. Although weak, mainly due to small sample size, findings warrant further investigation of the role of hostility and gender on HRV in an interpersonal and health context in order to better understand risk factors for cardiovascular disease.

CORRESPONDING AUTHOR: Carrie E. Brintz, BA, Psychology, Univ Miami, Coral Gables, FL, 33146; cbrintz@psy.miami.edu

D-048c

TARGET HEART RATE ADHERENCE PREDICTS BLOOD PRESSURE CHANGE AMONG PATIENTS IN CARDIAC REHABILITATION

Derek R. Anderson, MA and Charles F. Emery, PhD
Psychology, The Ohio State University, Columbus, OH.

Cardiac rehabilitation (CR) provides exercise training and education to patients with cardiac disease. Blood pressure (BP) reduction is a common goal of CR, and several studies have documented an association between traditional CR adherence measures (e.g., number of exercise sessions completed) and BP. However, number of sessions completed may not reflect the behavior of subjects during CR sessions. An alternative approach to measuring adherence is to evaluate the proportion of time participants maintain their heart rate within a prescribed target heart rate range (THRR), measured during telemetry-monitored CR sessions. The purpose of this study was to examine the influence of CR exercise adherence, as measured by the percentage of exercise time spent within the THRR, on BP. Data were collected from 39 patients (12 women; mean age 63.4+13.7; 73% Caucasian; 18% African-American) who had completed a hospital-based outpatient CR program. Data for 7 subjects were removed from analysis due to significant BP-related medication changes during CR. Average THRR percentage was calculated by dividing the total seconds each participant spent exercising within the THRR by the total seconds spent exercising. Although all of the patients had completed a 12-week CR program, and attendance was excellent in this group of completers (98.3% of sessions attended), the average THRR percentage was 56.5% (Range: 15.5 to 97.8%). THRR percentage predicted reduced systolic BP during the CR program, controlling for cardiac diagnoses and total time spent exercising (R-square change, F (1, 30) =5.60, p<.05). THRR percentage did not predict change in diastolic BP. Among patients whose THRR percentage was greater than 50, systolic BP was reduced by 11 points (t = 2.13, p=.05), but BP did not change among those whose THRR percentage was less than 50. Thus, THRR percentage may be another useful adherence predictor of health outcomes among patients participating in CR.

CORRESPONDING AUTHOR: Derek R. Anderson, MA, Psychology, The Ohio State University, Columbus, OH, 43201; anderson.1932@osu.edu

D-048d

THE EFFECT OF COPING STYLE FLEXIBILITY ON CVD RISK FACTORS VARIES ACROSS POVERTY STATUS AND SEX

Faren J. Grant, BA,[1] Shari R. Waldstein, PhD,[1] Michele K. Evans, MD[2] and Alan B. Zonderman, PhD[2]
[1]Psychology, University of Maryland Baltimore County, Baltimore, MD and [2]Intramural Research Program, National Institute of Aging, Baltimore, MD.

Previous research has indicated that the habitual manner in which individuals cope with stressful events is predictive of cardiovascular disease (CVD) risk factors. Here we examined whether CVD risk factors are associated with coping style flexibility, which is an individual's ability to employ multiple coping strategies as needed, and whether these associations vary as a function of sex, race, and socioeconomic status (SES). Participants were 1,956 socioeconomically diverse African Americans and Whites enrolled in the Healthy Aging in Neighborhoods of Diversity across the Lifespan (HANDLS) study. Coping style flexibility was operationalized as the number of coping styles a participant endorsed on the Brief COPE measure as "I've been doing this a little bit" to "I've been doing this a lot". Multiple regression analyses were computed to examine the relation between coping style flexibility and total white blood cell count (WBC), C-reactive protein (CRP), total cholesterol (TC), systolic and diastolic blood pressure (SBP, DBP), glycosylated hemoglobin (HbA1c), and body mass index (BMI). Additional models explored the potential interaction of coping style flexibility with sex, race, or SES interaction terms and were adjusted for age, perceived stress, smoking status, alcohol use, illicit drug use, diabetes/metabolic diseases, inflammatory diseases, depressive symptoms, pain relievers, anti-hypertensives, psychotropics, and anticholesteremics. Increased coping style flexibility was associated with lower HbA1c levels for women but higher HbA1c levels for men (p < .05). Additionally, increased coping style flexibility was associated with higher BMI for participants above the poverty line but lower BMI for participants below the poverty line (p < .01). Thus, the effect of coping style flexibility on CVD risk factors differs distinctly among demographic subgroups. It will be important to examine the mechanistic pathways of these risk relations.

CORRESPONDING AUTHOR: Faren J. Grant, BA, Psychology, University of Maryland Baltimore County, Baltimore, MD, 21229; grantfaren@gmail.com

D-048e

COUPLES' AFFECT AND CARDIAC PATIENT BEHAVIOR CHANGE

Jessica Pieczynski, MS[1] and Tamara Sher, PhD[2]
[1]Illinois Institute of Technology, Chicago, IL and [2]Northwestern Family Institute, Chicago, IL.

Dietary and physical activity changes are essential for improved cardiac outcomes. While couples' communication is consistently linked to health (Rosland, Heisler, & Piette, 2011), examining dyadic processes associated with patient readiness for change is a neglected area of research (Lewis et al., 2006). The current study explored the association between couples' affect and cardiac patient readiness for change. It was hypothesized that couples' affect would predict patients' stage of change and subsequent dietary and physical activity modifications. Participants were cardiac patients (n=48) and their partners enrolled in the Partners for Life program (Sher et al, in press). Affect was coded at baseline during a 10 minute videotaped interaction. Readiness for behavior change was measured using the Decisional Balance for Exercise (DBE; Marcus, Rakowski, & Rossi, 1992) and the Physical Activity Stage questionnaires (PAS; Marcus & Forsyth, 2003). Behavior change was assessed with the Kristal Food Habits Questionnaire (Kristal, Shattuck, & Henry, 1990) and the Yale Physical Activity Survey (YPAS; DePietro et al., 1993). Analyses revealed that patient empathy (β=.41, p<.05) and hostility (β=-.55, p<.01) were associated with patient baseline PAS, R2 =.24. Neither patient nor partner affect was associated with patients' physical activity. However, follow-up analyses revealed that baseline PAS score was significantly related to patient's physical activity at 12 months (r=.36, p<.01) suggesting that baseline readiness for change influences future healthy behavior change. Partners' expression of distress (β=.44, p<.01) was significantly related to patient baseline DBE cons score at baseline (R2 =.19) and baseline saturated fat intake, β =.34, p<.05, R2=.12. Results indicate that couples' interactions are associated with patients' readiness for change and that aspects of couples' affect may predict behavior. Given that couple functioning has been robustly associated with health variables, more research should examine how couples' communication is associated with behavior change.

CORRESPONDING AUTHOR: Jessica Pieczynski, MS, Illinois Institute of Technology, Chicago, IL, 60647; jpieczyn@gmail.com

D-048f

CARDIOVASCULAR RESPONSE TO RACIAL MICROAGGRESSIONS AMONG HISPANIC AND NON-HISPANIC WHITES

Mariana G. Hoar, MS, David Gonzalez, MS, Austin Bray, Bachelor's Candidate, Emily Clark-Ninmz, BS, Jonlih Magtoto, Bachelor's Candidate, Marisol Cuencas, Bachelor's Candidate, Isabelle Urbina, Bachelor's Candidate and John M. Ruiz, PhD
University of North Texas, Denton, TX.

Racial microaggressions (RM) are pejorative messages by a perpetrator, in which the perpetrator means no harm and is unaware of the exchange. One RM may be benign, but the cumulative effect over time may contribute to physical stress. The current aim was to examine differences in cardiovascular response between Hispanics and non-Hispanic Whites (NHW) on RM based on Hispanic stereotypes—microinsult (MI) of intelligence and microinvalidation (MV) of alien in own land. The sample consisted of 82 females and 35 males with a mean age of 20.56. Sixty-one percent identified as Hispanic. A GE Carescape V100 was used to collect an oscillometric measure of blood pressure and heart rate (HR) at one-minute intervals throughout the procedure. A female or male NHW confederate carried out the manipulation. Participants were randomly assigned into one of three conditions—control, MI, or MV. Participants first completed a baseline task to create a similar resting focus across participant. In the control condition, a confederate inquired about the date. In the MI condition, the confederate stated, "You speak English well." In the MV condition, the confederate asked the participant, "Where are you from?" The confederate followed-up by asking, "Where are you really from?" A recovery period followed the condition. Results revealed a significant interaction between the conditions, ethnicity, and sex on HR, F(2, 115) = 4.79, p<.01, d=.09), after controlling for baseline levels. NHW exhibited a higher HR than Hispanics in all conditions. NHW females exhibited a higher HR than NHW males in the MI condition while the opposite was true for the MV condition. Both Hispanics and NHW had the highest HR in the MV condition as compared to both the MI and control condition. Compared to the three conditions, males exhibited a higher HR in the MV condition while females had a higher HR in the MI condition as compared to males. These findings overall suggest that RM based on Hispanic stereotypes do not appear to evoke a cardiovascular response in Hispanics in this sample.

CORRESPONDING AUTHOR: Mariana G. Hoar, MS, Clinical Health Psychology and Behavioral Medicine, University of North Texas, Denton, TX, 76203-5017; marianagarza@my.unt.edu

D-048g

A MOBILE PHONE INTERVENTION INCREASES PHYSICAL ACTIVITY IN PEOPLE WITH CARDIOVASCULAR DISEASE: RESULTS FROM THE HEART RANDOMIZED CONTROLLED TRIAL

Ralph Maddison, PhD,[1] Robyn M. Whittaker, MBcHB, PhD,[1] Ralph H. Stewart, MBcHB,[2] Andrew J. Kerr, MBcHB,[3] Leila Pfaeffli, MSc,[1] Karen H. Carter, BSc (Hons),[1] Yannan Jiang, PhD,[1] Jonathan Rawstorn, BSc (Hons)[1] and Lance Dalleck, PhD[4]
[1]National Institute for Health Innovation, University of Auckland, Auckland, New Zealand; [2]Cardiology, Auckland City Hospital, Auckland, New Zealand; [3]Cardiology, Middlemore Hospital, Auckland, New Zealand and [4]Sport and Exercise Science, University of Auckland, Auckland, New Zealand.

Purpose: To develop and evaluate a theory-based mobile phone and Internet-delivered (mHealth) exercise-based cardiac rehabilitation program in New Zealand adults with cardiovascular disease.

Methods: A two arm, parallel, single blinded randomized controlled trial was conducted. Participants (n=171) were randomized at a 1:1 ratio to either receive a mHealth intervention over and above usual care or to usual care alone (control). The mHealth program was delivered over six months and consisted of text messages offering exercise prescription and behavioral change strategies and support. Participants also had access to an interactive website containing text and video messages to increase, and maintain regular, exercise behavior. Usual care involved encouragement to be physically active and an offer to join a local cardiac club. Follow-up was at 6 months and included, peak oxygen uptake (PVO2), self-reported physical activity, six minute walk test, self-efficacy, motivation to exercise and health related quality of life (HRQOL).

Results: There were no statistical differences observed in PVO2, however significant differences were found in leisure time physical activity, time spent walking, task efficacy and motivation, in favor of the intervention group. There was also a statistical difference in favor of the intervention group for the general health domain of the SF36, HRQOL measure.

Conclusions: An mHealth intervention is effective at increasing physical activity levels in people with cardiovascular disease. This effect may be mediated by increases in self-efficacy and motivation. The exercise prescription was not intense enough to show a positive effect on physical fitness.

CORRESPONDING AUTHOR: Ralph Maddison, PhD, National Institute for Health Innovation, University of Auckland, Auckland, 1000; r.maddison@nihi.auckland.ac.nz

D-058a

RELATIONSHIPS BETWEEN PERSONALITY, EMOTIONAL DISTRESS AND SELF-RATED MEDICATION ADHERENCE IN ETHNICALLY DIVERSE ADULTS WITH TYPE-2-DIABETES MELLITUS

Seth A. Margolis, MA[1] and Jeffrey S. Gonzalez, PhD[1,2]
[1]Ferkauf Graduate School of Psychology, Yeshiva University, Bronx, NY and [2]Diabetes Research Center, Albert Einstein College of Medicine, Yeshiva University, Bronx, NY.

Medication adherence is important to prevent poor health outcomes in Type-2-Diabetes Mellitus (T2DM). Yet, adherence is suboptimal in many patients. We examined independent relationships among NEO-FFI-3 (conscientiousness and neuroticism), Diabetes Distress Scale (DDS), Patient Health Questionnaire (PHQ-9), and medication adherence using validated self-rating in adults treated for T2DM (n=73, M age=55, SD=8.3; 67% female; 59% Black; 23% Hispanic). Multiple regression analyses were conducted. DDS and PHQ-9 were evaluated as mediators of personality and adherence. Controlling for age, diabetes complications, and prescription of insulin, results showed that higher levels of conscientiousness were significantly associated with less distress (DDS: β=-.30, p=.010; PHQ-9: β=-.45, p<.001) and better medication adherence (β=.29, p=.008). Higher levels of neuroticism were significantly associated with more distress (DDS: β=.39, p=.001; PHQ-9: β=.53, p<.001) but not with adherence. Distress was significantly associated with poorer medication adherence (DDS: β=-.44, p<.001; PHQ-9: β=-.35, p=.002). The relationship between conscientiousness and adherence attenuated in the presence of DDS and PHQ-9 (β=.17, p=.093; β=.17, p=.149), both of which remained significantly associated with adherence in separate models (β=-.39, p=.001; β=-.27, p=.032). The indirect effects of conscientiousness on adherence through DDS and PHQ-9 were significant (z=2.3, p=.022; z=2.5, p=.011), supporting partial mediation. Findings suggest that personality traits may predispose ethnically diverse patients with T2DM to problems with medication adherence as well as increased diabetes-related distress and depressive symptoms. Those who are less consistently organized, deliberate, persistent, motivated and self-disciplined may have more trouble with diabetes treatment adherence and much of this association may be explained by the experience of emotional distress.

CORRESPONDING AUTHOR: Seth A. Margolis, MA, Ferkauf Graduate School of Psychology, Yeshiva University, New York, NY, 10028; seth.a.margolis@gmail.com

D-058b

THE RELATIONSHIP BETWEEN GLOBAL LIFE STRESS AND MENTAL HEALTH FUNCTIONING IN BLACK AND HISPANIC DIABETES PATIENTS

Tanya Spruill, PhD,[1] Mary-Jane Ojie, MA,[2] Alex Sierra, MS,[1] Stephanie Grilo, BA,[3] Oluchi Iheagwara, MPH,[1] William Chaplin, PhD[2] and Gbenga Ogedegbe, MD[1]
[1]New York University School of Medicine, New York, NY; [2]St. John's University, Queens, NY and [3]Columbia University, New York, NY.

Background. Racial/ethnic minority patients report greater diabetes-related distress than Caucasian patients, however little is known about other sources of stress that may affect their psychological functioning and, in turn, disease management and outcomes. Methods. A sample of 89 non-Hispanic Black and Hispanic adult diabetes outpatients was recruited from Bellevue Hospital in New York City. Subjects completed a measure of global stress in which the stressfulness of eight life domains over the last year was rated (e.g., job, relationships, caregiving, medical problems); and the SF-12 from which mental health functioning (MCS) scores were computed. Results. The mean age was 57.5±10.5 years, 40.4% of subjects were female and 34.8% had less than a high school education. The majority of subjects were obese (53.2%) and had poor glycemic control (62.4%). After adjusting for these covariates in a linear regression analysis, the number of stressful life domains was significantly associated with poorer mental health (B=-0.353, p=0.004). A significant stress X race/ethnicity interaction indicated that the relationship between global stress and MCS score was stronger among Black versus Hispanic patients (B=0.808, p=0.04). Of the eight domains, stress related to relationships (B=-0.428, p=0.002) and stress related to living in one's neighborhood (B=-0.436, p=0.003) were most strongly related to MCS scores among Black patients; none of the individual stressors was related to MCS among Hispanic patients (ps>0.16). Conclusions. These findings suggest that mental health functioning in minority diabetes patients is influenced by global life stress, and identify specific sources of stress other than medical problems that may be particularly relevant in this population. Culturally tailored interventions that help diabetes patients cope with these other sources of stress may help to improve their psychological status and disease outcomes.

CORRESPONDING AUTHOR: Tanya Spruill, PhD, New York University School of Medicine, New York, NY, 10016; tanya.spruill@nyumc.org

D-058c

PSYCHIATRIC FACTORS, SELF-EFFICACY, AND GLYCEMIC CONTROL AMONG ADULTS WITH SERIOUS MENTAL ILLNESS AND TYPE 2 DIABETES

Thomas L. Wykes, MS, Sean M. Laurent, PhD, Aaron A. Lee, MS and Christine L. McKibbin, PhD
Psychology, 3415, University of Wyoming, Laramie, WY.

Background. Self-efficacy (SE) is a core element of successful diabetes treatment, and is a primary target of psychosocial interventions. Evidence shows direct relationships between SE and glycemic control (i.e., A1C). Adults with serious mental illness (SMI; i.e., schizophrenia, bipolar disorder) are twice as likely to have type 2 diabetes. The sequelae of SMI (e.g., cognitive functioning, negative symptoms) have been associated with poor functioning, but the impact of these psychiatric factors on the relationship between SE and glycemic control in this group is not clearly understood. We expected that cognitive functioning and negative symptoms would moderate the relationship between SE and A1C.

Methods. Ninety consecutive participants (mean age 52.4, SD = 8.9) were selected from the baseline data of diabetes self-management programs conducted between 2002 and 2010. All subjects had diagnoses of SMI and type 2 diabetes; a majority was Caucasian (68%), female (51%), and had a diagnosis of schizophrenia (63%). Linear regression models were used to separately test for interactions between SE and each of two factors (i.e., cognitive functioning and negative symptom severity), with A1C as the criterion variable.

Results. Results indicated that the relationship between SE and A1C was moderated by cognitive functioning, such that higher SE led to better glycemic control when cognitive functioning was high, but worse control when functioning was low (B = -3.5, p = .019). Marginally significant results suggested that negative symptom severity also moderated this relationship, such that higher SE led to better glycemic control when negative symptoms were less severe, but worse glycemic control when negative symptoms were more severe (B = 6.1, p = .057).

Conclusions. Future interventions designed to use SE to improve glycemic control among adults with SMI and type 2 diabetes should address the potential effects of cognitive impairment and negative symptoms on the impact of SE on A1C.

CORRESPONDING AUTHOR: Thomas L. Wykes, MS, Psychology, 3415, University of Wyoming, Laramie, WY, 82071; twykes@uwyo.edu

D-060a

CARE FOR THE SOCIALLY DISADVANTAGED: THE ROLE OF RACE AND GENDER ON THE PHYSICIAN-PATIENT RELATIONSHIP AND PATIENT OUTCOMES IN A SAFETY NET PRIMARY CARE CLINIC

Daniel Baughn, PhD,[1,2] Stephen M. Auerbach, PhD,[2] Bruce D. Rybarczyk, PhD,[2] Stephanie A. Call, MD, MSPH[3] and Laura A. Siminoff, PhD[4]
[1]Mental Health Service, Veterans Affairs San Francisco Medical Center, San Francisco, CA; [2]Psychology, Virginia Commonwealth University, Richmond, VA; [3]Internal Medicine, Virginia Commonwealth University, Richmond, VA and [4]Social & Behavioral Health, Virginia Commonwealth University, Richmond, VA.

Compared to the general population, socially disadvantaged patients have higher rates of chronic illness and require more complex medical care. They also endorse higher levels of psychological distress and tend to engage in behavioral risk factors such as poor diet, physical inactivity, and smoking. These issues are particularly concerning given that this population tends to adhere less to medical recommendations, has limited access to health resources, and receives poorer treatment from providers. This study sought to improve the quality of care received by socially disadvantaged patients by better understanding the role of race and gender on the physician-patient communication process and patient outcomes in a safety net primary care clinic. The study sample consisted of 322 low-income, uninsured/underinsured African American and White patients and 37 resident physicians. Multilevel Modeling for dyadic data was used to evaluate all hypotheses. Overall, African American patients and their doctors and White doctors and their patients were viewed as engaging in the highest levels of communication. South Asian physicians, and male South Asian physicians in particular, had the lowest levels of communication and the patients of these providers experienced less improvement in their physical health. Patient education level influenced physicians' perceptions of their patients to the extent that patients with higher educational levels were viewed as engaging in lower levels of communication. Last, indicators of a good physician-patient relationship were associated with higher levels of patient reported adherence. Practice implications and areas for future research are discussed.

CORRESPONDING AUTHOR: Daniel Baughn, PhD, Mental Health Service (116B), Veterans Affairs San Francisco Medical Center, San Francisco, CA, 94121; Daniel.Baughn@iCloud.com

D-060b

ACCESS TO AND USE OF NON-INPATIENT SERVICES IN THE NEW YORK STATE PUBLIC MENTAL HEALTH SYSTEM BY RACIAL/ETHNIC GROUPS

Carole Siegel, PhD,[2,3] Joe Wanderling, MS,[2] Gary Haugland, MA,[2] Eugene Laska, PhD,[2,3] Brady G. Case, MD[4] and Rachel Levenson, MA[1,2]
[1]Ferkauf Graduate School of Psychology, Yeshiva University, New York, NY; [2]Statistics and Services Research Division, Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY; [3]Department of Psychiatry, New York University, New York, NY and [4]Department of Psychiatry and Human Behavior, Alpert Medical School, Brown University, Providence, RI.

Nationwide studies contrasting service use of racial/ethnic groups provide an overview of disparities, but because of variation in populations and service systems, local studies are required to identify specific targets for remedial action. We report the 2009 use of the NYS non-inpatient public mental health system by its larger cultural groups. Data from the NYS Patient Characteristics Survey were used to estimate treated prevalence and average number of weeks in service for Black-Non Hispanics, Hispanics, Asians and White Non-Hispanics. Age/diagnostic, specific service-type rates were obtained for the state and for population-density defined regions. Statistical methods contrasted rates of Whites with other groups. 578,496 individuals were served in 2,500 programs. 51% were non- White. White treated prevalence rates were lower than Black and Hispanic rates and substantially higher than Asian rates. Statewide service use rates of all racial/ethnic/age groups were comparable except for lower Asian elderly rates. Key findings from granular analyses were Black children/youth with disruptive disorders, Hispanic adults/elderly with anxiety disorders and Asian elderly with depression had fewer service weeks than White counterparts. In upstate metropolitan areas, Black youth and Hispanic adults received fewer service weeks than Whites, and in the NYC metropolitan area, White elderly had higher service use rates than contrast groups. Findings suggest a need for assistance to Black families in negotiating the multiple systems used by their children, clinical training focusing on cultural symptom presentation, screening of Asians in community settings, and mandated cultural competency assessments for all programs.

CORRESPONDING AUTHOR: Rachel Levenson, MA, Ferkauf Graduate School of Psycholgoy, Yeshiva University, New York, NY, 10011; rachel.levenson@gmail.com

D-072a

THE IMPACT OF HIV-STATUS DISCLOSURE ON QUALITY OF LIFE AND THE MEDIATIONAL ROLE OF AVOIDANCE COPING

Calvin Fitch, BA, Gail Ironson, MD/PhD and Neil Schneiderman, PhD
Psychology, University of Miami, Coral Gables, FL.

This study sought to examine whether there was a relationship between disclosure of HIV-positive status and quality of life after HIV diagnosis and, furthermore, whether avoidance coping is a mediator of this relationship. 169 HIV+ men and women were asked to fill out questionnaires containing measures of a variety of psychological outcomes as well as information about their degree of HIV disclosure. Baron and Kenny's (1986) method for testing mediation was used to analyze the results. After controlling for quality of life before HIV diagnosis, HIV disclosure ($\beta = .164$, $p < .05$) significantly predicted higher quality of life after HIV diagnosis, $F(2, 138) = 6.37$, $p < .01$, R2 = .084 and lower avoidance coping ($\beta = -.236$, $p < .01$), $F(2, 135) = 4.94$, $p < .01$, R2 = .068. Additionally, more avoidance coping ($\beta = -.193$, $p < .05$) significantly predicted lower quality of life after HIV diagnosis, $F(2, 166) = 7.39$, $p < .01$, R2 = .082. Lastly, when we controlled for avoidance coping in addition to quality of life before HIV diagnosis, HIV disclosure ($\beta = .093$, ns) was no longer a significant predictor of quality of life after HIV diagnosis, $F(3, 133) = 6.24$, $p < .01$, R2 = .123. These results support our mediational hypothesis and suggest that decreases in avoidance coping may serve as the mechanism by which HIV disclosure increases quality of life after HIV diagnosis. Ancillary analyses revealed that men and women had equal levels of HIV disclosure suggesting that this mediational model holds across both genders. Ancillary analyses also suggest that partial mediation occurs when social support is added as a control variable to the model. Programs for people living with HIV should focus on targeting avoidance coping mechanisms and instilling more problem-focused methods for dealing with stressful situations. These programs might also focus on promoting disclosure of HIV status in various arenas of one's life (e.g. spouse/partner, family, friends, work, etc.) in hopes of increasing quality of life after one becomes diagnosed with HIV.

CORRESPONDING AUTHOR: Calvin Fitch, BA, Psychology, University of Miami, Coral Gables, FL, 33146; calvin.fitch.dlp@gmail.com

D-072b

FLUCTUATIONS IN DEPRESSION AND WELL-BEING ARE ASSOCIATED WITH SEXUAL RISK EPISODES AMONG HIV-POSITIVE MEN

Gertraud Stadler, PhD, Patrick A. Wilson, PhD, Melissa R. Boone, MA and Niall Bolger, PhD
Columbia University, New York, NY.

Objective: Research has suggested a weak association between depression and sexual risk behavior in men who have sex with men (MSM). The purpose of this study is to investigate the relationship between fluctuations in depression and well-being and episodes of sexual risk-taking among HIV-positive MSM.

Methods: Participants comprised a convenience sample of 106 sexually active HIV-positive MSM living in a large urban area. Men completed a 6-week structured diary survey; each week, they responded to items assessing their sexual behavior in the prior week, and in Weeks 1, 3, and 5 levels of depression and well-being over the past week were measured. Multi-level logistic regression analyses were conducted to explore the relationship between changes in levels of depression and well-being and episodes of unprotected anal intercourse.

Results: In weeks when participants experienced higher than usual levels of depression they were more likely to report a sexual risk episode compared to weeks in which they experienced lower than usual depression. In weeks when participants experienced higher than usual well-being they were less likely to engage in risk than in weeks when participants experienced lower than usual well-being. Between-person differences in depression and well-being were not associated with risk episodes.

Conclusions: This study is among the first to examine the association of within-person changes in depression and well-being with sexual risk behavior and contributes new evidence to literature exploring the relationship between depression and sexual risk. Further research should employ longitudinal designs to explore pathways linking within-person changes in depression with risk behavior.

CORRESPONDING AUTHOR: Gertraud Stadler, PhD, Columbia University, New York, NY, 10276; gs2334@columbia.edu

D-072c

LEISURE-TIME PHYSICAL ACTIVITY AND HRQOL IN A COMMUNITY SAMPLE OF PEOPLE LIVING WITH HIV

Matthew Kwan, PhD,[1] John Cairney, PhD,[1] Sergio Reuda, PhD[2] and Sean Rourke, PhD[2]
[1]Family Medicine, McMaster University, Hamilton, ON, Canada and [2]Ontario HIV Treatment Network, Toronto, ON, Canada.

Advances in highly active antiretroviral therapy has redefined HIV as a chronic disease (Stoff et al. 2004). As life expectancy among people diagnosed with HIV has risen, it has become increasingly important to understand factors related to their health-related quality of life (HRQoL) (Kamen et al., 2012). Exercise-based intervention trials have shown that increasing physical activity (PA) levels can positively impact HRQoL in HIV patients (e.g., Jelsma et al., 2005); however, the relationship between leisure-time PA and HRQoL is less clear. The current study examines the relationship between PA behaviors and HRQoL among a large community sample of people living with HIV. Cross-sectional analyses were conducted with 435 participants (males = 304; Mage= 45.69 +9.19) enrolled in the Employment Change and Health Outcome Study. The questionnaire included measures of HRQoL using the SF-36, and PA using the Godin-Shepard Leisure-Time Exercise Questionnaire. Adjusted for HIV-related covariates, multivariate analysis of variance (MANOVA) found that active individuals reported significantly higher overall HRQoL (Wilks Lambda = .963 F(8,411) = 2.96, p<.01). In a closer examination of each quality of life domain, results indicate that regularly active individuals were reporting significantly greater physical functioning F(1,418) = 13.43, p<.01, general health F(1,418) = 3.85, p<.05, vitality F(1,418) = 8.14, p<.01, and mental health F(1,418) = 9.62, p<.01. These findings highlight a positive association between leisure-time PA and HRQoL among individuals in the community living with HIV, pinpointing specific domains where PA might have the strongest impact. Longitudinal studies, however, are required to establish the nature of this relationship. Moreover, efforts should also be made to better understand the determinants of leisure-time PA in the HIV population, as it is becoming increasingly evident that PA may be particularly important for people living with HIV.

CORRESPONDING AUTHOR: Matthew Kwan, PhD, Family Medicine, McMaster University, Hamilton, ON, L8P 0A1; matty.kwan@utoronto.ca

D-086a

MATERNAL NATIVITY AND ITS IMPACT ON PSYCHOLOGICAL EXPERIENCES DURING PREGNANCY

Angelina Majeno, Bachelor's candidate and Guido Urizar, PhD
Psychology, California State University, Long Beach, Long Beach, CA.

The fastest growing foreign-born population in the U.S. is comprised of people from Central America and Mexico. A quarter of U.S.-born babies are born to foreign-born women; yet, no studies have assessed whether psychological experiences during pregnancy, specifically hassles (events that make the mother feel unhappy, negative or upset) and uplifts (events that make the mother feel happy, positive, or uplifted), are different between foreign-born women of Central American and Mexican origin and those of U.S.-born women. Previous studies have found that such experiences are associated with fetal functioning, with women who report more hassles during pregnancy having a fetus with a faster heart rate and more movement. Utilizing a cross-sectional design, the current study examined whether maternal nativity influences frequency and intensity of hassles and uplifts. The study sample consisted of 94 healthy women with low risk pregnancies (mean age= 25±6 years), with 68% being US-born and 32% being foreign-born (Central American; n = 6, Mexican; n = 24). Hassles and uplifts were measured using the Pregnancy Experience Scale (PES; mean gestational age 16±5 weeks). Independent samples t-test analyses were conducted to compare frequency and intensity of hassles and uplifts across groups. The results of such tests revealed that significant differences in the frequency of hassles were present, with foreign-born women reporting more hassles than U.S.-born women (t = -3.05, p <.01), such as experiencing normal discomforts of pregnancy (e.g. heartburn, incontinence). No group differences were found in the frequency of uplifts (t = - 0.86, p = .39). More intense uplifts were reported by U.S.-born women as compared to foreign-born women (t = 2.00, p < .05), such as thinking about the baby's appearance. No group differences in the intensity of hassles were found (t = 0.88, p = .38). These results bring attention to the importance of examining factors that may cause negative experiences during pregnancy in foreign-born women and the repercussions that they may have on fetal development.

CORRESPONDING AUTHOR: Angelina Majeno, Bachelor's candidate, Psychology/Human Development, California State University Long Beach, Hollywood, CA, 90028; angelina.orozco@student.csulb.edu

D-086b
TRULY "SHARING THE CARE" IN A PRIMARY CARE INTEGRATIVE BEHAVIORAL HEALTH MODEL

Anilga Moradkhani, PhD,[1] Julie C. Hathaway, MS,[2] Kristin S. Vickers-Douglas, PhD[1] and David J. Katzelnick, MD[1]
[1]Department of Psychiatry and Psychology, Mayo Clinic, Rochester, MN and [2]Department of Patient Education, Mayo Clinic, Rochester, MN.

Background: Mental health problems in primary care patients are associated with increased disability and health care utilization, and poorer quality of life. Primary care providers are increasingly relied on to deliver mental health services. Provider willingness and confidence to manage patient mental health concerns is an important consideration for developing collaborative care models. In this qualitative study, we assessed provider practices and preferences for managing primary care patient mental health problems.

Method: All providers (MD, PA, CNS; n = 18) at an integrated primary care clinic were invited to complete a questionnaire consisting of patient vignettes of increasing mental health complexity. Open ended questions assessed provider preferences for managing patients' concerns (i.e. care they would deliver themselves, care they would refer to behavioral health specialists). Qualitative analysis used methods of content analysis.

Results: 13 (72%) providers (5 male; 8 female) responded. Providers described actively managing several aspects of patient mental health care, including medical exams and history, initiating/managing first line medications, providing basic psychoeducation, and arranging for follow-up. Providers described wanting additional aspects of the patient care managed by behavioral health specialists (i.e., psychiatry, psychology/therapist, RN care manager).

Conclusion: Even in a collaborative care setting where integrated behavioral health services are readily available, these providers actively manage important aspects of patient mental health care and appropriately identify specialty care resources that further benefit their patients.

CORRESPONDING AUTHOR: Anilga Moradkhani, PhD, Department of Psychiatry and Psychology, Mayo Clinic, Rochester, MN, 55905; moradkhani.anilga@mayo.edu

D-086c
REFERRAL PATTERNS IN ARMY MENTAL HEALTH TREATMENT IN THE COMBAT THEATER: SOLDIERS DO SEEK HELP IN THE THICK OF IT

Denise M. Martin Zona, PhD[1] and Anderson Rowan, PhD[2]
[1]59th Mental Health Squadron, Lackland AFB, TX and [2]48th Medical Group, RAF Lakenheath, United Kingdom.

Preceding the 9/11 attacks, the US had about 26,000 troops stationed in Afghanistan, Iraq and neighboring areas (Belasco, 2009). Since then, more than 1.64 million troops have deployed multiple times to these areas. In dollar terms, the costs of mental health conditions stemming from the conflicts are estimated to reach $25,757/service member—incurred within two years after they return home (Tanielian & Jaycox, 2008). These costs are specifically related to primary conditions of depression and posttraumatic stress disorder (PTSD). Mental health stigma and perceived barriers to care, such as concern about breach of confidentiality, being "labeled" with a mental health diagnosis, or perceptions of negative career impacts may interfere with service members seeking help or seeking help early when problems can more easily and quickly be corrected. While use of mental health services following deployment has been addressed (Hoge, Auchterlonie & Milliken, 2006), there are no studies to date about military personnel help-seeking for psychological problems in theater. This study utilized mental health records of 1,640 soldiers who presented to Combat and Operational Stress Control (COSC) for services while deployed in Afghanistan: mean age was 27, 84% male, 49% married, and 57% had no prior deployments. Descriptive data analysis was completed to address referral source self- (61.5%) vs. other- (30.0%) vs. commander directed evaluation-referral (8.5%). Soldiers who received a primary diagnosis of PTSD during their mental health visit while deployed, 55.6% self-referred to the clinic. Of those diagnosed with depression, 62.9% self-referred seeking treatment. These numbers suggests independent help-seeking despite the pervasive view stigma keeps the majority of service members from obtaining care. These findings should be incorporated in information campaigns to promote early help seeking and reduction of costs (financial and emotional) when soldiers return home.

CORRESPONDING AUTHOR: Denise M. Martin Zona, PhD, Wilford Hall Ambulatory Surgical Center, United States Air Force, Lackland AFB, TX, 78236; denise.martin_zona.2@us.af.mil

D-086d
DEVELOPMENT OF A MEMORY COMPLAINTS SUBSCALE

Graham J. McDougall, PhD[1,2] and Phillip W. Vaughan, PhD[2,1]
[1]Capstone College Nursing, University of Alabama, Tuscaloosa, AL and [2]Curriculum and Instruction, Texas State Universtiy, San Marcos, TX.

Memory complaints, defined as everyday memory problems, shows a variation of approximately 25 - 50%. We therefore conducted an exploratory factor analysis on the MIA using a combined sample of older adults recruited from diverse living arrangements (e.g., nursing homes, independent community, etc; N= 690, mean age = 76.10, mean education = 11.95 years, 73% female, 78% Caucasian, 17% African American, 5% Hispanic). Memory complaint was measured with items from the Change subscale of the Metamemory in Adulthood Questionnaire (MIA). A higher score > 2.5 translated to greater stability of memory function. Among the factors we extracted, the content of one in particular seemed to reflect a concern with declining memory function, which we will refer to as Memory Complaints. Though closely related to the pre-existing Change subscale of the MIA, this factor also included items from the Locus, Capacity, Anxiety, and Achievement subscales. The alpha reliability was .92 in this sample. Reliability was .91 as calculated with the Time 1 data from the SeniorWISE sample (N = 263, mean age = 74.76, mean education = 13.59 years, 77% female, 71% Caucasian, 11% African American, 18% Hispanic). Because the SeniorWISE dataset is longitudinal, it allows us to look at test-retest reliability. The Complaints correlations average .80 across all time points. For example, using all available cases for analysis, T1 Complaints is correlated .76 with T2 Complaints (N=243) and .78 with T5 Complaints (N=207). At T1, Complaints is significantly correlated with the Rivermead SPS (.19), the HVLT (.15), and the MSEQ (.43). Most importantly, the Complaints scale has utility for predicting cognitive decline in older adults: change in Complaints from T1 to T2 was a significant predictor of change in performance on the Rivermead SPS (b = -.23, p<.01). Memory complaints are serious indicators of cognitive decline and deserve to be evaluated with psychometrically sound measures.

CORRESPONDING AUTHOR: Graham J. McDougall, PhD, Capstone College Nursing, University of Alabama, Tuscaloosa, AL, 35487-0358; gjmcdougall@ua.edu

D-086e

INTERNALIZING AND EXTERNALIZING SYMPTOMS IN HISPANIC AND NON-HISPANIC CAUCASIAN YOUTH WITH SPINA BIFIDA: LONGITUDINAL ASSOCIATIONS WITH FAMILY FUNCTIONING

Jaclyn M. Lennon, BS, Christina M. Amaro, BS and Grayson N. Holmbeck, PhD
Psychology, Loyola University Chicago, Chicago, IL.

Objective: Research has shown that youth with spina bifida (SB) have poorer psychosocial outcomes compared to typically-developing peers. However, research on Hispanic samples is sparse. This study (1) examines differences in internalizing and externalizing symptoms between Hispanic and non-Hispanic Caucasian youth with SB and (2) examines family functioning as a predictor of these symptoms over time. Methods: Participants were recruited as part of a larger, longitudinal study (Devine et al., 2012). The study sample included 36 Hispanic families (M child age=11.75, 41.7% male) and 75 non-Hispanic Caucasian families (M child age=11.21, 48.0% male) of youth with SB. Parents reported on family stress at Time 1 (T1). Family cohesion and family conflict subscales were derived from observational data of family interaction tasks at T1. Parents and teachers reported on youth's internalizing and externalizing symptoms at T1 and two years later (T2). Socioeconomic status was controlled for in all analyses. Results: No differences in internalizing and externalizing symptoms were found between Hispanic and non-Hispanic Caucasian youth at T1 or T2. However, Hispanic families demonstrated less family conflict at T1. Cross-sectional analyses revealed that for both groups, family stress and cohesion predicted youth internalizing symptoms, and family cohesion and conflict predicted youth externalizing symptoms. Longitudinal analyses revealed that for both groups, family cohesion and conflict at T1 predicted youth internalizing symptoms at T2. Further, Hispanic youth were more likely to show an increase in internalizing symptoms from T1 to T2. No significant interactions between family functioning and ethnic group were revealed. Conclusions: Although few differences were found between ethnic groups, it is important that future research investigate other psychosocial factors of Hispanic youth with SB. Also, future research should continue to investigate family functioning as a predictor of psychosocial functioning for all youth with SB.

CORRESPONDING AUTHOR: Jaclyn M. Lennon, BS, Psychology, Loyola University Chicago, Chicago, IL, 60603; jlenno2@luc.edu

D-086f

ALCOHOL USE, EMOTION REGULATION, AND MOTIVES FOR DRINKING IN A DEPRESSED POPULATION

Julie Richards, MPH,[1] Ursula Whiteside, PhD,[1] Evette Ludman, PhD,[1] Katharine Bradley, MD, MPH,[1,2] Emily Williams, PhD, MPH[2] and Lou Grothaus, MA[1]
[1]Group Health Research Institute, Seattle, WA and [2]VA Puget Sound, Seattle, WA.

Background: Individuals with chronic depression are at greater risk for alcohol use disorders. Drinking to regulate negative emotions ("coping drinking") is one of the most common reasons that people drink. The purpose of this study was to understand the association between alcohol use and regulating emotions and motives for drinking in a sample of chronically depressed patients.

Methods: Patients with chronic depression were recruited from several clinics in Seattle for a trial testing an intervention offering self-management support for chronic depression (n=302). All participants completed a survey at study enrollment including a validated alcohol screening questionnaire (AUDIT) with ≥ 5 defined as a positive screen for alcohol misuse. A subset of patients (n=162), were asked to complete additional questions measuring Difficulties in Emotion Regulation (DERS) and Drinking Motives (DMQ).

Results: Among the subset surveyed, 30% (n=49) screened positive for alcohol misuse, similar to overall study population (31%, n=93). Those with alcohol misuse, compared to those without, reported more difficulty with emotion regulation (p=0.046), specifically the DERS subscale measuring respondents' ability to access emotion regulation strategies perceived to be effective (p=0.05). Patients with alcohol misuse, compared to those without, scored higher on all drinking motive scales, including social (p=0.005), anxiety coping (p<.0001), depression coping (p<.0001), and enhancement (i.e. to elevate positive mood) (p<.0001).

Conclusions: Depressed patients who screened positive for alcohol misuse reported more difficulty regulating emotions and more frequently drinking to cope with depression and anxiety than those who screen negative. Patients with both depression and alcohol misuse may benefit from treatment which incorporates strategies to help patients monitor and manage their experience and expression of emotions, such as mindfulness or distress tolerance.

CORRESPONDING AUTHOR: Julie Richards, MPH, Group Health Research Institute, Seattle, WA, 98101; richards.je@ghc.org

D-086g

MINORITY STATUS, ATTACHMENT AND FORGIVENESS AS PREDICTORS OF QUALITY OF LIFE

Luci Martin, PhD[1] and Mark Vosvick, PhD[2]
[1]Psychology, University of La Verne, La Verne, CA and [2]Psychology, University of North Texas, Denton, TX.

Early life experiences have been associated with poor health and emotional outcomes. Sexual or ethnic minority members may experience additional stress. Positive coping strategies (e.g., forgiveness) may alter the relationship between early experiences (e.g., attachment style) and quality of life, but may not operate equally for all adults.

The current study aims to identify the contribution of ethnicity, sexual orientation, attachment style and forgiveness on quality of life in a diverse sample of adults. Participants (n = 252, 57% women) were recruited in Dallas/Fort Worth and self-identified as African-American (15%), European-American (58%), Latino(a) (11%) and other (16%), with an average age of 31.3 (SD = 13.3). Participants identified as gay (20%), lesbian (20%), bisexual (21%), heterosexual (27%) or transgendered (12%). Participants completed demographic information, the Experiences in Close Relationships Inventory, the Heartland Forgiveness Scale and the SF-36.

Hierarchical multiple regression analyses revealed that Latino/a ethnicity, bisexual, anxious attachment, forgiveness of self and others accounted for 36% of the variance in emotional well-being (F (12, 235) = 10.89, p < .001). Age, bisexual, attachment anxiety and forgiveness of self accounted for 24% of the variance in emotional role limitations (F (12, 235) = 6.02, p < .001). Gender, lesbian, bisexual and African American ethnicity accounted for 13% of the variance in physical functioning (F (12, 235) = 2.96, p < .01). Lesbian, transgender, anxious attachment and forgiveness of self accounted for 17% of the variance in pain (F (12, 235) = 3.89, p < .001). Forgiveness of the self accounted for 14% of the variance in role limitation in physical health (F (12, 235) = 3.08, p < .001).

Within our sample, forgiveness of the self appears to play the strongest role in predicting quality of life and could be easily implemented into behavioral interventions. Special attention to individual and group differences is essential when designing interventions to address the needs of those served.

CORRESPONDING AUTHOR: Luci Martin, PhD, Psychology, University of La Verne, La Verne, CA, 91750; lmartin@laverne.edu

D-093a

ACCESS TO COMMUNITY SERVICES AND AMENITIES: ASSOCIATIONS BETWEEN GIS-BASED AND SELF-REPORTED MEASURES AMONG A SAMPLE OF OLDER ADULTS. THE VOISINUAGE STUDY

Lucie Richard, PhD,[1,2] Lise Gauvin, PhD,[2,3] Dominic Julien, PhD,[1] Yan Kestens, PhD[2,3] and Hélène Payette, PhD[4,5]
[1]IRSPUM, Montreal, QC, Canada; [2]Université de Montréal, Montréal, QC, Canada; [3]CRCHUM, Montréal, QC, Canada; [4]Institut universitaire de gériatrie de Sherbrooke, Sherbrooke, QC, Canada and [5]Université de Sherbrooke, Sherbrooke, QC, Canada.

The role of perceptions of the environment in explaining effects of the built environment on health outcomes are poorly understood. In addition to actual availability of resources, perceptions of access to services and amenities may influence adoption and maintenance of health behaviors such as social participation and walking. This study examined associations between GIS (Geographic Information System)-derived estimates of access to neighborhood services and amenities and perceptions of walking time to reach these resources among older adults. The sample consisted of urban-dwelling adults aged 68 years or older (n = 681) from the VoisiNuAge Study. Distance to community services and amenities including grocery store, corner store, bank, pharmacy, sport center, restaurant, shopping center, place of worship, and park were estimated from a GIS. For each resource, respondents also estimated the number of minutes of walking to reach the resource from their home. Both GIS-estimated and self-reported measures were recoded into quartiles. Spearman rank-order correlations provided estimates of bivariate associations whereas polytomous regression models predicting perceptions of distance from GIS-based estimates allowed for estimating associations with adjustments for socio-demographic and health characteristics, income, education, and walking behavior. Results showed moderate to high correlations between GIS-based and self-reported estimates for all resources (rho between 0.43 and 0.55) with the exception of sport and shopping centers (rho = 0.18 and 0.16, respectively). Associations remained statistically significant ($p < .05$) in polytomous regression models. Self-reported measures of walking time to community services and amenities are correlated with actual access and are not confounded by other variables.

CORRESPONDING AUTHOR: Dominic Julien, PhD, IRSPUM, Montreal, QC, H2L1M3; dominic.julien@umontreal.ca

D-093b

TRAINING AND IMPLEMENTATION OF COACHES PROVIDING THEORY AND MOTIVATIONAL INTERVIEWING-GUIDED HEALTH COACHING FOR UN/UNDEREMPLOYED ADULTS

Sula Hood, PhD,[1] Diane De Trizio, BS,[1] Laura Linnan, ScD[1] and Jacki Hecht, MSN[2]
[1]University of North Carolina at Chapel Hill, Durham, NC and [2]Brown University, Providence, RI.

Efforts to cope with un/underemployment often lead to unhealthy behavioral choices (eg. smoking, alcohol abuse, physical inactivity) which increase the risk of developing chronic diseases such as cancer, heart disease, and diabetes. Few studies have addressed the health needs of the un/underemployed. This poster will describe the training for and implementation of a brief telephone-based theory and motivational interviewing-guided intervention designed to support and encourage positive health behavior changes among un/underemployed adults. Nine experienced MPH students completed 14 hours of training to deliver 3 follow-up phone calls to un/underemployed adults (N=200) who completed a health survey at a library-based job fair. Training methods included lecture, demonstration and role play methods, along with feedback/discussion. The 3 call protocol was guided by Social Cognitive Theory, Self-Determination Theory and principles of motivational interviewing (MI), where participants chose a health behavior target, and callers used MI to facilitate participants' goal setting for behavior change. Between October-December 2012, callers made 1403 calls to 189 enrolled participants. All calls were audio recorded and documented in a tracking database. Eighty-one (40.5%) participants completed call 1, 44 (22%) completed call 2, and 34 (17%) completed call 3. Twenty-four (12%) participants completed all 3 calls. One-hundred fourteen (56.7%) enrollees did not respond to a call due to missing contact information or lack of interest. Participants were more likely to be college graduates, insured, and veterans than non-participants. Physical activity was the health issue most likely to be selected. Participants described the calls as "motivating" and "encouraging." While initial enrollment was excellent, findings suggest that telephone-based follow-up is challenging in this population. Future studies should explore other methods for effectively delivering MI-guided health interventions to the un/underemployed.

CORRESPONDING AUTHOR: Sula Hood, PhD, Health Behavior, University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599; sulahood@unc.edu

D-100a

FACTORS INFLUENCING FREQUENCY OF FRUIT AND VEGETABLE PURCHASES AT FARM-TO-CONSUMER OUTLETS

Carmen Byker, PhD,[1] Courtney A. Pinard, PhD,[2] Teresa Smith, MS,[2] Sarah Katz, BS[3] and Amy L. Yaroch, PhD[2]
[1]Health & Human Development, Montana State University, Bozeman, MT; [2]Gretchen Swanson Center for Nutrition, Omaha, NE and [3]National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, GA.

The aim of this study was to determine if consumer factors or willingness to support changes to fruit and vegetable (FV) access are associated with frequency of FV purchases at farm-to-consumer outlets (FTCO). We used a cross-sectional sample from the HealthStyles 2010 Survey (N=4,198) that included participants specifying a response to, "In the summer, how often does the primary food shopper(s) get FVs from a farmers market, roadside stand, pick-your-own produce farm, or Community Supported Agriculture program (CSA)?" (n=3,872). A multivariable logistic regression was conducted to test independent correlates of frequent use (every other week or more) compared to infrequent use (less than once a month) of FTCO. Odds ratios (OR) were adjusted for sociodemographics. The analytic sample was 52% female, 70% non-Hispanic white, 11% non-Hispanic black, and 13% Hispanic. Respondents reported purchasing FVs from FTCO: 23.0% once a week or more, 17.9% every other week, 33.7% less than once a month, and 25.3% never.

Compared to those with college or more education, those with less than a high school education had a higher odds of frequent purchasing from FTCO [OR=1.4, CI =1.2-1.7]. No differences in FV purchases from FTCO existed by race/ethnicity or annual household income. Rating FV variety, freshness and quality, or cost as important (versus not important) was associated with higher odds of frequent FTCO [OR=2.4, CI=1.8-3.3; OR=1.7, CI=1.2-2.5; OR=1.4, CI =1.1-1.8]. Being willing to take action to create farmers markets or community gardens versus not were associated with a higher odds of frequent FTCO [OR=2.2, CI=1.9, 2.5; OR=2.0, CI=1.7, 2.3]. Ecologic data suggests that increased FV access may benefit FV behavior, thus approaches to increasing FV purchases at FTCO can play a role in health and in the local food economy.

CORRESPONDING AUTHOR: Carmen Byker, PhD, Montana State University, Bozeman, MT, 59717; carmen.byker@montana.edu

D-100b

HOME FOOD ENVIRONMENT CORRELATES WITH CHILD FOOD REQUESTS AT THE GROCERY STORE

Eric Calloway, BS, RD
Nutritional Sciences, The University of Texas at Austin, Austin, TX.

Parents determine food purchases, but children influence 34% of family food purchasing decisions with in-store food requests. Parents cite child food preferences as a major barrier to healthy food purchasing. Preschool-aged children make more food requests than older children and spend most of their non-school time at home. Home food accessibility is a major determinant of child food intake and BMI. It is hypothesized that the healthfulness of foods accessible in the home will correlate with the healthfulness of foods requested by the child in the grocery store.Parents (n=18) of preschool-aged children completed one shadowed grocery store trip and pantry inventory from the Healthy Home Survey. Food accessibility (in a form easily visible or consumed) and child food requests were analyzed. Healthy foods were fruits, vegetables, whole grain foods, nuts, seeds, and legumes/beans. Unhealthy foods were sugar sweetened beverages (SSB), salty snack foods and sweets. Indices for healthy and unhealthy food accessibility were scored from 0 to 100. Healthy and unhealthy requests were converted to requests per minute. Pearson's r was used to determine correlation with significance at $p<0.05$.Children (n=18) made 115 total food requests in 623 minutes of shopping time (0.185/minute) with 37 (32.2%, 0.059/minute) healthy and 30 (26.1%, 0.048/minute) unhealthy. Healthy food accessibility score was 63.2 (+-17, 31.25 - 100) and unhealthy was 20.1 (+-20.8, 0-81.25). Unhealthy accessibility scores were highly correlated with total requests/minute (r=0.899, $p<0.01$) and unhealthy requests/minute (r=0.675, $p<0.01$). Healthy accessibility scores were not significantly correlated with total requests/minute (r=0.255) or healthy requests/minute (r=0.217).Children are more likely to requests more foods and more unhealthy food at the grocery store if unhealthy foods are accessible in the home, though the same is not true for healthy foods. Parents should ensure unhealthy foods like SSB, sweets, and salty snack foods are not in forms easily visible to or consumed by their children.

CORRESPONDING AUTHOR: Eric Calloway, BS, RD, Nutritional Sciences, The University of Texas at Austin, Austin, TX, 78738; ericcalloway@utexas.edu

D-100c

ASSOCIATIONS BETWEEN MORAL FOUNDATIONS AND HEALTHY EATING IDENTITY AND SELF-EFFICACY

Sarah N. Kiser, Bachelor of Science,[1] Punam Ohri-Vachaspati, PhD, RD,[1] Christopher Wharton, PhD,[1] Sarah Martinelli, BS,[1] LeeAnn Bond, BS,[1] Gary Sherman, PhD[2] and Eric B. Hekler, PhD[1]
[1]School of Nutrition and Health Promotion, Arizona State University, Phoenix, AZ and [2]Harvard University, Cambridge, MA.

Background: Previous research suggests a healthy eater schema (i.e., identifying yourself as a healthy eater) may be a useful concept to target in interventions. A "stealth" intervention that discussed the moral issues related to food worked better at promoting healthful eating than an intervention focused on the health benefits. No research has explored the relationship between moral foundations, a theoretical model focused on delineating core "foundations" for making a moral decision, and healthy eater self-identity or self-efficacy. Purpose: We explored the relationship between moral foundations (i.e., harm/care, fairness/reciprocity, in-group/loyalty, authority/respect, & purity/sanctity) and health eater self-identity and fruit and vegetable self-efficacy (FVSE). Methods: 542 participants completed an online cross-sectional survey, which included moral foundations (i.e., MFQ), political views, healthy eater self-identity (i.e., HESS), and FVSE measures. Logistic regression was used to assess the relationship between moral foundations between healthy eater self-identity after controlling for age, gender, major, BMI, and political beliefs. OLS regression was used to explore the relationship between self-efficacy and the moral foundations after controlling for the covariates. Results: 75.6% of the sample were college students, with a mean age of 25.27 (SD=8.61). 25.1% of students were nutrition majors. Harm/care and authority/respect were significantly associated with healthy eater schema, (i.e., OR=1.7, p=.009, & OR=1.5, p=.01, respectively). Ingroup/loyalty, authority/respect, and purity/sanctity were related to FVSE (p=.006, p=.002, p=.04, respectively). Conclusion: Among college students, harm/care and authority/respect were associated with a healthy eater schema. Future research should explore possible uses of these moral foundations in interventions (e.g., a plant-based diet based on reduced harm to animals or eating fewer processed views based on "traditional" values).

CORRESPONDING AUTHOR: Sarah N. Kiser, Bachelor of Science, School of Nutrition and Health Promotion, Arizona State University, Tempe, AZ, 85281; snkiser@asu.edu

D-121a

THE ROLE OF HOUSEHOLD FACTORS AND FAMILY BEHAVIOR PATTERNS ON CHILDREN'S PHYSICAL ACTIVITY AND DIETARY INTAKE

Alicia Kunin-Batson, PhD, Alison Roeder, BA and Nancy Sherwood, PhD
HealthPartners Institute for Education and Research, Bloomington, MN.

The home environment is an important influence on modifiable risk factors for childhood obesity. We examined the relationship between household variables and family behavior patterns on the likelihood of meeting recommended guidelines for key dietary intake and physical activity patterns. 421 children (ages 5-10 years, mean = 6.59) with BMI percentiles ranging from 70 to 95 (mean = 84.8) and their parents were recruited from pediatric clinics. Parents completed diet recalls and surveys measuring TV viewing habits, food/beverage and exercise/play equipment availability, and family behavior patterns. Children wore accelerometers to measure physical activity. 13% met recommended guidelines for fruit/vegetable consumption (eating at least 5 servings of fruits/vegetables per day), 34.8% engaged in at least 60 minutes of physical activity per day, 57.7% watched 2 hours or less of television per day, and 42.3% did not drink any sugar sweetened beverages. Hierarchical logistic regressions were used to examine the relationship between household factors and family behavior patterns and the likelihood of meeting these healthy behavior guidelines, after controlling for child BMI and demographic characteristic. Children who had more frequent physical activity with a parent (OR 2.61, 95% confidence interval (CI) 1.46-4.66), more exercise/play equipment availability in the home (OR 1.08, 95% CI 1.03-1.13), less non-exercise media availability (OR .75, 95% CI .65-.85) and lower frequency of eating dinner with the TV on (OR .79, 95% CI .70-.88) were more likely to fall within recommended guidelines for TV viewing. Children from homes with higher levels of parental education (OR .42, 95% CI .257-.688) and lower availability of unhealthy beverages (OR 1.422, 95% CI 1.173-1.773) were less likely to consume sugar-sweetened beverages. Household factors and family patterns were not related to child physical activity or fruit/vegetable intake. Modification of key household practices have implications for children's sugar-sweetened beverage consumption and TV viewing.

CORRESPONDING AUTHOR: Alicia Kunin-Batson, PhD, HealthPartners Institute for Education and Research, Bloomington, MN, 55440; alicia.s.kuninbatson@healthpartners.com

D-121b

EXERCISE TRAINING PER SE DOES NOT IMPROVE COGNITION BUT AFFECTS BRAIN ACTIVATION IN OVERWEIGHT CHILDREN

Catherine L. Davis, PhD,[1] Jennifer E. McDowell, PhD,[2] Cynthia Krafft, MS[2] and Celestine Williams, MS[1]
[1]Medical College of GA, Augusta, GA and [2]UGA, Athens, GA.

This randomized trial compared exercise to an attention control condition to determine whether exercise alone can improve children's cognition and achievement.

Method: 175 overweight and obese (BMI-for-age≥85th percentile, M±SD=96±4; 74% obese) children age 8 - 11 (9.7±0.9; 61% girls; 87% Black) were randomized into aerobic exercise (average heart rate, 160±6 bpm, 59±25% attendance) or sedentary attention control (62±24% attendance) after-school programs for 8 mo. Children provided health measures (DXA % body fat=38±7; VO2 peak=29±5) and completed psychological assessments of cognition (Cognitive Assessment System, Tower of London), achievement (WJ-III), and teacher ratings (BRIEF) measures at baseline and posttest. Intent-to-treat mixed repeated measures models evaluated the effect of exercise. Adherence (% attendance X heart rate average) was correlated with changes in the exercise group.

Results: The exercise program reduced fatness (-1.8 vs -0.8%) and improved fitness (2.7 vs 1.4 ml/kg/min) compared to the attention control (p<.05). However, no benefits of exercise were apparent for any psychological assessments. Exercise adherence correlated weakly to improvements on executive function (CAS Planning, Attention, p<.10; TOL initiation time, p<.05).

Conclusions: An after-school exercise program, when compared with a very similar sedentary program, did not result in improved cognition. Thus, most cognitive benefits of aerobic exercise programs in children may be attributable to social factors such as adult attention rather than exertion. Correlations of benefits with adherence suggest that there might be a very small cognitive benefit of exercise on cognition. However, in a subset of children who provided potentially more sensitive fMRI data, changes in the pattern of brain activation were observed during executive function tasks suggesting improved efficiency and flexibility of cognitive control due to exercise (Krafft et al., Soc. for Neuroscience 2012; under revised review). Thus, exercise per se may only subtly benefit the brain.

NIH R01 HL87923

CORRESPONDING AUTHOR: Catherine L. Davis, PhD, Pediatrics, Medical College of GA, Augusta, GA, 30912; cadavis@georgiahealth.edu

D-121d

CLUSTERING OF MULTIPLE RISK BEHAVIORS AMONG ETHNICALLY DIVERSE ADOLESCENTS IN HAWAII

Juliana L. Kahrs, Health Promotion and Karly S. Geller, PhD
Kinesiology and Health, Miami University of Ohio, Oxford, OH.

BACKGROUND: The prevalence of youth obesity has spread to epidemic proportions. Previous research demonstrates a co-occurrence among common health-risk behaviors, with strong association to youth obesity that worsens across development. PURPOSE: The current study examined the prevalence and clustering of 5 health-risk behaviors among adolescents in Hawaii: physical inactivity (PA), low fruit and vegetable consumption (FV), junk food consumption (JF), excessive television time (TV) and inadequate sleep (SL). METHODS: Participants were 11th (85%) and 12th grade (15%) high school students recruited in Hawaii. Self-reported data was collected at one time point via surveys with corresponding focus groups. Proportions were used to describe the prevalence of single and multiple health risk behaviors. Significant multiple health behavior clusters were revealed using observed to expected (O/E) ratios. RESULTS: Participants (n=114) were predominantly female (75%) and Filipino-American (68%). Seventy-seven percent of adolescents were physically inactive, 90% watched excessive TV, 66% had inadequate FV, 94% had inadequate levels of sleep, and 80% consumed excessive junk food. Overall, 96% of participating adolescents reported at least 2 behavioral risk factors, 94% reported at least 3 risk factors, 76% reported at least 4 risks factors, and 40% reported all 5 risk factors. Clustering was observed in multiple combinations. The greatest degree of clustering was observed among TV, JF, and SL (OE: 1.154; CI: 0.313-1.995), indicating a proportion 15% greater than expected if behaviors had occurred independently. The combination of all 5 risk factors demonstrated clustering with an OE ratio of 1.071 (CI: 0.810-1.333). The most frequent cluster patterns, with 4-behaviors, included PA, TV, FV, SL (OE: 0.734; CI: 0.154-1.314), PA, TV, JF, SL (OE: 1.002; CI: 0.597-1.407) and TV, FV, JF, SL (OE: 1.007; CI: 0.460-1.554). IMPLICATIONS: Among this youth population, the unhealthy behaviors most likely to cluster were excessive television time and inadequate sleep.

CORRESPONDING AUTHOR: Juliana L. Kahrs, Health Promotion, Kinesiology and Health, Miami University of Ohio, Valparaiso, IN, 46385; kahrsjl@miamioh.edu

D-121e

SOCIAL AND ENVIRONMENTAL SUPPORT TO PROMOTE WEIGHT LOSS AMONG IMMIGRANT LATINOS: A RANDOMIZED CONTROLLED TRIAL

Lisa G. Rosas, PhD MPH,[1] Sreedevi Thiyagarajan, MA,[1] Rebecca Drieling, MPH,[2] Jun Ma, PhD,[3] Veronica Yank, MD[4] and Randall Stafford, MD PhD[1]
[1]Stanford Prevention Research Center, Stanford University, Palo Alto, CA; [2]School of Public Health, University of Washington, Seattle, WA; [3]Palo Alto Medical Foundation Research Insitute, Palo Alto, CA and [4]General Medical Disciplines, Stanford University, Palo Alto, CA.

Background: Approximately 80% of Latinos are overweight/obese. Latinos face social and environmental barriers to weight loss. Community Health Workers (CHWs) have been shown to be effective for addressing barriers; however, their effectiveness has not been tested for weight loss.

Methods: Vivamos Activos is a clinical trial designed to test two case management (CM) approaches for promoting weight loss with and without CHWs providing environmental support (ES) among Latinos. Participants were randomized to: CM only (n=84); CM +ES (n=82); or usual care (UC) control (n=41). The interventions included a 12 month intensive and 12 month maintenance phase. CM intervention included one-on-one and group sessions focusing on social and environmental factors using behavioral change strategies. ES was provided through home visits focused on cultural and community dimensions of behavioral change. The primary outcome was change in weight from baseline to 24 months.

Results: At baseline, participants had a mean (SD) age of 47.5 (11.1) and BMI of 35.6 (5.2); 77% were female; and all were foreign born Latino. Participants reported high levels of food insecurity (51%), symptoms of depression (49%), and fair to poor self-rated health (48%). At 6 months, the mean ± SE change in weight from baseline was -4.4 (1.6) for CM +ES compared to -2.1 (2.0) for UC (p=0.08) and -3.2 (1.8) for CM alone compared to UC (p=0.40). At 24 months, the mean ± SE change in weight from baseline was -2.9 (2.8) for CM +ES compared to -1.7 (4.5) for UC (p=0.66) and -1.6 (2.6) for CM alone compared to UC (p=0.99).

Conclusion: While incorporation of CHWs resulted in modest weight loss, it was not statistically significantly better compared to a usual care. Future incorporation of social and environmental determinants into interventions is needed.

CORRESPONDING AUTHOR: Lisa G. Rosas, PhD MPH, Stanford Prevention Research Center, Stanford University, Palo Alto, CA, 94304; lgrosas@stanford.edu

D-121f

AN EXPLORATION OF EXERCISE BELIEFS AND PHYSICAL ACTIVITY AMONG OBESE WOMEN ENROLLING IN A BEHAVIORAL WEIGHT LOSS PROGRAM

Loneke T. Blackman, MA,[1,2] Melissa M. Crane, MA,[1,2] Carmina G. Valle, PhD, MPH[1,2] and Deborah F. Tate, PhD[1,2]
[1]Gillings School of Global Public Health, University of North Carolina-Chapel Hill, Chapel Hill, NC and [2]Lineberger Comprehensive Cancer Center, University of North Carolina-Chapel Hill, Chapel Hill, NC.

Previous research demonstrates that African American (AA) women perform less physical activity (PA) during weight loss interventions than non-Hispanic White (W) women. Exercise beliefs may differ by race and may account for differences in PA between AA and W women. This study examined the relationships between race, exercise beliefs, and baseline PA.

Data for this analysis are from a randomized, community-based, internet-delivered, 4-month behavioral weight loss intervention. Prior to randomization, participants completed the Dishman Expected Outcomes and Barriers for Habitual Exercise (Exercise Beliefs) and the Paffenbarger Physical Activity questionnaires. Exercise Beliefs assessed perceived benefits of PA (subscales: psychological, body image, health) and barriers to PA (subscales: time, effort, obstacles). PA was calculated as total energy expenditure for one week (kcal/wk; log transformed for analyses). Analyses included women who identified as AA or W (N=157; W= 45.9%, AA=54.1%). BMI and marital status were covariates.

W and AA women differed in marital status (W=77% v AA=50% married) and BMI (W=35.7±7.4, AA=39.8±8.0). Participants did not vary by age (M=46.0±10.9yrs) or education (80% college graduates). There was no difference between AA and W women on exercise beliefs (all p's >.10) and baseline PA levels (M=711.0±832.7 kcal/wk). Among all women, effort as a barrier was the only subscale that directly predicted PA (p= .01). The effect of obstacles as a barrier on reported PA was moderated by race such that the negative relationship was stronger for AA than W women (p=.04).

In this sample of treatment-seeking, obese women, PA did not differ between AA and W women at baseline. Future behavioral weight loss interventions should consider exercise beliefs, such as obstacles, that may influence the uptake of PA in AA women.

CORRESPONDING AUTHOR: Loneke T. Blackman, MA, University of North Carolina-Chapel Hill, Chapel Hill, NC, 27514; Lonekeb@live.unc.edu

D-121g

EVALUATION OF A PORTABLE DEVICE TO RECORD DIETARY INTAKE IN WOMEN USING COMMERCIAL WEIGHT-LOSS PROGRAMS

Matthew J. Burns, BSc,[1] Philip M. Wilson, PhD,[1] Diane E. Mack, PhD,[1] Jenna D. Gilchrist, BA,[1] Lindsay S. Meldrum, BA[1] and Chris M. Blanchard, PhD[2]
[1]Kinesiology, Brock University, St Catharines, ON, Canada and [2]Medicine (Cardiology), Dalhouise University, Halifax, NS, Canada.

Objectives: This study examined compliance issues and user attitudes linked with the CalorieSmart CS-100S™ (Coheso, Inc. Pleasanton, CA) handheld digital monitoring device to record dietary intake.

Methods: Data were collected from a purposive sample (N = 10; Mage = 47.70 ±12.73 years) of women enrolled in commercial weight-loss programs (CWLP). Most participants were married/common-law (60.00%), university educated (70.00%), full/part-time employed (76.40%), and Caucasian/White (100.00%). Body Mass Index (BMI) values ranged from 22.67 to 48.41 kg/m2 (70.00% > 25.00 kg/m2). Participants completed an assessment of affective (i.e., positive emotions) and instrumental (i.e., perceived utility) attitudes towards device use following a period of 7 consecutive days using the CS-100S™.

Results: Compliance rates varied in terms of dietary intake record entries for breakfast (M = 5.60 ± 1.84 days), lunch (M = 6.00 ± 1.56 days) and dinner (M = 5.90 ± 1.52 days). CWLP users reported less affective (M = 4.36 ±2.10) than instrumental (M = 6.44 ±2.47) attitudes towards the device (t(9) = 4.89, p < .01; Cohen's d = 1.55). Higher instrumental attitudes were correlated with breakfast (r = 0.79) and lunch (r = 0.71) record entries. Total number of device entries were correlated with both instrumental (r = 0.77) and affective (r = 0.65) attitudes (all p's < .05).

Conclusions: Imperfect compliance rates across a short duration of time in a cohort focused on weight-control issues suggest using portable devices like the CS-100S™ to monitor dietary intake may underestimate caloric intake. Portable electronic devices such as the CS-100S™ may be useful, albeit not emotionally gratifying, for tracking food consumption patterns and caloric intake among women enrolled in CWLP. Intervention strategies designed to promote greater use of the CS-100S™ should focus efforts on conveying the utility of portable devices for monitoring caloric intake rather than emotional aspects of device use.

CORRESPONDING AUTHOR: Philip M. Wilson, PhD, Kinesiology, Brock University, St Catharines, ON, L2S3A1; pwilson4@brocku.ca

D-121h

INCREASED RATES OF OBESITY AND ASSOCIATED BEHAVIORAL AND ENVIRONMENTAL RISK FACTORS IN CHILDREN WITH AUTISM SPECTRUM DISORDERS

Megan M. Fritz, BS, E. Amy Janke, PhD and Jessica M. Sautter, PhD
Behavioral and Social Sciences, University of the Sciences, Philadelphia, PA.

Background: Prevalence rates of obesity in children with autism spectrum disorders (ASD) have not been well examined. Furthermore, little is known about how risk factors for obesity may vary in children with ASD compared to typically-developing peers. Aims: To examine in a nationally representative sample whether children with ASD are more likely to be obese compared to peers without ASD, and how select obesity risk factors differ between these two groups. Methods: Data were obtained from the National Survey of Children's Health (NSCH 2007), a nationally representative telephone survey assessing health indicators in U.S. youth. Children aged 10-17 (n=45,821) were grouped based on current ASD status (ASD = 500, Non-ASD = 45,321). Weight status was derived using height and weight to calculate BMI-for-age percentiles. Obesity status, environmental, and behavioral factors associated with childhood obesity were examined using t-tests and Pearson's chi-square tests for significance. Results: Obesity prevalence was higher in children with ASD (24.8%) compared to peers without ASD (13.5%, p<.000). Children with ASD differed significantly from those without ASD in environmental factors frequently associated with obesity, such as living below the federal poverty level (13.0% ASD vs. 10.0% non-ASD, p<.000). Children with ASD also differed significantly in behavioral factors known to contribute to obesity, specifically parents of ASD-diagnosed children were more likely to report their child had ≥4 hours of screen time daily (17.8% ASD vs. 10.6% non-ASD, p<.000) and absence of any weekly physical activity (20.8% ASD vs. 10.6% non-ASD, p<.000). Conclusion: Compared to typical peers, youth with ASD are significantly more likely to be obese. Increased screen time and decreased physical activity observed in this ASD population may place ASD youth at increased risk for obesity.

CORRESPONDING AUTHOR: Megan M. Fritz, BS, Behavioral and Social Sciences, University of the Sciences, Philadelphia, PA, 19104; mfritz@mail.usciences.edu

D-121i

FOOD ADDICTION, STRESS, AND ABDOMINAL FAT

Nana Lea O'Donnell, PhD Candidate, Jennifer Daubenmier, PhD, Marin Thompson, MS, Barbara Laraia, PhD, MPH, RD and Elissa S. Epel, PhD
University of California, San Francisco, San Francisco, CA.

Background: Many women report eating unhealthy food to cope with stress (APA, 2012; Wang, 2009). High stress combined with overeating comfort food can lead to greater abdominal fat in animal models (Kuo et al., 2007). It is possible that stress eating may contribute to a syndrome of food addiction, characterized by reward-based learning, binging, tolerance, and withdrawal, similar to drugs of abuse, which can be measured by the Yale Food Addiction Scale (YFAS) (Gearhardt, Corbin, & Brownell, 2009; Pelchat, 2009). We propose that women who develop symptoms of food addiction will exhibit both higher levels of psychological stress, stress eating, and greater abdominal obesity.

Method: We examined 41 obese women, ages 25 to 45, 23 who met criteria for food addiction on the YFAS, and 18 control subjects matched on body mass index (BMI) scores, to determine if high YFAS also have higher Perceived Stress Scale scores, more emotional eating on the Dutch Eating Behavior Questionnaire, and greater abdominal fat (larger waist-to-hip ratio and more trunk fat), relative to BMI-matched controls.

Results: High and low YFAS groups were matched on BMI, by design. High YFAS endorsed significantly more emotional eating (t(41)=-3.315, p=0.002), higher perceived stress (t(41)=-3.393, p=0.002), and had a greater amount of trunk fat (t(37)=-2.117, p=0.041).

Conclusions: Women scoring high on food addiction reported greater perceived life stress, emotional eating, and abdominal obesity. Although we do not know what came first, stress eating may contribute to FA. FA is not only a distressing condition but may also be a risk factor for the metabolic syndrome. Treatment for obesity should take into account the added complication of food addiction, and related metabolic risk that appears associated with it.

CORRESPONDING AUTHOR: Elissa S. Epel, PhD, Psychiatry, University of California, San Francisco, San Francisco, CA, 94143-0848; eepel@lppi.ucsf.edu

D-121j

THE EFFECTS OF EXECUTIVE CONTROL ON SNACK FOOD CONSUMPTION IN THE PRESENCE OF RESTRAINING VERSUS FACILITATING CUES

Peter Hall, PhD, Cassandra Lowe, MSc and Corrie Vincent, MSc
University of Waterloo, Waterloo, ON, Canada.

Background: Studies have documented a negative relationship between strength of executive control resources (ECRs) and frequency of self-reported fatty food consumption. However, it is unknown whether this effect generalizes to observed consumption, and little is known about the effects of restraining vs. facilitating environmental cues on the relationship between ECRs and eating behavior.

Methods: We presented 86 young adults with a taste test for three appetitive but unhealthy foods (milk chocolate, regular/sour cream potato chips). Participants were randomly assigned to receive instructions to either eat the bare minimum to make their ratings ("restraint condition"), eat as much as they like ("facilitation condition") or no special instructions ("control"). We surreptitiously measured the weight of food consumed during the taste test in each condition. ECRs were assessed via three computer tasks administered prior to the taste test (Stroop, Go-Nogo), standardized and combined into a single index score.

Results: Findings indicated a main effect of treatment condition, such that those in the restraint group ate significantly less than in either of the other groups (R2=.288, p≤.001). However, this main effect was qualified by an ECR by treatment condition interaction (R2=.068, p=.016). Specifically, those in the facilitation condition showed a strong negative association between ECR strength and amount of food consumed (β=-.503, p=.010), whereas those in the restraint (β=-.173, p=.344) and control (β=.160, p=.309) conditions showed no significant variability in consumption as a function of ECR strength.

Conclusions: Findings suggest that the effect of ECR strength on consumption of appetitive snack foods may vary significantly by context. In the presence of self-restraint cues, participants did not show variation in food consumptive behavior as a function of ECRs. However, in the presence of facilitating cues there was a strong relationship between ECRs and quantity of snack food consumed. ECRs may have special relevance for eating behavior in the presence of facilitating cues.

CORRESPONDING AUTHOR: Peter Hall, PhD, University of Waterloo, Waterloo, ON, N2L 3G1; pahall@uwaterloo.ca

D-121k

EXECUTIVE FUNCTION AND CONSCIENTIOUSNESS AS PREDICTORS OF HEALTH PROTECTIVE BEHAVIORS

Peter Hall, PhD and Geoff Fong, PhD
University of Waterloo, Waterloo, ON, Canada.

Background: Conscientiousness, as a personality trait, predicts a variety of health behaviors, health outcomes and even longevity. The ability to be goal directed and inhibit responses to distractions is described as an important facet of conscientiousness. However, inhibition is also a central facet of executive function (EF), and executive function has shown these same predictive relationships with health behaviors, outcomes and longevity. It is unclear which of the two constructs (EF or conscientiousness) is the best way of understanding inhibition, and which is the best predictor of health-related outcomes. We sought to answer this question in the present study in relation to two health protective behaviors: dietary behavior, and physical activity.

Methods: We recruited an age-stratified sample of 208 community members (Mage=45.21), and administered tests of EF, personality, and health behavior. We examined the relationship between conscientiousness (Big Five Inventory), EF (Stroop; Go-NoGo), and each health behavior. Dietary behavior was assessed using the fatty food items from the NCI Fat Screener, filled out for two consecutive weeks; physical activity was assessed via tri-axial accelerometer worn on the hip for seven consecutive days.

Results: When entered as simultaneous predictors of each behavior in the same block, EF was the only significant predictor of fatty food consumption frequency (β=-.153, p<.001) and of physical activity (β=.285, p<.001). Moreover, EF was a significantly stronger predictor, in absolute terms, of both behaviors combined (β=.368, p<.001) than was conscientiousness (β=.187, p=.011; z=1.868, p=.031).

Conclusions: Conceptual overlap between EF and conscientiousness appears to exist; however, in the current sample, the former was a stronger predictor than the latter. When directly compared, only EF predicted unique variability in both dietary and physical activity behaviors, and in absolute terms, EF predicted significantly more variability in both behaviors. Inhibitory control might be best thought of—and assessed—as a facet of EF, when predicting health protective behaviors.

CORRESPONDING AUTHOR: Peter Hall, PhD, University of Waterloo, Waterloo, ON, N2L 3G1; pahall@uwaterloo.ca

D-121l

OBESITY CAUSAL BELIEFS AND HEALTH BEHAVIORS: MEDIATION BY SELF-EFFICACY FOR WEIGHT CONTROL

Sarah Knerr, MPH,[1] Deborah Bowen, PhD,[2] Shirley Beresford, PhD[3] and Catharine Wang, PhD[2]
[1]Health Services Research, University of Washington, Seattle, WA; [2]Community Health Sciences, Boston University, Boston, MA and [3]Epidemiology, University of Washington, Seattle, WA.

Obesity is a highly heritable common disease with well-established behaviors that decrease risk. Understanding how beliefs about the causes of obesity, particularly genetic attributions, influence health behavior will be essential for translating genomic technologies into public health improvements. We explored self-efficacy as a theory-based mechanism mediating associations between obesity causal beliefs and diet and physical activity behaviors following the methods of Preacher and Hayes (2004). Participants were drawn from a sample of non-Hispanic white women living in King County, Washington (N=503). Causal attributions (measured on a 1-4 scale) were similar for diet (3.36, SD=0.72) and physical activity (3.34, SD=0.72), but were lower for genetic attributions (2.48, SD=0.75). After bootstrapping over 5,000 samples, significant indirect effects through self-efficacy for weight control were present for diet attributions and fruit and vegetable intake (αβ=0.051, 95% CI:0.008, 0.109), genetic attributions and fruit and vegetable intake (αβ=-0.055, 95% CI:-0.113, -0.017), and genetic attributions and physical activity measured using a modified Godin score (αβ=-0.685, 95% CI:-1.440, -0.244). There was no association between physical activity attributions and self-efficacy for weight control (α=0.151, p=0.308). These results indicate that self-efficacy is an important construct to include in longitudinal and experimental studies identifying causal mechanisms linking genetic beliefs and behaviors. Negative associations between genetic attributions for obesity and perceived self-efficacy for weight control highlight the need to emphasize that multiple genes and environmental factors interact to cause obesity when communicating with the public.

CORRESPONDING AUTHOR: Sarah Knerr, MPH, Department of Health Services, University of Washington, Seattle, WA, 98195; saknerr@uw.edu

D-124a

THE IMPACT OF ROLE STRESS ON CLERGY PROFESSIONAL COMMITMENT THROUGH JOB SATISFACTION AND BURNOUT

John M. Faucett, PhD, Tom H. Poling, PhD and Robert F. Corwyn, PhD
Psychology, University of Arkansas at Little Rock, Little Rock, AR.

Role conflict, an individual's perception of two or more conflicting role expectations, and role ambiguity, uncertainty concerning what the occupant of a particular office is expected to do, have been proposed as important predictors of clergy job satisfaction, burnout, and professional commitment. The present study examines the role of job satisfaction and burnout as mediating variables between role conflict and ambiguity and commitment to the ministerial profession.

Methodology

179 clergy in the Arkansas Conference of the United Methodist Church completed a web survey of pastor job attitudes. Role ambiguity was measured with the 6-item scale developed by Rizzo, House, and Lirtzman (1970), role conflict using Rizzo et al.'s (1970) 7-item scale, plus two clergy-specific items developed by Kemery (2006), job satisfaction with the 25-item Ministerial Job Satisfaction Scale (Glass, 1976), professional commitment with the 15-item Professional Commitment Questionnaire (Mowday et al., 1979), and burnout by the 21-item Burnout Measure (Pines & Aronson, 1988).

Results

Path analysis was conducted using AMOS version 6.0 (Arbuckle, 2005). The model showed a good fit to the data. As expected, conflict and ambiguity were negatively related to job satisfaction (β = -.29, β = -.50 respectively) and job satisfaction was positively related to commitment (β = .61). As a result, conflict and ambiguity had a significant effect on commitment, through their negative effect on job satisfaction.

Conflict and ambiguity were positively related to burnout (β = .31, β = .24 respectively). However, burnout was not significantly related to commitment (β = -.06) and the indirect effects through burnout were not significant.

Discussion

The present findings suggest that job satisfaction plays a mediating role between role ambiguity and conflict and professional commitment of clergy. However, although conflict and ambiguity were positively related to burnout, burnout was not significantly related to commitment and burnout did not play a significant mediating role.

CORRESPONDING AUTHOR: John M. Faucett, PhD, Psychology, University of Arkansas at Little Rock, Little Rock, AR, 72204; jmfaucett@ualr.edu

D-142a

ATTENTION TO AND IMPORTANCE OF ADOPTION VERSUS BIOLOGICAL FAMILY STATUS IN PEDIATRIC PSYCHOLOGY RESEARCH

Bret Boyer, PhD and Alarico Barabino, MA
Institute for Graduate Clinical Psychology, Widener University, Chester, PA.

Literature investigating important factors among adoptive families has burgeoned, including research addressing adoption of children with special health care needs (CSHCN). This literature has suffered from inattention to models of adjustment to chronic health conditions among biological families, which is a much more well developed literature. In addition, the pediatric psychology research literature has confounded this lack of integration between the adoption of CSHCN literature and the larger domain of pediatric psychology research by ignoring adoptive versus biological status of families enrolled in research samples. This study investigated the degree of this problem by manually investigating whether the following factors were measured and reported in 129 studies in two peer-reviewed pediatric psychology journals (index factors of 2.91 and .95, respectively), including all articles from two subsequent calender years (2010, 2011): Participant age, Race, Family income, Education, Adopted versus biological status of participants. Article abstracts and Participants subsections of Method sections were reviewed, in order to prevent inaccurate data (false-negatives assumed if search technology did not register by fulltext keyword searches). Participant age was reported in 93,5% of the first journal, 100% or second, and 95.3% of the combined sample of articles; Race was reported in 77.4% of the first journal, 80.6% of second journal, and 78.3% of combined sample; Family Income and/or Parental income (as indicator of socioeconomic status) was reported in 68.8% of the first journal, 61.1% of second journal, and 66.7% for combined sample. In contrast, only 17.2% of first journal, 8.3% of second journal, and 14.7% of combined sample reported whether participants were biological or adopted children. This lack of attention to and reporting of adoptive versus biological status hampers clarity for generalizability of results, and hampers the ability of pediatric psychology research to investigate differences resulting from varied developmental family histories.

CORRESPONDING AUTHOR: Bret Boyer, PhD, Institute for Graduate Clinical Psychology, Widener University, Chester, PA, 19013; baboyer@mail.widener.edu

D-142b
EXPECTANT MOTHERS' PROSPECTIVE DECISION MAKING ABOUT INFANT AND CHILDHOOD VACCINATIONS

Jo Ann Shoup, MS,[1,2] Mary Guy, PhD,[1] Danielle Varda, PhD,[1] Jessica Sowa, PhD[1] and Jason Glanz, PhD[2]
[1]School of Public Affairs, University of Colorado Denver, Denver, CO and [2]Institute for Health Research, Kaiser Permanente Colorado, Denver, CO.

Background/Objective: Parents use the internet to seek out health information for themselves and their children. When seeking information on the internet about vaccines, parents encounter vast amounts of information, most of which is in a negative tone about vaccines. To develop better web-based vaccine resources for parents, we surveyed pregnant women to learn more about parents' vaccine decision making processes and how they use the internet to seek information about vaccines.

Methods: We surveyed 96 women who were health plan members of Kaiser Permanente Colorado, over age 18, and in the first 2 weeks of their third trimester of pregnancy. The paper-based survey comprised questions measured on a Likert-style scale.

Results: Seventy-three percent of the pregnant women intend to fully vaccinate their baby; 11.5% intend to get some vaccines; 11.5% are undecided and 4% intended to delay vaccines for their baby. All pregnant women reported general use of the internet and 81% reported use of social media at least weekly; 76% look for health information on the internet and 18% use social media to seek out health information at least weekly. However, only 7% use the internet and 1% use social media weekly as a resource for seeking out information about vaccines.

Conclusions: Parents are active users of the internet to seek health information. The literature indicates that the internet is an important source of information about vaccines. In our study, pregnant women were concerned about vaccine decisions and used the internet to seek health information; however, they were not using the internet to seek information specifically about vaccines. We need to study the decision to vaccinate longitudinally to determine when parents start using the internet to gather vaccine information. This information will contribute to the design and communication messages of web-based tools to address parents' concerns about vaccines at critical time points in the decision-making pathway.

CORRESPONDING AUTHOR: Jo Ann Shoup, MS, University of Colorado Denver, Denver, CO, 80231; Jo.Ann.Shoup@kp.org

D-142c
EXPLORING BLOOD DONATION FEARS USING A NOVEL OPEN-ENDED QUESTIONNAIRE

Katrina Hamilton, High School, Regina M. Warfel, MS, Anthony Hess, BA, Mary Mushaben, High School, Markie Ruggeri, High School, Emily Jones, High School, Jacob Mosher, BA, Jessica Solano, High School, Janis L. France, PhD and Chris France, PhD
Psychology, Ohio University, Athens, OH.

Background: Past blood donation researchers typically rely on self-report measures of donor fears, and qualitative data in this area is scarce. We addressed this by creating an interview-style blood donation fears questionnaire in order to explore the fears of those with and without prior donation experience.

Method: A total of 251 undergraduate participants who indicated having at least some fear completed an implicit donation attitude task followed by self-report measures of donation attitudes, donation anxiety, personal moral norm, and anticipated regret. Participants were then asked to "describe what aspects of having blood drawn cause you to have some fear."

Results: Among the 251 reporting any fear, needles was the most common fear reported first ($n = 114$). Interestingly, those indicating a fear of needles reported significantly more negative donation attitudes ($t(250) = 2.46, p < 0.05$), significantly less perceived moral obligation to donate ($t(250) = 2.06, p < 0.05$), significantly lower anticipated regret after donating ($t(250) = 2.07, p < 0.05$), marginally higher donation anxiety ($t(250) = 1.71, p = 0.09$), and marginally more negative implicit attitudes ($t(250) = 1.73, p = 0.09$), when compared to all other reported fears (i.e. blood, vasovagal, pain, and other).

Conclusion: The present study demonstrated that needles were the most commonly cited fear, and that those with needle fear may differ in key ways from those reporting other types of fears. Specifically, those with needle fear reported more anxiety regarding the donation process and demonstrated more negative implicit and explicit attitudes. In addition, anticipated regret after donation was lower for needle fear individuals; this may be because they anticipate feeling proud of overcoming their fear (as opposed to expecting negative physiological reactions for other types of fears). These initial findings indicate differences in donation motivation based on fear type warrant further investigation.

CORRESPONDING AUTHOR: Katrina Hamilton, High School, Psychology, Ohio University, Athens, OH, 45701; kh353709@ohio.edu

D-142d
HEALTH INFORMATION SEEKING EXPERIENCES: THE ROLE OF SELF-EFFICACY AND PATIENT-CENTERED COMMUNICATION

Laura Forsythe, PhD, MPH,[1] Ellen Beckjord, PhD, MPH,[2] Richard Moser, PhD[3] and Lila Rutten, PhD[4]
[1]Patient-Centered Outcomes Research Institute, Washington, DC; [2]University of Pittsburgh Cancer Center, Pittsburgh, PA; [3]National Cancer Institute, Bethesda, MD and [4]Mayo Clinic, Rochester, MN.

Purpose: We examined the information seeking experiences of the U.S. population and assessed the role of self-efficacy and patient-centered communication with healthcare providers in information seeking experiences.

Methods: We analyzed nationally representative data collected in 2011-2012 from the Health Information National Trends Survey (HINTS). Our main outcome was information seeking experience, assessed by the Information Seeking Experiences scale. Using multiple linear regression, information seeking experience scores were regressed on sociodemographics, information seeking self-efficacy, patient-centered communication, and the interaction of self-efficacy with patient-centered communication.

Results: Over half of respondents (52.4%) reported concerns about information quality; 35.8% reported that it took a lot of effort to get information; 33.3% felt frustrated during their search; and 27.0% felt the information was hard to understand. In the multivariable model (R-squared=28%), respondents aged 35-49 years (B=6.06, p=0.02) and 50-64 years (B=5.08, p=0.01) reported more favorable information seeking experiences than those aged 18-34, and Asians reported poorer experiences than non-Hispanic Whites (B=-7.79, p=0.02). The interaction of self-efficacy with patient-centered communication was significant (p=0.004); the positive association between self-efficacy and information seeking experience was stronger among those who reported more patient-centered communication compared to those who reported less patient-centered communication (B=31.32, and B= 21.68, respectively).

Conclusions: Many Americans searching for health information report poor experiences. More favorable health information seeking experiences are associated with greater information seeking self-efficacy, particularly when communication with healthcare providers is patient-centered.

CORRESPONDING AUTHOR: Laura Forsythe, PhD, MPH, Office of Cancer Survivorship, National Cancer Institute, Rockville, MD, 20892; laura.forsythe@nih.gov

D-142e

RELATIONSHIPS BETWEEN SELF-OBJECTIFICATION AND PERSONALITY TRAITS TO PSYCHOSOCIAL OUTCOMES AMONG WOMEN

Marissa W. Oehlhof, PhD,[1] Debra A. Hoffmann, BS[2] and Robert A. Carels, PhD, MBA[2]
[1]Blue Ash College, University of Cincinnati, Blue Ash, OH and [2]Psychology, Bowling Green State University, Bowling Green, OH.

Self-objectification (SO), valuing one's body for appearance rather than for performance, often results in negative psychosocial consequences. While objectification theory distinguishes between SO as a transient state and persistent trait, scant research has examined SO with regard to personality. This study sought to determine whether SO is a subtype of or is distinct from other personality traits (i.e., perfectionism). Similarly, as little research exists on personality traits and body image, a secondary aim was to examine psychosocial correlates of SO and perfectionism (PF).

Method: 325 female undergraduates completed measures of trait SO, PF, and psychosocial outcomes (i.e., appearance control beliefs, body shame, binge eating, depression).

Results: Analyses show SO is related to the personality trait of PF, while differentially predicting psychosocial outcomes. Both SO and PF predicted internalized weight bias, binge eating and depression, while only PF predicted appearance control beliefs and body shame. Regression analysis demonstrated PF accounts for a significant amount of variance in both internalized weight bias and depressive symptoms above and beyond SO. An interaction between SOBJ and PF was identified in the regression of binge eating, such that women who were high in both SO and PF reported the greatest amount of binge eating symptoms. Additionally, an interaction between PF and appearance control beliefs was found in the regression of weight loss efforts such that women with high appearance control beliefs engage in more weight loss efforts than those with low control beliefs, unless they are high in PF.

Conclusion: These findings suggest that while SO and PF are likely relevant constructs in the lives of most women, it's likely SO exists as a subtype of PF in terms of personality traits. Further study of these constructs is necessary as without interventions directed at this way of viewing one's body, continued negative outcomes may result.

CORRESPONDING AUTHOR: Marissa W. Oehlhof, PhD, Blue Ash College, University of Cincinnati, Blue Ash, OH, 45236; marissa.oehlhof@uc.edu

D-142f

IMPLICIT MEASUREMENT OF SELF-OBJECTIFICATION: IMPLICATIONS FOR HEALTH BEHAVIORS AND PSYCHOSOCIAL WELL-BEING

Marissa W. Oehlhof, PhD,[1] Jacob M. Burmeister, MA,[2] Nova Hinman, MA,[2] Caroline Coates, BS,[2] Austin Brown, BS,[2] Jessica Peternelj, BS[2] and Robert A. Carels, PhD, MBA[2]
[1]Blue Ash College, University of Cincinnati, Blue Ash, OH and [2]Psychology, Bowling Green State University, Bowling Green, OH.

Background: Self-objectification (SO), valuing one's body for appearance rather than for performance, often results in negative outcomes (e.g., depression, disordered eating). SO research traditionally utilizes one of two explicit measures, and while implicit measures have been created for a variety of attitudes and self-perceptions, no such measure has been developed for SO. This study sought to develop and examine an implicit SO measure in relation to explicit measures as well as psychosocial outcomes among men and women.

Method: 114 undergraduates (49 male; 65 female) completed psychosocial outcome measures (body satisfaction, depression, internalized weight bias), two explicit SO measures (TSOQ and OBCS), and demographic measures of pornography use and physical activity. To measure implicit SO, participants completed an electronic Implicit Association Task (IAT) with target category labels for bodily attributes (e.g., Appearance, Performance) and attribute category labels of rank (e.g., Important, Unimportant).

Results: For both sexes the explicit SO measures were correlated, but only one (TSOQ) was correlated with the IAT. The OBCS predicted depression, internalized weight bias, body dissatisfaction, physical activity, and weight loss efforts. For both sexes, porn use predicted body dissatisfaction. However, for men, analyses also indicated an interaction between porn use and body shame, such that men who reported high levels of both body shame and porn usage reported the greatest body dissatisfaction.

Among men, the IAT was correlated with one explicit SO measure (OBCS), and among women, the IAT was only correlated with porn use. Similarly, among women, greater SO (TSOQ) was also related to greater use of porn.

Conclusion: The findings, though complex, suggest that SO is a construct that can be measured implicitly, although the appropriate use of various measures of SO may depend on the specific research questions as well as sex of the sample.

CORRESPONDING AUTHOR: Marissa W. Oehlhof, PhD, Blue Ash College, University of Cincinnati, Blue Ash, OH, 45236; marissa.oehlhof@uc.edu

D-142g

PARENTAL PRACTICES AND PEDESTRIAN RISK BEHAVIORS AMONG CHILEAN ADOLESCENTS

Paula Repetto, PhD[1,2] and Andrea Herrera, MA[3]
[1]P. Universidad Católica de Chile, Santiago, Chile; [2]Universidad de Chile, Santiago, Chile and [3]PUC, Santiago, Chile.

Background: Traffic accidents are the second leading cause of death in adolescents and young adults in Chile. However, very few studies have examined the determinants of this behavior in this age group. Researchers have shown the importance of parental practices in risk behavior in adolescents, such as substance use, sexual risk behavior, violence, among others. In the present study, we suggest that these practices will influence pedestrian risk behaviors among adolescents. Objective: The goal of this research was to study the influence of parental practices: mother and father support, and behavioral control (monitoring and presence of rules) in pedestrian risk behavior. Methodology: A sample of 470 adolescents under 17 years attending to schools in the Metropolitan Region of Santiago, Chile participated. Participants answered a self-administered questionnaire in which they were asked about parental practices and pedestrian risk behaviors. Analyzes were performed using descriptive and inferential statistics, using multiple regression. Results: Father support and the presence of rules were protective factors of pedestrian risky behavior, but not monitoring or maternal support. Conclusions and Implications: Parental practices influence this behavior and reveal the importance they have in its prevention. It shows further evidence of the importance of these practices in the development of behavioral self-regulation and is association with behaviors that are less observed directly by parents.

CORRESPONDING AUTHOR: Paula Repetto, PhD, PUC, Santiago, Chile; prepetto@uc.cl

D-142h

ILLNESS PERCEPTIONS, PSYCHOLOGICAL FUNCTIONING, AND QUALITY OF LIFE IN PATIENTS WITH COPD AND THEIR CAREGIVERS

Risa N. Long, BA, Philip T. Diaz, MD and Charles F. Emery, PhD
Ohio State University, Columbus, OH.

Chronic obstructive pulmonary disease (COPD) is the third leading cause of death in the United States. Previous studies indicate that negative illness perceptions among patients with COPD are associated with psychological distress and poor quality of life (QoL). In addition, negative illness perceptions among caregivers of esophageal cancer survivors have been associated with patient distress, but no prior studies have examined the relationship of caregiver illness perceptions to COPD patient outcomes. This cross-sectional study examined the relationship of COPD patient illness perceptions with psychological distress and QoL and the extent to which caregiver perceptions of illness moderate the relationship. Forty-three COPD patients (mean age = 63 ± 10 yrs; 55% women; mean FEV1% predicted = 62) and 43 caregivers (mean age = 58 ± 14 yrs; 63% women) completed self-report questionnaires, including the Brief Illness Perception Questionnaire (IPQ), State-Trait Anxiety Inventory (S), and SF-36. For the caregiver version of the Brief IPQ, caregivers indicated how they view or respond to the patient's illness. Data were analyzed with Pearson correlations and hierarchical regression. Results indicated that patients' illness perceptions were not associated with QoL but, surprisingly, patients' perceived personal control was positively associated with anxiety ($r=.40$, $p<.01$). The regression analysis revealed that caregivers' perceived control over the patients' illness moderated the relationship of patient control and anxiety (R2change=.17, $p<.05$), indicating that patient anxiety was low only in the context of lower patient control and higher caregiver perceived control. When caregiver perceived control was low, patient anxiety was high regardless of patient perceived control. Thus, in patients with moderately severe COPD, caregiver perceptions of illness may play an important role in patient emotional state. Caregiver perceptions of patient illness will be important to consider in future research and clinical applications among patients with COPD.

CORRESPONDING AUTHOR: Risa N. Long, BA, Psychology, Ohio State University, Columbus, OH, 43210; long.713@osu.edu

D-142i

APPLICATION OF MULTILEVEL ORAL HEALTH MODEL TO 2012 WICHITA-BASED GIVE KIDS A SMILE (GKAS) INTERVENTION

Simi Mani, Masters in Public Health, Philip Twumasi-Ankrah, PhD, Douglas D. Bradham, DrPH, MA, MPH, Angela Paschal, PhD, Patricia Cox, Kurt Konda, Elizabeth Ablah, PhD, MPH and Judy Johnston, MS, RD/LD
Preventive Medicine and Public Health, University of Kansas, Wichita, KS.

Background: Much oral health research examines individual influences primarily in the oral cavity, or focuses on a limited number of individual-level factors.

Purpose:This study described the participant population in the 2012 Wichita-based Give Kids a Smile (GKAS) Intervention through application of the Oral Health Conceptual Model of Fisher-Owens, et al (2007). This analysis identified factors that were most significantly associated with negative oral health status (i.e., number of procedures done).

Methods:This study is a retrospective descriptive analysis of a cohort. The collected data included individual patient dental charts,surveys and interviews for all children and the parent who participated in GKAS in 2012.The study sample included 141 uninsured children between 2-11 years of age, living in Sedgwick County,who attended the 2012 GKAS day. Data were recorded,cleaned and analyzed using SASv.9.3 and SPSS.A log-linear regression model was used to explore child and family level factors influencing children's oral health.

Results:GKAS data included 25 variables consistent with the comprehensive conceptual model. 37% of parents rated their child's natural teeth as fair or poor and 62% of partents rated it as good or better; however,these perceptions were not predictive of the amount of care deemed by professional to be need on the day of GKAS.Three variables were found to be significantly associated with these children's oral health, as measured by total number of procedures received at GKAS:(1) being married (RR=1.44, CI=1.1000-1.9042);(2) visiting a health professional on a regular basis(RR=0.80, CI=0.669-0.977);(3) the child having an annual dental visit (RR=0.8077, CI=0.673-0.969).

Conclusions:Our results suggest that efforts made to improve uninsured children's oral health should consider family-level factors along with other child-level or individual factors. We suggest that interventions planned for improving oral health among uninsured children should include a multilevel approach.

CORRESPONDING AUTHOR: Simi Mani, Masters in Public Health, Preventive Medicine and Public Health, University of Kansas, Wichita, KS, 67205; smani@kumc.edu

D-142j

NEEDS ASSESSMENT AND BARRIERS TO CARE FOR INDIVIDUALS WITH A MOVEMENT DISORDER

Sarah Lageman, PhD, Therese V. Cash, Master of Science and Melody Mickens, Master of Science
Virginia Commonwealth University Parkinson's and Movement Disorders Center, Richmond, VA.

Parkinson's disease (PD) affects nearly 5 million individuals worldwide and it, as well as other movement disorders (MD; e.g., essential tremor, dystonia) significantly impact patient as well as caregivers' quality of life (QOL). While the motor symptoms are the hallmark of these diseases, in recent years, non-motor symptoms (NMS) have been identified as having a significant impact on QOL. A needs assessment survey was conducted by an interdisciplinary MD specialty clinic in order to determine the incidence of MD in the community and identify the needs of individuals affected by MDs, with a focus on NMS and barriers to access to care. Demographic information from patient respondents (n=104) indicated more males (54%) than females affected by MDs, a larger portion of individuals identifying as Caucasian (97%), followed by Native American (2%), Hispanic (1%), and Pacific Islander (1%), an average age of 68, and a primary diagnosis of PD (74%). The most highly endorsed areas of need endorsed by patients included symptom management (66%), planning for the future (52%), wellness strategies (49%), and thinking changes (46%). Patients selected support groups (51%), exercise (47%), and physical therapy (39%) as the most needed services for effectively managing a MD. Patients reported that significant barriers to accessing these services included cost of services (26%), balancing family, work, and medical issues (16%), and stigma associated with having an MD (14%). Endorsement of NMS was high, with the majority of patients reporting 10 NMS in the past month. Sleep difficulties (59%), cognitive problems (52-56%), and anxiety and depression symptoms (38-40%) were among the most highly reported NMS. Furthermore, NMS was significantly related to overall QOL (r= -.36, p<.01) and PD-related QOL (r= .46, p<.01). The results of this survey confirm that individuals with movement disorders are affected by NMS and suggest that increasing access to services, reducing barriers, and developing targeted interventions for NMS will enhance QOL in MD.

CORRESPONDING AUTHOR: Therese V. Cash, Master of Science, Virginia Commonwealth University, Richmond, VA, 23221; verkerketk@vcu.edu

D-142k

NEEDS ASSESSMENT OF CAREGIVERS FOR INDIVIDUALS WITH MOVEMENT DISORDERS

Sarah Lageman, PhD, Melody Mickens, Master of Science and Therese V. Cash, Master of Science
Virginia Commonwealth University Parkinson's and Movement Disorders Center, Richmond, VA.

Movement disorders (MD) such as Parkinson's disease (PD) and Essential Tremor (ET) affect numerous individuals and their families. Previous studies have shown that non-motor symptoms (NMS) significantly contribute to patient quality of life (QOL) and risk of institutionalization at advanced stages. Caregiver-identified needs may provide insights into services with potential to further optimize QOL for both caregivers and individuals with MDs. A needs assessment survey of caregivers of individuals with MDs was conducted by an interdisciplinary team to determine caregiver needs and perceived barriers to care. Participants were (N= 64) caregivers of individuals with PD (90%), Parkinsonism (7%) or ET (1%), and co-morbid mild cognitive impairment (50%). Respondents were predominately female (78%), Caucasian (92%), with a mean age of 65 years (SD=10.5). Highly endorsed needs were symptom management (81%), lifestyle changes (71%), future planning (60%), wellness strategies (59%), care recipients' thinking changes (57%), caregiver stress (46%) and stress management (39%). Caregivers who endorsed caregiver stress reported lower overall QOL (t=-1.23, p<.05), greater IADL care recipient needs (t=8.17, p<.001), higher burden (t=9.53, p<.001), difficulties with completing personal and social activities (t=2.78, p<.001), and increased depression and anxiety (t=1.16, p<.001). Caregivers indicated that neurology (43%), physical therapy (35%) and pharmacy (35%) were the most important services for managing the patient's MD. Respondents indicated patients could benefit from access to exercise groups (42.1%), support groups (24%), speech/language therapy (20%) and a sleep specialist (18%). Caregivers identified the following as significant barriers to care: unavailability of service/specialist in local area (23%), cost (21%), and lack of coordinated care (20%). Results from this study provide specific caregiver-reported needs and barriers to care of individuals with MDs. Developing services targeted to address these needs could improve caregiver QOL and patient outcomes.

CORRESPONDING AUTHOR: Therese V. Cash, Master of Science, Virginia Commonwealth University, Richmond, VA, 23221; verkerketk@vcu.edu

D-153a

PARENT CHRONIC PAIN IMPACTS ADOLESCENT PAIN, SOMATIC SYMPTOMS, LAB PAIN RESPONSES, BMI AND PHYSICAL FUNCTION

Anna C. Wilson, PhD
Oregon Health & Science University, Portland, OR.

Children who have a parent with chronic pain are more likely to have pain and somatic complaints, likely due to a combination of genetic and environmental factors. This increased pain has largely been documented via self-report or chart review of the presence of painful conditions in youth. Few studies have examined lab pain responses or health outcomes in these youth aside from pain. A more complete description of health status among these children may elucidate potential environmental and health mechanisms through which family history risk is conferred. We describe high-risk adolescents who had a parent with chronic pain and low-risk adolescents who had healthy parents. Parents with chronic pain were experiencing pain at least weekly and receiving specialty medical care for their pain. In addition to adolescent self-report of daily pain frequency and somatic symptoms (Children's Somatization Inventory-24; CSI), we examined responses to laboratory pain stimuli (cold pressor tolerance; pressure pain threshold), BMI, and performance tests of physical function (sit-to-stand task; timed 10m walk). We hypothesized that high-risk youth would show poorer health and function across these domains compared to low-risk youth. Adolescents ages 11-15 (n=54 low-risk; n=45 high risk; M age=13.13; 61% female) and a parent participated. Parent pain problems included fibromyalgia, back pain, headaches, and other musculoskeletal pain. Chi-squared and t-tests showed high-risk youth had more frequent pain (p=.001), higher CSI scores (p=.02), lower pressure pain threshold (p=.04), lower cold pressor tolerance time (p=.02), higher BMI (p=.003), poorer sit-to-stand performance (p=.001), and slower walk times (p=.02). Parental chronic pain appears to have a broad impact on the health of their adolescent children. The presence of chronic pain in a parent may impact children's pain and health through a variety of behavioral mechanisms that will be examined in planned longitudinal analyses. Future interventions for adults with chronic pain might also focus on preventing pain and health problems in their children.

CORRESPONDING AUTHOR: Anna C. Wilson, PhD, Oregon Health & Science University, Portland, OR, 97239; longann@ohsu.edu

D-153b

PAIN CHARACTERISTICS IN ADULTS PRESENTING FOR GROUP WEIGHT LOSS TREATMENT

Megan M. Fritz, BS, Brittany L. Haltzman, BA, Kareem Ishmail, BS and E. Amy Janke, PhD
Behavioral and Social Sciences, University of the Sciences, Philadelphia, PA.

Background: Pain is commonly co-morbid with obesity and may influence weight loss treatment outcomes. Yet, little is known about how pain presents in adults seeking weight loss treatment. Aims: To examine pain characteristics of adults seeking group weight loss treatment, and to compare individuals with and without persistent pain on select health behaviors. Methods: Newly-enrolled participants in MOVE! group weight loss at a large Midwestern VA hospital completed standardized assessments of pain and health behaviors. Descriptive statistics were calculated for the entire sample (n=121). Participants reporting persistent pain (n=97) defined as pain ≥ half the days in the past 3 months were compared to those not reporting persistent pain (n=24) on health behaviors. Majority of participants were male (85.1%) and aged ≥ 50 years (79.3%); average BMI was 36.9 (SD=6.1). Results: Majority of individuals reported persistent pain (80.2%), and 94% reported having any pain complaint during the past 3 months. Of those reporting any pain, the majority (59%, n=69) had pain duration > 3 years although many reported pain ≥ 10 years (30.1%, n=35) and even ≥ 20 years duration (15.5%, n=18). Pain was typically described as "throbbing" (41.8%, n=51) at an average level of 5.07 (SD=1.9) on 0-10 pain scale, highly interfering in daily activities (3.4 on 0-6 scale, SD=1.9), and overwhelmingly participants used medication (86.5%, n=83) to manage their pain, with only one participant reporting applying behavioral techniques. Common pain sites included low back (38.5%, n=47), head (18.9%, n=23), and neck pain (13.9%, n=17). Individuals with and without pain were generally comparable on health behaviors measured (diet, activity, alcohol) except participants with persistent pain were more likely to be current cigarette smokers (p=0.04). Conclusion: Persistent pain is highly common among adults seeking weight loss treatment. When present, pain tends to occur most commonly in the lower back or head, be of prolonged duration, and treated with medical rather than behavioral management strategies.

CORRESPONDING AUTHOR: Megan M. Fritz, BS, Behavioral and Social Sciences, University of the Sciences, Philadelphia, PA, 19104; mfritz@mail.usciences.edu

D-153c

IMPROVED RATES OF PAIN CATASTROPHIZING, PHYSICAL ACTIVITY, AND PHYSIOLOGICAL OUTCOMES FROM PARTICIPATING IN A UNIVERSITY WELLNESS PROGRAM

Julie M. Cunningham, MA,[1] Joshua C. Eyer, PhD,[1] Beverly E. Thorn, PhD, ABPP,[1] Lindsey Jacobs, MA[2] and Rebecca Kelly, PhD[2]
[1]Psychology, University of Alabama, Tuscaloosa, AL and [2]Health Promotion and Wellness, University of Alabama, Tuscaloosa, AL.

Pain catastrophizing (PC) is a negative cognitive pattern that has been reliably linked to various pain-related outcomes, but the role of PC in exercise engagement among healthy participants is unclear. This poster reports on PC, exercise rates, and health outcomes associated with participation in a university wellness program. Participants were 106 adults who completed a nine-week employee health program aimed at helping healthy but sedentary or minimally active adults reach a fitness goal of completing a 5 kilometer run/walk. Participants completed several brief measures assessing their physical health at three points during the program. PC arising during regular physical activity decreased over the course of the program, suggesting that participants became less likely to engage in maladaptive thinking associated with physical activity. Changes were also noted in a number of important health-related domains. With regard to rates of physical activity, there were significant increases in terms of both days per week (2.64 to 3.37) and duration (28.94 to 38.47) for aerobic exercise and increases for days of stretching (1.53 to 2.66). Although neither total weight nor Body Mass Index changed significantly, waist circumference did significantly decrease from pretest (M = 35.56, SD = 6.10) to posttest (M = 34.63, SD = 5.63), F(1, 67) = 11.64, p = .001, suggesting that participants' increases in physical activity may have resulted in changes to base body composition (i.e., increased muscle mass and reduced fat). Also, sleep quality, sleep latency, and nighttime awakenings all improved significantly over the course of the nine weeks. Thus, participant engagement in a university wellness program resulted in significant decreases in PC as well as important improvements in physical activity rates and other psychosocial outcomes. This study provides initial evidence that PC may be related to engagement in and adherence to physical activity.

CORRESPONDING AUTHOR: Julie M. Cunningham, MA, Psychology, University of Alabama, Tuscaloosa, AL, 35406; jcunningham@crimson.ua.edu

D-153d

CAN PHYSICAL PAIN INCREASE SOCIAL PAIN? AN EXPERIMENTAL STUDY OF PAIN, NEGATIVE MOOD AND SOCIAL REJECTION

Raquel Graham, BA and Susan Holtzman, PhD
Psychology, University of British Columbia (Okanagan), Kelowna, BC, Canada.

There is growing evidence to suggest an overlap between the social pain and physical pain systems. For example, previous research has demonstrated an association between higher rejection sensitivity and lower pain tolerance, and neuroimaging studies have found an overlap in the areas of the brain that process physical pain and social rejection. However, previous studies have failed to control for the potential confounding role of negative affect. The primary objective of the present study was to determine whether the association between physical pain and increased sensitivity to interpersonal rejection could be attributable to the increases in negative mood that often accompany physical pain. A total of 93 female undergraduate students participated in a laboratory-based experiment. Participants were randomly assigned to either: (1) an ischemic pain task (pain), (2) a mental arithmetic task (negative mood), or (3) a neutral counting task (control). Next, participants were exposed to an experimental manipulation that involved interpersonal rejection by a confederate. We hypothesized that participants in both the pain and arithmetic tasks would report greater levels of perceived rejection, compared to those in the control group. Indeed, our findings revealed no significant differences in levels of perceived rejection between those in the pain and negative mood groups. However, inconsistent with our hypotheses, the control group reported significantly higher (not lower) levels of perceived rejection, compared to the pain and negative mood groups. These findings are contrary to past research, and suggest that, at least in the context of acute pain, pain may actually serve as a distraction from interpersonal rejection and conflict, rather than exacerbate its effects. Future studies are required to tease apart the complex relationship between physical pain, negative mood, and social rejection and highlight the need to address this question in both acute and chronic pain contexts.

CORRESPONDING AUTHOR: Susan Holtzman, PhD, UBC-O User, University of Victoria, Kelowna, BC, V1V1V7; susan.holtzman@ubc.ca

D-153e

RELIABILITY AND CORRELATES OF THE WHITELEY INDEX OF HEALTH ANXIETY AMONG PATIENTS PRESENTING AT A PAIN CLINIC

Susan Stoner, PhD,[1,2] Charles Chabal, MD,[1] Peter Dunbar, MD[1,2] and Cassandra Vaughn, MS[1]
[1]Talaria, Inc., Seattle, WA and [2]Anesthesiology and Pain Medicine, University of Washington, Seattle, WA.

The Whiteley Index is a well-known 14-item measure of health-related anxiety, used to screen for somatization and hypochondriasis. It has been investigated in primary care and neurology settings, but psychometrics in other settings are lacking. We investigated the psychometrics of the full 14-item scale (W14) and a common 7-item variant (W7) in the context of outpatient tertiary care for chronic pain at two pain clinics. Two hundred-thirty one consecutive clinic referrals (10% non-White, 8% Hispanic/Latino, 64% women) completed the instrument, in addition to the Center for Epidemiologic Studies Depression (CESD-10) scale, Generalized Anxiety Disorder (GAD-7) scale, and the Opioid Risk Tool (ORT). Mean age was 49.1 years (SD = 15.5, range = 17-86). Cronbach's alpha was .81 for the W14 and .74 for the W7. A cutoff of 2/3 on the W7 has been recommended in the literature as a screen for hypochondriasis in primary care . In our sample of outpatients with chronic pain, 44.6% scored ≥ 3 (mean = 2.5.SD = 1.9, range = 0-7). Compared to W7, W14 exhibited slightly stronger correlations with the CESD-10 (r = .61 vs. .55), GAD-7 (r = .61 vs. .56), and the ORT (r = .24 vs. .21). All p-values were significant. Notably, W14 was correlated with self-reported personal history of alcohol abuse (r = .21, p = .002), illicit drug abuse (r = .16, p = .018), prescription drug abuse (r = .17, p = .012), depression (r = .26, p < .001), and severe mental illness (r = .22, p = .001). It was not correlated with self-reported history of preadolescent sexual abuse (r = .11, p = .096). We conclude that while the W7 and W14 correlate with other important measures of mental health, their utility in a chronic pain tertiary care setting remains open to question.

CORRESPONDING AUTHOR: Susan Stoner, PhD, Talaria, Inc., Seattle, WA, 98122; sstoner@talariainc.com

D-176a

PUBLIC PERCEPTIONS OF THE IMPACT OF IMPLEMENTING A PUBLIC BICYCLE SHARE PROGRAM ON HEALTH-RELATED OUTCOMES

Ariane Bélanger-Gravel, PhD,[1,2] Lise Gauvin, PhD[1,2] and Daniel L. Fuller, PhD[1,2]
[1]Université de Montréal, Montreal, QC, Canada and [2]Centre de recherche du Centre Hospitalier de l'Université de Montréal, Montreal, QC, Canada.

Introduction. Recent research shows that BIXI (BIcycle-taXI), a public bicycle share program implemented in 2009, has had positive impacts on cycling (Fuller et al., In Press). We investigated public perceptions of the impact of this program on health-related outcomes.

Methods. Two population-based telephone surveys examining impact of BIXI on the image of the city, road safety, ease of travelling, active transportation, and health were conducted in the fall of 2009 and 2010. Differences-in-differences analyses controlling for socio-demographic variables, cycling, BIXI use, and body mass index allowed for the test of the effects of time and residential proximity to BIXI docking stations.

Results. Substantial proportions of the population perceive that BIXI has positive effects on the image of the city (91%), ease of travelling (83%), active transportation (86%), and health (75%). Fewer individuals believe that BIXI supports improvements in road safety (46%). The likelihood of having a negative perception of the road safety impact of BIXI increased across time (OR=1.31;95%CI:1.09-1.57). People living closer to BIXI docking stations were less likely to perceive that BIXI had a negative impact on the image of the city (OR=0.54; 95%CI:0.39-0.75). Significant time x proximity interactions were observed for ease of travelling (OR=0.62;95%CI:0.44-0.87), active transportation (OR=0.64;95%CI:0.44-0.93), and health (OR=0.64;95%CI:0.48-0.85) suggesting decreased perceptions of negative outcomes across time among people living closer to BIXI docking stations.

Discussion. Findings indicate that the population perceives the outcomes of BIXI positively. Any negative perceptions in the population were more likely to decrease among those living in close proximity to the bicycle docking stations. We conclude that this built environment intervention can be favorably received by the population.

CORRESPONDING AUTHOR: Ariane Bélanger-Gravel, PhD, Laval University, Quebec, QC, G1V 0A6; ariane.belanger-gravel@fsi.ulaval.ca

D-176b

RELATING SELF-EFFICACY AND STAGES OF CHANGE FOR PHYSICAL ACTIVITY AND FRUIT AND VEGETABLE CONSUMPTION IN 5-8 YEAR OLD MULTIETHNIC CHILDREN

Claudio Nigg, PhD,[1] Yuhua Su, PhD,[2] Gloria A. Renda, MPH,[3] Katalina McGlone, PhD[2] and Rachel Novotny, PhD[2]
[1]Public Health Sciences, Univ Hawaii, Honolulu, HI; [2]Human Nutrition, Food and Animal Sciences, Univ Hawaii, Honolulu, HI and [3]The Center for Health Research, Kaiser Permanente Hawaii, Honolulu, HI.

Physical activity (PA) and fruit and vegetable (FV) intake in children is related to positive physiological and psychological health outcomes. Multiple behavior change interventions may have a greater impact than single behavior change interventions. Investigation of how changes in PA and FV may impact each other is warranted. Depending on the interaction of the behaviors, change in more than one behavior may be due to transfer or compensation effects. Transfer effects describe the translation of mediators and engagement in one health behavior to another. However, individuals may compensate for their risk behavior by performing another health behavior. The research in children is inconclusive in these mechanisms and has never been investigated in younger children. Therefore, we investigated the possibility of either transfer or compensation in a sample of 85 children (5-8 years old; 62% female; main ethnicities Asian, White, and Pacific Islander). The PA stage distribution was: 13% Precontemplation (PC), 5% Contemplation (CO), 13% Preparation (PR), 15% Action (AC), and 54% Maintenance (MA). The FV stage distribution was: 28% PC, 5% CO, 46% PR, 0% AC, and 21% MA. PA self-efficacy mean=4.4 (SD=0.9) and FV self-efficacy mean=4.1 (SD=1.2). Pearson's correlation between PA self-efficacy and FV self-efficacy was r=0.43, p<.0.01, and the Spearman's rho between PA stage and FV stage was r=0.19, p=0.07. There is some evidence for transfer relationships between PA an FV behaviors, even among young children. Behavior change interventions targeting FV intake may influence PA and interventions targeting PA may influence FV intake. These relationships have important implications for interventions.

Acknowledgement: Funding provided by USDA

CORRESPONDING AUTHOR: Claudio Nigg, PhD, Public Health Sciences, Univ Hawaii, Honolulu, HI, 96822; cnigg@hawaii.edu

D-176d

VALIDATION OF THE STAGES OF EXERCISE BEHAVIOR CHANGE WITH LOW, MODERATE, AND VIGOROUS PHYSICAL ACTIVITY BEHAVIOR IN JAPANESE YOUNG WOMEN

Hiroshi Matsumoto, PhD
Department of Health and Sport Sciences, Mukogawa Women's University, Nishinomiya, Hyogo, Japan.

The benefits of regular exercise in enhancing health and reducing risk for all-cause morbidity and mortality are well documented in the literature (US Department of Health and Human Services, 1996). Despite such benefits, only 10.8% of Japanese young women were reported to participate in the regular exercise (Ministry of Health, Labour and Welfare, 2012). An accurate model of behavior change is necessary to understand how and why people first initiate and then maintain regular exercise. The transtheoretical model (Prochaska & Velicer, 1997) has increasingly been used as the theoretical basis for developing of exercise behavior interventions. This model regards behavior change as a process that involves progression through a series of stages. The stages were found to be associated with self-reported exercise behavior as well as with fitness level measures in preadolescents through adults in western countries. However, the evidence available regarding the validity of the stages of exercise behavior change based self-reported physical activity in Japanese young women is inadequate. The purpose of this study was to examine the construct validity of the stages of exercise behavior change for low, moderate, and vigorous physical activity behavior in female Japanese university students. Participants were 193 female Japanese university students in various stages of change regarding exercise; their physical activity was estimated by Japanese version of the IPAQ (the usual 7 days, short, self-administered version). The mean age of the subjects was 19.8 years (SD=1.3, range 18 to 23). Results show that the participants classified as being in the action and maintenance stages exhibited the highest vigorous physical activity [F (4/188) =65.2, p<0.001] and the total weekly physical activity [F (4/188) =60.9, p<0.001]. These results offer additional partially support for the validity of the stages of exercise behavior change in Japanese young women based on self-reported physical activity behavior.

CORRESPONDING AUTHOR: Hiroshi Matsumoto, PhD, Mukogawa Womenâ€™s University, Nishinomiya, Hyogo, 663-8558; hmatsu@mukogawa-u.ac.jp

D-176e

BUILDING THE BRAND EQUITY OF A NATIONAL PHYSICAL ACTIVITY PROMOTION ORGANIZATION

Jocelyn W. Jarvis, BSc,[1] Tanya Berry, PhD,[2] Sameer Deshpande, PhD,[3] Guy Faulkner, PhD,[4] Ryan E. Rhodes, PhD,[5] John C. Spence, PhD,[2] Mark Tremblay, PhD[6] and Amy E. Latimer-Cheung, PhD[1]
[1]Queen's University, Kingston, ON, Canada; [2]University of Alberta, Edmonton, AB, Canada; [3]University of Lethbridge, Lethbridge, AB, Canada; [4]University of Toronto, Toronto, ON, Canada; [5]University of Victoria, Victoria, BC, Canada and [6]Healthy Active Living and Obesity Research Group - CHEO, Ottawa, ON, Canada.

ParticipACTION is a Canadian, non-profit organization dedicated to promoting active living. In 2008, 2010, and 2011 ParticipACTION launched mass-media campaigns targeting parents, and in 2011, moms specifically. The purpose of this study is to determine how ParticipACTION's brand equity has changed while refining its target audience. Brand equity, the degree to which individuals identify with a brand, can impact the relationship between social marketing campaigns and resulting behavior change. Data were drawn from ParticipACTION's campaign evaluations (collected annually from 2008 to 2012); 6,266 Canadian adults (42.4% moms; 22.7% dads; 33.9% non-parents) were included in the sample. Perceived brand quality, brand leadership and popularity, organizational association, and brand awareness, were assessed. Scores were combined to determine brand equity (Aaker, 1996). A 5 (Time) x 3 (Parental Status) ANOVA with Bonferroni-adjusted post-hoc test revealed significant main effects for Time and Parental Status (ps < .01). Brand equity was greater in 2011 (ps < .001, d = .32) and in 2012 (ps < .05, d = .12) as compared to in 2008, 2009, and 2010. Brand equity was highest among moms as compared to dads and non-parents (ps < .001, d = .17). A significant interaction also emerged (p < .01). Among moms, brand equity was greatest in 2011 (ps < .001, d = .25). Among dads, brand equity was greater in 2012 than all other years except for 2011 (ps < .05, d = .33). Among non-parents, brand equity was greater in 2011 than every other year except 2012 (p < .05, d = .21) when it was greater than in 2009 (p < .01, d = .23). Thus, ParticipACTION's brand equity grew among all Canadian adults even within the context of a targeted campaign. Targeted campaigns can be implemented with no detrimental effect on organizational brand equity.

CORRESPONDING AUTHOR: Jocelyn W. Jarvis, BSc, Queen's University, Kingston, ON, K7K 3Z4; 7jwj@queensu.ca

D-176f

DESIGN AND TESTING OF HEALTH-PROMOTING MOBILE APPLICATIONS: USER EXPERIENCE AND SATISFACTION AMONG MID-LIFE AND OLDER ADULTS

Jylana L. Sheats, PhD,[1] Sandra J. Winter, PhD,[1] Lauren A. Grieco, PhD,[1] Matthew P. Buman, PhD,[2] Eric B. Hekler, PhD[2] and Abby C. King, PhD[1]
[1]School of Medicine, Prevention Research Center, Stanford University, Palo Alto, CA and [2]School of Nutrition and Health Promotion, Arizona State University, Phoenix, AZ.

New strategies are needed to assist mid-life and older adults fail to achieve national physical activity (PA) recommendations. The Mobile Interventions for Lifestyle Exercise and Eating at Stanford (MILES) was an 8-week study testing the efficacy of three theoretically-based smartphone applications (apps) to improve physical activity and reduce sitting time. The "analytic" app promoted behavior change via goal setting, feedback, and problem solving; the "social" app promoted behavior change via social relationships and norms; and the "affective" app promoted behavior change using game-like elements. Tech naïve, physically inactive mid-life and older adults (n=64, mean age=55.7 years) were recruited in two waves and randomized to an app. Wave 1 (n=27) user feedback-informed refinements to the apps' design (to increase user-friendliness) and training protocols (e.g., more individually-focused training, development of app-specific user guides) were applied in Wave 2 (n=37). Users completed a survey at the end of the study to assess their overall experience and satisfaction. For physical activity, 69% of all users (i.e., Wave 1 and Wave 2) had an enjoyable experience with the apps; 87% found the apps easy to use; 80.6% reported the apps increased their physical activity level awareness; and 69% indicated the apps motivated them to be more physically active. For sitting time, 87% reported increased awareness of their sitting; and 74% were motivated to sit less. From Wave 1 to Wave 2, there was a 13% average increase in positive ratings on general app user experience and satisfaction. There was also a 28% increase in positive ratings on behavior-specific app user experience and satisfaction. In conclusion, user feedback-informed design processes and training protocols led to increases in positive user experience and satisfaction ratings in a less studied population in this field.

CORRESPONDING AUTHOR: Jylana L. Sheats, PhD, School of Medicine, Prevention Research Center, Stanford University, Palo Alto, CA, 94304; sheats@stanford.edu

D-176g

RUNNING AGAINST PREHYPERTENSION TRIAL (RAPT): A RANDOMIZED PILOT OF GROUP-BASED TRAINING AND CHIRUNNING TO INCREASE EXERCISE ADHERENCE

Kelly McDermott, PhD, Veronica Goldman, BS, Haojun Feng, BS, Wolf Mehling, MD and Fredrick M. Hecht, MD
Osher Center for Integrative Medicine, University of California, San Francisco, San Francisco, CA.

Background: Exercise is a key prescription for prehypertension. Running is accessible, not requiring equipment or other people, however adherence can be difficult. Group-based training may overcome early barriers to adoption and biomechanically efficient form may reduce injury and increase longer-term adherence. ChiRunning is a group-based training focusing on form while developing mind-body skills.

Objective: To 1) evaluate differences in adherence in three modes of running instruction, and 2) assess whether changes in mind-body skills are associated with adherence to running.

Methods: In this 12 week pilot, participants were randomized to: 1) ChiRunning instruction with a coach (n=10); 2) group-based basic running instruction with a coach (n=6); or 3) self-directed training with educational materials (n=6). All participants were asked to walk/run at least 3x/week and keep a detailed training diary. Between group effects are reported as Cohen's d.

Results: Among the 19 participants submitting training diaries, ChiRunning participants completed more runs (in excess of those required) than both control groups (d=0.58, p=ns). Group-based training participants ran more total minutes than self-directed participants (d=0.76, p=ns). Across all groups, improving mind-body skills was positively correlated with total minutes run: mindfulness (r=0.6, p=0.03); ability to describe and observe internal experience (r=0.49, p=.0.03 and 0.49, p=0.04); regulating distress by paying attention to body sensations (r=0.54, p=0.01) and experiencing one's body as safe and trustworthy (r=0.72, p<0.001). In addition, describing internal experience was negatively correlated with the number of missed runs (r=-0.55, p=0.01).

Conclusion: We found that ChiRunning and group-based training may result in better adherence to running and that improvement in mind-body skills was positively correlated with greater adherence. Further investigations of these strategies to increase exercise adherence are warranted.

CORRESPONDING AUTHOR: Kelly McDermott, PhD, Osher Center for Integrative Medicine, University of California, San Francisco, San Francisco, CA, 94103; mcdermottk@ocim.ucsf.edu

D-176h

CHANGING DISCRETIONARY SITTING TIME USING SMARTPHONE APPS

Lauren A. Grieco, PhD,[1] Jylana Sheats, PhD,[1] Sandra Winter, PhD,[1] Eric Hekler, PhD,[2] Matthew Buman, PhD[2] and Abby King, PhD[1]
[1]School of Medicine, Stanford University, Palo Alto, CA and [2]Arizona State University, Tempe, AZ.

Evidence is growing that sedentary behaviors (e.g., TV viewing or other prolonger periods of setting), independent of physical activity levels, have detrimental impacts on health. Eliminating physical inactivity could save over 5.3 million deaths and increase life expectancy by 0.68 years worldwide. We developed a suite of smartphone applications (apps) designed to reduce the amount of time spent sitting and engaging in sedentary behaviors. Data were collected as a part of the 8-week Stanford MILES study, where 93 inactive adults (mean age = 60.0±9.3 years, BMI m=28.8±5.8, 73.1% women, 84.6% white, 77.4% completing higher education) were randomized to one of four apps. Three apps were designed to improve physical activity and sedentary behavior via differing motivational frames (analytic, social, affective); and one app (a diet improvement app, "Calorific") served as the control. The analytic app provided personal numerical and graphical feedback; the social app used numerical normative feedback and group-embedded avatar-based feedback; and the affective app used feedback via a cartoon avatar and gaming components (no numerical feedback).

Sedentary time, operationalized as hours per week of discretionary sitting time (ST) in leisure activities and in other hobbies, was assessed at baseline and at the study end via survey. ANCOVA analyses revealed significant group differences in discretionary sitting time, with significantly less ST for social (p<.05) and analytic (p<.01) app users than affective app users. Similarly, the same two groups (social and analytic apps) had significantly improved self-efficacy (p <.05) for not sitting and eating in front of the TV relative to the affective app. Results indicate that several of the MILES apps were successful in promoting less weekly sitting time. Furthermore, apps utilizing explicit numerical feedback around sedentary activity may be a more potent behavior change agent than apps that do not.

CORRESPONDING AUTHOR: Lauren A. Grieco, PhD, School of Medicine, Stanford University, Palo Alto, CA, 94304; lagrieco@stanford.edu

D-176i

SELF-EFFICACY, WEIGHT PERCEPTION, AND PHYSICAL ACTIVITY IN HISPANIC ADOLESCENTS

Marissa D. Alert, BA,[1] Erin N. Etzel, MS,[1] Katie E. Chipungu, MS,[1] Judith R. McCalla, PhD,[1] Patrice G. Saab, PhD[1] and Judy Brown, EdD[2]
[1]Psychology, University of Miami, Coral Gables, FL and [2]Miami Science Museum, Miami, FL.

Self-efficacy for physical activity (SE) and perception of weight status may influence physical activity (PA) levels in youth. Since little is known about how these factors relate to PA in Hispanic adolescents, this study examined whether SE and weight perception (WP) were associated with moderate (M)PA. 485 Hispanic 10th graders (age range 15-17; 44.7% boys) reported their height, weight, and number of days/week spent in ≥ 60 minutes of MPA. They also completed a SE measure (score range 0-15) and indicated their perception of their weight status (e.g., underweight, very overweight).

Based on body mass index, 27.2% were overweight or obese; 38.2% misperceived their weight status and of these, 51% were boys. Only 16.7% of students met recommended guidelines for 7 days of PA. SE was higher in boys (M = 13.0, SD = .20) than girls (M = 11.1, SD = .18; p < .001) and bouts of ≥ 60 minutes MPA per week were greater in boys (M = 4.3, SD =2.2) than girls (M = 2.9, SD = 2.3; p < .001). Although the association between SE and bouts of PA was larger in girls (β = .59, p < .001) than in boys (β = .50, p < .001), it was not significantly different. Overweight and obese students who underestimated their weight status were as active (M = 3.9, SD = .35) as those who accurately perceived their weight status (M = 3.4, SD = .19; p = .20). Also, no difference in bouts of PA was observed among normal weight students who overestimated their weight status (M = 3.3, SD = .27) relative to those who did not (M = 3.5, SD = .12; p = .91).

Consistent with other studies, these results indicate that boys have higher levels of SE and MPA than girls. Although previous research suggests that WP is an important determinant of adolescents' weight management habits, WP was not associated with PA in this sample. Given the high prevalence of overweight /obesity among Hispanics and the benefits of PA, future studies should explore whether improving SE would increase PA among Hispanic adolescents since most do not meet recommendations for 7 days of MPA.

CORRESPONDING AUTHOR: Marissa D. Alert, BA, Psychology, University of Miami, Coral Gables, FL, 33146; marissa1787@gmail.com

D-176j

FUNCTIONAL LIMITATIONS IN OLDER ADULTS: THE INFLUENCE OF SELF-EFFICACY, PHYSICAL ACTIVITY, AND FUNCTIONAL PERFORMANCE

Thomas R. Wójcicki, MS, Neha Gothe, MS, Erin A. Olson, MS, Jason T. Fanning, BS, Elizabeth Awick, BS, Hyondo D. Chung, MS, Robert W. Motl, PhD and Edward McAuley, PhD
Kinesiology and Community Health, University of Illinois, Urbana, IL.

Maintaining functional independence in later life is important for continued engagement in activities of daily living and well-being. The purpose of this study was to determine whether changes in self-efficacy, physical activity, and functional performance contribute to changes in functional limitations (FL) in older adults. Participants (N=307, M age=71.01) were randomized into one of two treatment conditions: 1) home-delivered, DVD-based, non-aerobic exercise program or 2) healthy-aging, attentional control. Assessments were conducted at baseline and six months following the start of the intervention. Self-report measures included FL, self-efficacy for exercise, and leisure-time physical activity. Functional performance was assessed objectively via measures of upper- and lower-body flexibility, strength and endurance, and balance. Correlational analyses were conducted among the residual change scores of the predictor and outcome variables for each condition. In the exercise condition, FL was significantly associated with physical activity (r=.18, p=.046), self-efficacy (r=.33, p=<.001), upper-body flexibility (r=.24, p=.008), and strength and endurance (r=.27, p=.003). There were no significant relationships in the control group. Hierarchical multiple regression analyses were then conducted to examine the independent contribution of changes in each predictor variable on changes in FL. Changes in self-efficacy (R2=.06, p=.005) and functional performance (R2=.08, p=.024) significantly influenced changes in FL in the exercise group; contributions in the control group were not significant. Involvement in a structured exercise program can lead to improvements in self-efficacy for exercise and functional performance, which, in turn, is associated with FL. Programs aimed at improving functional limitations in older adults, should implement efficacy-enhancing strategies that focus on flexibility, strength, and balance-related activities.

CORRESPONDING AUTHOR: Thomas R. Wójcicki, MS, Kinesiology and Community Health, University of Illinois, Urbana, IL, 61801; wojcicki@illinois.edu

D-176k

EFFECTS OF QIGONG EXERCISE ON QUALITY OF LIFE AND COGNITIVE FUNCTIONING IN PEOPLE WITH CANCER

Timothy HY Chan, MHES,[1] Lai Ping Yuen, BCM,[2] Tammy Lee, BA,[3] Jessie SM Chan, MPH,[1] Jonatham ST Sham, PhD[1] and Cecilia LW Chan, PhD[1]
[1]Centre on Behavioral Health, The University of Hong Kong, Hong Kong, Hong Kong; [2]International Association for Health and Yangsheng, Hong Kong, Hong Kong and [3]The Hong Kong Anti-Cancer Society, Hong Kong, Hong Kong.

Background: Evidence on whether the practice of qigong, a mind-body integrative exercise in traditional Chinese medicine, improves quality of life remains inconclusive. On the other hand, people with cancer, who often report impaired cognitive functioning, may benefit from the meditative component of the exercise.

Objectives: The aim of this study was to investigate the effect of qigong exercise on quality of life and cognitive functioning in people with cancer.

Methods: Seventy-two persons (female/male: n = 42/30; mean age = 54.7 [SD = 8.9]) with mixed cancer diagnosis within three years participated and completed a randomized waitlist-controlled trial. Participants in the intervention group (n = 39) had ten 2-hour sessions of qigong exercise training (wuxing pingheng-gong) by an experienced practitioner (YLP). The control group (n = 33) received no intervention. Outcome measures included Functional Assessment of Cancer Therapy-General (version 4), Short Form Health Survey (12 items) and a battery of computerized cognitive tests (CogState).

Results: Baseline measures were comparable between groups. At the end of the intervention there was no significant improvement in FACT-G (F = 0.27, n.s.). Marginal improvement was observed in the SF-12 physical component score (F = 3.98, p = .051, partial eta squared = .061) but not mental component score (F = 0.79, n.s.). No significant change was observed in accuracy and response time (F = 0.38 and 2.19, n.s.). At one month follow-up, no significant changes were observed in all measures.

Conclusion: The study provided limited evidence on the effects of qigong exercise on quality of life in people with cancer, and no evidence on the effects on their cognitive functioning.

CORRESPONDING AUTHOR: Timothy HY Chan, MHES, Centre on Behavioral Health, The University of Hong Kong, Pokfulam, 852; chan.hangyee@hku.hk

D-180a

THE REPRODUCTIVE TRANSITION: HOW HISPANIC AND NONHISPANIC WHITE WOMEN GIVING BIRTH IN TEXAS DIFFER ON SOCIAL, BEHAVIORAL, AND BIRTH CHARACTERISTICS

Lorraine Walker, EdD, MPH, Hsiu-Rong Cheng, MSN and Adama Brown, PhD
Nursing, Univ. of Texas at Austin, Austin, TX.

Demographic shifts are occurring in the US population with rapid increases in persons of Hispanic ethnicity. This shift is dramatically seen in women giving birth in the Texas. The purpose of this study was to compare childbearing Hispanic and NonHispanic (NH) White women on social, behavioral, and birth variables of importance to health care. Data were extracted from birth certificates for 148,503 Hispanic and 106,104 NH-White women aged 18 years or greater with term, singleton births in Texas in 2009. Mean maternal age was 26.4 years for Hispanic women compared to 27.8 for NH-White women (p <.001). Hispanic and NH-White women differed (p <.001) in regard to the percentage who were married (53% vs. 75%), high school graduates (62% vs. 92%), born in the US (51% vs 95%), and covered by Medicaid for delivery (55% vs. 32%), respectively. Hispanic women compared to NH-White women were more likely to be overweight (27% vs. 23%) or obese prepregnancy (23% vs. 19%) (p <.001), but were less likely to smoke either prior to pregnancy (2.5% vs. 14.4%) or in the third trimester of pregnancy (0.9% vs. 8.4%) (p <.001). Hispanic women were more likely than NH-White women to have inadequate (27% vs. 18%) and less likely to have excessive weight gain during pregnancy (42% vs. 53%). Hispanic women compared to NH-White women were more likely to develop gestational diabetes (4.2 vs. 2.7%) but less likely to develop gestational hypertension (3.3 vs. 4.2%) (p <.001). These results indicate that Hispanic women on average enter pregnancy with greater social disadvantages, e.g., lower education, than NH-White women. These differences call attention to the importance of ensuring that health education be carried out at suitable literacy levels and in culturally competent ways. Although Hispanic women have healthier behavior in regard to smoking, prepregnancy weight may contribute to higher rates of gestational diabetes and warrant preventive care.

CORRESPONDING AUTHOR: Lorraine Walker, EdD, MPH, Nursing, Univ. of Texas at Austin, Austin, TX, 78701; lwalker@mail.nur.utexas.edu

D-189a

A THEORY-BASED INTERVENTION FOR HPV RISK REDUCTION

Jocelyn Sweeney, MS, Richard D. McAnulty, PhD, Charlie L. Reeve, PhD, Arnie Cann, PhD, Anam Barakzai, BS and Amanda Tanner, PhD
Psychology, UNC-Charlotte, Charlotte, NC.

Human papillomavirus (HPV) is the most prevalent sexually transmitted infection in the U.S. The infection rates are particularly high among college students (up to 43% of college women). The goal of the study was to examine the effectiveness of a group intervention in reducing HPV risk behaviors among sexually active, college-aged women. The study examined the effectiveness of an HPV educational group intervention based on the Theory of Planned Behavior (TPB) compared to a control condition. A total of 82 unmarried sexually active female students were randomly assigned to one of two conditions. The intervention was provided in a single session in-person group format. The control condition consisted of viewing a study skill informational video. Measures were completed prior to the intervention, immediately after the intervention, and one month post-intervention. Consistent with TPB, study outcomes included changes in: 1) HPV knowledge, 2) attitudes towards risk reduction, 3) subjective norms in association with risk reduction, 4) perceived behavioral control for engaging in risk reduction behaviors, 5) intention to reduce risks by altering behavior, and 6) actual behavior change. The findings suggest that the intervention was effective at increasing knowledge and behavioral intentions but was not sufficient in effectively changing attitudes, social norms, behavioral control, and the targeted risk reduction behaviors. However, participants in the intervention group were more likely to seek HPV information and undergo HIV-testing following the intervention than those in the control group. The preliminary results revealed relatively low levels of HPV awareness. Participants in both groups perceived little social pressure to engage in HPV preventive behaviors. Suggestions for future HPV intervention research include adding a skills training component (including safer sex communication and negotiation skills) and adding additional sessions to increase opportunities for behavioral rehearsal. Strategies to increase perceived peer support for risk reduction are needed.

CORRESPONDING AUTHOR: Richard D. McAnulty, PhD, Psychology, UNC-Charlotte, Charlotte, NC, 28223; rdmcanul@uncc.edu

D-191a

ENDOTHELIAL FUNCTION AND SLEEP: ASSOCIATIONS OF FLOW-MEDIATED DILATION WITH PERCEIVED SLEEP QUALITY AND RAPID EYE MOVEMENT (REM) SLEEP

Denise C. Cooper, PhD,[1] Michael G. Ziegler, MD,[2] Milos S. Milic, MD, PhD,[2] Sonia Ancoli-Israel, PhD,[2] Paul J. Mills, PhD,[2] José S. Loredo, MD,[2] Roland von Känel, MD[3] and Joel E. Dimsdale, MD[2]
[1]Health Services Research & Development, VA Puget Sound Health Care System, Seattle, WA; [2]University of California San Diego, La Jolla, CA and [3]Inselspital, Bern University Hospital and University of Bern, Bern, Switzerland.

Background: Endothelial function typically precedes clinical manifestations of cardiovascular disease and provides a potential mechanism for the associations observed between cardiovascular disease and sleep quality.

Purpose: This study examined how subjective and objective indicators of sleep quality relate to endothelial function, as measured by brachial artery flow-mediated dilation (FMD).

Methods: In a clinical research center, 100 non-shift working adults (mean age: 36 years) completed FMD testing and the Pittsburgh Sleep Quality Index, along with a polysomnography assessment to obtain the following measures: slow wave sleep, percentage rapid eye movement (REM) sleep, REM sleep latency, total arousal index, total sleep time, wake after sleep onset, sleep efficiency, and apnea hypopnea index. Bivariate correlations and followup multiple regressions examined how FMD related to subjective (i.e., Pittsburgh Sleep Quality Index scores) and objective (i.e., polysomnography-derived) indicators of sleep quality.

Results: After FMD showed bivariate correlations with Pittsburgh Sleep Quality Index scores, percentage REM sleep, and REM latency, further examination with separate regression models indicated that these associations remained significant after adjustments for sex, age, race, hypertension, body mass index, apnea hypopnea index, smoking, and income (p's<0.05). Specifically, as FMD decreased, scores on the Pittsburgh Sleep Quality Index increased (indicating decreased subjective sleep quality) and percentage REM sleep decreased, while REM sleep latency increased (p's<0.05).

Conclusion: Poorer subjective sleep quality and adverse changes in REM sleep were associated with diminished vasodilation, which could link sleep disturbances to cardiovascular disease.

CORRESPONDING AUTHOR: Denise C. Cooper, PhD, Health Services Research & Development, VA Puget Sound Health Care System, Seattle, WA, 98101; dccooper@ucsd.edu

D-191b

GOAL ADJUSTMENT PROCESSES, COPING, AND SLEEP QUALITY IN YOUNG ADULTS WITH TESTICULAR CANCER

Michael A. Hoyt, PhD and Brandon Patallo, BA (in progress)
Psychology, Hunter College, City University of New York, New York, NY.

Objective: Cancer patients report significant goal disturbance, which has been associated with higher distress and physical declines, yet its impact on cancer-related sleep problems have not been examined. Navigation of life goals represents a central self-regulatory process and a potential pathway to health and well-being, and may be critical when facing cancer in the context of young adulthood. This study examines the impact of blocked life goals following testicular cancer on sleep quality and the potential utility of goal navigation skills in promotion of better sleep. Methods: Questionnaires were administered to 171 young men (age range:18-29; M=25.2, SD=3.32) with testicular cancer recruited from a state cancer registry. The Cancer Assessment for Young Adults was used to assess perceptions that life goals are blocked or limited by cancer ("Cancer has made some goals unattainable") and the use of goal navigation skills ("I know what steps to take to make progress toward my goals"). Sleep efficiency was measured by the Pittsburgh Sleep Quality Index. Regression was used to determine relationships. Results: Education was significantly related to sleep efficiency (r=-.18, p<.05) and statistically controlled. Use of sleep medications and time since diagnosis were also controlled. Regressions revealed higher levels of goal blockage were significantly related to less efficient sleep (B=.33, p<.001). No main effect of goal navigation was observed (p=.681). The interaction of goal blockage and goal navigation was significant (B=.16, p<.05), such that goal blockage had a stronger relationship with sleep efficiency in the context of lower (B=.45, p<.001) versus higher goal navigation skills (B=.20, p<.05). Conclusions: Goal blockage appears to confer risk for poorer sleep, and perhaps diminished quality-of-life. Possession of skills to effectively navigate goals (e.g., disengagement from unattainable goals, identification of realistic goals) might buffer this effect and constitute key adaptive self-regulation skills. Longitudinal research will better characterize these relationships.

CORRESPONDING AUTHOR: Michael A. Hoyt, PhD, Psychology, Hunter College, City University of New York, New York, NY, 10065; mhoyt44@gmail.com

D-206a

USE OF NICOTINE REPLACEMENT THERAPY POST-HOSPITALIZATION AMONG SMOKERS WITH SERIOUS MENTAL ILLNESS

Rachel K. Schuck, BA,[1] Kevin Delucchi, PhD,[2] Sebastien Fromont, MD,[2] Stephen Hall, MD,[2] Sharon Hall, PhD[2] and Judith J. Prochaska, PhD, MPH[1,2]
[1]Stanford University, Stanford, CA and [2]University of California, San Francisco, San Francisco, CA.

Nicotine replacement therapy (NRT) is recommended during smoke-free hospitalizations to manage nicotine withdrawal among patients who smoke. Prior research has shown high rates of relapse to smoking upon discharge. The current study focused on patients hospitalized with serious mental illness (SMI) and examined predictors of patient requests for NRT post-hospitalization.

Participants were 499 adult smokers (≥5 cigarettes/day [cpd]) recruited from two psychiatric hospitals in the San Francisco Bay Area. Intention to quit smoking was not required to participate. Randomized to one of two intervention groups, participants were offered 3 or 6 months of study-provided NRT. In logistic regression analyses, main effects and two-way interactions examined baseline demographic, substance use, and psychiatric correlates of NRT requests post-discharge.

The sample (age M=39 years, sd=14; 50% female; 43% non-Hispanic Caucasian, 26% African-American, 31% other/mixed) averaged 17cpd (sd=10). Stage of change for quitting smoking was 29% precontemplation, 47% contemplation, and 24% preparation. Most (71%) requested NRT at discharge, 14% later in the study, and 15% did not request NRT. Participants requesting NRT were more likely to be in the contemplation or preparation stage of change (p<.001), smoke more cpd (p=.034), and have more severe psychiatric symptoms on the BASIS-24 (p<.001). Significant sex-X-age (p=.002) and prior use of NRT-X-ethnicity (p=.029) interactions indicated greater likelihood of NRT requests among older females and non-Hispanic Caucasians with a history of prior NRT use.

Though few intended to quit smoking in the next month, a high level of interest in NRT post-hospitalization was found in this sample of smokers with SMI. Future work should target increasing motivation to quit and NRT use in specific groups, such as minorities, people with no history of NRT use, and those with less severe psychiatric symptoms.

Funded by NIMH #R01MH083684

CORRESPONDING AUTHOR: Rachel K. Schuck, BA, Stanford University, Berkeley, CA, 94704; rschuck@stanford.edu

D-206b

AUTOMATIC MOVEMENT-BASED SMOKING DETECTION: FIRST REAL-WORLD PILOT RESULTS

Theodore Walls, PhD,[1] Erin McClure, PhD,[4] Bethany Raiff, PhD,[3] Cagdas Karatas, MS[2] and Dario Pompili, PhD[2]
[1]Center for Health Monitoring and Intervention, Department of Psychology, University of Rhode Island, Kingston, RI; [2]Department of Electrical and Computer Engineering, Rutgers University, Piscataway, NJ; [3]Department of Psychology, Rowan University, Glassboro, NJ and [4]Clinical Neuroscience, Medical University of South Carolina, Charleston, SC.

In 2010, Varkey, Walls and Pompili published a technical paper describing how accelerometers combined with modified machine learning algorithms could be used to recognize movements of the limbs and phalanges to identify specific behaviors, such as toothbrushing or smoking. This work along with several other related approaches to measurement of health behaviors in vivo and inference about them were presented in the 2012 SBM annual conference. This rapid communication describes the results of a pilot funded by a major NIH technology development center. In our pilot, 6 individuals participating in methadone treatment volunteered to smoke in an approved smoking laboratory following a short training period. Sensors were worn on the shoulder and forearm and a wireless device received signals that were instantly evaluated for features reflecting the presence of cigarette puffs and whole cigarettes. Results across subjects indicated that arm and wrist placement of the sensors performed best. Performance of the system was highly variable across participants, with slow and distinct movements reflecting higher detection rates than fast and vague movements. Also, when subjects engaged in activities with similar movements, the algorithm performed more variably. However, results are promising in that the overall capture rate of puffs was often sufficient to provide a persuasive point estimate of puffs per period, versus a camera-based gold standard.

CORRESPONDING AUTHOR: Theodore Walls, PhD, Psychology, University of Rhode Island, Kingston, RI, 02852; walls@uri.edu

D-206c

ANXIETY SENSITIVITY AND COPING PARAMETERS: DOES EXPERIENTIAL AVOIDANCE MEDIATE THIS RELATIONSHIP IN SMOKERS?

Vasos G. Pavli, BSc Psychology[1] and Maria Karekla, Clinical Psychology, PhD[2]
[1]Psychology, University of Cyprus, Nicosia, Cyprus and [2]Psychology, University of Cyprus, Nicosia, Cyprus.

Anxiety sensitivity (AS) describes the fear of anxiety symptoms and consists of concerns that the experiences of anxiety and related physical sensations have harmful Physical, Psychological or Social consequences (Reiss & McNally, 1985). Coping is a term used to describe the process of how a person responds to situations involving stress (Lazarus, 1966). Smokers high in AS are found to smoke as a way of coping with intense emotional states (i.e. decrease negative affect related cues such as stress etc.; Zvolensky et al., 2004). Experiential avoidance (EA) occurs when someone is unwilling to stay in touch with internal experiences (thoughts, feelings, sensations) and tries to avoid, escape, or change the frequency surrounding them (Hayes et al., 1996). ACT targeting EA for smoking cessation has shown promise in a couple of trials (Gifford et al., 2004; Hernández-López et al., 2009). Given the link between AS, Coping and Smoking, a next step in this line of inquiries is to examine whether EA mediates the relationship between Coping Parameters and AS among regular smokers. Participants: 345 college regular smokers (169 Female: Mage=20.08, SD=1.60 and 176 Male: Mage=21.99, SD= 2.37), recruited from various universities in Cyprus. Method: participants completed a packet of questionnaires: ASI-16 (Reiss et al., 1986), COPE-B (Carver, 1997), AAQ-II (Bond et al., 2011) and information regarding their smoking history. Regression analyses were utilized to test the proposed mediation model (Barron & Kenny, 1986). Results suggested that EA: mediated the relationship between Behavior Dysinhibition (BD) and Global AS, and the relationship between BD and Physical, Psychological, and Social AS Concerns (all $p < .01$) among smokers. EA was also found to mediate the relationship between Substance Use, Psychological and Social AS Concerns (all $p < .01$).

CORRESPONDING AUTHOR: Vasos G. Pavli, BSc Psychology, Psychology Department, University of Cyprus, Nicosia, 20537; vasilis_billis@hotmail.com

D-206d

SOCIAL INFLUENCE AND SOCIAL SUPPORT AS PREDICTORS OF CESSATION AMONG COLLEGE STUDENTS ENROLLED IN A QUIT AND WIN CONTEST

Winta Ghidei, BS,[1] Xianghua Luo, PhD,[2,3] Qi Wang, MS,[2,3] Jill Ronco, MPA,[1] Meredith Schreier, BS,[1] Jasjit S. Ahluwalia, MD,MS,MPH[1] and Janet Thomas, PhD[1]
[1]Medicine, University of Minnesota, Minneapolis, MN; [2]Division of Biostatistics, School of Public Health, University of Minnesota, Minneapolis, MN and [3]Cancer Center, University of Minnesota, Minneapolis, MN.

Background: The prevalence of smoking among young adult college students is 34.2%. Quit & Win contests, in which smokers quit for a one-month period to win prizes, may be well suited for college students. Little is known about the influence of perceived social support and social influence on the impact of contingency management strategies designed to promote short and long term cessation.

Methods: A randomized, clinical trial designed to test the impact of Quit and Win contests on college campuses was implemented at 2- and 4-year colleges (N = 658). Participants were required to abstain completely from tobacco for 30-days for the chance to win $3000. 30-day and 6-month assessments were conducted. Urine verification was used to confirm smoking status.

Results: Participants were 26 ± 8.0 years of age, 58% female and 86% White. 61% were from 4-year colleges vs. 49% from 2-year colleges. 3±1.4 of their five closest friends smoked. Participants' expectation of cessation-specific support received during the contest was 3.5±1.4 (0=no support and 5=a lot), and most expected support from a non-smoker (65.4%) and a friend or romantic partner (49.6%). Of the 52.7% (n=342) who reported 30-day continuous abstinence, 63.7% reported that people important to them had a positive influence on their cessation. Among those who did not quit/stay quit (n=285), 61% did not maintain cessation because their "family and friends were smoking". Among the 24% who achieved six-month prolonged abstinence (n=158), 57% were influenced to stay quit by those important to them.

Conclusion: Both short and long-term abstinence rates associated with Quit and Win contests appear to be influenced by the perception of social support and social influence. Results have implications for the design of future interventions utilizing social networks.

CORRESPONDING AUTHOR: Winta Ghidei, BS, Medicine, University of Minnesota, Minneapolis, MN, 55414; ghide002@umn.edu

D-214a

THE PATIENT-PROVIDER RELATIONSHIP IS RELATED TO COPING WITH DISEASE-RELATED STRESS IN MULTIPLE SCLEROSIS PATIENTS

Elizabeth W. Raffanello, MPH,[1] Andrea Hobkirk, MA,[1] Renata Vaysman, BA,[1] Kristen Uhl, BA,[1] Leslie Halpern, PhD[1] and Sharon Danoff-Burg, PhD[2]
[1]University at Albany, SUNY, Albany, NY and [2]San Diego State University, San Diego, CA.

Multiple Sclerosis (MS) is an unpredictable and debilitating neurological condition that impairs physical and psychosocial functioning; however, disease-related factors do not fully account for psychological adjustment to MS (Aikens, Fischer, Namey, & Rudick, 1997). The stress-coping paradigm posits that patients' appraisal of and responses to disease-related stress predict psychosocial functioning (Lazarus & Folkman, 1984). Although there has been interest in the role of the provider in adjustment to other chronic diseases, this has not been extensively examined in MS. A sample of MS patients (N=285) recruited through the National MS Society and online support groups completed an online survey containing the Patient Reactions Assessment (PRA; Galassi, Schanberg, & Ware, 1992), subscales of the Brief COPE (Carver, 1997), and the Emotional Approach Coping Scale (Stanton, Kirk, Cameron, & Danoff-Burg, 2000). Indices of the PRA were examined separately: Communication (PCI), Information (PII), and Affective (PAI). Subscales of the coping measures were summed to form composites. Multivariate linear regression analyses controlling for demographic and disease-related covariates revealed that PII and PCI were associated with greater emotional approach coping (B=0.20, B=0.21, $p<0.001$). The PCI was also related to decreased avoidance coping (B=-0.15, $p<0.05$) and greater problem-focused coping (B=0.20, $p<0.01$). These results suggest that the information and communication received through patient-provider relationships is important in understanding how individuals with MS cope with their disease. Lode et al. (2007) similarly found that satisfaction with information from the provider at time of diagnosis was related to subsequent coping with MS-related stress. The results of the present study underscore the significance of patient-provider communication in adjustment to MS. Future research should examine these relationships prospectively and determine whether they translate into improvements in quality of life.

CORRESPONDING AUTHOR: Elizabeth W. Raffanello, MPH, Psychology, University at Albany, SUNY, Albany, NY, 12222; epersons@albany.edu

D-214c
MULTI-FAMILY GROUP FOR VETERANS WITH TRAUMATIC BRAIN INJURY: VALUE TO PARTICIPANTS AND RECOMMENDATIONS FOR IMPROVED ACCESS

Kristy Straits-Troster, PhD,[1,2] Jennifer M. Gierisch, PhD, MPH,[3,2] Jennifer L. Strauss, PhD,[4,2] Dennis G. Dyck, PhD,[5] Diane Norell, MSW[5] and Deborah Perlick, PhD[6]
[1]Phoenix VAHCS, VISN 6 MIRECC, Phoenix, AZ; [2]Duke University, Durham, NC; [3]VA HSR&D, Durham, NC; [4]VA Office of Mental Health Services, Durham, NC; [5]Washington State University, Spokane, WA and [6]Bronx VAMC, VISN 3 MIRECC & Mt. Sinai School of Medicine, Bronx, NY.

BACKGROUND: Few effective treatments for traumatic brain injury (TBI) are readily available to injured military service members and their caregivers. This study evaluated the feasibility, acceptability and helpfulness of multi-family group treatment (MFG) for TBI in an open clinical trial of problem-solving skills training for veterans who sustained a TBI during the wars in Iraq and Afghanistan, and their families or caregivers. METHODS: Participants in a 9-month group intervention study conducted at two VA medical centers were invited to one of three focus groups. Participants responded to questions about problems prior to and during the intervention, which aspects were helpful, and what could be improved to facilitate effective MFG implementation and family engagement. Participants (n=16) included 8 veterans with TBI and 8 family members. Post-intervention focus group transcripts were analyzed utilizing qualitative content analysis. RESULTS: Five themes emerged: exploring common struggles and reducing isolation; building skills to cope with TBI and related problems; restoring relationships through communication and understanding; increasing understanding of TBI and PTSD; improving the MFG experience and treatment engagement of veterans and their families. Recommendations included increased use of communication technologies: telephone and social media to maintain connections, email for meeting reminders and posting problem solving solutions, and multimedia MFG advertisements to reach out to families directly. CONCLUSION: Veterans and family members found multi-family group treatment for TBI helpful, highly acceptable and offered recommendations to increase access to the program that included increased use of communication technologies.

CORRESPONDING AUTHOR: Kristy Straits-Troster, PhD, PVAHCS & Duke University, Phoenix, AZ, 85012; kristy.straits-troster@va.gov

D-214d
DOES RUMINATING ELEVATE METABOLIC RISK IN RESPONSE TO DAILY STRESS? FINDINGS FROM A DAILY DIARY STUDY

Laura Kurtzman, MS, Eli Puterman, PhD, Justine Arenander, BA, Katrina Koslov, PhD, Aric Prather, PhD and Elissa S. Epel, PhD
Psychiatry, University of California, San Francisco, San Francisco, CA.

INTRODUCTION: Chronic psychological stress is a strong predictor of age-related disease, including cardiovascular disease. Yet little is known about the relationship between chronic psychological stress and early indicators of poor metabolic health. By prolonging the stress response, rumination may compound the negative relationship between chronic stress and metabolic risk. Here, we examine the relationship between chronic psychological stress and metabolic risk in a sample of healthy women, and further test whether rumination compounds this relationship.

METHODS: 175 pre-menopausal women were asked to report their most stressful experience on 7 consecutive days and rate how stressful it was at its peak, as well as the extent to which they were unable to stop thinking about it. We averaged these peak stress perceptions and rumination ratings across the week. Metabolic risk was assessed through a composite measure of waist circumference, fasting blood glucose, triglycerides, ratio of total cholesterol to high density lipoprotein and systolic blood pressure, which were z-scored and summed.

RESULTS: Regression analysis indicated that peak stress perception across the week was not related to metabolic risk (standardized $\beta = .07$, $p = .39$). Yet, moderation analysis indicated that, in fact, perceived stress was differentially related to metabolic risk at varying levels of rumination (interaction $b = .04$, $se = .02$, $p = .03$). Johnson-Neyman technique indicated that for those who tended to ruminate at least moderately (average 1.88 on a 0 to 4 scale where 2 indicates moderately), stress perceptions were significantly related to metabolic risk. These perceptions were unrelated to metabolic risk at lower levels of weekly rumination.

CONCLUSIONS: Rumination may compound the harmful effects of stress on metabolic health by prolonging unpleasant experiences. Chronic hypothalamic-pituitary-adrenal axis stimulation and extended cortisol secretion, which is typically seen in high ruminators, could potentially explain these findings.

CORRESPONDING AUTHOR: Laura Kurtzman, MS, Psychiatry, University of California, San Francisco, San Francisco, CA, 94118; Laura.Kurtzman@ucsf.edu

D-214e
THE EFFECT OF VIOLENCE EXPOSURE ON HOSTILITY IN WOMEN

Shannon E. Chiles, Bachelor's of Science
Psychology, University of Pittsburgh, Pittsburgh, PA.

Objective: To examine the effect of different types of violence exposure independently and collectively on hostility scores in women. The first aim of this study was to examine the effect of different types of exposure to violence on hostility scores collectively. The second aim of this study was to determine if particular types of violence exposure are more important than others when examining the different subsets of hostility. Methods: 876 women were recruited from the introduction to psychology course subject pool at the University of Pittsburgh. They completed an online survey "Childhood Stress" which assessed past experiences of interpersonal violence, current health behaviors, and psychosocial factors. The Cook-Medley hostility scale (total hostility score) and its subscales (cynicism, aggressive responding, and hostile affect) were used to operationalize hostility study. A one-way between groups ANOVA and stepwise regression was conducted. Results: Women who were exposed to one or more types of violence had significantly and increasingly higher hostility scores compared to those who were not exposed to any type of violence. Peer bullying and witnessing violence were responsible for most of the variance in cynicism ($R2=.062$; $p<.001$). Intimate partner violence and community violence were responsible for most of the variance in hostile affect ($R2=.035$; $p<.001$). Peer bullying and witnessing violence were responsible for most of the variance in aggressive responding ($R2=.040$; $p<.001$). Lastly, peer bulling, intimate partner violence, and witnessing violence were responsible for most of the variance in total hostility scores ($R2=.079$; $p<.001$). Conclusion: Women who were exposed to one or more types of violence had significantly higher hostility scores compared to those who were not exposed to any type of violence; and particular types of violence exposure were more related with certain subscales of hostility. limitations: Some limitations of the study were the cross-sectional design and self-report for hostility and violence scales.

CORRESPONDING AUTHOR: Shannon E. Chiles, Bachelor's of Science, Psychology, University of Toronto, Toronto, ON, ON M5S 3L1; shannon.chiles25@gmail.com

D-221a

FEASIBILITY AND ACCEPTABILITY OF USING TEXT MESSAGES AS AN INTERVENTION TOOL FOR THE TREATMENT OF SUBSTANCE USE DISORDERS: A FOCUS GROUP STUDY

Sandra K. Milling, MS and Richard McAnulty, PhD
UNC Charlotte, Charlotte, NC.

Interest in text-messaging intervention studies designed to support behavioral health changes has been steadily rising over the past several years. The ubiquity of text-messaging enabled mobile phones coupled with their ease of use suggests that mobile-based interventions may provide better health outcomes when added to existing treatments for substance use disorders. Text-messages can be tailored and personalized to meet the individual's needs and can occur in real-time, making them a logical choice for an intervention tool. This study assessed the acceptability and feasibility of using a text messaging intervention program aimed at enhancing substance abuse treatment in intensive outpatient (IOP) care as well as aftercare. Three focus groups of five participants each were interviewed for 1.5 hours and were asked to provide their feedback regarding types of text-message preferences, preferred number of texts, and timing of text messages. All 15 participants were receiving IOP care at the time of the study and reported that using text-messaging as an intervention tool was both acceptable and feasible. Fourteen of the 15 participants indicated they had a cellular phone with unlimited text messaging capability. In other words, participation in a text messaging study would not accrue an additional financial burden. Several themes from the interview included: preference for random timing of messages, penchant for tailored and personalized messages, as well as a desire for bi-directionality of messages. Types of preferred messages included: motivational agents, informational texts, consequence driven messages, and consciousness raising texts. In addition, several concentrated areas of concern included the preference for text messages to sound non-authoritative and more collaborative/supportive. Overall, the results of the study indicate that text-messaging interventions designed to enhance treatment of substance use disorders are both acceptable and feasible. Thus indicating more attention in this area is needed.

CORRESPONDING AUTHOR: Sandra K. Milling, MS, UNC Charlotte, Charlotte, NC, 28207; smilling@uncc.edu

D-221b

SCREENING, BRIEF INTERVENTION, AND REFERRAL TO TREATMENT (SBIRT) IN HOSPITAL EMERGENCY DEPARTMENTS: EFFECTS ON ADMISSIONS TO CHEMICAL DEPENDENCY TREATMENT AND MORTALITY

Thomas Wickizer, PhD, MPH,[1] Sharon Estee, PhD,[2] Melissa Ford-Shah, MPP[2] and Lihian He, PhD[2]
[1]Health Services Management and Policy, College of Public Health Ohio State University, Columbus, OH and [2]WA State Dep't of Social and Health Services Division of Research and Data Analysis, Olympia, WA.

National survey data indicate that 12% of the people who need treatment for a substance use disorder (SUD) receive it. To strengthen the capacity of health care organizations and communities to offer SUD prevention and treatment services, the Substance Abuse and Mental Health Services Administration (SAMHSA) funded a national initiative to promote screening, brief intervention and referral to treatment (SBIRT). Washington State received a grant to develop a SBIRT program in 9 hospital emergency departments (ED). We evaluated the effect of the program on (1) admissions to chemical dependency treatment 90 days following screening and (2) one-year mortality. The treatment group for the admission analysis (n=7,097) consisted of welfare clients on Medicaid or a state-sponsored medical program. Data on mortality were available for a subgroup of clients (n=2,465). Using 1:1 propensity score matching procedures, we constructed comparison groups for the two analyses. We used multivariable logistic regression techniques to assess the association between SBIRT and the two outcomes (readmission and mortality), controlling for demographic factors, health risk factors and prior treatment. Individuals receiving a brief intervention were 2.6 to 3.2 times more likely to be admitted to treatment ($p < .001$) compared to similar clients not receiving treatment, and were 30% less likely ($p < .01$) to die within the year following screening. Our findings suggest SBIRT programs operating in ED settings can promote timely admission to treatment and reduce mortality risk for individuals with SUD.

CORRESPONDING AUTHOR: Thomas Wickizer, PhD, MPH, Health Services Management and Policy, College of Public Health Ohio State University, Columbus, OH, 43210; twickizer@cph.osu.edu

PRESENTING AUTHOR INDEX

SOCIETY *of* BEHAVIORAL MEDICINE

Better Health Through Behavior Change

National Office
555 E. Wells Street, Suite 1100 • Milwaukee, WI 53202-3823

Phone (414) 918-3156 • Fax (414) 276-3349 • E-mail info@sbm.org • Website www.sbm.org

SBM-0213-246