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Rapid Communications Abstracts

Behavior Matters: The Impact and Reach of Behavioral Medicine

Rapid Communications
Poster Session A

Wednesday, April 23, 2014
6:10 PM-7:30 PM

A-042a

COMPARING PATIENT AND OBSERVER RATINGS OF PATIENT-CENTERED COMMUNICATION

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Patient-centered communication (PCC) is associated with patient outcomes. Both patient and observer ratings of PCC are used to determine the impact of PCC on outcomes. We compared two validated PCC scales, one using patient and the other using observer ratings. We hypothesized that patient and observer ratings would be positively correlated, and both ratings would correlate with patient distress, perceptions of treatment, and physician perceptions of the patient.

Participants (n=73) and medical oncologists (n=17) were recruited for a larger study of racially discordant interactions at the outpatient clinics of two urban cancer centers. Patients were visiting a participating oncologist to discuss chemotherapy for their breast, colon, or lung cancer. After the visit, patients provided ratings of distress, PCC and recommended treatment; physicians provided perceptions of the patient's intelligence, question asking, and visit satisfaction. Visits were video recorded. Trained coders observed and rated visits using an observer PCC scale with subscales (informativeness, supportiveness, and partnership building). Correlational analyses were conducted.

Patient and observer PCC ratings were not correlated (r(70)=.09, ns). Observer PCC was positively correlated with physicians' perceptions of patients' asking few questions (r(73)=.25, p=.03). The supportiveness subscale of the observer scale was positively correlated with physician perceptions of patient intelligence (r(73)=.27, p=.02), patients' ability to stay on topic (r(73)=.27, p=.02), and patients' satisfaction with the visit (r(73)=.26, p=.03). Patient PCC was positively correlated with patient perceptions of appropriateness of treatment (r(57) = .54, p < .001), and negatively correlated with perceptions of seriousness of side effects (r(47) = -.43, p = .002) and distress (r(66) = -.38, p = .002).

Patient and observer PCC ratings are uncorrelated, but both offer construct validity. They may be measuring different constructs and should not be used interchangeably.

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A-042b

FAMILY COMMUNICATION AND BEHAVIOR NORMS OF LUNG CANCER PREVENTION

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The family context can influence how members respond to lung cancer (LCa) risk. Discussions about risk are shaped by family norms, and shared beliefs about health and disease. The purpose of this qualitative study is to understand family-level beliefs about LCa causes and within-family communication norms about preventing LCa .

Participants were 10 families who had a history of LCa. Within-family interviews were conducted by a moderator using a semi-structured interview to assess within-family beliefs about causes of LCa, and family norms around discussion of LCa prevention behaviors. Median number of family members was 2 (range=2-3). Average time of discussions was 19:32 (range=13:22-30:32). Conversations were audio recorded, transcribed, and thematically analyzed.

Shared beliefs: There was a pervasive assumption that family members 'know' smoking and secondhand smoke are unhealthy: "There's such an overwhelming sense of...disapproval of smoking, that there is an expectation that people are not going to be smoking." "We have unwritten rules...the smokers know that they're not smoking in other people's homes." Communication norms: Families reported the majority of within-family discussions focus on members who are current smokers, but rarely involve the smoking family member. Families reported not being active in their efforts to encourage within-family smoking cessation. "[My brother] wants to quit...he's a closet smoker...he pretends he doesn't smoke, but he does." "I would love for [my brother] to quit smoking, but the amount of interaction I have with him...I've never lived in close proximity."

Findings suggest families with a history of LCa have a shared belief that other family members 'know' smoking is unhealthy and may lead to LCa. The majority reported a communication norm in which family members discuss the smoking behavior of other family members but do not actively encourage smoking cessation efforts. Family-based interventions that promote positive and active support for smoking cessation may facilitate higher rates of individual smoking cessation.

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A-042c

A COMPARISON OF PHYSICAL ACTIVITY PREFERENCES AMONG BREAST, PROSTATE, AND COLORECTAL CANCER SURVIVORS IN NOVA SCOTIA, CANADA

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Background: Physical activity (PA) preferences may vary by cancer survivor group but few studies have made direct comparisons. The purpose of this study was to identify and compare the PA preferences of breast, prostate and colorectal cancer survivors in Nova Scotia, Canada.

Methods: A stratified sample of 2063 breast, prostate and colorectal cancer survivors diagnosed between 2003-2011 were identified by the Nova Scotia Cancer Registry (NSCR) and mailed a questionnaire assessing PA preferences and standard demographic and medical variables.

Results: A total of 741 completed surveys were received. Overall,

Nova Scotian cancer survivors preferred to receive PA information from a fitness expert associated with a cancer centre (51%); via print materials (61%); start a PA program 3-6 months after treatment (34%); engage in PA with friends (53%) or a spouse (50%); at home (55%) or outside around the neighbourhood (67%); in the morning (55%); and at moderate intensity (65%). Chi-square analysis revealed some significant differences in preferences based on cancer site with breast and colorectal cancer survivors more likely to prefer engaging in PA with their friends than prostate cancer survivors (p<.001) and breast cancer survivors more likely to prefer supervised and group PA than prostate and colorectal cancer survivors (p<.001). Differences were also found within each survivor group based on demographic and medical variables including PA behavior, age, and perceived general health.

Conclusions: Breast, prostate, and colorectal cancer survivors have some differences in PA preferences that may influence targeted PA program interventions.

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A-042d
HPV VACCINE AWARENESS, BARRIERS, INTENTIONS, AND UPTAKE IN LATINA IMMIGRANTS

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BACKGROUND: Latina immigrant women are at heightened risk of cervical cancer incidence and mortality compared to their non-Latina counterparts. The Human Papillomavirus (HPV) is the principal cause of the majority of cervical cancer cases. A vaccine that protects against HPV was licensed in 2006. To date, there are considerable disparities in vaccination rates, with Latina women living in poverty trailing behind. The purpose of this study was to understand awareness of HPV and the HPV vaccine, vaccination barriers, potential reasons for vaccination, intention to vaccinate, and vaccination uptake in a sample of low acculturated Latinas.

METHODS: We conducted a population-based telephone survey with a random sample of 296 Latinas living in a Midwestern city in the United States.

FINDINGS: Approximately 75% of respondents indicated they had heard about the HPV vaccine. Among these, 41% indicated they were 'extremely likely' to accept the vaccine for hypothetical daughters. All women who reported having a daughter in the recommended vaccination age range reported having heard of the HPV vaccine. However, only 48% reported having vaccinated their daughters against HPV. Intentions to vaccinate was found to be significantly associated with health care provider recommendations, worry about side effects, knowing other parents have vaccinated, perceived severity of HPV, and worry that daughter may become sexually active following vaccination. Intentions to vaccinate and worry that daughter may become sexually active emerged as significant predictors of vaccine uptake.

CONCLUSIONS: These findings suggest the need for interventions to promote the HPV vaccine in Latina immigrants. Training providers to discuss the low risk of severe side effects, consequences of persistent HPV, and sexuality related concerns with parents may encourage vaccination.

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A-042e
EMPOWERING LATINO CANCER PATIENTS ON THE REALITY OF CANCER PAIN AND DEBUNKING CULTURAL MYTHS VIA AN INTERACTIVE PAIN EDUCATION PROGRAM

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The purpose of the Spanish interactive pain education program was to provide patients and families with tools and resources to assist them in communicating their pain to the healthcare team and debunking the cultural myths of cancer pain.

Methods: Needs assessments (n=132) were mailed to all new Spanish speaking patients, 57 were completed. Data identified the need to educate patients/families on cancer pain management and greater need for Spanish educational programs versus support. Thus, an interactive pain management education program was developed. Cultural factors were considered in designing and delivering the education intervention such as the significance of family or "familismo". Three Spanish pain classes were conducted and five interactive components were added throughout the class to ensure patients understanding and learning. Education was provided on how to interpret and use two pain scales (Faces versus ten point scale), creating a pain diary, medication list, and how to read medication bottles and warnings. A Bingo game was used as a way for patients to demonstrate the skills gained during the class, and for educators to re-address objectives or provide clarification. Data was collected to evaluate effectiveness and knowledge gained. Patients received a one week follow-up phone call to see if they applied any of the skills gained during the class.

Findings: The pilot program further identified a distorted perception of pain when undergoing cancer treatment: (1) pain was not manageable (2) part of the treatment process (3) a way that the body is getting rid of cancer. Patients stated that the class provided them with tools and resources to take more of an active role in their care and managing their pain.

Conclusion: After attending the class patients took a more of an active role in their care and were able to communicate their pain to their health care team by using descriptive words and/or using the pain scale to rate their pain or describe it. Patients have incorporated non-drug intervention strategies to help them cope with pain (music, meditation).

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A-042f

INTERVENTION-RELATED CHANGES IN MOOD AND FATIGUE DURING PRIMARY TREATMENT PREDICT DEPRESSION IN BREAST CANCER SURVIVORS AT 5-YEAR FOLLOW-UP

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Objective: Previously, women assigned to cognitive behavioral stress management (CBSM) post-surgery for breast cancer (BCa) reported better psychosocial adaptation over the initial 12 mos. of primary treatment and less depression at the 5-yr follow-up than those in the control group. The present study investigated whether changes in mood and fatigue over the initial 12 mos. account for the group differences in depression at the 5-yr follow-up. Methods: Women (N = 240) with stage 0-IIIb BCa were recruited 2-10 weeks post-surgery and randomized to either a CBSM group or a psycho-educational control group. Women completed psychosocial questionnaires at the initial assessment, 12 mos. later, and at 5-yr follow-up. Regression analyses determined whether changes in mood and fatigue over the initial 12-mos. accounted for severity of depressive symptoms at the 5-yr follow-up. Moderated regressions determined whether the difference in depression between the CBSM and control groups was attributed to 12-mo. changes in mood and fatigue. Results: Increased positive affect, decreased negative affect, and decreased fatigue over the initial 12-mos. predicted less depression at 5-years. Specifically, women in the control group who experienced increased negative mood and fatigue intensity showed significantly greater depression at 5-yr follow-up than women in the CBSM group (ps < .05). Conclusions: CBSM delivered to women with BCa may be protective in buffering changes in negative mood and fatigue during primary treatment, and mitigate long-term depression. Psychosocial interventions implemented early in treatment may have long-term benefits.

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A-042g

A META-ANALYSIS OF THE RELATIONSHIP BETWEEN SOCIAL CONSTRAINTS AND DISTRESS IN CANCER PATIENTS

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Many cancer patients experience significant distress following a cancer diagnosis. Researchers have focused on the role of social support in cancer patient distress; however, social constraints (SCS; e.g., avoidance, criticism, minimization of patients' concerns) has received less attention, despite work suggesting that it may be more strongly associated with distress than social support. Guided by social cognitive processing theory, we reviewed the relationship between SCS and distress in cancer patients in order to inform future psychosocial intervention development. This meta-analysis: (1) quantified the average strength of the relationships between SCS and general distress (e.g., depressive and anxiety symptoms) and SCS and cancer-specific distress (e.g., avoidance and intrusions); and (2) examined whether age, sex, and time since diagnosis moderated SCS-distress relationships.

A total of 30 studies were analyzed, including 26 associations between SCS and general distress and 20 associations between SCS and cancer-specific distress. Correlation coefficients were weighted by sample size and transformed using Fisher's Z-transformation prior to computation of mean effect sizes. We also examined the homogeneity of effect sizes using I2 and potential moderators (i.e., age, sex, time since diagnosis). A fail-safe N analysis was conducted for each relationship.

Moderate, significant relationships were found between SCS and general distress (r=.37) and SCS and cancer-specific distress (r=.37). Age and sex did not moderate either relationship. Time since diagnosis moderated the relationship between SCS and cancer-specific distress (β=-.82, p=.0001), but not general distress, such that the relationship between SCS and cancer-specific distress was stronger for samples with a shorter mean time since diagnosis than those with a longer mean time since diagnosis. Findings suggest that SCS may be an important variable to target in interventions to reduce distress in cancer patients.

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A-042h

PREDICTORS OF CLASS ATTENDANCE IN A COMMUNITY EXERCISE PROGRAM FOR BREAST CANCER SURVIVORS

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Background: Exercise has positive psychosocial and physical effects, however adopting and maintaining can be difficult for breast cancer survivors on treatment. This study examined predictors of exercise class attendance in a community exercise program for breast cancer survivors. Method: The Breast cancer survivors Engaging in Activity while Undergoing Treatment (BEAUTY) program is a community exercise program, and suggested participants attend one group exercise class per week for 12 weeks. Predictors of attendance were BMI, marital status, education, income, cancer stage, physical activity and employment status, and distance from participants' home to exercise class location. Differences in attendance by categories of predictors were examined using independent t-tests or one-way ANOVA. Predictors that had significant or borderline significant (p<0.10) univariate associations with attendance were included in a multivariate regression analysis. Results: Women in the program (N=57; Age M=50.0±8.7 years, BMI M=25.8 ±5.5 kg/m²) were mostly married (89.5%), had completed university (80.7%), reported a household income >$80,000/year (78.6%),

were diagnosed with stage II breast cancer (55.1%), reported being physically active (87.7%), and were not employed (52.6%). Participants lived M=16.6 ±15.5 km from the exercise class location, and attended M=7.8 ±6.5 classes. Participants who lived ≥11.3 km away had lower attendance (t(55)=2.464, p=.017). Attendance did not differ by any other predictor categories. Pearson correlations showed that living further away (r=-.343, p<.01), and being employed full time (r=-.237, p=.076) were inversely associated with attendance. After controlling for employment status, living further away predicted lower attendance (β=-2.80, t=-.234, p=.023, r²=13.1%). Conclusion: Distance from home to class location was the most important predictor of attendance, highlighting practical considerations when planning sustainable community programs, including the need for convenient and accessible locations.

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A-042i
EXPRESSIVE WRITING IN BREAST CANCER SURVIVORS WITH LYMPHEDEMA

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Breast cancer survivors who develop lymphedema report poorer quality of life (QoL) due to lymphedema itself, resulting psychological distress, and a cluster of associated symptoms. Expressive writing is a promising intervention for women with lymphedema to address these outcomes as a complement to standard limb reduction treatment. Adult women (N=107) with breast cancer and chronic Stage II lymphedema were randomized to write about thoughts and feelings specific to lymphedema and its treatment or to a control group that wrote about daily activities. Both groups wrote for four, 20-minute sessions spaced over two weeks. The primary outcome of QoL (measures: Functional Assessment of Chronic Illness Therapy - Breast [FACT-B] and Upper Limb Lymphedema 17 [ULL-27]) was assessed at baseline, one, three, and six months post-intervention. Moderators of results at one-month follow-up assessed were time since lymphedema diagnosis, optimism (Life Orientation Test), and intrusive and avoidant thoughts (Impact of Event Scale; IES). Intent-to-treat tests of differences between the groups on changes in QoL were conducted using mixed-level general linear modeling. No statistically significant intent-to-treat main effects were found (FACT-B: F(3, 189) = 0.23, p = 0.878; ULL-27: F(3,164) = 0.04, p = 0.991). However, statistically significant interaction effects of writer group and IES avoidant score on the change from baseline to one-month in FACT-B physical (β = -0.33, t = -2.13, p = 0.036) and social scores (β = -0.38, t = -2.16, p = 0.034) were observed indicating that expressive writing was effective for improving physical and social QoL in women who were lower on avoidance. No moderating effects were found for the ULL-27. Thus, expressive writing may be helpful for improving QoL in a subset of women who are not engaged in avoidant thinking. Future research may investigate the efficacy of targeting the expressive writing intervention to women who are most likely to benefit.

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A-042j
PERCEIVED LACK OF ACCESS, PERCEIVED LACK OF NEED FOR SCREENING, AND MODESTY PREDICT MAMMOGRAPHY HISTORY AMONG NONADHERENT CHINESE AMERICAN WOMEN

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Background: Chinese American women (CAW) have lower rates of mammography screening compared with non-Hispanic White women. Although perceived barriers, as conceptualized in the Health Belief Model, distinguish between currently nonadherent CAW who have ever and never had a mammogram, it is less clear which specific types of barriers distinguish between them. Having more detailed information about the types of barriers that predict mammography history in CAW may help in the development of culturally-targeted interventions.

Method: One hundred twenty-eight CAW in New York City who had not had a mammogram in the past year completed baseline assessments for a mammography framing intervention study. Demographics, medical access variables, and barriers to mammography were measured. The outcome was mammography history (ever vs. never).

Results: Fifty-five women (43%) reported having been screened at least once. A factor analysis yielded three factors from the barrier items: perceived lack of access, perceived lack of need for screening, and modesty. A sequential logistic regression showed that years in the USA, English speaking ability, and having health insurance all significantly predicted mammography history. However, all control variables became nonsignificant when the three barrier factors were included in the final model. Furthermore, women who reported a greater lack of access (OR = 0.86, p < .01) and lack of need (OR = 0.74, p < .01) were less likely to be ever screeners. Unexpectedly, women who reported greater modesty were more likely to be ever screeners (OR = 1.38, p < .01).

Conclusions: The modesty finding may reflect how a subjectively uncomfortable prior screening experience may influence or be influenced by modesty, which may, in turn, affect future screening. These results suggest that interventions for CAW should consider identifying and targeting specific barriers based on previous adherence.

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A-042k

RELATIONSHIPS BETWEEN HPV KNOWLEDGE, ACCULTURATION, HPV SCREENING, AND HPV INCIDENCE IN WOMEN LIVING IN LITTLE HAITI, MIAMI

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Background: Women living in the neighborhood of Little Haiti shoulder a disparate burden of cervical cancer incidence nearly 4 times that of the general population. As part of a community-based participatory research initiative to address this disparity, we examined relationships between Human Papilloma Virus (HPV) knowledge, acculturation, past HPV screening behavior, and HPV incidence, to understand which women might be at the greatest risk for disease.

Methods: Community health workers recruited 242 Haitian women. Participants answered closed-ended questions regarding HPV knowledge, completed an adapted version of the Marin acculturation scale, and reported their past Pap smear screening behavior. Women were also tested for HPV using a self-sampling device.

Results: Bivariate correlations measured relationships between our main study variables. We then tested associations between acculturation, HPV knowledge, HPV screening, and HPV incidence using univariate and multivariate logistic regression analyses. Bivariate correlations indicated that acculturation was significantly associated with greater HPV knowledge (r = .351, p < .001). Univariate logistic regression analyses indicated greater HPV knowledge was positively associated with both HPV screening (OR = 1.167, 95% CI: 1.035-1.317, p = .012) and HPV incidence (OR = 1.186, 95% CI: 1.045-1.345, p < .01). Furthermore, acculturation was marginally positively associated with HPV incidence (OR = 1.080, 95% CI: .986-1.183, p = .099). However, in the full multivariate models, only HPV knowledge remained significantly associated with HPV screening and HPV incidence.

Conclusion: In our sample, women with greater HPV knowledge were more likely to have been screened for HPV, but were also more likely to have HPV infection. Thus, our results suggest that HPV knowledge does not necessarily confer decreased risk of infection. Our results highlight the need for HPV education that is culturally and linguistically appropriate, as well as the need for disease prevention measures, such as the HPV vaccine.

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A-042l

RACE MATTERS: UNMET SUPPORTIVE CARE NEEDS IN GYNECOLOGIC CANCER

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Gynecologic cancer impacts over 80,000 women in the U.S. yearly (Center for Disease Control and Prevention, 2010). Women often report unmet support needs across many domains including psychosocial, physical, and practical. Furthermore, research in health disparities has identified greater incidence, prevalence, and mortality of cancer related to sociodemographic factors including race and ethnicity (Smedley, Stith & Nelson, 2003) and income (Byers et al., 2008). The present study tested the hypothesis that racial and socioeconomic disparities would influence unmet supportive care needs of women with gynecologic cancer. Women with gynecologic cancer (N=150) completed a 52-item adapted version of the Supportive Care Needs Survey (Bonevski et al., 2000). The analyses were limited to women who were Caucasian (82%) and African-American (13%). Reported household income was most frequently less than $25,000 (26%), but 38% of the sample declined to indicate. Top support needs included: fear of cancer spreading (41.7%), worries about loved ones (34%), uncertainty about of the future (31.9%), and anxiety (30.6%). A series of hierarchical regressions controlling for relevant sociodemographic and treatment characteristics suggested health disparities in the physical (B=-0.35, p<.01), psychological (B=-0.64, p< .001), sexuality (B =-1.06, p< .001), health systems/information (B= -0.46, p< .001), social (B= -0.63, p<.001) and practical (B=-0.515, p<.01) domains, with African American women endorsing greater unmet needs than Caucasian women. Consistent with existing literature, trends were found for unmet support needs among low-income women; however, with less than 2/3 of the sample reporting income, no statistical significance was found in the model. Nonetheless, these findings confirm the presence of racial disparities in unmet support needs. Future research may investiagte program evaluation and outreach options for underserved women with gynecological cancers.

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A-042m

A PANACEA FOR ALL SEASONS? MINDFULNESS MAY INCREASE DISGUST DRIVEN SOCIAL AVOIDANCE

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Background: Mindfulness-based interventions are now being widely used to improve health outcomes in multiple areas. There may, however, be limits to its utility when mindfulness draws attention to emotional experiences that promote avoidance. The current project assessed whether manipulated disgust predicted greater social avoidance in bowel health contexts, specifically examining whether mindfulness would increase disgust-driven social avoidance.

Methods: 101 participants, aged 18 to 30 years, completed questionnaires before attending a laboratory session where they were gender block randomised to a control condition or one of three conditions where disgust and/or mindfulness were experimentally induced. Participants completed a series of tasks to assess social avoidance behaviours, decision-making in the context of bowel problems, and perceptions of social networks.

Results: Manipulation checks confirmed the independent elicitation of disgust and mindfulness in the applicable conditions (p < .005). Persons in the disgust condition were more likely to

exhibit social avoidance behavior (rejecting a glass of water; $\chi 2$ =5.53, p<.05). State disgust predicted greater socially avoidant decision-making (β=.10, p<.05), less decisional conflict (β= -3.45, p<.05), and smaller social network maps (β=-1.74, p<.01). State mindfulness predicted recording fewer people on inner network circles (β=-1.35, p<.05) and increased the avoidance-promoting effect of disgust on social network mapping.

Conclusions: These findings imply limits to the domains in which mindfulness may be useful and underscores the importance of disgust in promoting greater social avoidance. Mindfulness may encourage the incorporation of affect into decision-making and increase social avoidance when avoidance-producing emotions are active. Caution is needed in interventions that raise awareness of emotion without also providing skills in emotional regulation.

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A-042n
A LONGITUDINAL STUDY EXAMINING CHANGES IN SYMPTOM PREVALENCE AND ITS RELATIONSHIP TO CHANGES IN EMOTIONAL DISTURBANCE

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Lung cancer patients experience significantly more distress than other cancer types. Distress has been linked with fatigue, pain, health status, and emotional well-being, yet the course of these symptoms likely fluctuates across time. In the present study, we were able to track longitudinal changes in distress and symptoms in a sample of those living with lung cancer. The purpose of this study was to assess sequential impact of changes in symptom prevalence and on emotional well-being in lung cancer patients. A total of 230 participants (Mage = 67.1 years) completed self-report measures of MSAS, POMS, and the SF-36 Questionnaire. Participants completed questionnaires at baseline (T1) and again at a 3-month follow-up (T2). The most commonly reported symptoms at T1 were fatigue (89.1%), shortness of breath (72.2%), sleep problems (67.1%), and pain (66.2%), and the high prevalence of these symptoms persisted at T2. Symptoms of pain (β = .22, p <.01) and general health (β = -.19, p <.05) at T1 significantly predicated total mood disturbance at T2 (R2 = .45, F(3, 120) = 32.12, p =.00). Changes in fatigue (β = .24, p <.05), sleep problems (β = .23, p <.01), pain (β = -.18, p <.05), and general health ((β = -.18, p =.05) over time significantly predicted and explained 22.1% of the variance in changes in total mood disturbance (R2 = .22, F(4,114) = 7.76, p =.00). Our results suggested that pain and poor general health were critical predictors for mood disturbance longitudinally. Changes in symptoms such as pain, fatigue, and sleep problems uniquely contribute to patients' overall emotional well-being. Appropriate psychoeducation groups may be utilized to improve patients' mood status as the relationship between physical symptoms and mood disturbances are better explained and understood. Treatment of mood disturbance related to cancer may also improve patients' quality of life. Future research will be needed to better elucidate underlying resilient factors that promote emotional well-being despite the decline of general health functioning.

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A-050a
SELF-BLAME AND SYMPTOM EXPERIENCES IN CARDIAC REHABILITATION PATIENTS: CONTROL APPRAISALS AND DEPRESSION AS MEDIATORS

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Cardiovascular disease is a condition for which patients readily search for a cause. Behavioral self-blame (BSB; the tendency to blame past behaviors) and characterological self-blame (CSB; the tendency to blame one's disposition) are two types of attributions. BSB is hypothesized to aid adjustment because it is associated with higher control appraisals, whereas CSB is hypothesized to increase distress because control is low. This study tested those predictions, and examined whether BSB and CSB were associated with self-reported cardiac health through a double-mediated model among cardiac rehabilitation (CR) patients. Patients (N=93) completed surveys at the beginning of CR (Time 1), three months later at the end of CR (Time 2), and 18-months post-CR (Time 3). BSB, CSB, and control appraisals (behavior control [BC] and character control [CC]) were measured at Time 1, depressive symptoms (DS) at Time 2, and cardiac symptom experiences (CSE) at Time 3. Path analysis tested whether control appraisals and DS mediated the relationship between SB and CSE (controlling for baseline), separately for BSB and CSB. Results indicated that BSB was positively related to BC (β=.34), which was positively associated with DS (β=.16). DS, in turn, positively predicted CSE (β=.20). BC was unrelated to CSE. Likewise, CSB was positively related to CC (β=.22), CC was positively related to DS (β=.14), and DS was positively related to CSE (β=.17). CC also was positively related to CSE (β=.18). Both models fit the data well: $\chi 2(4)$=7.55, NFI=.97, CFI=.98, RMSEA=.09; $\chi 2(4)$=5.23, NFI=.97, CFI=.99, RMSEA=.06; respectively. Findings suggest that both BSB and CSB are associated with more distress through greater feelings of control over one's behavior or character. Also, feelings of control are associated with more CSE through higher distress. Results do not support a protective effect of BSB on adjustment. Thus, CR providers should identify patients who exhibit feelings of SB and distress for interventions targeting improvements in health outcomes following CR.

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A-050b
SELF-REGULATION IN OLDER ADULTS: THE PRIORITIZATION OF EMOTION REGULATION

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Despite having fewer cognitive resources, older adults tend to regulate their emotions at least as well as younger adults. This study aimed to test the claim that older adults allocate a greater

proportion of their self-regulatory resources to regulate their emotions relative to younger adults, and relative to other self-regulatory tasks. Participants included 48 healthy older adults aged 65-85, and 50 healthy younger adults aged 18-25. They were randomly assigned to one of four experimental groups involving an activity designed to fatigue (not eat cookies) or not fatigue (not eat radishes) self-regulatory resources, followed by a test task of emotion regulation (suppression in response to a sad video) or attention regulation (dichotic listening). One week later they returned to engage in the same level of fatiguing task, followed by whichever self-regulation test task they did not complete at the first session. As expected, older adults performed as well as younger adults on the emotion regulation test task (t(96) = .39, p = .70, SE = .14), though worse on the attention regulation test task (t(95) = -4.84, p < .001, SE = .68). Using resting heart rate variability as a physiological index of self-regulatory capacity, older adults appeared to allocate more resources toward the emotion regulation task relative to the attention regulation task (β = .31, t = 2.35, p = .02, SE = .13). The results support Socioemotional Selectivity Theory, and suggest that older adults maintain their emotion regulation capacity in part by allocating more of their self-regulatory resources toward emotion regulation goals. The findings raise the possibility that focusing on the emotional value of health behaviors might be particularly effective in public health campaigns aimed at older adults.

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A-050c

NONINVASIVE ASSESSMENT OF CARDIAC OUTPUT: A VALIDATION STUDY COMPARING PULSE CONTOUR ANALYSIS WITH IMPEDANCE CARDIOGRAPHY

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Accurate assessment of cardiovascular risk is imperative in both clinical and research settings to manage care and analyze research findings. The present study assessed the accuracy of pulse contour analysis from fingertip plethysmography (Nexfin formally known as Finapress) against thoracic impedance cardiography (ICG) in measuring both absolute and changes in systolic blood pressure (SBP), diastolic blood pressure (DBP), cardiac output (CO), stroke volume (SV), and total peripheral resistance (TPR).

Validation studies comparing ICG and more invasive methods have shown that it is a reliable method for estimating change in CO. ICG requires patients to undress or undergo hair removal. Some studies have suggested that the Nexfin device can accurately index changes in CO without this inconvenience. To our knowledge this is the first study to compare hemodynamic measurements from Nexfin to those obtained with ICG.

On average, the Nexfin SBP value was 12.2 ± 4.1 mm Hg higher than the same measurement collected via ICG. For DBP, the discrepancy was 2.7 ± 1.7 mm Hg on average. As expected, we observed robust correlations for resting SBP (r = 0.67, P = 0.01) and DBP (r = 0.59, P = 0.03) measured with the two systems. There were no significant correlations for resting TPR, CO, and SV collected via the two methods. Correlation values ranged from -0.19 to +0.09 (all p's > 0.54). Between-method measurements of SBP and DBP were significantly correlated, while measures of TPR, CO, and SV were uncorrelated. We found a robust correlation between CO change scores collected with the two methods (r = 0.57, p = 0.05). This correlation was not evident for change in TPR and SV. Change in SBP and DBP during stress were correlated between the two methods. The correlation for SBP reactivity was 0.85 (p = 0.0002) and for DBP reactivity it was 0.73 (P = 0.005).

Our study shows Nexfin is a reliable method of measuring both absolute and change in SBP and DBP. Results confirm previous findings of the accuracy of fingertip plethysmography in measuring changes in CO.

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A-050d

A QUALITATIVE STUDY OF NUISANCE BRUISING, NUISANCE BLEEDING AND ADHERENCE IN COMMUNITY DWELLING ADULTS WITH CARDIOVASCULAR DISEASE AND ORAL ANTIPLATELET DRUG THERAPY

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Superficial bleeding, also known as nuisance bleeding, is a common side effect of oral antiplatelet drug therapy. Nuisance bleeding in the form of bruising and excess minor bleeding has been implicated as a reason for high rates of poor adherence and self-discontinuation of therapy. The purpose of this qualitative descriptive study was to explore perceptions of nuisance bleeding and adherence in persons with cardiovascular disease taking clopidogrel (Plavix). Participants (N=34), mean age 73.7 ± 9.1 years, 55.9% female, 88.2% white were recruited via print advertising and completed a semi-structured telephone interview. Audiotapes of the interview were transcribed verbatim and analyzed using qualitative content analysis to identify predominant themes. The three major themes were: 1) Nuisance bruising and bleeding means its working, 2) The cost and importance of adherence, and 3) Concern about the unknown. Participants reported nuisance bruising that often appeared spontaneously or with minor bumps. Minor cuts and scrapes bled for longer periods of time and were slow to heal. However, most reported these side effects were an expected part of therapy and evidence the drug was working. Poor adherence was commonly related to the cost of Plavix and many were relieved when Plavix became available in its generic form (clopidogrel). Participants reported taking the drug "religiously" based on physician recommendation and to prevent having major cardiac events. None reported poor adherence because of nuisance bruising or bleeding. Most were unsure about the duration of therapy but believed they would be on antiplatelet therapy for their entire lives and did not know whether this was really necessary. Given the tendency for

nuisance bleeding, concerns were also expressed about major bleeding as a result of accident or injury. Findings of this study have implications for reducing concerns about antiplatelet therapy and promoting long-term adherence in cardiac patients.

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A-050e
POST-TRAUMATIC STRESS DISORDER, RACE/ETHNICITY, AND CORONARY ARTERY DISEASE AMONG VETERANS WITH DEPRESSION

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Background: Post-traumatic stress disorder (PTSD) and depression are both associated with coronary artery disease (CAD) in older adults. It is unclear whether PTSD is independently associated with CAD among older patients with depression, particularly ethnic/racial minority patients. We examined how PTSD relates to CAD in older depressed patients and how this relationship differed between White and racial/ethnic minority patients.

Methods: Medical records were used to identify White, Black, Hispanic, Asian, and American Indian/Native Alaskan patients (n=24,719; ages 60-96), who were diagnosed with depression at Veterans Affairs clinics. Adjusted logistic regressions were conducted to assess the cross-sectional association between PTSD and CAD in each racial/ethnic group.

Results: Among depressed Black patients, PTSD was associated with a 30% increase in odds for CAD [adjusted odds ratio (AOR) =1.30; 95% Confidence Interval (CI): 1.01, 1.78]. Conversely, PTSD was associated with decreased odds for CAD among White (AOR 0.91; 95% CI: 0.84, 0.99) and Hispanic (AOR: 0.64; 95% CI: 0.44, 0.94) depressed patients. PTSD was not associated with CAD in Asian or American Indian/Native Alaskan patients.

Conclusion: The relationship between PTSD and CAD varied among depressed patients according to race/ethnicity. The results suggest that older depressed Black patients with PTSD may benefit from increased monitoring for CAD by clinicians.

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A-058a
EVALUATING THE IMPACT OF A 10-WEEK COMMUNITY BASED DIABETES SELF-MANAGEMENT COURSE ON HEALTH BEHAVIORS AND CLINICAL OUTCOMES

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This study examined a 10-wk diabetes self-management program that targeted under-insured individuals diagnosed with diabetes. Topics covered included blood glucose monitoring, healthy eating, tobacco cessation, physical activity. Promotores de Salud (community health educators) led the classes. 151 Community Health Center patients enrolled in the program (76% female; 97% diabetics; 85% uninsured). Patients reported how many days over the past week (0-7dys) they performed various behaviors ("followed a healthful eating plan," participate in at least 30 min of physical activity," "test your blood sugar," "check your feet"). Responses were summed to create a healthy behavior frequency index and then dichotomized at the mean with higher values indicating greater performance of healthy behaviors over the past week. Various clinical outcome data, such as weight, blood pressure, triglyceride, A1c, and cholesterol levels, were collected at baseline and 3- and 6- months post-program. T-tests examined differences in clinical outcomes between high and low health behavior groups, and Mann-Whitney U tests examined differences only among those participants with poor clinical outcomes at baseline. Triglycerides were significantly higher among those with low frequency of healthy behaviors at 6 months (t=2.48, p=.018). Additionally, there was a strong trend in that the low healthy behavior group weighed more at 3 months (t=1.96, p=.054). For participants with poor clinical outcomes at baseline, triglyceride levels were significantly higher at 6 months among those who reported low frequency of healthy behaviors (U=89.00, p=.003) ; HDL was higher at 6 months among those who reported high frequency of healthy behaviors (U=167.00, p=.022). Reported health behaviors corresponded significantly with clinical values post the 10-wk class and strong trends were noted in improved values. Promotor-led community diabetes self-management classes can serve as an effective means to educate and positively influence the uninsured in controlling diabetes.

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A-058b
EMPATHIC ACCURACY IN A COMMUNITY SAMPLE OF COUPLES COPING WITH TYPE 2 DIABETES

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Empathic accuracy is the ability to correctly infer the thoughts/feelings of another person. The purpose of this study was to examine empathic accuracy in a community sample of 50 couples in which one partner was diagnosed with type 2 diabetes in the past 2 years (mean age = 55; 52% male; 68% white). Couples were filmed discussing the difficulties in managing diabetes for 8 minutes and then completed a questionnaire about their perceptions of the discussion. Videotapes were coded by trained observers. Persons with diabetes viewed the video privately, paused it when they recalled having a specific thought or feeling, and recorded the thought/feeling. Partners then watched the video and recorded what they believed to be the thoughts/feelings of the patient at those same times. Six coders examined the similarity of patient and partner comments to determine empathic accuracy. Coders also rated the overall affective tone of each comment, from which positive and negative affect accuracy scores were created. Weighted regression analysis showed that partner empathic accuracy was related to greater patient communal coping, as indicated by references to the illness as "our"

rather than "my" diabetes, and greater communal coping behavior during the videotaped discussion. By contrast, less empathic accuracy was related to more problematic discussion behaviors, such as patient physical withdrawal, defensiveness, and negative affect displays (p's < .05). Greater empathic accuracy was linked to more positive post-video ratings of the discussion, including partner views of patients as more sympathetic and patient views of partners as less demanding (p's < .05). Accurate detection of positive affect was related to perception of the discussion as helpful (p < .05), and accurate detection of negative affect was related to decreased patient disagreement and defensive behavior (p's < .05). These results suggest that one's ability to infer the thoughts/feelings of a chronically ill partner are highly context-dependent. Partner empathic accuracy has implications for how relationships function when coping with chronic illness.

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A-058c
EVALUATION OF A TELEHEALTH DIABETES SELF-MANAGEMENT PROGRAM IN A RURAL PRIMARY CARE CLINIC

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Problem: Individuals in rural communities have a greater risk of developing comorbid chronic diseases such as diabetes and depression. Rural populations also have limited access to behavioral medicine services that can improve chronic disease management and outcomes. This pilot study evaluated the feasibility and preliminary efficacy of a telehealth program for improving health outcomes in patients with comorbid diabetes and elevated depressive symptoms. Sample: Participants (N=40) were on average 53 years old, primarily African American (71%) and female (80%). Procedure: The program was designed to be accessible to patients and suitable for a low resource primary care clinic. Program delivery consisted of six 1-hour individual telephone sessions. The theory-based intervention used cognitive-behavioral strategies to improve mood management and self-efficacy in the context of diabetes management. Outcomes included depressive symptoms, and diabetes knowledge self-efficacy and distress measured at baseline, post-treatment, and 3 months post-treatment. HbA1c data was available at baseline and 3 months post-treatment. Results: Repeated-measures ANOVA indicated that post-treatment scores significantly improved from baseline on measures of depression (p<.001), diabetes knowledge (p=.043), self-efficacy (p=.004), and regimen distress (p=.025). At 3 months post-treatment, participants maintained improvements in depression (p=.001) self-efficacy (p=.016) and regimen distress (p=.009). Findings indicated no significant changes in HbA1c from baseline to 3 months post-treatment (p=.347). Exploratory analysis at 6 months post-treatment revealed statistically significant reductions in HbA1c (M=7.31, SD=1.53, p=.003). Conclusions: Telehealth programs addressing behavioral and emotional challenges of managing

diabetes hold promise for improving psychosocial and disease outcomes in rural populations. More efforts are needed to make this and similar programs efficacious and feasible for delivery in low-resource rural healthcare settings.

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A-058d
LATENT CLASS ANALYSIS OF SELF-MANAGEMENT AMONG DIABETICS IN THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

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Heterogeneity in diabetes self-management behavior has not been formally evaluated despite apparent variance in health outcomes. Latent class analysis assessed heterogeneity using the diabetic subsample from the 2009-2010 NHANES cycle (n= 727, 51% male, 59% white, mean age = 60.4, SD = 13.3, mean illness duration = 10.88 years, SD = 11.1). Measurement on five domains of self-management (diet adherence measured by sugar and vegetable consumption; medical adherence measured by frequency of specialist visits, self-foot exams, and frequency of eye exams; health status measured by HbA1c, BMI, and illness duration; social context measured by marital status and SES; and health perception measured by rating of personal health) identified four latent classes of diabetics. Active Change (16%) included good diet adherence, moderate medical adherence, good health status, most recent diagnosis, poorest health perception, high probability of being married, and higher SES. Long-term Improver (7%) included poorest diet, highest medical adherence, good health status, longest duration, best health perception, high probability of being married, and lowest SES. Average Care (69%) included moderate probability of adherence on all measures, middle-length duration, average health perception, likelihood of being married, and low-to-mid SES. Long-term Static (7%) included poor diet, high medical adherence, poorest health status, second longest duration, average health perception, likelihood of being married, and highest SES. Response probabilities suggest importance of spousal support, health perception, and illness duration in diabetes self-care. Observed heterogeneity supports design and implementation of targeted education and intervention programs.

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A-058e
PARTICIPATION IN BEHAVIOR CHANGE: EXPERIENCES OF INDIVIDUALS AT-RISK OF TYPE 2 DIABETES

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Changes to several health behaviors are often necessary for reducing risk of developing type 2 diabetes. For example, health

care providers recommend weight loss, increased physical activity, the use of medication, and annual monitoring (American Diabetes Association, 2013). Intervention research supports the benefit of changing multiple unhealthy behaviors simultaneously (Spring et al., 2012) but little is known about multiple behavior change in a non-intervention setting. The purpose of this study was to explore individual experiences of participation in activities recommended for type 2 diabetes risk reduction in order to assess how behavior change is accomplished. Individuals at-risk for developing type 2 diabetes were recruited from southern Wyoming and northern Colorado. A trained researcher conducted qualitative interviews. Twelve interviews were coded by the research team for themes pertaining to facilitators and inhibitors of behavior change through a process of line-by-line and focused coding (Charmaz, 2010). Overall, individuals discussed making changes to diet and physical activity and the importance of self-education (i.e., seeking information from the internet and others with knowledge of diabetes). Two themes emerged to describe factors associated with participation in recommended behavior change. First, facilitators of behavior change included: disease education, setting goals, keeping a routine, awareness of body and health status, and an attitude of prevention and positivity. Second, inhibitors of behavior change: lack of information from the health care provider, expenses of education classes and equipment, lack of time for activities, and feeling overwhelmed by the multitude of changes. The results suggest that participation in multiple behavior change is influenced by capacity for self-management. At-risk individuals may benefit from learning self-management skills and from ongoing support for behavior change.

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A-059a
SEXUAL HEALTH EDUCATION IN A SAMPLE OF PSYCHOLOGY TRAINEES IN THE SOUTHEASTERN UNITED STATES

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Sexual dysfunction is highly prevalent in medical populations; however, providers often report feeling under-trained to address sexual dysfunction with their patients. Less attention has been paid in the literature to psychology student samples, though mental health professionals often play an important role in treating sexual dysfunction. The study aims were 1) to compare the quantity of psychology trainees' sexual health education to other health professions students, and 2) to examine relationships between psychology trainees' quantity of education and self-reported skill at discussing sexual health with diverse patient populations. This was part of a larger survey study conducted at a southeastern public university, where students of medicine (n = 270), nursing (n = 31), allied health (n = 94), and dentistry (n= 49) participated through an online evaluation system. Psychology students (n = 35) were recruited separately and completed the same survey via SurveyMonkey. Psychology students had the least number of previously obtained ($\chi2$ (12, 490) = 21.59, p <

.05) and current ($\chi2$ (12, 489) = 68.71, p < .001) classroom hours devoted to sexual health topics compared to all other health professions students and the least number of relevant patient contact hours in their current training programs compared to all other student groups, $\chi2$ (4, 488) = 76.52, p < .001. Psychology students' number of patient contact hours was significantly correlated with skill at discussing sexual health issues with older patients (r = .47), patients of the opposite gender (r = .36), patients identifying as lesbian (r = .35), gay (r = .37), or bisexual (r = .37), and patients with physical disability (r = .40), as well as skill at taking a sexual abuse history (r = .39) (all ps < .05). Given the increasingly important role of psychologists in medical settings and in the treatment of sexual dysfunction, improvements in the sexual health education for psychology trainees are needed, which may positively impact skill at discussing sexual health with patients.

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A-059b
A STUDY OF REFORM JEWISH RABBIS: PERSONAL AND CONGREGATIONAL HEALTH AND WELLNESS

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Rabbis, as faith leaders, are in the unique position of being able to disseminate and encourage healthy choices among their congregants and are possible advocates for health promotion, especially if they act as healthy role models. The purpose of this qualitative study was to determine the personal health effects of a religious vocation on reform rabbis and the rabbis' effects on the health and wellbeing of their congregants. Methods: Structured interviews were conducted with 12 reform rabbis, who were asked about their personal health, its relation to their vocation, how seminary schools addressed health, and their involvement in the health and wellness of their congregations. Their responses were audio recorded, transcribed, coded, and analyzed by the authors. Results: Participants were predominately male (75%), and 50% were overweight or obese. Over half of the rabbis stated that they are involved in health and wellness activities in their synagogues and influence the health and wellness of their congregations through role modeling. None of the rabbis recalled any health programs available for them as seminary students, and 92% stated that health and wellness were not covered in the curriculum in seminary. All responded that as faith leaders, they constantly experienced negative health effects such as stress as a result of feeling "weighed down" by an "overburdening" and "emotionally draining job." Discussion: These results suggest that the rabbis are not experiencing optimal personal health or best impacting the health of their congregants. Findings suggest that this could be related to a lack of relevant health and wellness education. Future studies or interventions should address the gap and the need for health and wellness education for rabbis in order to improve their health, awareness, and knowledge so that they can act as better role models and health advocates for their congregations.

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A-064a

DEPRESSION AND COPING SELF-EFFICACY MEDIATE THE EFFECT OF HIV-RELATED STIGMATIZATION ON MEDICATION ADHERENCE AMONG HIV-POSITIVE MEN WHO HAVE SEX WITH MEN

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Stigmatization (i.e., social discrediting and devaluation due to HIV status) may interfere with self-care among persons living with HIV by undermining adaptive coping and heightening vulnerability to depressive symptoms. In this pilot study, we tested the hypotheses that depression and coping self-efficacy would mediate the association of stigma to medication adherence in an outpatient sample of HIV+ men who have sex with men (MSM; N = 66; 65% White, 23% African-American). Participants completed an 11 item measure of stigma-related experiences (alpha = .85), a 15 item measure of coping self-efficacy (alpha = .97), and standardized measures of depression (CESD) and medication adherence for the past week. Analyses confirmed that stigma-related experiences were negatively associated with adherence in the past week (β = -.342, p < .01). Mediational hypotheses were tested using linear regression models that were fitted according to the steps outlined by Baron and Kenny (1986). As predicted, depression scores fully mediated the association between HIV-related stigma and adherence. That is, depression scores were positively associated with stigma-related experiences and negatively associated with adherence, and when depression scores were included in the final model, stigma was no longer a significant correlate of adherence. In separate analyses, coping self-efficacy fully mediated the association between HIV-related stigma and adherence, such that the association between stigma and adherence was no longer significant when coping self-efficacy was included in the final model. Depression and coping self-efficacy scores were correlated (p < .001). However, our small sample size precluded model testing to clarify whether depression and coping self-efficacy serve as independent mediators. Depression and coping self-efficacy are two mechanisms worthy of further research to enhance our understanding of mechanisms linking stigma to medication adherence difficulties.

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A-064b

PREDICTING COUNTY-LEVEL HIV RATES THROUGH AUTOMATIC TWITTER ANALYSIS

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HIV is uncommon in most US counties but travels quickly through vulnerable communities when it strikes. Tracking behavior through social media may provide an unobtrusive, naturalistic means of predicting HIV outbreaks as well as understanding the psychological factors behind its spread. This project aimed to identify county-level language use that precedes increases in HIV rates by analyzing over 1 billion words in Tweets tagged with city and state information. Over 1,638 US counties, we regressed HIV rates on (1) language categories, as indexed by the Linguistic Inquiry and Word Count (LIWC), and (2) individual words and topics, using Differential Language Analysis (DLA). All models controlled for major demographic and structural predictors of HIV. We hypothesized that references to risky behavior and poorer mental health would predict higher HIV rates and references to protective behavior and future orientation would predict lower HIV rates. Supporting our hypotheses, category-level analyses revealed that lower HIV rates were associated with more future-oriented (e.g., will), social (e.g., chat), and active language (e.g., work). Higher HIV rates correlated with more frequent references to risky recreational activities (e.g., gambling) and negative emotion words (e.g., depressed). DLA, which is a data-driven approach, showed that Tweets in counties with higher HIV rates included more references to consumerism (e.g, shopping) and nightlife (e.g., DJ) and fewer references to rest (e.g., sleep), school (e.g., homework), and work (e.g., meeting). Most effects were stronger in riskier counties, as indexed by structural variables such as wealth inequality and STI rates. Analyzing structural variables and verbal behavior may allow us to triangulate high-risk communities and intervene before HIV outbreaks occur.

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A-064c

BODY MASS INDEX (BMI) AND BODY IMAGE IN YOUTH WITH HIV

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Objective: Limited information about body image (BI) in youth with HIV is available although adult studies suggest BI impacts on health behaviors. We explored the role of BMI on BI and related behaviors in youth with HIV.

Methods: Youth (M age = 20.7) with HIV (n = 143; 69.2% male; 83.2% behaviorally infected) participated in an audio computer assisted self-interview (ACASI) assessing BI perceptions, behaviors and demographics. Information also was abstracted from the medical record. Descriptive analyses were conducted evaluating BI perceptions (Figure Rating Scale). BMI categories were derived from CDC recommendations. A 96% acceptance rate among approached patients was observed.

Results: Mean BMI = 25.3; CD4 count = 653 (30.8%); viral load = 12,963 copies/mL. Overall, under and normal-weight individuals were less likely to prefer a smaller body compared to overweight and obese individuals (ORs<0.1, p<0.05). For every unit increase in BMI, the likelihood for preference of a thinner body increased (OR=1.6, p<0.001). However, of those classified as overweight/obese, 24% indicated contentment with current

body size. Similarly, 33% of youth classified as underweight indicated contentment with current body size. Females significantly preferred smaller body size compared to males with similar BMI (OR=3.4, 95% CI=1.3-8.4, p=0.01).

Conclusions: BMI predicted discrepancy in perceived vs. ideal BI. However, a sizable number of youth classified as overweight/obese reported contentment with their current body size. Females were three times more likely to prefer a thinner body. Overall, these results suggest youth with HIV exhibit BI perceptions relative to BMI and generally appropriate perception of size/weight control desires. Studies are needed regarding underweight, overweight and obese youth who indicated contentment with body size and the relationship between BI and other health status markers and behaviors (e.g., adherence, reproductive decision making).

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A-076a
ALTRUISTIC EXPERIENCE AND PSYCHOLOGICAL WELL-BEING IN THE DOMINICAN REPUBLIC

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Though volunteerism and other forms of altruistic behavior have been positively linked to psychological well-being, little empirical information exists on the benefits of being a recipient of altruism. In this study, which served as a follow-up investigation of altruistic experiences in Brazil, 98 Dominican adults (62 females, 35 males, and 1 gender unknown) in a convenience and snowball sample responded affirmatively to a semi-structured questionnaire in Spanish, and generated 100 reports of altruistic experiences in their country. Their reports were analyzed on five dimensions: 1) the type of altruistic deed they experienced; 2) their age when it occurred; 3) the social connection between the recipient and initiator of the altruistic deed; 4) their gender relationship; and 5) their age/social status relationship.

Participants reported 6 categories of altruistic experience. Essential financial aid was the most frequent (37%), followed by emotional support (26%), mentoring (11%), rescue from danger (10%), free labor (10%), and non-essential financial gift (6%). One report was too broad to be scored by specific category.

In their qualitative reports. participants described a wide variety of psychological benefits from experiencing altruism. These could be grouped in terms of (1) enhancing a positive outlook on life and humanity; (2) increasing optimism, gratitude, and intrinsic motivation; (3) strengthening pro-social behavioral change, such as involving greater empathy and attentiveness to others, closer relationships, and the "pay-it-forward" phenomenon. The implications for community behavioral medicine in Latin America are discussed, and future avenues of research are highlighted.

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A-076b
TEARS OF JOY: THE IMPACT ON RESILIENCE AND HEALTH

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The role of positive emotions in contributing toward psychological and physical well-being is gaining increasing attention in medical research today. Although people in seemingly diverse cultures and historical periods have experienced tears of joy (TOJ), it is striking that almost no empirical research exists on this phenomenon. As a follow up to a recently published study involving a sample in India, the current authors developed a 10-question self-report survey designed to better determine the relationship between TOJ as experienced by adult Americans and their life satisfaction, resilience, and self-reported health.

In this study, 141 participants (114 females, 37 males) mostly in their 20s in a combined convenience/snowball sample and undergraduate psychology class responded affirmatively that they had ever experienced tears of joy. This number represented 93.8% of those surveyed. Not only were TOJ common in our sample (39.0%) had cried in joy within the past month), but as we hypothesized, their frequency was significantly linked positively to stronger emotionality, better self-reported physical health, and greater life satisfaction. However, contrary to our hypothesis, TOJ frequency was not linked significantly to resilience, that is, the ability to cope better with stress. Nor did participants report significantly less stress after experiencing TOJ. These results may have reflected participants' ambiguity in defining stress, which can be situation-specific or more pervasive in daily life.The recentness of a TOJ experience was significantly linked to the tendency to feel better physically afterwards. Women reported significantly more frequent TOJ, as well as significantly more stress, than did men.

The implications for behavioral medicine are discussed, including ways of using TOJ experiences to optimize well-being. Future research avenues are highlighted, including the generalizability of our findings across cultures,chronological age, and educational levels.

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A-076c
THE LINK BETWEEN MINDFULNESS AND DISTRESS TOLERANCE

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Background: Studies have shown that lower levels of distress tolerance, or difficulty coping with aversive life experiences, is a risk factor for substance, eating, and mood disorders and that mindfulness-based interventions are effective for treating these disorders. Therefore, mindfulness meditation may be beneficial for those who lack distress tolerance since this Eastern-based practice involves awareness and acceptance of the present moment, positive or negative. The current study's aim was to investigate a possible relationship between distress

tolerance and dispositional mindfulness. Methods: A sample of 360 undergraduate students (234 female and 126 male; mean age: 20.1) completed the Five Facet Mindfulness Questionnaire (FFMQ) and the Distress Tolerance Scale (DTS) through an online survey. The FFMQ measures mindfulness over five facets: observing, describing, acting with awareness, non-judging of inner experience and non-reactivity to inner experience. The DTS measures distress tolerance on four factors: tolerance, appraisal, absorption and regulation, with a total score calculated from the means of the subscales. Higher scores on both scales indicate higher levels of mindfulness or distress tolerance. A linear regression model was conducted with two subscales of mindfulness (non-judging and non-reactivity) hypothesized to be associated with total DTS score. The model was adjusted for gender since men typically having higher DTS scores, and religiosity, due to a potential influence on meditation practices. Results: As predicted, a significant positive relationship was found between non-judging of inner experience and total DTS (p<.000) as well as non-reactivity to inner experience and total DTS (p<.000). Conclusions: Mindful awareness and acceptance are related to one's ability to tolerate distress. This suggests that mindfulness training might be an effective treatment for increasing distress tolerance. Controlled trials are needed to determine the effectiveness of mindfulness as an intervention for distress tolerance.

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A-076d
THE INFLUENCE OF TRAIT WORRY ON DUAL-TASK PERFORMANCE: AN EXPLORATORY ANALYSIS

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Research has demonstrated the harmful effects that trait-worry, defined as the tendency to engage in negative and intrusive thoughts about possible future outcomes, can have on cognitive processing. However, few studies have examined the impact of worry on dual-task performance; where in many real-life situations, individuals are often called upon to perform two or more tasks concurrently. Thus, the present exploratory analysis examined the relationship between trait worry and various indicators of performance during a series of dual-tasks. Thirty-one participants completed the Loaded Simon Effect task - a dual-task paradigm comprised of three working memory-related tasks (free recall (FR), serial recall (SR), and additive task (AT| mental math)) while simultaneously performing the Simon Effect Task. The Simon Effect task represented the foreground (visual) task, while the recall and additive tasks represented the background (mental) task. Trait worry was assessed using the Penn State Worry Questionnaire (PSWQ). Partial correlations (controlling for reaction time) revealed an inverse relationship between PSWQ scores and accuracy on the foreground task (FR: r= -.508; SR: r= -.458; AT: r=-.401, p's<.05). Spearman's rho (ρ) correlations show that PSWQ scores were inversely related to accuracy on the background tasks (FR: ρ=-.301; SR: ρ=-.301, p's<.05),

with the exception of the AT (ρ= .123, p=.254). Worry was not significantly associated with performance on the foreground task alone (rpartial = .046, p = .412).These data support previous research suggesting that worry can be more detrimental to cognition under high load. Additionally, data suggests that trait worry may have the greatest influence on dual-task performance when the background task is memory (i.e. recall) related. Overall, these findings suggest that low trait worriers may be better at allocating cognitive resources amongst more than one task - a relationship with implications for both cognition and mental health.

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A-080a
TEXTING FOR TMAP: A NOVEL METHOD TO DEVELOP A MHEALTH ALCOHOL INTERVENTION FOR COMMUNITY COLLEGE STUDENTS

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Heavy alcohol use is a significant health problem for community college students (CCS), who comprise 40% of all US college students. The Text Message Alcohol Program (TMAP) is a mHealth delivered alcohol risk reduction intervention designed for CCS. In formative research, 5 focus groups were conducted with 26 CCS who provided feedback on sample text messages and intervention content. Many of the researcher-written messages were criticized for having the wrong tone and content. Students disliked texts that told them not to drink or sounded like public service messages. They preferred cautionary messages and expressions of care and support, as if from their own peers. Inspired by students' rewriting of our messages, and by the linguist John McWhorter's argument that texting is a form of "fingered speech" with structures and rules that differ from writing, we developed a method for collecting student-composed messages to support the researcher-designed intervention.

We enrolled 8 community college students in an advisory panel (informed consents were collected; the protocol was IRB-approved), which met 5 times Oct-Nov 2013. During discussions panelists composed and sent sample texts, on topics identified by the investigators, to a study phone line. To collect texts composed while they were in their normal environment, they also sent texts during the days between panel meetings. Using this approach, panelists produced over 300 texts. At the final panel, they sorted a selection of these texts, indicating to what degree each might influence them; 94% were rated as possibly helping them engage in safer drinking behavior. These texts will be among those used in the TMAP intervention trial in early 2014. The process of in vivo peer-generated text messages increases the likelihood that messages will be well received by the target audience and may improve effectiveness of the TMAP intervention.

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A-088a

THE EFFECT OF SCHOOL LUNCH MENU COMPOSITION ON PARTICIPATION RATES AND LOW-FAT FOOD SELECTION IN ELEMENTARY CHILDREN

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Background: Children consume a substantial proportion of their caloric intake at school, making this an ideal setting to impact child eating and weight status. While there have been concerns from food service vendors that a healthier menu will lead to lower participation rates, undermining the financial viability of their program, this has not been well tested.

Purpose: This paper examines the extent to which natural variations in school lunch menu composition impact both the selection of low-fat (LF) foods and student participation rates.

Methods: Lunch purchases for 146 days of a school year were collected from 10,134 children (K-5th) in 17 elementary schools. Data were aggregated at the school level. The schools offered 3 entrées per day, and days were coded and categorized according to number of LF entrées offered (0, 1, 2) on a given day. Schools were also categorized by their average socioeconomic status (SES) through a frequency analysis of students on free/reduced lunch. Because no selection of LF entrées is possible when they are not offered, a 2(day) X 3(SES) MANOVA tested effects of day score (1,2) and school SES on LF entrée selection. A 3(day) X 3(SES) MANOVA was used to test school lunch participation.

Results: Significant differences in selection were found between days (F=1176.5, p<0.001). LF entrée selections increased from 15.3% to 60.2% when the number of LF entrées offered increased from one to two. Differences in participation were found between SES groups (F=153.5, p<0.001) but not between days (p>0.05). Average participation rates in low SES schools (50.2%) and medium SES schools (50.3%) were significantly higher relative to high SES schools (44.4%); p<0.001, while participation remained constant across all days (48.0%, 48.2%, and 48.3%).

Conclusions: Increasing the number of LF entrées offered at school lunch results in a substantial increase in the selection of these foods, while maintaining participation rates in the school lunch program. This pattern is consistent across all SES groups.

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A-088b

WHEN DOES HEALTHY EATING BECOME UNHEALTHY?: EXPLORING DEFINITIONAL AND DISTINGUISHING FACTORS OF ORTHOREXIA

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A healthy diet has been strongly promoted as a means to reduce and prevent obesity. For some, the pursuit of healthy eating is taken to an extreme and may become orthorexia. Orthorexia is characterized as an inflexible obsession with healthy foods and healthy eating (Bratman, 1997). Many psychologists contend that orthorexia has aspects that are too similar to established pathologies, specifically obsessive-compulsive disorder and anorexia, which thereby constrain its legitimacy as a separate diagnosis. Others claim that it has unique characteristics including magical thinking about food and sense of superiority that qualify it as an independent disorder. The current study investigated definitional and unique dimensions of orthorexia. We developed items for an orthorexic tendency scale based on the Bratman's conceptualization and previous measures. This scale (28 items) and assessments of potential correlated and discriminative variables were administered online to 223 college students. A retest was administered 1-2 weeks later (n = 38). A factor analysis of the orthorexia measure yielded 4 factors with good alpha reliability and explained 66% of the variance. These factors were labeled: Control, Health Motives, Righteousness, and Self-Esteem and 14% of the sample had elevated scores on all factors. When combined into one overall orthorexic tendency score, a multiple linear regression found that health orientation, preoccupation with weight, and obsessiveness were significant predictors, respectively explaining 42%, 15%, and 9% of the variance. The orthorexia factors also had zero-order associations with the correlate and discriminant variables in predicted ways. The retest found good reliability. Together the results suggest that orthorexia likely has similarities to anorexia, obsessive-compulsiveness, and poor body image, yet these traits do not entirely account for the definitional and potentially diagnostic aspects of orthorexia. However, since this study has limitations, further research is warranted especially in regards to being able to distinguish between pathological and healthy eating.

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A-109a

I AM PREGNANT AND WANT DO BETTER BUT I CAN'T: FOCUS GROUPS WITH LOW-INCOME OVERWEIGHT AND OBESE PREGNANT WOMEN

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Objective. This study was conducted to identify daily stressors, changes made after becoming pregnant, and barriers and facilitators for healthy eating and physical activity among low-income overweight and obese pregnant women.

Methods. Low-income overweight and obese pregnant women (N = 96) attended 7 focus group discussions. Discussions were audio taped and transcribed. Common themes were identified.

Results. Women experienced daily life stress and negative feelings because of negative relationships with significant others, being told what to do or not to do, and taking care of young children at home. Most women said that they were emotional and slept all the time after becoming pregnant. Many withdrew from their social lives. They also faced numerous challenges in eating healthier, e.g., craving for unhealthy foods and eating foods for comfort or for two. To eat healthier, some reminded themselves

to avoid overeating or stop eating in the car. Women were not physically active because of tiredness, lack of motivation or social support, or bad weather. Some stayed physically active to prevent excessive pregnancy weight gain and have an easier labor. Women equivocally said weighing themselves to manage weight would stress them out and make them depressed.

Conclusion. Interventions to help low-income overweight and obese pregnant women avoid excessive pregnancy weight gain may address these barriers by providing simple and practical ways to improve relationships and parenting skills, manage negative feelings, avoid eating food for comfort and for two, and increase physical active.

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A-109b
REMOVAL OF VISUAL AND WEIGHT CUES RELATED TO THE AMOUNT OF FORMULA IN THE BOTTLE AS A STRATEGY FOR PREVENTING OVERFEEDING DURING BOTTLE-FEEDING

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Objectives: It is hypothesized that bottle-feeding leads mothers to feed in response to the amount of liquid in the bottle, rather than in response to infant cues, placing bottle-fed infants at higher risk for over-feeding. We tested the hypothesis that providing mothers with opaque, weighted bottles (OWBs; that remove visual and weight cues related to the amount of formula in the bottle) leads to lower infant formula intakes compared to when mothers are given conventional, clear bottles (CCBs).

Methods: Formula-feeding dyads (n=23) visited our laboratory on two separate days for feeding observations. Mothers were video-recorded while feeding their infants from a CCB on one day and an OWB on the other; bottle-order was counterbalanced across the two days of testing. Both bottles were glass with latex, low flow nipples; the OWB was fitted with a silicone sleeve containing a 60-g metal plate in its base. Infant intake was assessed by weighing each bottle pre- and post-feeding.

Results: Infants consumed significantly less formula when fed from OWBs compared to CCBs (112.6±8.4ml vs 129.0±9.1ml; F[1,21]=5.08, p=.04). Mothers were unaware of intake differences, as their reports of how much their infants consumed compared to usual did not differ across test days (F[1,21]=0.21, p=.66).

Conclusions: Given the wide-spread usage of bottles for infant feeding, a better understanding of how over-feeding can be avoided is an important focus for obesity prevention efforts. Our study highlights one simple, yet effective intervention: removal of visual and weight cues related to the amount of formula in the bottle.

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A-109c
SELF-MONITORING AS A MECHANISM FOR SUCCESS FOLLOWING BEHAVIORAL WEIGHT LOSS TREATMENT

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Self-monitoring has been shown to be a fundamental part of success in behavioral weight-loss programs, but less is known about the role of self-monitoring in the long run. During the year after intervention, participants commonly regain one-third or more of lost weight. We examined the association between self-monitoring and percent weight change during a 6-month intervention (Phase 1) and a 12-month extended care period (Phase 2) in a group of 167 obese women (M±SD: baseline BMI=37.0±5.1 kg/m2, age=59.9±6.2 years). We hypothesized that self-monitoring would continue to play an important role in weight loss in Phase 2. Participants were asked to keep daily food records in Phase 1; however, during Phase 2, participants were only asked to self-monitor three days per week. During Phase 1, group attendance was associated with weight change (r=-.474, p<.001), but self-monitoring frequency was not associated with either attendance or weight change. During Phase 2, correlations between group attendance and weight change (r=-.406, p<.001), self-monitoring frequency and weight change (r=-.486, p<.001), and attendance and self-monitoring frequency (r=.614, p<.001) were all significant. The mediating role of self-monitoring frequency on the relation between Phase 2 attendance and weight change was examined using the Preacher and Hayes model. Results showed self-monitoring frequency significantly mediated the relationship between Phase 2 attendance and weight change (95% CI [-.004, -.001], p<.001), such that participants who self-monitored more often also continued to lose more weight following the end of treatment. The mediation remained significant when age, education, race, and ethnicity were included as covariates (95% CI [-.003, -.001]). Previous research has demonstrated the benefits of self-monitoring during behavioral weight-loss programs; the findings from the current investigation show the importance of self-monitoring in maintaining or continuing weight loss following the end of an initial intervention.

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A-109d
OBSTETRICIANS' PERCEIVED BARRIERS AND INTERVENTIONS TO MANAGING GESTATIONAL WEIGHT GAIN

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Background: Pregnancy can be a major trigger for weight problems in some women. This study focused on obstetricians' perceived barriers to managing gestational weight gain along with interventions used for managing gestational weight gain.

Methods: A descriptive survey was mailed to obstetricians in Houston and San Antonio, TX. The sample (n =63) was 56% female with 71% practicing > 10 years. For practice setting, 73% were in private practice and 14% were at teaching hospitals/clinics. Patient populations managed by the sample were 39% White/Caucasian, 36% Hispanic/Latino and 20% Black/African American. Participants filled out 3 questionnaires: 1) Background Information; 2) Barriers to Gestational Weight Gain Management; and 3) Frequency of Gestational Weight Gain Interventions.

Results: Obstetricians greatest perceived barriers to gestational weight gain management after combining moderate and major barrier categories were: 1) patients not interested in changing behavior (78%); 2) high relapse rates (67%); 3) lack of community resources for referrals (60%); and 4) patients cannot afford referrals (59%).

Gestational weight gain interventions recommended often for pregnant patients by the majority of participants were: 1) increase activity (76%); 2) aerobic activity (64%); 3) increase fiber (i.e., fruit & vegetables) (62%); 4) patient education on weight management principles (62%); and 5) use IOM/ACOG guidelines for weight gain (59%). Interventions never used by the majority of participants were: 1) use of self-tracking weight gain charts (76%); 2) support group referrals (70%); and 3) advice to eat to appetite (62%).

Conclusions: Gestational weight gain management continues to be a challenge with multiple barriers for obstetricians, especially perceived patient motivation. Innovative behavioral medicine strategies need to be developed to address the problem.

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A-109e
IMPACT OF WEIGHT REGAIN ON DEPRESSIVE SYMPTOMS AFTER A BEHAVIORAL WEIGHT LOSS PROGRAM

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Participants in behavioral weight management programs commonly lose 8% - 10% of their body weight and subsequently regain one-third to one-half of their weight loss in the year following treatment. While losing weight has been shown to reduce depressive symptoms in obese individuals, it is unclear whether such improvements are maintained if an individual regains weight. In the current study, we addressed this question in a group of 103 obese older women (M ± SD: baseline BMI = 36.44 ± 4.83 kg/m2, age = 60.14 ± 6.32 years) who received six months of behavioral treatment and were evaluated at a one-year follow-up. Participants were divided into three groups: Group 1 (N = 58) had minimal net changes in body weight at Month 6 (M = -4.5%) and at Month 18 (M = -1.7%); Group 2 (N = 16) lost a clinically significant amount of weight but then regained it during follow-up (M = -11.9% at Month 6 and M = -5.2% at Month 18); and Group 3 (N = 29) lost a clinically significant amount of weight and maintained their losses at follow-up (mean net weight changes of -15.9% at Month 6 and -17.9% at Month 18). At Month 6, all three groups showed significant reductions in depressive symptoms on the Beck Depression Inventory (ps < .05), and there were no significant between-group effects. Over the course of follow-up, however, a significant increase in depressive symptoms was observed only in the group that had initially lost weight and subsequently regained it, and the group that lost and maintained their weight reductions showed significantly less depressive symptomatology than either of the other groups (ps < .05). Collectively, these results suggest that the beneficial effect of weight loss on depressive symptoms persists only if weight loss is maintained. This finding highlights the critical role that maintenance of weight loss plays in sustaining the psychological benefits of weight reduction.

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A-109f
OVERWEIGHT ADOLESCENTS IN SOUTHERN APPALACHIA DO NOT REPORT LOWER HEALTH-RELATED QUALITY OF LIFE

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Approximately 34% of adolescents are overweight or obese (Ogden, et al., 2012) and even higher rates have been documented in Southern Appalachia (USDHHS, 2005). Pediatric overweight/obesity is accompanied by numerous physical and psychosocial consequences (Dietz, 1998; Griffiths et al., 2010). Increasingly, research has focused on Health Related Quality of Life (HRQoL) as a health outcome. The purpose of this study was to examine differences in HRQoL across weight categories as well as the role of sex in moderating this relationship. Data were extracted from Team Up for Healthy Living, a school-based obesity prevention program targeting students in Southern Appalachia. Participants (N = 924; 50% Female; 94% Caucasian) completed the Pediatric Quality of Life (PedsQL) Inventory as part of a larger survey. Body mass index-for-age and sex percentiles were calculated using actual height and weight, and students were classified as underweight, healthy weight, overweight, or obese. A factorial ANOVA showed no main effects between total HRQoL and weight status and no significant interaction effect of adolescent sex. The lack of HRQoL and weight status findings contrast with previous research showing higher HRQoL scores in healthy weight as compared to overweight/obese youth (Griffiths et al., 2010; Tsiros et al., 2009; Ul-Haq et al., 2013). These results suggest the possibility of other factors unique to the Southern Appalachia region, compared to other regions of the nation, may contribute to one's perceived HRQoL in the context of weight. Consistent with previous research (Keating et al., 2011; Swal-

len, et al., 2005; Tsiros et al., 2009), the current study yielded a main effect for student sex indicating females report significantly lower HRQoL than males (p < .05). Future studies are needed to examine other factors that may explain our lack of significant findings between HRQoL and weight status in this population, and to evaluate the potential role of sex as a moderator within the relationship between adolescent weight and HRQoL (Tsiros et al., 2009).

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A-109g
MOTIVATIONAL AND AFFECTIVE RESPONSES TO FTO GENETIC TEST FEEDBACK: RESULTS FROM A RANDOMIZED CONTROLLED TRIAL

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Genetic testing for risk of weight gain has uncertain benefits and may have adverse psychological consequences. We carried out the first randomized controlled trial investigating the psychological effects of adding obesity gene feedback (FTO) to simple weight control advice in a context with raised risk of weight gain (first year at university) to discover whether it could have clinical utility for weight gain prevention. We have already shown that FTO predicts weight gain over this time. Students who had volunteered for genotyping (n=1016) were randomised to receive i) a simple weight-control advice leaflet (AO) or ii) personal FTO feedback in addition to the weight-control leaflet (FA). Motivational and affective responses were examined in multivariable analyses adjusting for age, sex, BMI at baseline and family history of obesity. Due to delays in genotyping, loss to follow-up was high; data were available for only 279 participants but post-hoc power analyses showed 90% power to detect a small difference in weight control intentions (d=0.25) and there were no baseline differences between completers and non-completers. Participants in the FA condition were more likely than those in AO to be thinking about controlling their weight (OR=1.77, 95% CI=1.08-2.98, p=0.023), with overweight/obese individuals in the FA group being more likely to have started weight control than those in the control group (OR=6.67, 95% CI=1.13-39.25, p=0.036). There was no evidence that higher-risk (vs. lower-risk) FTO results increased fatalism (p=0.217), or that lower-risk results induced complacency (p=0.546), but qualitative data showed reduced guilt or self-blame among obese participants. There were no differences in behaviours or weight loss (p=0.85, p=0.13). FTO feedback may have psychological benefits beyond 'objective' clinical utility, and could be considered as a novel way to promote engagement with weight management.

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A-109h
WEIGHT LOSS TRAJECTORIES ON POPULAR REALITY TELEVISION SHOWS: A CONTENT ANALYSIS OF THE BIGGEST LOSER

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Background: Weight loss reality television (WLRTV) programming cultivates among viewers a sense of an attainable, "successful" weight loss trajectory for obese individuals. Thus, it is important to examine how weight loss is portrayed and interpreted by obese individuals losing weight in the media spotlight.

Methods: We conducted a content analysis of seasons 10-13 of The Biggest Loser (n=62 episodes with weigh-ins; M=14.5 weeks/season plus a season finale). Three coders independently recorded each contestant's weekly weigh-in results and their perception of the contestant's reaction (positive, negative, or ambivalent) to learning the weigh-in results. For each weigh-in, the reaction receiving two or more "votes" by coders was used in the analysis; reactions without a majority were coded as ambivalent.

Results: In the first week of the show, contestants lost an average of 17.91 lb (SD=8.96 lb); 83% reacted positively to their first weigh-in results. The rate of weight loss dropped substantially during the subsequent weeks (up to, but not including, the season finale) whereby contestants lost an average of 6.23 lb (SD=4.17 lb) per week. Significant differences were observed in the amount of weekly weight loss eliciting a positive (versus negative and ambivalent) reaction from contestants for weeks two through ten (p<.05 for all comparisons); beyond week ten, contestants exhibited greater variation in weight loss and their response to learning the weigh-in results.

Conclusions: The weight loss trajectory portrayed by obese adults participating on a popular WLRTV show greatly exceed the recommended rate of loss of 1-2 lb/week as well as the weight loss outcomes typically obtained by behavioral intervention. This substantial misalignment may contribute to disappointment and program attrition among obese individuals seeking weight loss, and unrealistic weight loss expectations among health care professionals working with this population.

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A-109i
MEDICAL STUDENTS' PREPAREDNESS TO PROVIDE BEHAVIOR CHANGE COUNSELING TO OBESE PATIENTS

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Background: Weight-related behavior change counseling is an important component of primary health care, and can help patients lose weight and adopt new behaviors if delivered in a patient-centered and non-judgmental manner. Despite this, many clinicians avoid discussing body weight and weight-related behaviors. This may be due to beliefs that patients will be unable to change or lack of knowledge of counseling strategies. Medical

schools must provide future physicians with the skills needed to counsel patients, as well as an environment that fosters positive attitudes about and confidence to provide that counseling. The purpose of this study is to identify medical student attitudes and characteristics of the medical school enviroment that predict preparedness to provide behavior change counseling to obese patients.

Method: A stratified random sample of 50 US medical schools was drawn and 40 4th year students from each of those schools were randomly selected. Those students were contacted and asked to participate in a web-based survey about their medical schools. Of those 2000 students, 1286 (64%) completed a survey which included measures of both student attitudes and overall school climate regarding obese patients. We used multiple linear regression to identify predictors of preparedness to counsel obese patients.

Results: Several factors significantly predicted preparedness, including the number of course hours spent learning how to provide care for obese patients, belief that diet and physical activity were contributors to obesity, greater empathy, greater belief in the importance of patient-centered care, and less exposure to negative comments or derogatory humor about obese patients by professors, instructors, attendings, and residents.

Discussion: Providing training in counseling strategies and creating an environment where obese patients are respected may improve new physicians' preparedness to provide weight-related behavior counseling.

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A-110a
NEUROTICISM, OCCUPATIONAL BURNOUT, AND SOMATIC HEALTH COMPLAINTS: RESULTS FROM A RANDOMLY SELECTED NATIONWIDE SAMPLE OF CERTIFIED ATHLETIC TRAINERS

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Occupational burnout has been widely investigated and continues to impact the quality of life of millions of adults. We investigated the role of the neurotic personality trait in the relationship between occupational burnout, predicting somatic health complaints. Specifically investigated was whether neuroticism directly predicted, independent of burnout, somatic health complaints (direct effect) and whether neuroticism indirectly predicted somatic health complaints via burnout (indirect effect). A stratified (age, gender, years in the profession), proportionate, random sample of adults employed full-time as athletic trainers (ATs) in college/university, industrial/clinical, and secondary/school youth settings was utilized. Participants completed web-administered versions of the NEO-FFI, Maslach Burnout Inventory, and the somatic health complaints subscale of the Symptom-Checklist (SCL-90-R). The sample included 480 female ATs and 454 male ATs (mean age= 33.84, SD= 8.29). The majority (n= 330) of ATs had over 10 years of experience and were working in clinical/industrial settings (n=365). After meeting multivariate normal assumptions, structural equation modeling (SEM) was conducted. Goodness of fit indices and significant beta weights

indicated a predictive direct and indirect model of neuroticism to somatic health complaints. These results show that the neuroticism personality trait is directly and indirectly implicated in the etiology and health impacts of occupational burnout.

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A-130a
THE EFFECT OF PARENTAL SOCIAL SUPPORT ON CHILDHOOD ASTHMA CONTROL

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Background: Puerto Rican (PR) children are disproportionately affected by asthma, and Mexican children have the lowest prevalence and morbidity among Latino subgroups. While these disparities are poorly understood, social support appears to have a beneficial impact on health outcomes, including asthma control. We aimed to investigate the relationship between social support and asthma control among PR and Mexican caregivers and children.

Methods: Participants were 267 primary caregivers and their children with asthma (5-12 years) of PR (n=79) and Mexican (n=188) descent recruited from Bronx, NY and Phoenix, AZ. Parent-child dyads completed the Social Networks questionnaire and the Childhood Asthma Control Test. Logistic regression was used to determine the impact of social support on asthma control.

Results: Caregivers' total level of social support predicted better asthma control among their children (p<.05), and support received from each family and friends independently predicted better control (p<.05). Consistent with the literature, Mexican children had better asthma control than PR (p<.001); however, there was no significant interaction between ethnicity and social support. Mexican caregivers were more likely to be married (p<.001), but no difference was found on level of support between Mexican and PR caregivers.

Conclusion: Across Latino subgroups caregivers' social support provided instrumental benefits in managing children's asthma. Asthma management is associated with many stressors and may be a burden. Our findings may suggest that social support reduces some of this burden enabling caretakers to better manage their child's asthma. For example, the presence of support may assist in the day-to-day tasks of asthma management, or may decrease caregiver stress and psychological burden. This suggests that level of social support may have important implications for asthma control interventions (e.g., support groups).

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A-130b

USE OF EVIDENCE-BASED INTERVENTIONS IN AFRICAN AMERICAN FAITH-BASED ORGANIZATIONS: CHALLENGES AND OPPORTUNITIES

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Health promotion interventions offered through faith-based organizations (FBOs) have become an increasingly popular approach, particularly in the effort to improve health and eliminate health disparities. It is estimated that 53% of African Americans attend a place of worship on a weekly basis. More and more FBOs (such as churches) offer structured health promotion activities such as health fairs, screenings, or education, sometimes termed "health ministry." However, without an external partner such as a healthcare provider or a university, most churches do not know how to access evidence-based interventions (EBIs), which are strategies known to be effective based on prior studies. Conversely, researchers have developed many EBIs for use either in or outside of FBOs, however little is known about how to achieve broader dissemination of these interventions within FBOs. In addition, the increase in technology penetration among minorities may help to play a role in dissemination of EBIs in FBOs. The present study aimed to 1) determine facilitators and barriers in FBOs to adopting and implementing EBIs; and 2) identify technologies that FBOs currently use and are interested in using to implement health activities. We conducted 18 key informant interviews with African American FBO leaders and 6 focus groups with members. Overall, there was limited awareness of the term "evidence-based" and how to access EBIs. The most common health ministry strategy was distribution of print materials. Challenges included maintaining a trained or qualified volunteer base, sustainability, lack of resources, and need for technical assistance. Technology use was present (e.g., internet, social media, tablet computers, smart phones, text messaging), but was less utilized among older adults. Findings provide implications for implementation and health promotion research in FBO settings.

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A-130c

DISTINGUISHING BETWEEN COPD & ANXIETY: FACTOR STRUCTURE OF THE BECK ANXIETY INVENTORY

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Applied behavioral medicine findings cut across boundaries to help clinicians identify and treat mental health disorders in medical settings, where rapid assessment is critical. Such assessments are particularly important and needed for individuals with chronic obstructive pulmonary disease (COPD) as they often experience anxiety. Unfortunately, assessing anxiety in this population is complicated by the overlap between symptoms of anxiety and COPD. The current study describes the factor structure of the Beck Anxiety Inventory (BAI) in patients with COPD to identify characteristics that might be used to aid in the rapid assessment of anxiety.

Participants (N=162) with COPD completed the BAI, Chronic Respiratory Disease Questionnaire, Patient Health Questionnaire-9 and Medical Research Council dyspnea scale. Principal component analysis (PCA) was conducted on the BAI's 21 items. Multiple regression analyses assessed associations among anxiety, depression, COPD-related functional impairment and quality-of-life domains.

PCA identified four factors: 1) general somatic distress, 2) fear, 3) nervousness, and 4) respiration-related distress. Multiple regression analyses suggest that greater fear was associated with less perceived mastery over COPD (β = -0.19, t(149) = -2.69, p < .01).

Fear may be an important indicator of anxiety in patients with COPD. Focusing anxiety assessments on fear may help clinicians more rapidly and confidently identify and treat anxiety in this population.

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A-130d

THE CROSS-CULTURAL VALIDITY OF THE EDI-3 EATING DISORDER RISK SUBSCALES: A COMPARATIVE FACTOR ANALYSIS WITH CAUCASIAN AMERICAN AND AFRICAN AMERICAN SAMPLES

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This study examined the cross-cultural validity of the eating disorder subscales of the Eating Disorder Inventory-3 (EDI-3) in Caucasian American and African American female samples. A comparative factor analysis was conducted in order to determine the fit of a three-factor model of Eating Disorder Risk, within the EDI-3, proposed by Garner (2004). The sample consisted of 197 Caucasian American and 104 African American females. Confirmatory Factor Analyses (CFA) of the three-factor model were conducted separately for each ethnic group using Lisrel 9.1. CFA results indicated the 3-factor model was an adequate fit for the Caucasian sample, but only a mediocre fit in the African American sample. Follow-up Exploratory Factor Analyses indicated that the Caucasian data produced a pattern matrix consisting of three factors (Drive for Thinness, Body Dissatisfaction, and Bulimia) while the African American data produced a pattern

matrix consisting of four factors (Drive for Thinness, Bulimia, Body Dissatisfaction, and Body Satisfaction). Assessment of item composition differences under similar factors, mean differences, and correlations further elucidated differences found between the two samples. The overall results of the factor analyses suggest that the EDI-3 may be capturing different constructs for African American Americans compared to Caucasians.

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A-130e
EXAMINING PREDICTORS OF HEALTH LITERACY AMONG LOW-INCOME LATINAS

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BACKGROUND: Over one-third of US adults have limited health literacy (HL), which increases risk for poor health outcomes. Across racial/ethnic groups, the prevalence of low HL is greatest among Latino populations. Known predictors of HL include education, age, and race/ethnicity; however psychosocial factors may protect against low HL and influence healthy behaviors. This study examined predictors of HL among low-income, Latina mothers (N=80) in Kennett Square, PA.

METHODS: Spanish-translated surveys assessed HL (Newest Vital Sign), healthy eating social support (HESS), and healthy eating change strategies (HECS). HL score was dichotomized to reflect high and low literacy levels. Independent t-tests determined mean differences between HESS/ HECS scores and HL level. Logistic regression was used to predict high and low HL, adjusting for covariates. Odds ratios (OR) and 95% Confidence Intervals (CI) determined predictors of HL. Chi-squares examined associations between health conditions and HL.

RESULTS: Mean age was 33±5 years. Most did not complete high school (76.3%) and over half had low HL (56.3%). Mean HESS and HECS were 3.54 and 3.03, respectively. HL was not associated with any health conditions, HESS, or HECS. Educational attainment was the only significant predictor variable; where Latinas who did not finish high school were three times more likely to have low HL (OR=3.30; 95% CI = 1.09, 10.01).

DISCUSSION: In this study sample, participants were relatively young and healthy; however 56% had low HL. Among Latinos, limited HL is compounded by cultural, economic, and language barriers and continues to be a public health priority. While education remains a strong predictor of HL, limited variability of HESS and HECS responses likely contributed these results. Future research should include a larger and more diverse Latina sample to examine potential associations between psychosocial factors and HL. Educational strategies should be culturally tailored to impact HL and subsequent health outcomes in this high-risk population.

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A-130f
PSYCHOLOGICAL AND CULTURAL PREDICTORS OF MEDICAL MISTRUST AMONG URBAN AFRICAN AMERICAN MEN

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Lack of trust in medical providers and the health care system is associated with underutilization of health care resources and nonadherence to medical advice. Medical mistrust is particularly high among African Americans. This study explored psychological and cultural characteristics associated with medical mistrust in a sample of urban African American men.

Participants (N=477) were recruited via community-based strategies and completed the Conformity to Masculine Norms Inventory (CMNI), the Black Identity Classification Scale (BICS), and the Medical Mistrust Index (MMI). A supervised random forest analysis was conducted to determine which factors were most useful in predicting high MMI scores (i.e., above the median). Random forest analysis creates segments of participants with the greatest possible homogeneity within and heterogeneity between segments.

Participants had a mean age of 49 years (SD=11, range=21-78) and most had little formal education (63.7% HS or less). Most were unemployed or disabled (60.7%), and most reported a total household income below $20k (78.2%). Over one third (36.2%) had no insurance, and of those who did, 47% had Medicare or Medicaid. About one quarter (24.7%) reported having no usual source of healthcare. All of these variables along with the CMNI and BICS subscale scores were entered into a random forest analysis with MMI score as the criterion. The strongest predictors of higher MMI scores were the BICS racial salience and cultural mistrust subscales; the CMNI self-reliance and dominance subscales; younger age and less comorbidity. Higher MMI scores were also associated with perceived discrimination by race but not with perceived discrimination by income or insurance.

Participants with the highest levels of medical mistrust were younger and healthier, tended to view themselves as more self-reliant and dominant, and perceived race as particularly salient and divisive in their lives. Such information can be used in health marketing initiatives designed to build greater trust in the health care system among this segment of African American men.

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A-139a
EVIDENCE OF GENDER DISPARITIES IN WEIGHT AND BEAUTY BIAS TOWARD CHRONIC PAIN PATIENTS

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Research consistently demonstrates the presence of anti-fat bias in medical and health settings (see Puhl & Brownell, 2001 for review). Studies have found that healthcare professionals

and trainees associate obesity with negative characteristics that include dishonesty, laziness, sloppiness, low intelligence, and unattractiveness (e.g.: Price et al, 1987; Wiese et al, 1992). Such bias may be particularly salient for female patients, as research finds a stronger weight bias against women across various settings (Fikkan & Rothblum, 2011). The current study examined the associations between participants' perceptions of patient weight and their ratings of patient likability, similarity to self, and attractiveness. Photographs of 34 patients (19 female) with chronic back pain were viewed by 785 students (550 female) at the University of North Texas (n = 625) and Indiana University-Purdue University Indianapolis (n = 186). Participants categorized the patients into weight categories ranging from underweight to obese, rating each patient twice. Participants likewise rated perceived patient likability, similarity to self, and attractiveness using a 10-point Likert-type scale. As expected, significant positive associations emerged among ratings of patient likability, attractiveness, and similarity for both male and female patients (r = .67 -- .96, all p's < .01). Interestingly, participants' ratings of perceived patient weight were negatively associated with ratings of likability, attractiveness, and similarity for female (r -.50 -- -.71, all p's < .05) but not male (r = -.45 -- .20, all p's > .05) patients. Subsequent analyses indicated that this finding was particularly pronounced for female raters. Discussion focuses on the role of gender bias in weight and beauty perceptions and the possible implications for patient-provider interactions in the context of chronic pain.

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A-139b
THE RELATION OF PSYCHOLOGICAL SYMPTOMS TO IMPLANTABLE DEVICE OUTCOMES FOR CANCER PAIN MANAGEMENT

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Introduction: Psychological symptoms are a common part of the cancer pain experience, yet little is known about how these factors may relate to implantable device outcomes in patients with cancer pain. The purpose of this study is to examine how psychological symptoms relate to implantable device outcomes in cancer pain management.

Methods: We retrospectively examined the medical records of 79 cancer patients and collected information on psychological symptoms and pain, as assessed on the Edmonton Symptom Assessment System (ESAS). Data were collected prior to and at three points following the implantation of either a spinal cord stimulator or an intrathecal pump.

Results: Pain was correlated with both anxiety, r = 0.39 (n=74; p< .01), and depression, r = 0.38, (n = 75; p< .01), at the pre-surgery baseline. Results of LMM analysis indicated that neither baseline anxiety nor baseline depression main effects were significantly associated with pain at post-implant assessments, when adjusting for baseline pain and demographics. However, the symptom-time interaction was significant for anxiety (Beta = 0.233; p-value = 0.032). The trajectory of pain scores overtime

differed by baseline anxiety scores, with pain scores increasing overtime at a higher rate for those with a high baseline anxiety score, compared to those with low baseline anxiety scores. The symptom-time interaction was not statistically significant for depression.

Conclusion: Pre-surgery psychological symptoms should be considered, along with other medical, psychosocial, and individual characteristics in multidisciplinary treatment planning. Multidisciplinary care which includes aspects of mood management or supportive psychotherapy would likely be beneficial to cancer patients presenting with high psychological symptoms.

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A-139c
NON-PHARMACOLOGICAL MANAGEMENT OF ACUTE PAIN SYMPTOMS IN PEDIATRIC PATIENTS

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Pediatric acute pain is often undertreated and undermanaged due to a lack of fast-acting and effective pain management interventions. Needle stick procedures, in particular, receive some of the highest patient-reported pain scores. Needle stick pain is often described by patients as an "acute pain phenomenon"; more than physical hurt, it includes feelings of fear and anxiety. This study explored the feasibility of implementing a fast acting non-pharmacological intervention to reduce physical pain and psychological anxiety experienced during needle sticks.

Forty outpatients from a pediatric hospital were referred to the Laboratory Medicine Clinic for a routine blood draw. Treatment Group subjects completed a non-pharmacological intervention: a mandala art-therapy directive. Control Group subjects received standard of care treatment during needle stick procedures. Participants' heart rate and blood oxygen saturation were recorded to measure physiological stress. Stress behaviors were observed and included fidgeting, crying, screaming, and the need for physical restraint. Participants were asked to complete a one-item anxiety questionnaire pre- and post-needle stick. Participants were also invited to complete a one-item pain scale after the procedure.

Results indicated high feasibility of using a non-pharmacological intervention for pain and anxiety during a needle stick. Treatment Group subjects demonstrated fewer stress behaviors when compared with Control Group subjects (p=0.03). Anxiety changed over time in the Treatment Group, decreasing from pre-procedure ratings to post-procedure ratings (p=0.04). The Control Group showed no significant change in anxiety (p=0.77). A high anxiety subset of the Treatment Group showed significant decreases in physiological, behavioral, and psychological stress when compared with a high anxiety subset of the Control Group. There was no significant difference in subjective pain between the two groups, though self-reported pain was low for the majority of the participants.

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A-160a

MOVEU: EXPLORING THE ROLE OF SOCIAL MEDIA IN PHYSICAL ACTIVITY PROMOTION

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Background: Social media sites such as Facebook (FB) and Twitter have become increasingly popular as complimentary tools in health promotion campaigns. However, few physical activity (PA) promotion campaigns have rigorously evaluated the utility of these tools in terms of the purposes and goals for which they are being used. "MoveU" is a tri-campus social marketing campaign that was piloted in the fall of 2012 at University of Toronto in collaboration with ParticipACTION. It was designed to promote the role of PA as an integral component of the university experience. The primary target audience are first year females. MoveU leverages Facebook and Twitter as additional tools for the overall social marketing strategy.

Purpose: To evaluate the reach and engagement of MoveU's FB page over the fall term of 2013.

Methods: A mixed methods evaluation was used. Reach (page "Likes") and engagement (post level clicks, comments, likes, and shares) were evaluated using quantitative data provided from FB Insights. Qualitative content analysis of posts was undertaken using a coding scheme informed by interviews with key partners involved in the campaign.

Results: Over the fall term (August 26 to December 20, 2013), the MoveU FB page reached 564 new fans for a total of 1,800 fans. 82% of fans were female and 71% were 18-24 years old. Out of 261 posts that were analyzed, the majority of posts (55%) informed students about different opportunities to be active around the campuses, while 29.5% of posts contained motivational content reflecting theoretical variables related to behaviour change such as outcome expectancies and self-efficacy. Average engagement (39) was higher for posts that contained motivational content compared with posts that were promoting campus recreational information (32.5).

Conclusion: This evaluation provides preliminary evidence that the social media strategy is reaching its target audience although the number of users and amount of student engagement remains modest. Future qualitative work will examine how mediated MoveU messages are being received by students.

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A-160b

BEHAVIOR CHANGE TECHNIQUES IN TOP-RANKED MOBILE APPS FOR PHYSICAL ACTIVITY

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Background: The recent proliferation of smartphones has turned mobile applications (apps) into potential tools for increasing physical activity. The behavior change techniques marketed in these apps, however, are not well characterized.

Purpose: The goal of this study was to characterize the behavior change techniques and their combinations represented in online descriptions of top-ranked physical activity apps for smartphones and tablets.

Methods: A total of 167 top-ranked apps in the Health and Fitness category were identified in the iTunes and Google Play app stores on August 28, 2013. The online description of each app was reviewed and coded independently by two trained coders using the CALO-RE taxonomy of 40 behavior techniques.

Results: App descriptions referred to between 1 and 13 behavior change techniques, but most of them included less than 4 of the total techniques, and 14 of the techniques were not found in any of the apps. The most common techniques involved providing instruction on how to perform exercises, modeling/demonstrating how to perform exercises, providing feedback on performance, goal-setting for physical activity, and planning social support/ social change. A latent class analysis of technique configurations within apps revealed two types of apps: educational and motivational.

Conclusion: Behavior change techniques are not widely marketed in contemporary physical activity apps. Depending on a person's needs when attempting to modify their behavior, multiple apps may be needed for people who seek to initiate and maintain physical activity. Taxonomies of behavior change techniques provide a useful and inexpensive lens through which apps can be viewed and evaluated by scientists and clinicians.

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A-160c

EXAMINING DIFFERENCES IN ACTIVE TRAVEL BY GENDER AMONG COLLEGE STUDENTS

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Background: Active travel (AT) is associated with various health benefits and could be beneficial in preventing the decline in physical activity. Distinctions amid the physical and sociocultural environments may explain differences between genders. Forming a habit for AT in college may be translated into AT later in life, reducing gender disparities and improving the health of the population.

Objective: This study examined differences in college students' AT by gender.

Methods: Students at a large northeastern US university completed an online survey on demographics, height frequency/ mode of travel to/around campus, and social/physical environmental influences on travel. Analyses examined relationships and differences between genders.

Results: Participants (n=782) were primarily white (85.3%), female (62.7%), normal weight (63.1%), undergraduate students (85.4%). Males (n=292) were more likely than females (n=490) to have a car (p=.015) or a bike (p<.001). On average, males reported driving to campus 2.46 times/week compared to

1.81 times/week for females (p=.04). Males reported biking to campus more than females on average (2 and .73 times/week, respectively; p<.001). Females were more inclined to cite physical environment influences such as sidewalks, maintenance, terrain, and traffic (p<.05) and sociocultural influences like crime and physical appearance (p<.05) as impacting their choice on transportation to campus. Confidence biking around town (p<.001) and around campus (p<.001) and friends/classmates' travel modes (p=.02) were more important for females than males. Males were more likely to walk or bike between classes more if they had a friend/classmate to travel with (p=.03). Males also reported using AT as their only form of travel between classes (p=.003).

Discussion: This study provides insight on the relationship between gender and AT behavior among college students, showing major differences among the influences of AT between genders and greater AT among males than females. This information may be helpful in identifying future directions for AT interventions targeted at female college students.

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A-160d
A WEB-BASED PHYSICAL ACTIVITY PROMOTION PROGRAM FOR KOREAN AMERICAN MIDLIFE WOMEN

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Background: To increase physical activity, many interventions including Web-based programs have been developed. However, these programs have rarely been tailored to Asian Americans while considering their cultural attitudes toward physical activity.

Purpose: The purpose of this pilot study was to develop a Web-based physical activity promotion program for a sub-ethnic group of Asian Americans—Korean American midlife women—based on findings from previous studies on Korean American midlife women's attitudes toward physical activity.

Methods: This was an intervention development study. The Web-based program was developed using the information mapping approach. Then, through teleconferences, 10 experts were asked to evaluate the program, and the Cognitive Walkthrough method was used. Then, 10 Korean American midlife women were asked to use the program and their feedback was obtained through a 1-month online forum. The data were transcribed and analyzed using a content analysis. Then, the research team made decisions on the development of specific areas, and incorporated them into further development of the program.

Findings: Three modifiable determinants (attitudes, self-efficacy, and perceived barriers) of physical activity were selected. Menus were developed based on the three determinants. The Ruby on Rails framework and the Xen hypervisor were used. The program included interactive online message board, interactive online educational sessions, and online resources. Graphic User Interface controls were used, and the presentation styles were tailored to Korean American. All the experts positively evaluated the program and provided feedback on the content and structure. Korean American midlife women also positively evaluated the program and provided feedback on the menu, structure, display, and content.

Conclusions: This study suggests that researchers make continuous efforts to develop and test Web-based programs for behavior modifications of people across the lifespan.

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A-160e
IMPACT OF MHEALTH INTERVENTION TARGETING PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOR ON CHANGE IN PHYSICAL ACTIVITY AND SELF-EFFICACY

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Background: Increasing physical activity reduces the risk of multiple illnesses (i.e. obesity/cancer) and decreasing sedentary leisure time allows more time for physical activity. Self-efficacy influences the amount of effort and persistence put into behavioral change, increasing the odds that change will be maintained.

Methods: In the Make Better Choices study, 204 adults were randomized to four treatment conditions and assessed before and after a 3 week intervention that required them to change activity (increase activity or reduce sedentary leisure time) and food (reduce saturated fat or increase fruit and vegetable consumption) behavior by using mobile self monitoring technology and personalized phone coaching. Repeated measures ANOVAs tested the effect of treatment on change in actual physical activity and sedentary behaviors, measured by accelerometers, as well as change in self-efficacy for these behaviors, measured by self-report.

Results: A significant activity treatment x time interaction showed that those coached to increase activity did so to a greater degree than those told to reduce sedentary leisure time (F(1,187)=12.29, p=0.00) and vice versa (F(1,197)=20.54, p=0.00). Self-efficacy for physical activity showed a treatment x time interaction (F(1,182)=3.981, p=0.048) such that it increased for those coached to increase activity, but decreased for those coached to decrease sedentary leisure time.

Conclusion: Those coached to exercise felt more confident they could continue to exercise post intervention, while those told to watch less TV felt less sure they would be able to exercise post intervention. Results are consistent with Baumeister's self-regulatory model, which posits that exerting self-control to inhibit a tempting behavior (watching television) depletes a limited resource, reducing the strength available for further self-regulatory efforts (exercising). For adults to initiate and maintain a more active lifestyle, physical activity needs to be targeted directly; decreasing sedentary leisure is insufficient.

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A-160f

MEASURING PHYSICAL ACTIVITY WITH PEDOMETERS IN ELEMENTARY SCHOOL CHILDREN: COMPLIANCE, RELIABILITY, AND REACTIVITY

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Introduction: Pedometers are a reliable and valid method to assess physical activity in elementary school children, but the evidence of reactivity is inconsistent.

Purpose: To examine the compliance rate, reliability, and reactivity of using pedometers to measure physical activity in elementary school children attending afterschool programs.

Methods: A total of 133 children with an average age of 9 years old participated in a cross-sectional study, and a subsample of 50 randomly selected children participated in a pretest-posttest study. IRB approval, parental consent and child assent were obtained before data collection. All the children wore unsealing pedometers for seven consecutive days (Day 1 to 7), and the 50 children in the subsample also completed the surveys measuring physical activity self-efficacy, enjoyment, parental influence and environment on Day 1 as well as Day 8 (pretest and posttest). Adult guidance and incentives (basketball prizes and kick balls) were used to increase the compliance rate of wearing pedometers.

Results: Almost 87% of the children returned pedometers with seven children not wearing pedometers at all, and 62% wore pedometers for more than three days with 38% wearing for seven days. The Intraclass Correlation Coefficients (ICCs) ranged from .70 to .87, with the ICC for four-day pedometer steps exceeding .80. Results from mixed regression model indicated that pedometer steps did not change significantly from Day 1 to Day 7, either change from Monday through Sunday. Additionally, the paired-samples t-test results in the 50 children showed that children's perceptions of physical activity self-efficacy, enjoyment, parental influence or environment did not significantly change after seven-day pedometer wearing.

Discussions and conclusion: Using pedometers to measure elementary school children's physical activity is feasible and reliable. Four-day pedometer steps are adequate to measure physical activity, and there is no reactivity of wearing pedometers in elementary school children.

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A-160g

DAILY PHYSICAL ACTIVITY ENHANCES RESILIENT RESOURCES FOR SYMPTOM MANAGEMENT IN MIDDLE-AGED WOMEN

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The benefits of habitual physical activity are well-established; however, the effectiveness of physical activity to alleviate menopausal symptoms remains equivocal. These inconclusive findings can be attributed to the complexity and individualized experience of the transition which requires the understanding of both between- and within-person factors in biological and psychosocial processes. The aim of the present study was to unveil potential underlying pathways of the physical activity and menopausal symptom association to better understand the critical question of "whether, how, for who, and under what circumstances" physical activity may help alleviate symptoms. Community-dwelling middle-aged women (N = 103; age range 40-60 years) completed daily Internet surveys at the end of the day and wore an accelerometer for objective assessment of physical activity for 21-days. 1-1-1 multilevel mediation models were estimated to test whether resilient resources (i.e., positive affect and coping efficacy) mediated the association between physical activity and symptom burden at both the between- and within-person level. Results from the analysis demonstrated daily physical activity had an indirect effect (-.23) on daily symptom burden through the enhancement of positive affect at the within-person level (p < .05; 95% CI based on 20,000 Monte Carlo replications [-.28, -.12]). In models that tested coping efficacy as the mediator, it was found that the indirect effect of daily physical activity on daily symptom burden at the within-person level was -.11 (p <. 05; 95% CI based on 20,000 Monte Carlo replications [-.18, -.04]). That is, on days when a woman engaged in more physical activity than usual, she reported higher than usual positive affect and coping efficacy both of which were associated with lower daily symptom burden. These effects were non-significant at the between-person level, suggesting one way in which physical activity may help a woman to cope with her symptoms is through the enhancement of positive affect and coping efficacy on a day-to-day basis.

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A-160h

COGNITIVE MEDIATORS IN THE EFFECT OF BODY MASS INDEX ON PHYSICAL ACTIVITY

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The rising rates of adolescent obesity are a leading public health concern. Because adult weight status is often predicted by adolescent weight status, early intervention is key. Physical activity (PA) is a common element to preventing and treating obesity in youth. Obese youth are less physically active than their normal-weight peers (Janssen et al., 2005). Understanding the cognitive facilitators and barriers to PA related to weight status supports more effective interventions. The current study focused on two factors, self-efficacy for PA (SEPA) and self-concept for PA (SCPA), evidenced to be influenced by weight status and predictive of PA in adolescents. This study adds to the existing literature by examining these relationships longitudinally in underserved youth. It was hypothesized that SEPA and SCPA would mediate the longitudinal relationship between body mass index (BMI) and moderate-to-vigorous PA (MVPA). Participants were 1422 underserved youth from the Active by Choice Today trial. The mean age was 11.3 (SD=0.59), 73% were Black, and 54% were girls. Data were collected pre-randomization (T1) and 19 weeks later (T2). The product of coefficients approach was used to test the significance of the mediated paths. The analyses indicated no mediation effect. The direct effect was significant. T1 BMI predicted lower T2 MVPA (B=-0.044, SE=0.01, p<.05).

The b path for SCPA was significant with T2 SCPA positively correlating with T2 MVPA (B=0.172, SE=0.08, p<.05). There was a trend towards significance in the a path, with T1 BMI predicting T2 SCPA (B=0.007, SE=0.004, p=.087). Overall, the results provide preliminary evidence for SCPA as a potential mediator explaining why obese youth are less physically active. These results suggest targeting SCPA in PA interventions for youth. Moreover, since positive self-concepts are associated with positive mental health (O'Mara et al., 2006), these results point to the potential importance of SCPA in integrative intervention programs targeting obesity and related mental health outcomes.

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A-169a
A SURVEY OF THE RECURRENCE RISK PERCEPTIONS AND PERCEIVED CAUSES OF AUTISM SPECTRUM DISORDERS (ASD) AMONG TAIWANESE PARENTS

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Purpose: Autism Spectrum Disorders (ASD) is a type of complex, multifactorial and genomic disorder. Strong evidence has demonstrated that parents of children diagnosed with ASD are at an increased risk of having another affected pregnancy in the future. The recurrence risk of another child developing ASD is 2-9% among parents having one affected child and increases to 25-35% for parents with two or more affected children. With increased prevalence of ASD in Taiwan, it is important to understand the recurrence risk perceptions and perceived causes among Taiwanese parents having ASD children. This project attempted to address this problem and contribute for the development of better genetic services and health education programs in Taiwan.

Methods: 433 parents of ASD children completed the mailed paper questionnaires. The selected children were enrolled from preschools and elementary schools in Taiwan.

Results: Among the final sample, most were females (76.3%), with an average age of 38.8 years. The majority of parents (80.4%) perceived their recurrence risk of having another child with ASD was larger than 40%. Compared to other parents with normally-developed children, approximate half of the parents considered their chances of giving birth to another child with ASD were either higher (38%) or much higher (11.6%). The top three frequently mentioned reasons that parents believed may cause their children to develop ASD were 1) hereditary (41.5%), 2) environmental factors (36.7%), and 3) problems/complications during pregnancy (36.2%).

Conclusions and Discussion: Our study indicated that although majority of the participants were aware of the causes of ASD, most had incorrect perception regarding their recurrence risk of having another ASD affected child. As biased recurrence risk perception might affect parents' reproductive decision-making, health professionals should develop ASD health education programs to educate Taiwanese parents in this area.

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A-178a
BEHAVIORAL INHIBITION AND ACTIVATION ARE RELATED TO QUALITY OF LIFE AND ADHERENCE IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA (OSA)

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Adherence rates to continuous positive airway pressure (CPAP) for obstructive sleep apnea (OSA) are highly variable, ranging from 6% to 80%, resulting in increased healthcare costs and morbidity. Previous research using Reinforcement Sensitivity Theory (RST) has identified which patients will be adherent, which may ultimately lead to differing interventions. RST is comprised of neurophysiological systems that relate to approach and withdrawal behaviors, including the Behavioral Activation System (BAS), and the Behavioral Inhibition System (BIS). BAS is associated with left frontal alpha activity (measured through EEG) and approach behavior, while BIS is associated with right frontal activity and withdrawal behavior. The findings from previous research in our laboratory indicate that individuals with elevated BIS are less likely to adhere to CPAP. Taking the next step, the relationships between BIS, BAS, frontal EEG asymmetry, and health-related quality of life (QoL) using the SF-12v2 were examined in 105 patients with OSA. It was hypothesized that BIS would be negatively associated with the Physical Component Summary (PCS) and the Mental Component Summary (MCS) of the SF-12v2, while the opposite relationship would be observed for BAS. It was also predicted that PCS and MCS would be negatively associated with adherence to CPAP at 30 days. The hypotheses were partially supported. BIS was associated with the MCS of the SF-12v2, r (100) = -27, p <.01), and a weaker association was observed for a subscale of BAS (BAS-D) and MCS, r (100) = .17, p <.05). Likewise, adherent patients had higher MCS scores, r (53) = .27, p <.05). These results indicate that the mental health component of QoL is associated with behavioral inhibition and adherence to CPAP among OSA patients. The implications of mental health and intervention for OSA are discussed.

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A-186a
SMOKING AMONG ADULT CANCER SURVIVORS: DIFFERENCES BETWEEN CURRENT, FORMER, AND NEVER SMOKERS

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Background: Tobacco use in the United States is undoubtedly a public health problem, as it is associated with chronic disease and the greatest number of preventable deaths each year. Despite such risks, about 20% of adults currently smoke. There

are nearly 14 million cancer survivors alive in the United States today, and survivors who smoke are at an increased risk for experiencing the adverse effects of smoking. However, as of 2008, smoking rates among survivors surpassed 18%. These rates are comparable to that of the general population and have changed little over time. Therefore, targeting prevention and cessation programs toward cancer survivors is imperative.

Purpose: To provide an updated estimate of the prevalence of smoking among cancer survivors and differences between survivors who are current, former, or never smokers.

Methods: We analyzed data from the National Cancer Institute's Health Information National Trends Survey (HINTS 4, Cycle 2), a mailed survey that provides nationally representative estimates.

Results: 17.4% of adult cancer survivors were current smokers, 38.0% were former smokers, and the remaining 44.6% were never smokers. Of the current smokers, 60.8% reported attempting to quit within the past year and 72.3% intended to quit within the next six months. In multivariate analyses, current smoking was more common among males and younger survivors. Current smokers were also least likely to have a college education or higher and to report "excellent or very good" health.

Conclusions: The prevalence of smoking among cancer survivors is on par with smoking in the general population. However, our results suggest that survivors who are younger and male may be at an increased risk for smoking. Also, current smokers were least likely to have achieved a college education or higher. These results provide further incentive for targeting cessation and prevention programs among cancer survivors. Clinical encounters, electronic health records and survivorship care planning each offer opportunities for enhanced smoking cessation efforts among cancer survivors.

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A-186b
DATA VISUALIZATION IN PUBLIC HEALTH: IDENTIFYING PATTERNS OF SMOKING AND LUNG CANCER IN THE UNITED STATES

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Although mortality rates from lung / bronchus cancer are on the decline, this cancer is the leading cause of cancer death in both men and women in the United States. By using innovative data visualization methods, smoking behavior, lung cancer incidence and geographic spatial data can be synthesized to illustrate and elucidate relationships between patterns of behavior and environmental factors. In turn, these visual data can be used by researchers and public health practitioners to identify areas of need and conduct surveillance, with the ultimate goal of reducing incidence and mortality of lung cancer. In this regard, the National Cancer Institute (NCI) has created a set of geographic information system tools that allow state health officials, policy makers, and researchers to access and visualize information from a number of large national surveillance data sources, over several time points, in order to evaluate important health re-

search questions. The result was the State Cancer Profile System, available through the NCI planning website, and Cancer Control P.L.A.N.E.T., which includes an interactive map feature. This poster will present maps produced by the State Cancer Profile site to illustrate how visualization of multiple data points can be used to explore the link between geographic location of smoking prevalence, cancer beliefs, and lung cancer mortality. Public health professionals may use the maps to create interventions tailored to diverse demographic characteristics. Future directions for visualizations include accessing the data in a more real-time environment and having the ability to connect with other (non-government) data sources of health related behavior data. Groups must work together to facilitate change, and the maps provide a common starting ground.

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A-186c
THE RELATIONSHIP BETWEEN E-CIGARETTE COMMUNICATION AND PUBLIC SUPPORT FOR TOBACCO-FREE POLICIES

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Background: E-cigarettes are gaining attention among tobacco control advocates who are concerned communication about e-cigarettes may undermine public support for tobacco-free policies. This study examined whether exposure to e-cigarettes communication predicts support for policies to restrict e-cigarette use (vaping) and smoking in public venues (restaurants, bars and casinos, and parks).

Method: Online survey data was collected from a national sample of US adults from October to November 2013 (n=1041; sample mean age=49 years, 51% female, 7% African-American, 10% Hispanic, 6% other races). We fitted multiple regression models to predict support for policies to restrict vaping and smoking in public venues. Key predictors were frequency of exposure to e-cigarette information in the preceding month through: (1) advertising, (2) media coverage, and (3) interpersonal channels weighted by whether the information was perceived as positive or negative. Analyses controlled for demographic characteristics and used post-stratification sampling weights to correct for differences between the sample and the US adult population.

Results: Exposure to communication about e-cigarettes from the three channels differed by demographic characteristics. Increased exposure to e-cigarettes information perceived as positive from advertising (B=-.023, p=.015) and interpersonal communication (B=-.086, p<.0005) was associated with reduced support for policies that restrict vaping in public venues. Exposure to media coverage of e-cigarettes was marginally significant (B=-.023, p=.054). There was no significant effect of e-cigarette information exposure on support for policies to restrict smoking.

Conclusion: This study provides empirical support that exposure to favorable information about e-cigarettes may influence acceptance of e-cigarettes use in public venues and may undermine tobacco-free policies.

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A-186d

EFFECTS OF COUNSELING AND OTHER SMOKERS ON CHILD SHS EXPOSURE IN A TRIAL WITH UNDERSERVED MATERNAL SMOKERS

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Maternal smoking is a primary source of child secondhand smoke exposure (SHSe). Because poverty is associated with higher SHSe rates and greater tobacco morbidity/mortality risk, effective SHSe reduction interventions targeting low-income maternal smokers are needed. The Philadelphia FRESH (Family Rules for Establishing Smoke-free Homes) trial recruited participants from pediatric primary care and WIC clinics in low-income communities. Smokers were randomized to receive 16 weeks of behavioral counseling for SHSe reduction, or a parallel, self-help manual intervention. ITT analysis with direct entry regression (8 controlling variables) was used to test two hypotheses: 1) compared to the manual condition, counseling would be more effective in reducing child urine cotinine and reported 7-day point prevalence SHSe from maternal cigarettes at 16-week follow-up; and 2) the presence of other residential smokers would moderate (attenuate) treatment effects. RESULTS: 300 participants enrolled (mean maternal age= 29.42 [SD=7.68] years old; mothers smoked 12.25 [SD=6.30] mean cigarettes per day at baseline). Compared to the written manual condition, counseling was associated with lower cotinine (β= -.18, p<.05), lower SHSe from maternal cigarettes (β= -.57, p<.05) and fewer maternal cigarettes smoked per day (β= -1.84, p<.01) at follow-up. Other residential smokers did not influence child cotinine or maternal cigarettes smoked per day, but did affect child SHSe from maternal cigarettes- in the opposite direction than predicted (β= -0.522, p=0.04). Contrary to our hypothesis, presence of other smokers did not attenuate treatment effects. Behavioral counseling for underserved maternal smokers may be effective in reducing young children's SHSe, and may decrease the potential adverse impact of other residential smokers on child SHSe.

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A-188a

ECOLOGICAL MOMENTARY ASSESSMENTS OF MINDFULNESS IN POST-SURGICAL LUNG CANCER PATIENTS

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Mindfulness (MF) refers to one's non-judgmental awareness of the present moment. However, many questionnaires assess global MF. Ecological momentary assessment (EMA) repeatedly sample moments of daily life and appear uniquely suitable for studying MF. Recent work indicates that MF enhances response to and recovery from illness, but little is known about the role of MF in lung cancer. The goal of this work is to demonstrate feasibility of EMA in studying MF with cancer patients.

Fifty-nine patients diagnosed with early stage lung cancer (61% female, M age = 66.1 y.o., SD = 7.9) participated in a quality of life study. Following a hospital discharge (M = day 5 following hospitalization; SD = 2.77), participants responded to palm-pilot EMA twice daily for 2 weeks. MF was assessed with 4 questions about the present state of awareness (e.g., "I am curious of the thoughts and feelings I am having right now?"; 1 - not at all; 5 - very much). Patients also reported on physical symptoms, quality of life, and use of pain-coping strategies (e.g., humor, denial, etc).

A total of 1,099 EMA were collected. Adherence was perfect for 81.4% of the sample, with remaining participants providing 8 to 26 EMA (M = 18.2, SD = 6.1). Missing data typically occurred due to early withdrawal. On average, participants had relatively low levels of MF (M = 1.72, SD = .52). Multilevel modeling helped to determine contextual factors related to MF. Momentary MF was associated with pain-coping strategies (p's < .05), perceived symptom burden (p < .01), and quality of life (p < .01).

The EMA approach to assess MF in daily life appeared feasible for use in lung cancer patients, even shortly after surgical treatment. Researchers should take advantage of developing technologies to study the dynamics of MF and associated contextual factors, which may in turn inform MF training programs.

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A-194a

LONGITUDINAL ASSOCIATIONS BETWEEN EXECUTIVE COGNITIVE FUNCTION DEFICITS, PERCEIVED STRESS AND SLEEP IN CHILDREN

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Purpose: Previous work has found executive cognitive function (ECF) to be associated with a variety of health behaviors and links have been identified between ECF and both short sleep and psychological stress. However, little is known about the relationship between these factors in children and how they

covary across development. This study sought to determine the longitudinal relationship between ECF deficits, perceived stress, and sleep duration in a diverse cohort of preadolescents followed over a 3 year period.

Methods: Participants were 708 fourth grade youth who were enrolled in a school-based obesity prevention program. ECF was assessed using the emotional control, inhibitory control, organizational skills, and working memory subscales of the Behavioral Rating Inventory of Executive Function. Perceived Stress was assessed using an adapted 6 item Cohen's Perceived Stress Scale. Sleep duration was determined via self-reported weekday sleep hours. Three panel cross-lagged path analyses were conducted using MPlus 6 to establish longitudinal relationships between measures at baseline, year 1 follow-up and year 2 follow-up adjusting for participant SES, ethnicity, and gender.

Results: Perceived stress was found to be significantly associated with ECF at baseline (r=.41), year 1 (r=.38) and year 2 (r=.30), but was only associated with sleep hours at year 1 (r=-.09). ECF deficits at baseline and year 1 were predictive of perceived stress at year 1 (β=.15) and year 2 (β=.16), respectively. Weekday sleep hours were negatively associated with ECF deficits at baseline (r=-.12), year 1 (r=-.09), and year 2 (r=-.13).

Conclusions: ECF deficits were positively associated with perceived stress, and negatively associated with weekday sleep hours in our 4th grade cohort at each year. Cross-lagged analyses suggest that perceived stress is predictive of future ECF deficits. Future work should consider the impact of sleep and perceived stress on ECF.

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A-198a
THE EFFECTS OF ALCOHOL PRIMING ON SUBSEQUENT PREFERENCES FOR ALCOHOL AND OTHER DRUGS

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Research has demonstrated that the relative reinforcing efficacy of substances may be altered by a variety of variables (e.g., Rousseau, Irons, & Correia, 2011). That is, the value of or preferences for substances may vary under different conditions. There is some evidence to suggest that a preload priming dose of alcohol increases subsequent preference for alcohol (e.g., de Wit & Chutuape, 1993); however, few studies have considered this phenomenon. The priming effect may elicit unintended subsequent use such as binge drinking. Young adults who engage in binge drinking are at an elevated to risk of experiencing alcohol-related problems (Wechsler, Dowdall, Davenport, & Rimm, 1994). The current study randomly assigned participants (N = 34 to date) to receive alcohol or placebo and employed the Multiple Choice Procedure (Griffiths, Troisi, Silverman, & Mumford, 1993) to examine the effects of a priming dose (relative to placebo) on subsequent alcohol preference (relative to money) as well as hypothetical preference for marijuana and tobacco among college students. Preliminary data analyses reveal no main effect

of condition; however, further analyses reveal that males value marijuana and nicotine more so than females, but only in the placebo condition. Though not significant, the same trend is evident for alcohol preferences. It is currently unclear what may be contributing to the observed gender effect. Understanding the potential priming effects of alcohol among young adult social drinkers may help explain consequent use choices that may lead to binge drinking and/or prolonged abuse and thus may lead to strategies for reducing the reinforcing efficacy of consuming more of a substance while under the influence of substances.

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A-201a
QUALITY OF LIFE AMONG LUNG TRANSPLANT CANDIDATES: EXAMINING BETWEEN-DISEASE DIFFERENCES

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AIM: To characterize disease-specific quality of life (QoL) among a sample of lung transplant candidates, and to examine differences by disease type.

METHODS: Data were derived from INSPIRE, a RCT of patients awaiting lung transplant. QoL was assessed with the Pulmonary Quality of Life Scale (PQLS), a 25-item self-report instrument designed to assess health-related QoL in lung transplant candidates. Lung disease was divided into 4 categories: Cystic Fibrosis (CF), Obstructive (e.g., COPD), Restrictive (e.g., pulmonary fibrosis), and Other (e.g., sarcoidosis). Supplemental oxygen use at rest was divided into 3 categories: None, ≤2 l/min, and >2 l/min. Finally, participant functional capacity was assessed with the 6-minute walk test (6MWT). Univariate ANOVA was used to examine differences in QoL by lung disease type. Significant main effects were examined with planned contrasts.

RESULTS: Participants (n = 370) were 43.5% male, generally middle-aged (Mean age = 49.5 years), predominately Caucasian (87.8%) and well-educated (62.4% attended at least some college). Lung diseases included Obstructive (48.7%), Restrictive (23.8%), CF (14.1%) and Other (13.5%).

The primary ANOVA revealed a significant main effect for Disease Type (F = 6.1, p < .001). Planned contrasts revealed higher (worse) PQLS for Obstructive (PQLS Mean = 83.7) compared to CF (PQLS Mean = 74.1, p < .0001) or Restrictive (PQLS Mean = 78.2, p < .01). When Supplemental Oxygen and 6MWT were entered into the model, they were both significant predictors of PQLS (F = 6.9, p < .01; F = 34.7, p < .0001; respectively), and Disease Type was no longer significant (F = 0.71, p = .54).

CONCLUSIONS: On average, lung transplant candidates who suffer from obstructive lung diseases such as COPD exhibit worse disease-specific QoL, compared to patients with CF or restrictive lung diseases. These differences can be explained by greater need for supplemental oxygen and poorer functional capacity.

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A-201b

UTILITY OF THE STANFORD INTEGRATED PSYCHOSOCIAL ASSESSMENT FOR TRANSPLANTATION (SIPAT) IN STEM CELL/BONE MARROW TRANSPLANTATION (SCT/BMT)

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Most SCT/BMT centers in the US use psychosocial evaluations of Pts as part of a pre-transplant workup. Psychosocial criteria (e.g., severe psychopathology or heavy alcohol/substance abuse) are generally viewed as contraindications for transplant. Research suggests that strong associations between pre-transplant psychosocial risk factors (e.g., depressive symptoms) & post-transplant outcomes (e.g., survival or non-adherence) exist. Assessment tools are available for psychosocial risk factors in solid organ transplant, but limited data is available on the utility of such measures in SCT/BMT.

The aim of this ongoing prospective study is to examine if pre-SCT/BMT SIPAT scores predict medical and psychosocial outcomes over 12 months. Psychosocial & medical outcomes include depression & anxiety symptoms, QoL, adherence, social support, nutrition, physical functioning, medications, comorbidities, mortality, & total hospitalizations. Data are being collected at baseline (BASE), the day of transplant, & at 3-, 6-, & 12-months. Only BASE assessments (n=59) have been completed.

Results: Male (58%,n=35), aged 56±13.4 yrs, modal diagnosis of multiple myeloma (28%,n=17). 96.5% (n=55) of Pts were considered excellent (26.3%) to good candidates (70.2%) for SCT/BMT (mean SIPAT=8.9±5.9). Mean depression (2.8±3.2) & anxiety scores (2.5±3.0) were low, suggesting Pts endorsed min. affective symptoms at BASE. Pts walked an average of 1080±467 ft, which suggests greater functional capacity despite a cancer diagnosis. 93% (n=51) of Pts adhered to doctors' recommendations (past month).

The SIPAT may be less sensitive to psychosocial issues in SCT/BMT, but standardized assessments may allow doctors to help Pts improve functioning & reduce negative SCT/BMT outcomes.

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Rapid Communications Poster Session B

Thursday, April 24, 2014
6:40 PM-8:00 PM

B-043a

SOCIAL SUPPORT MEDIATES THE RELATIONSHIP BETWEEN OPTIMISM AND DEPRESSION AMONG WOMEN AT RISK FOR BREAST CANCER

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Among breast cancer patients, higher levels of optimism are associated with lower levels of depression. However, no studies to our knowledge have explored the relationship between optimism and depression among women at risk for cancer. We hypothesized that 1) women at risk for breast cancer who have higher levels of optimism would have lower levels of depression. Furthermore, given prior research that demonstrates social support reduces depression, we hypothesized that 2) social support would mediate the relationship between optimism and depressive symptoms. Participants (n = 123) with any family history of breast cancer were recruited from the community and screened for elevated distress. Participants completed the Center for Epidemiologic Studies Depression Scale (CESD), the Life Orientation Test Revised (LOT-R), and the Interpersonal Support Evaluation List (ISEL-12). Path analysis with bootstrap sampling procedures was used to examine the relationship between optimism, social support, and depressive symptoms. Results indicated that 24% of the variance in depressive symptoms was explained through direct paths from optimism (β = -.347; 95% CI = -.500 to .183, p = .002) and social support (β = -.281; 95% CI = -.427 to -.108, p = .002). The indirect path from optimism to depressive symptoms via social support was also significant (β = -.053; 95% CI = -.114 to -.004, p = .039). These results suggest that social support may prove important for helping reduce depression among women at risk for breast cancer. This is important information because social support can be changed, whereas optimism is a relatively stable personality trait.

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B-043b

PATTERNS OF FAMILY COMMUNICATION IN LEARNING OF MELANOMA GENETIC RISK

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Given the lack of research around family communication in genetic testing for melanoma risk, this study used existing data collected from family members of individuals being treated for melanoma (Hay et al., 2012) to analyze how genetic information impacted one's intention to discuss melanoma risk within their families. Eligible participants (N=140, M age = 48.2 years, 70% female) were asked about their prior level of discussion with their family members regarding melanoma risk, and were later asked about their intention to discuss melanoma risk with those same family members after having received hypothetical genetic information. Results revealed that overall, while only 54% of individuals claimed to speak to their first-degree family members "some" or "a lot" regarding melanoma risk before receiving feedback, 76% of participants intended to speak to their families "some" or "a lot" after having received feedback. Feedback type (positive or negative) had a significant main effect (p < .05), as did the baseline level of discussion regarding melanoma risk that participants had with their family members (p < .001), and the type of family member with whom the discussions regarding melanoma risk would be had (p < .05). Further analysis revealed that participants are most likely to discuss melanoma risk with their siblings as well as their children over other first-degree family members, with 85% (SE = .07) of participants reporting intentions to have some or a lot of discussion regarding melanoma risk with their children (regardless of feedback type) and 87% (SE = .04) of participants reporting intentions to have some or a lot of discussion with their sisters regarding melanoma risk regardless of feedback type. These data provide more information about the how to promote family communication around melanoma risk, and confirm the importance of providing genetic information to patients. Future studies should explore how to utilize this information in the form of intervention.

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B-043c

PATTERNS OF SUNSCREEN USE AMONG U.S. ADULTS

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Background: Changes were recently made to how sunscreens are marketed in the United States to facilitate proper use, but little is known about patterns of use among adults.

Methods: Data on sunscreen use from the 2013 HealthStyles survey were analyzed (N=4033; 66% response rate). Adults who use sunscreen on their face or other exposed skin "sometimes," "most of the time," or "always" when outside for more than 1 hour on a warm sunny day were categorized as sunscreen users; those who "rarely" or "never" use sunscreen were categorized as non-users. Adjusted percentages of adults who use sunscreen on the face and other exposed skin were examined by demographic and behavioral factors. Differences were assessed using general linear contrasts.

Results: Most men (54.7%) and many women (35.0%) were non-users. Non-users were more likely than sunscreen users to be male, black, have skin that does not burn, have an annual household income below $25,000, and not meet aerobic activity guidelines (all Ps < .05). Among sunscreen users, over 85% used sunscreen with a sun protection factor (SPF) of ≥15, but more than 30% were unsure if it provided broad spectrum protection. Many only "sometimes" used sunscreen on their face (53.6% of male users; 28.5% of female users) and other exposed skin (51.5% of male users; 39.9% of female users) when outside for more than 1 hour on a warm sunny day. Among all women, nearly 10% used broad spectrum sunscreen with SPF ≥15 "always" or "most of the time" on their face but not on other exposed skin.

Conclusion: Sunscreen use is low among certain groups, so encouraging sun protection strategies other than sunscreen use may be necessary. Cost may be a barrier to sunscreen use, especially among those with lower incomes. Sunscreen users

should be encouraged to use it consistently when outdoors in the sun and to apply it to all exposed skin rather than only the face. Consumers may also need more guidance on which characteristics to look for when purchasing sunscreen (i.e., broad spectrum and SPF ≥15).

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B-043d
COLORECTAL CANCER KNOWLEDGE DIFFERENTIATES PEOPLE WHO COMPLETE A SCHEDULED COLONOSCOPY AND THOSE WHO DO NOT

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Up to 50% of people in one safety net hospital in the Midwest who received a referral for colonoscopy from their healthcare provider failed to complete the test. Research is needed to understand the complex interplay between individual, social, and health care systems and their influence on colonoscopy completion. The purpose of this study was to compare people who completed a scheduled colonoscopy after receiving a referral with those who did not on demographic and clinical characteristics, CRC knowledge, and health beliefs (perceived risk, perceived benefits, perceived barriers). Quantitative data were collected via telephone interviews from 90 patients; 46 who completed colonoscopy and 44 non-completers. In-depth interviews were conducted with 42 participants to examine perceptions of barriers and facilitators to test completion. Data were analyzed using two-sample t-tests, chi-square tests, Fisher's exact tests and content analysis. People who completed colonoscopy had a higher mean CRC knowledge score (p=.0008), and a smaller proportion had hypertension (p=.03). No group differences in perceived risk (p=0.81), perceived benefits (p=0.66), and perceived barriers scores (p=0.24) were observed. Non-completers frequently reported that life events interfered with their ability to keep their appointments. While receipt of a provider recommendation is the most important predictor of CRC screening, results showed that receipt of a recommendation with immediate referral to an endoscopist and automatic colonoscopy appointment-making were not sufficient to insure test completion. Education and tailored counseling about the need for and benefits of colonoscopy, along with reminders and tangible assistance to complete the test in the context of competing demands, may be required to increase completion rates.

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B-043e
PERCEPTIONS OF CERVICAL CANCER AMONG MEXICAN FARMWORKER WOMEN IN RURAL GEORGIA

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Cancer health disparities affect Latina women with cervical cancer incidence rates of 11.8 per 100,000 and mortality rates of 3 per 100,000 compared to rates of White women, which are 7.2 per 100,000 and 2.1 per 100,000, respectively. We explored Pap screening behaviors, acculturation levels, and cervical cancer beliefs among Mexican farmworker women in Southeast Georgia.

We recruited a purposive sample of 39 Mexican women meeting eligibility criteria (farmworker background, no Pap test in >3 years, Mexican origin). We administered questionnaires to collect information on socio-demographic characteristics, Pap screening behaviors, acculturation levels, and cervical cancer beliefs. We calculated frequencies and percentages of demographic, health history, and acculturation variables and used principal components analysis to estimate consensus on cervical cancer risk factor and belief responses.

Average age for the sample was 39 (SD = 10.5), with an average of 8 years of schooling (SD = 4.6); 20 (51%) of women have lived in the U.S. ≤ 10 years. Most women 30 (77%) had a Pap test more than three years ago. Thirty-one (79%) women reported intent for next Pap 1 year or less; 4 women (10%) >1 not more than 3 years; 4 (10%) had just had their first Pap or did not know. Based on responses to open-ended questions about cervical cancer, 27 (69%) women did not know or knew very little about it. There was consensus for the 24 agree/disagree questions about cervical cancer causes (Eigenratio = 5.9) and 7 agree/disagree statements on attitudes and beliefs (Eigenratio = 5.0).

Women's attitudes and beliefs regarding cervical cancer did not differ by years of living in the United States. There were misperceptions of what constitute cervical cancer risk factors and inconsistent endorsement of actual risk factors. Culturally-tailored interventions should focus on exploring cognitive schemas associated with cervical cancer risk factors and beliefs, and debunking myths associated with cervical cancer within the Mexican immigrant population.

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B-043f
CAREGIVER ACTIVATION: CANCER COMMUNICATION IN HOME HOSPICE

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Current research focused on patient activation demonstrates that activated patients have the skills, knowledge, and confidence to manage their own care, resulting in lower hospital readmission rates, fewer medical errors, and less likelihood of experiencing adverse consequences due to poor communication with provid-

ers. Patient advocacy groups, federal agencies, and professional organizations support the development of evidence-based practices to enhance patient engagement and activation. Despite the growing body of evidence on patient activation, little is known about the transition of activation when cancer care progresses to home hospice and family caregivers assume more responsibility. The purpose of this study was to identify communication behaviors associated with caregiver activation during home hospice visits for cancer patients and families. Audio taped conversations of 20 home hospice visits (705 minutes) were analyzed using an 11-item coding system adapted from the Street Activation Verbal Coding tool. Types of communication analyzed included: asking questions, being assertive (offering opinions, preferences, making requests), expressing concerns, and describing activated care strategies. Descriptive analyses revealed the most commonly used forms of activated communication by caregivers were: describing care strategies they had implemented or planned to implement (95%), expressing a concern they had about the patient (85%), expressing an opinion regarding care (75%), facilitating the conversation toward the patient through questions and statements as a means of informing the nurse (70%), and requesting an explanation of care (60%). This study supports the significance of caregiver activation during advanced cancer care when the role of the caregiver is vital to the patient's wellbeing and parallels the NCI description of the family caregiver in facilitating decision making, patient advocacy, and communication. Future research is planned to determine the effects of caregiver activation on patient care outcomes over the course of cancer care in home hospice.

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B-043g
PREDICTORS OF BODY IMAGE DISSATISFACTION AMONG PATIENTS WITH LYMPHEDEMA PAIN

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Breast cancer survivors with upper extremity lymphedema often report body image dissatisfaction associated with appearance and functional changes secondary to breast cancer treatment. Body image dissatisfaction may be influenced by an individual's investment in appearance and investment in body image integrity (i.e., the belief that the body should be intact). The broader literature also suggests that symptoms of pain can heighten an individual's awareness of their body, leading to higher body image dissatisfaction. These associations have not been examined in breast cancer survivors with lymphedema, where there is elevated risk of experiencing pain and body integrity changes. The current study examined whether investment in appearance, investment in body integrity, and lymphedema pain severity will positively predict body image dissatisfaction in patients with lymphedema (n = 54). Reports of pain in the sample were examined and likelihood ratio analyses compared demographic characteristics (i.e., race, marital status, employment, and education) of patients who endorsed and did not endorse lymphedema pain. Subsequently, investment in appearance, investment in body

integrity, and lymphedema pain severity were entered into a multiple regression model predicting body image dissatisfaction while controlling for age and BMI. Thirty six patients (67%) reported some degree of pain while 18 patients (33%) reported no pain associated with lymphedema. There were no demographic characteristic differences in the group that endorsed pain and did not. Multiple regression results revealed that investment in body integrity (β=.40, p=.008) and lymphedema pain severity (β=.29, p=.049) were positively related to body image dissatisfaction after controlling for age and BMI. The overall model fit was $R2$=.382. For patients with lymphedema, pain symptoms and investment in body integrity are risk factors for increased body image dissatisfaction. Clinical implications are discussed.

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B-043h
CANCER AND CHEMOTHERAPY PERCEPTIONS AMONG ELDERLY PATIENTS: EXAMINING THE PARADOX OF AGING

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Objective: In adults with colon cancer, older age is the strongest predictor of chemotherapy non-completion. Further, while elderly patients experience more treatment complications relative to younger patients, research suggests that the psychological impact of cancer is less severe with older age. This paradox has been attributed to age differences in patient perceptions. We aimed to examine in-depth cancer perceptions among elderly patients.

Method: We conducted qualitative interviews with 26 adults, ages 65+, who were undergoing chemotherapy for colon cancer with either curative or palliative intent. A semi-structured interview guide was used to elicit (1) perspectives about colon cancer and chemotherapy and (2) life experiences that contributed to perspectives. Two raters coded interviews independently and reached acceptable inter-rater reliability (k>.85). We used content analysis to identify themes.

Results: Among patients (65.4% male; M age=70.3 years [SD=5.7]), (1) colon cancer diagnosis was perceived as significant and inexplicable due to good premorbid health. Patients expressed mixed confidence, hope and uncertainty about chemotherapy efficacy. While patients focused on developing routines to accommodate clinic visits and manage side effects, many struggled with overall identity and life roles (e.g., caregiver, breadwinner). (2) Experiences of cancer in close others led patients to feel variously prepared, confused, or fearful of colon cancer and chemotherapy.

Conclusions: Elderly patients perceived diagnosis as an 'off-time' life event. Peer group morbidity lessened cancer confusion for some and heightened it for others. Patients valued routines to manage chemotherapy challenges but faced difficulty resolving health-related identity. Elderly patients might benefit from targeted intervention in tandem with chemotherapy, to develop self-care routines and maintain meaningful life activities -- with the aim of facilitating optimal treatment and quality of life.

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B-043i

AFRICAN AMERICAN PATIENTS' INTENT TO SCREEN FOR COLORECTAL CANCER: DO CULTURAL FACTORS, HEALTH LITERACY, KNOWLEDGE, AGE AND GENDER MATTER?

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African Americans are at increased risk for colorectal cancer (CRC) and have higher incidence and mortality rates. Research has suggested that CRC screening interventions be targeted to African Americans based upon cultural dimensions. This secondary analysis used baseline data from a large randomized trial to examine: 1) relationships among cultural factors (i.e., provider trust, cancer fatalism, health temporal orientation), health literacy, and CRC knowledge; 2) age and gender differences in cultural variables, health literacy, and CRC knowledge; and 3) relationships among these variables and intention to screen for CRC. African-American primary care patients who were not up-to-date with CRC screening (n=815) completed a telephone interview prior to being randomized to one of two CRC screening interventions. Data were examined using Pearson's correlation, t-test, and multiple regression analyses. Provider trust was positively correlated with health temporal orientation (p<.01). Cancer fatalism was negatively correlated with health literacy (p<.01) and CRC knowledge (p<.01), whereas health literacy was positively correlated with CRC knowledge (p<.01). Age was positively correlated with cancer fatalism (p<.05) and negatively correlated with CRC knowledge (p<.05) and intention to perform a stool blood test (SBT) (p<.05). Men had higher health literacy scores than women (p<.01) and reported greater intentions to complete a SBT (p<.01) or receive a colonoscopy (p<.05). However, no variables predicted intention to receive SBT or colonoscopy in multiple regression analyses. More research is needed to improve understanding of relationships among cultural factors, health literacy, knowledge, and CRC screening intention in order to more effectively increase CRC screening among African Americans.

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B-043j

CORRELATES OF POSITIVE HEALTH BEHAVIOR CHANGE IN CANCER SURVIVORS: RESULTS FROM THE 2010 LIVESTRONG SURVEY FOR PEOPLE AFFECTED BY CANCER

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The transition to cancer survivorship represents a "teachable moment" during which survivors may be more motivated to take better care of their health and adopt a healthier lifestyle. The goal of this analysis was to examine factors associated with self-reported positive health behavior changes in 2456 post-treatment cancer survivors who completed the LIVESTRONG 2010 online survey. Multivariate logistic regression was used to model odds of reporting each of six positive health behavior changes "as a result of your experience with cancer": three 'healthy lifestyle' changes and three 'health care utilization' changes. In fully-adjusted models, factors associated with greater odds of healthy lifestyle changes included sociodemographic factors (e.g., male gender and more education linked to regular physical activity; older age and minority race linked to healthier diet); greater knowledge about how to reduce cancer risk; and reporting more psychological benefits due to cancer (ps < .01). Cancer-related factors and patient-provider communication were unrelated to healthy lifestyle changes. Factors associated with greater odds of attending medical appointments and obtaining recommended cancer screenings included older age, less time since completing cancer treatment, better patient-provider communication, greater knowledge about how to reduce cancer risk, and more psychological benefits of cancer (ps <.01). Results suggest that knowledge about how to prevent cancer and benefit-finding after cancer are related to protective health behaviors broadly, whereas better patient-provider communication is associated with positive cancer screening and health care utilization but not healthy lifestyle choices. Clinical interventions targeting these modifiable factors could maximize positive health behavior changes among cancer survivors, affecting risk for cancer recurrence as well as overall health and well-being.

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B-043k

INTEREST AND WILLINGNESS TO REGISTER FOR CANCER PREVENTION TRIALS THROUGH ON-LINE HEALTH RISK ASSESSMENT

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Less than three percent of adult cancer patients participate in clinical treatment trials. Participation in prevention trials is even lower among high-risk healthy individuals. Additionally, racial/ethnic minorities are under-represented in cancer prevention trials, suggesting that novel recruitment strategies are needed. The US employee population is large and diverse, and

employer-sponsored on-line health risk assessments (HRAs) are increasingly popular as part of the employee wellness programs (EWPs). Typical HRAs assess biological and modifiable cancer risk factors, and therefore can identify individuals with higher cancer risk for potential recruitment into prevention trials. To explore the feasibility of this approach, we used qualitative research methods (focus group and individual interview) to examine employees' interest and willingness to release their on-line HRA responses to an external, secure database for registering as potential cancer prevention trials participants. The risk profiles in the database would be reviewed by a cancer prevention trials specialist, who would contact the HRA participant to discuss further details if trials are suitable for him/her. In collaboration with a large health system employer, employees who were eligible for their EWP were recruited. One focus group (N=5) and eight individual interviews have been conducted thus far (total N=13). All employees, including 4 African-Americans and 1 Hispanic, showed interest and willingness to release their on-line HRA responses as a way to register as a potential prevention trial participant. Analyses of the focus group and interviews responses revealed that major motivators to do so were to: 1) have help finding prevention trials that fit their needs, 2) help people they know who are affected by cancer, and 3) increase knowledge about cancer prevention trials. Main concerns of doing so were credibility and security of the database. EWP-based HRAs show promise for creating a large, centralized registry of racially/ethnically representative potential cancer prevention trials participants.

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B-043l
THE FAMILY LIFE, ACTIVITY, SUN, HEALTH AND EATING (FLASHE) STUDY: A COLLABORATIVE APPROACH TO EVALUATING FAMILY DYADS AND THEIR CANCER PREVENTION BEHAVIORS

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The FLASHE study is designed to collect data in adolescents and their parents and will examine the correlates of obesogenic and cancer preventive behaviors among adolescents and their parents across intra- and interpersonal domains, including the community and home environments. The development of NCI's FLASHE study, a web-based survey, will be presented. First, environmental scans of extant publicly available data sets with obesity data were conducted. This informed a literature review of priority research gaps. Scientific meetings were held to review research methodology. In collaboration with partners, a survey of extramural childhood obesity researchers and stakeholders was conducted (n = 516) in October 2011 to identify prior-

ity research areas and gaps. Results were then presented and discussed with a group of scientific experts to further prioritize research gaps identified and refine survey methodology, constructs and measures.

The highest priority research domains identified in diet included: home, community and school food environments; psychosocial correlates of dietary behaviors; and parenting styles and practices for dietary behaviors. In contrast, the highest priority research domains in physical activity included: community environment (e.g., neighborhood access, policy influences); school and home environments; sedentary behaviors; and parenting styles and practices for physical activity.These results strengthen the scientific purpose and goals of the FLASHE study and lend credibility to the potential for FLASHE to inform the broad literature on the interplay between parents and adolescents around obesogenic and other cancer preventive behaviors.

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B-043m
OVARIAN CANCER PATIENTS' PERCEPTIONS TOWARD NOVEL THERAPEUTIC CLINICAL TRIALS

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Ovarian cancer (OC) patients face high drug resistance and tumor recurrence. Novel therapeutic trials hold the greatest potential for improved survival yet inadequate trial enrollment can impede progress. This ongoing study reports early data on perceptions of novel therapeutic trials for women with OC. We interviewed 20 OC patients who had the experience of being offered a clinical trial. We assessed their initial reactions to "first-in-human" trials, vaccine (immunotherapy), and virus (virotherapy) trials. For some patients, "first-in-human" trials raised concerns about uncertain benefits and risks. Early-phase trials were less desirable than "proven" therapies, yet one patient recognized that standard therapy would "always be an option," while a new study drug may not. About half of patients were familiar with immunotherapy; many described familiarity and comfort with the science of vaccines providing protection from other diseases. Several patients talked about the hope that an OC vaccine could bring. For many, virotherapy seemed risky because viruses were "live" or "hard to control." There was concern that a virus could spread in their body or to family members. Across all trial types, patients described worry about unknown, long-term, or permanent side effects, especially those that impacted quality of life. They noted that the stage of their disease would likely influence acceptability. Virotherapy trials were described to patients as being offered with standard treatment when cancer recurred; some patients described a willingness to do anything at that stage, i.e., in the setting of incurable cancer. Despite concerns, most women noted they would be open to learning more, particularly about side effects and success rates, including results of prior human or animal studies. In sum, novel therapies such

as vaccine- and virus-based approaches in OC were generally acceptable, although virotherapy met with apprehension. Ensuring successful enrollment may require reassurance and scientific explanation.

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B-043n

DISCUSSING HUMAN PAPILLOMAVIRUS IN ORAL CANCER: A QUALITATIVE STUDY OF HEALTH PROFESSIONALS

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Background: The etiological role played by human papillomavirus (HPV) in some oral cancers means that clinicians working in this field increasingly have to discuss this sexually transmitted infection with their patients. Prognosis for HPV-related oropharyngeal squamous cell carcinomas (HPV-OCSS) is better than for non-HPV types, and this means that testing for the virus is useful; HPV status may ultimately guide treatment. As yet, little is known about whether and how health professionals discuss HPV with patients. Using qualitative methods we explored health professionals' experiences of and attitudes towards discussing HPV.

Methods: Health professionals working with OSCC patients were purposively sampled through research contacts and snowballing. We conducted 15 semi-structured interviews with surgeons, oncologists, nurses and allied health professionals in March-June 2013. Verbatim transcripts were analysed thematically.

Results: Most participants had talked to patients about HPV. Four main themes emerged: attitudes to discussing HPV, ways of communicating, feelings about discussing HPV, and professional development. Surgeons and oncologists expressed mixed views about the benefits of explaining the causal role played by HPV to HPV-OSCC patients. When talking about HPV, positive prognosis and normalising HPV were common components of the consultation. Experiences included a patient de-escalating their own treatment based on the news of the positive prognosis and patients' concerns about transmitting HPV to their partners. Some participants described limitations to their own HPV knowledge and many identified a need for information and training.

Conclusions: Surgeons and oncologists appeared more comfortable and articulate when talking about HPV than did nurses and allied health professionals, but patients tended to approach nurses with questions. Clinical guidance for health professionals and further information for patients about HPV-OSCC is needed.

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B-051a

DOES PROBLEM-FOCUSED COPING MODERATE WEIGHT LOSS IN METABOLIC SYNDROME?

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Individual differences in behavioral intervention results can identify potential moderators of treatment effects. Engaging in problem-focused coping (PFC) may explain variability in intervention results. We examined whether PFC moderated the efficacy of the Community Health and Risk Reduction in Metabolic Syndrome (CHARMS) randomized controlled trial, which examined whether a 17 session lifestyle intervention (diet, exercise, stress management) led to sustained weight loss in 120 (56% women) disadvantaged, mostly minority adults with MetS. Weight in kilograms was assessed at baseline, 6 months, and 12 months after the intervention. Multiple regression analysis was used to evaluate PFC, group assignment, and their interactions in predicting weight change. PFC was assessed with the Brief COPE questionnaire. There was a significant mean difference between the treatment (M6 = -2.70, SD = 4.09; M12 = -2.54, SD = 4.56) and control group (M6 = .26, SD = 5.33; M12 = .17, SD = 8.07) on weight loss at 6 and 12 months (ps < .05). PFC at baseline predicted weight loss at 6 and 12 months (ps < .01). The interaction between PFC and group was significant at 12 months only (p = .03). Contrary to expectation, greater use of PFC related more strongly to weight loss for control participants. Repeated measures ANOVA on PFC revealed a significant time by group interaction, ($F_{(1, 89)}$ = 6.36, p = .01, partial η2 = .07), such that PFC increased for the treatment group (Mdif = 2.25), but not for the control group (Mdif = -.49) at 12 months. These findings support the notion that PFC may influence weight loss in a treatment-seeking sample and that it is modifiable by intervention. The relationship between baseline PFC and weight loss at 12 months may be stronger in the control group without the dominant effect of intervention-based diet and exercise change. Future research should examine the effectiveness of teaching PFC to a clinical sample and determining its impact on weight loss and behavior change.

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B-051b

ELECTRONIC REMINDING DOES NOT INFLUENCE THE RELATIONSHIP BETWEEN COGNITION AND MEDICATION ADHERENCE IN HEART FAILURE PATIENTS

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Introduction

Over 5 million Americans have heart failure (HF) and manage complex medication regimens. Non-adherence and cognitive dysfunction are common.

Purpose

We examined if cognition was related to medication adherence in HF patients receiving electronic adherence interventions. We hypothesized that poor global cognition would be related to poorer adherence, and that reminding via auditory alarms would attenuate the relationship between poor cognitive functioning and poor medication adherence.

Method

Participants were 60 HF patients (aged 69 ± 11 years, 65% male, 83% white) recruited from an outpatient cardiology practice. In this randomized trial examining medication reminders, four medications were tracked for 28 days and half the sample was reminded. Adherence rates per medication were averaged per person. Participants completed the Rey Auditory Verbal Learning Test, Rey-Osterrieth Complex Figure Test, Trail Making Parts A and B, Letter Number Sequencing, Frontal Assessment Battery, and the Stroop Color Word Test. Using age and gender, raw neuropsychological test scores were converted to t-scores. The mean of the t-scores represented global cognitive function; scores <35 indicated impairment.

Results

Overall adherence was high (75% ± .30) and 25% exhibited cognitive impairment. Linear regression revealed that global cognitive function did not predict adherence in the reminding (p = .25) or silent condition (p = .87).

Conclusion

Global cognition was unrelated to medication adherence in adults with HF receiving an adherence intervention. Reminding had no impact. This sample demonstrated high adherence rates and low prevalence of cognitive impairment. Future studies should investigate the contribution of cognition to adherence in a larger sample.

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B-051c
THE HEART OF CAFFEINE'S PRESSOR EFFECT: HEART RATE VARIABILITY (HRV) AS A MARKER OF DIFFERENTIAL CARDIOVASCULAR RESPONSIVITY

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Caffeine is the most widely consumed stimulant in the world and has the potential to adversely influence cardiovascular health. In particular, caffeine consumption has a pressor effect on the cardiovascular system, acutely increasing blood pressure at rest. Despite this potential, epidemiological research has yet to ascertain if caffeine consumption may contribute to the development of cardiovascular disease. As such there is a need for further research into the aetiology of caffeine's effects on the cardiovascular system.

A randomised, placebo-controlled, crossover experiment was conducted, examining the cardiovascular and emotional responses of 20 normotensive, regular caffeine consumers (n = 10 males) at rest and in response to caffeine ingestion. To examine the effects of resting autonomic nervous system activity on the pressor response to caffeine, underlying autonomic functioning was indexed by median split of the participants' resting heart rate variability (HRV).

Results indicated that caffeine produced a significant increase on diastolic (DBP), $F_{(1,18)} = 9.39$, $p < .01$, $\eta p^2 = .34$, and mean arterial pressure (MAP), $F_{(1,18)} = 18.01$, $p < .001$, $\eta p^2 = .50$, for all participants. Further analyses determined that this effect was carried by individuals with higher, but not lower, resting HRV, DBP: $F_{(1,18)} = 5.44$, $p < .05$, $\eta p^2 = .23$; MAP: $F_{(1,18)} = 6.06$, $p < .05$, $\eta p^2 = .25$. Unexpectedly, no changes in mood were observed subsequent to caffeine ingestion. This suggests that individuals with higher parasympathetically-mediated HRV are more physiologically responsive to caffeine.

Overall, the present research suggests that basal autonomic nervous system functioning may represent a stable individual difference that predicts differential cardiovascular responsivity to caffeine consumption. Further research to replicate this finding and relate it to cardiovascular health outcomes is warranted.

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B-051d
FACTOR STRUCTURE OF THE BECK ANXIETY INVENTORY AMONG CARDIAC REHABILITATION PATIENTS: LONGITUDINAL MEASUREMENT INVARIANCE

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We examined longitudinal measurement invariance of a four-factor model of the Beck Anxiety Inventory (BAI) in individuals with cardiovascular disease (CVD) enrolled in cardiac rehabilitation (CR). With greater rates of anxiety than in the general population, anxiety symptoms in individuals with CVD have been linked to greater risk for negative outcomes following a cardiac event. The role anxiety factors play on outcomes is limited and understanding these factors over time is necessary. Prior research has suggested a four-factor model of the BAI consisting of cognitive, autonomic, neuromotor, and panic factors, best explains anxiety components in individuals with CVD. This structure of the BAI has not been previously examined longitudinally in individuals with CVD.

Participants (n=151) completed the BAI and demographic information at the onset of CR (Time 1) and 12 weeks later at the end of CR (Time 2). The majority of the sample was male (67.5%) and European American (94.7%) with an average age of 64.2 years. Consistent with prior research, 32% of our sample reported at least mild symptoms of anxiety (BAI>8) at both Time 1 and Time 2. Confirmatory factor analysis (CFA) of the aforementioned four-factor model suggested adequate fit at Time 1 (SB $\chi^2[182]= 242.99$; CFI = .94; RMSEA = .05; SRMR = .07) and Time 2 (SB $\chi^2[182]=$

259.70; CFI = .92; RMSEA = .05; SRMR = .07). Single-group CFA analyses and Satorra-Bentler scaled chi-square difference tests indicated that factor loadings and indicator intercepts of the four-factor model of the BAI are invariant over time.

Our results suggest that measurement invariance over time of a four-factor model of the BAI (cognitive, autonomic, neuromotor, and panic) in individuals with CVD attending CR can be assumed. Research using the BAI should examine the trajectory of change in anxiety components and the relationship between each of these four components and outcomes over time following CVD.

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B-058a

COUPLES' COMMUNAL COPING IN PATIENTS WITH NEWLY DIAGNOSED TYPE 2 DIABETES: A FOCUS ON SEX AND RACE

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Type 2 diabetes (T2D) is the 7th leading cause of death in the United States and is associated with an array of health problems, including heart and kidney disease, neuropathy, and lower limb amputation. Prevention of these problems largely depends on effective disease self-management. Persons with T2D need to alter their diet, exercise, and typically take medication to control blood glucose levels. As social environment is an important determinant of diabetes self-management, we enrolled 50 couples (52% male; 68% white; mean age 55; mean A1c 6.83) that included one person with newly diagnosed T2D (mean diagnosis 1.33 years ago) in a study to examine partner influence on patients' management of diabetes. Race and sex differences were examined. Evidence that communal coping (i.e., perception of diabetes as a joint problem rather than an individual problem) was more common for males than females with T2D. Males chose greater overlap among two concentric circles to represent the couples' approach to diabetes and reported more daily communication about diabetes than females (p's < .05). Using audiotaped recordings of coping interviews to analyze pronoun usage, females were marginally more likely than males (p < .10) and blacks were more likely than whites to use "I" pronouns (p < .05). In videotaped couple conversations about coping with diabetes, trained observers rated the lowest level of communal coping among couples in which the patient was female and black (p < .05). When asked how involved they would like partners to be in diabetes, females were more likely than males and blacks were more likely than whites to report that they desired greater involvement of the partner in their diabetes care (p's < .05). In summary, this study suggests that women and blacks are less likely to receive partner support regarding diabetes management. These findings are important because partner involvement in diabetes care was related to better diabetes self-management.

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B-058b

PROMOTORES PROVIDE DISTINCTIVE CHANNEL FOR IMPLICIT AND EXPLICIT EMOTIONAL SUPPORT

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Emotional support is a commonly reported feature of peer support interventions, although recipients often profess interest only in informational support regarding disease management. This study examined how emotional support emerged in the interactions between promotores and Latino adults in a peer support program for diabetes management. Semi-structured interviews were conducted with seven promotores at a federally qualified health center in Chicago. Interviews were conducted in English and Spanish. Coding of field notes used deductive and inductive codes and consensus among three coders to ensure accuracy. Type of support varied over time. In the beginning of client contact, promotores were more likely to provide information for diabetes self-management. Over time, they came to provide substantial emotional support. Clients confided in promotores about a variety of stressors that affected their emotional well-being and diabetes management both social - jail, domestic violence, deportation, loneliness, as well as psychological—stress, anxiety, alcoholism, and depression. Promotores reported both explicit (e.g., reassurance, acceptance, reframing, normalizing, debriefing) and implicit support strategies. Implicit support entailed presence or shared activities without discussion of one's problems, such as praying for/with clients, providing phone numbers, talking about family, and going on walks. In providing support, promotores differentiated their role from medical providers, who lacked time to help clients in these ways, and family members, with whom clients did not want to burden with their problems. Nonetheless, and after careful discussion with clients, promotores often counseled clients' family members in providing support. These findings indicate that promotores provide a distinctive channel for emotional support addressing a variety of social and psychological stressors but that the ability to provide this support evolves through the development of relationships with those they help.

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B-058c

EFFECTS OF A LIFESTYLE MODIFICATION INTERVENTION ON STRESS, WEIGHT, AND HBA1C IN TYPE 2 DIABETES

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Stress may play a role in the prevalence of obesity in patients with type 2 Diabetes (T2D). Individuals with T2D who experience higher levels of stress tend to experience poorer glycemic

control and more diabetes related complications. Previous lifestyle modification interventions, designed for individuals with or at risk for T2D, have focused on reducing weight via diet and physical activity. Little research has been done examining effects of diet, exercise, and stress management on glycemic control and weight loss in individuals with T2D. This study carried out such analyses (see Moncrieft, 2014, SBM) and examined the association between stress reduction and weight loss and glycemic control. We studied 111 disadvantaged, primarily minority (85% Hispanic, 10% non-Hispanic/black) adults (mean age 55 years; 58% women) with T2D recruited for the CALM-D study who were randomized to a 17 session 12 month lifestyle intervention or usual care. All participants were assessed at baseline, 6 month and 12 month post-randomization on Perceived Stress (PSS), weight, and glycemic control (HbA1c). Latent growth modeling was used to evaluate intervention effects on stress reduction. The effect of treatment occurred mainly over the first 6 months of the intervention, and maintained from 6 to 12 months. Relative to usual care, the intervention resulted in significant decreases in PSS (β = -.515, SE = .220, p < .05), controlling for age and gender. There was no association between change in PSS and change in weight (β = 10.419, SE = 9.330, p =.264) or HbA1c (β = 0.082, SE = 0.069, p =.236). Thus, the major finding of the present analysis is that although the lifestyle intervention decreased perceived stress, decreased weight, and increased glycemic control, the decreases in weight and improved glycemic control were not influenced by decreases in perceived stress.

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B-058d
EXTENDED CARE WITH FADED CONTACTS FOR RESISTANCE TRAINING IN PRE-DIABETIC OLDER ADULTS

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Resistance training (RT) has been shown to positively affect the aging process, including benefits to muscle mass and strength, bone health, weight and mood, and RT can improve biological processes related to the onset and progression of diseases, such as diabetes. The current study, Resist-Diabetes, sought to examine the effects of a whole body resistance training protocol using moderate resistance but a high degree of effort at the end of a set in older adults with pre-diabetes and employed an extended care protocol likely to facilitate long-term RT maintenance. Participants are adults aged 50-69 with a BMI between 25-39, sedentary and de-conditioned, fitting pre-diabetic criteria. Resist-Diabetes consists of three phases, including supervised in-lab RT 2/week (Initiation Phase), assisted transition to health clubs (Transition), and social cognitive theory (SCT) based extended care with faded face-to-face and electronic contacts revolving around scheduling, planning, and recording workouts, with feedback provided, plus problem solving (Follow-Up). Focusing

on Follow-Up outcomes only across 4 waves, for 74 participants, we found good adherence to the SCT based protocol. Specifically, participants attended 90% of follow-up meetings (M = 8.1/9). Of the total number of RT workouts scheduled, all 74 participants are doing some amount of planning and recording. While the number of scheduled training sessions varies, participants on average are planning 52% (Range = 1% - 100%; Median = 55%) and recording 82% (Range = 26% - 100%; Median = 84%) of their scheduled RT workouts. Overall, these findings suggest that SCT based extended care can lead to moderate to high adherence for behaviors associated with maintaining RT.

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B-058e
LEVELS OF CHRONIC CARE SUPPORT AND ASSOCIATIONS WITH DIET ADHERENCE LEVEL IN OLDER ADULTS WITH INSULIN-TREATED TYPE 2 DIABETES

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Living with Type 2 (T2) Diabetes (DM) requires adherence to dietary recommendations in order to achieve improved glucose control and lower cardiovascular risk. Diabetes exerts considerable burden across the aging continuum, particularly in those prescribed insulin. Valuable support for self-management can come from individual and community resources.

Aim: (1) Describe levels of DM support (Chronic Illness Resources Survey; CIRS) in older adults with T2DM injecting insulin (2) examine relationships with diabetes self-efficacy (DSE) and dietary behavior (SDSCA).

Method/Result: 80 adults ages 50-86 with T2DM using insulin (51.2% men; M=65.05) completed self-report measures; HBA1c obtained from chart review. Highest rated perceived support came from health providers, personal sources, media/policy and neighborhood. No gender differences observed.

Ss were split at age 65: group A<65 (n=40), group B≥ 65 for comparisons (t-tests). Group A reported greater health provider support, lower DSE, and lower diet adherence and had poorer control (HbA1c M 8.64% vs 7.80%) relative to group B.

CIRS subscales were positively associated with DSE (p<.05); strongest associations with personal and neighborhood support sources (p<.001). Diet adherence behaviors were associated with all CIRS subscales in group A (at p<.05) and only diet-specific support in group B (p<.05).

Hierarchical linear regression (HLR) was used (Frazier, Tix, and Barron approach, 2004) for testing moderator effects of DSE in the top CIRS and diet behavior associations. HLR (controlling age) indicated that health provider support was a significant moderator (Sig R2 change= .025).

Conclusion: Social and environmental sources of diabetes support may play an important role in diet self-management in older

adults with T2DM. Findings suggest that perceptions of support and diet adherence may vary by experience of chronic disease, including age, with DM-specific self-efficacy playing an important role.

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B-060a
HEALTH DISPARITIES FOR RURAL PEOPLE WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITY

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In the US, there are approximately 6 million individuals with intellectual and developmental disabilities (ID/DD). Individuals with ID/DD experience significant health disparities in terms of increased rates of preventable mortality, often related to barriers to obtaining effective health care (Bride, 2010). Vaughn, et al. & the National Council on Disability (2009) cite negative provider attitudes and training deficits as barriers to serving patients with ID/DD. Rural care coordinators indicate need for more mental health, dental, and optometry providers, yet little research has examined this need.

We surveyed Health Care Coordinators (HCCs) for 133 people with ID/DD living in a frontier state. The individuals with ID/DD ranged in age from birth to older than 61 years, were predominantly non-Hispanic white, and support needed for Activities of Daily Living included: "completely independent" (9%), "some support" (22.6%), "regular support" (30.1%), and "ongoing support" (38.4%). Regardless of level of support needed, HCCs reported "putting off care" by provider type: primary care (PC; 12.0%), dental (27.1%), vision (15.8%), and mental health (28.9%). Most frequently endorsed difficulties included: "PC providers not accepting new patients (12.0%)", PC and Dentist reluctant to serve people with ID/DD (14.3% & 12.0%), and PC and Dentists not accepting Medicaid (14.5% & 8.3%). Open ended responses included: For PC; payment and finding a provider: For Dental; dental procedures weren't available, not covered by insurance, or the dentist was not qualified to provide care and travel distance: For Vision; communication and patient issues: For Mental Health; finding someone who understood the specific disability. HCCs cited distance as the primary barrier to continuing to see a provider. While most individuals have providers, changing financial needs and identifying qualified local providers may limit ongoing high quality care. Overall there appears to be a need for specific provider training in behavioral needs of individuals with ID/DD and in medical procedures.

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B-067a
TEN TOES DOWN: SELF-CARE PRACTICES OF HOMELESS YOUTH

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Purpose: Homeless youth, one of the highest risk groups for HIV and substance use, face multiple challenges to self-care. We explore factors that may influence self-care practices in homeless youth, identify common sheltering strategies, and identify intervention needs among homeless youth 16-24 years old. Methods: A qualitative study was conducted using focus groups and thematic content analysis. Results: 88 homeless youth 16-24 years old participated in focus groups to identify self-care strategies related to health seeking behaviors, sheltering, and obtaining necessities. Four themes emerged: stigma related to homelessness, prioritizing necessities, the role of resilience and self-reliance, and the use of technology. Participants described the desire to self-propel through challenges faced while homeless vs. admitting to being homeless and seeking help. Homeless youth prioritized behaviors related to obtaining necessities. Participants described the role of resilience and self-reliance in facing the daily challenges and stresses associated with homelessness. Finally, participants reported on the importance of smart phones and access to internet to obtaining information and provisions and health and social service seeking behaviors.

Conclusions: The emerged themes loosely aligned with Orem's Theory of Self-Care and Rew's Theory of Taking Care of Oneself. Yet, a theoretical framework that explains self-care capacity for homeless youth is needed due to the specific challenges and behavioral determinants of this high-risk population. Interventions seeking to improve HIV and substance use outcomes in homeless youth may benefit from including self-care capacity constructs relevant to homelessness. Behavioral change techniques may improve self-care practices and help homeless youth adopt health promoting and health protecting behaviors that can reduce the disparate burden of HIV and substance use in this highly vulnerable population.

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B-078a
COLLABORATIVE CARE MODELS FOR MANAGEMENT OF MENTAL AND BEHAVIORAL HEALTH CONCERNS IN FEDERALLY QUALIFIED HEALTH CENTERS

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Objective: There are questions about the feasibility of collaborative care models for mental health in primary care in real world settings. We explored the variety of mechanisms used by 47 Federally Qualified Health Centers (FQHCs) to provide services for a range of mental and behavioral health (MBH) concerns.

Method: Participating practices are members of a practice-based research network. Network members complete annual practice surveys in which they report practice demographics (# of patients) and staffing (full-time equivalents [FTE] of MBH providers). In 2013, practices reported mechanisms by which patients received MBH services: referral to off-site providers, co-located MBH providers (separate space from medical providers), on-site MBH providers (shared clinic space), or no systematic mechanism. For each, they further indicated for which types of MBH concerns those services were available: health behavior (eg, physical activity counseling); psychosocial (eg, domestic violence counseling); mental health (eg, depression); serious mental illness or substance abuse (SMI/SA). Practices could report more than one mechanism for each type of MBH concern.

Results: Few practices reported lacking systematic mechanisms for providing care to patients with a range of MBH concerns. 70% of practices (33/47) reported the use of on-site providers (with shared clinic space with medical providers) to address health behavior, psychosocial, and/or mental health concerns. 55% (26/47) reported on-site BHP services for SMI/SA, while 37% (19/51) reported referral to off-site providers for SMI/SA. On average, practices with on-site providers employed 1.6 FTEs (SD = 2.4, range 0-8.5) of a master's level provider (LCSW/MSW) and 1.5 FTEs (SD = 2.9, range 0-14.7) of a doctoral level psychologist (PsyD/PhD) for every 5000 unique patients.

Conclusion: It is feasible for FQHCs to provide on-site MBH services for a range of mental and behavioral health concerns. These models are staffed by both masters and doctoral level MBH providers.

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B-078b
DEPRESSION AND ALCOHOL USE AMONG ADOLESCENTS: THE MEDIATING EFFECT OF FAMILY ATTACHMENT

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Background: Adolescent depression is associated with risk behaviors including substance abuse, suicidal behavior, early pregnancy and eating disorders. Alcohol use and Depression in young people has been identified as co-directional, with a youth's experience of one variable significantly increases the likelihood for experiencing the other. Alcohol use and depression are also significantly associated with poorer quality of family relationships. Method: This quasi-experimental study examined the relation between depression, alcohol use (past 30-day), and family attachment among students between ages of 13-19 in a suburban public school district. Data were collected annually, over a four-year period, using a validated self-report questionnaire: 2009 (n= 1,603), 2010 (n=1,616), 2011 (n=1,513), 2012 (n=1,665). Results: Demographic variables (age, gender, race) were examined to determine whether they should be used as covariates, however none were identified. Multiple regression analyses were conducted to determine whether family attachment might mediate the relation between depression and alcohol use. Depression was significantly associated with alcohol use (p<.05) and associated family attachment (p<.01). After statistically controlling for family attachment, the association between depression and alcohol use was no longer significant. This pattern was observed across all four years of data. Results indicated that depression was positively associated with alcohol use and this relation appeared to be mediated by family attachment. Discussion: Students with high levels of depression were less likely to use alcohol if they have close parental relationships. These findings suggest that an adolescent's risk for depression and alcohol use can be lowered through improving parent-child relationships. Students with depression and alcohol may benefit from interventions focused on promoting secure attachment and the building of social support with their parents.

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B-078c
THE INTERSECTION OF VITAMIN D AND MENTAL HEALTH: A REVIEW AND META-ANALYSIS

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Vitamin D has long been known to have an influence on bone health; however, more recent research suggests that vitamin D may have more far-reaching effects than previously realized. Mental health literature is gaining a foundation in vitamin D research with studies that suggest vitamin D may be linked to a wide variety of psychopathologies, including depression and cognitive impairment. This presentation reviews the literature concerning the function of vitamin D and its relation to mental health. MEDLINE via PubMed and PsycINFO were searched for articles that investigated the link between psychopathology and vitamin D. Meta-analyses were conducted to synthesize results of included studies. Of 548 abstracts, full text articles of 51 relevant articles were eligible for inclusion. Bibliographies were also examined for relevant articles, resulting in a total of 53 articles reviewed. Twenty-six studies reported or provided sufficient data for inclusion in meta-analysis. The mean effect size for the association of vitamin D with cognition was significant across cross-sectional studies (d = 0.30, p = .002), and suggested that individuals with lower vitamin D consumption or blood levels are more likely to show poor cognitive performance relative to those with higher levels. The mean effect size for the association of vitamin D with depression was also significant across cross-sectional studies (d = -0.26, p = .0001), and suggested that individuals with higher vitamin D consumption or blood levels are less likely to report current depression. There was no significant mean association (d = 0.03, p = .376) between vitamin D and outcomes across 3 randomized controlled trials. The literature will particularly benefit from more longitudinal studies and improved reporting standards.

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B-078d
INFLUENCE OF HYDRATION STATUS ON SHORT-TERM MEMORY IN A HEALTHY COLLEGE SAMPLE

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Background: Previous research indicates that hypohydration leads to decrements in cognitive ability. This present study was designed to assess the effects of fluid restriction throughout the evening until wake on daytime cognitive function. Methods: Participants (n = 34) provided demographic and inclusionary information, height, weight, blood pressure, and hydration status determined through bioelectrical impedance at baseline. Instructions were given to adhere to fluid restriction (i.e., hypohydration) or fluid enhancement (i.e., hyperhydration) from 6:00PM until a morning lab session. Order of condition was randomly assigned. Next, participants were outfitted with an ambulatory heart rate monitor and accelerometry to monitor physical activity and sleep. Further instructions were provided to complete a journal with sleep, wake, and dietary measures. In the morning, participants completed a word-span task at their residence to assess short-term memory and returned to the lab to repeat bioelectrical impedance. A week later participants returned to experience the alternate condition following the same procedure. Results: A time by condition interaction revealed extracellular water by weight was greater in the morning following hyperhydration compared to the morning following hypohydration, $F(24) = 4.505$, $p = .044$. Total body water by weight change was not significant over time and hydration status, $F(24) = 2.437$, $p = .132$. No significant main effects by time or condition were observed for either hydration variable. Participants during hypohydration recalled fewer words during a word-span task relative to the hyperhydration condition, $t(21) = 2.799$, $p = .011$. Conclusion: This study demonstrated that in young, healthy adults acute hypohydration achieved with fluid restriction may result in reduced cognitive capacity compared to hyperhydration. Further investigation to establish the difference between hypohydration and hyperhydration from euhydration is necessary to better determine the impact of hydration status on wakeful cognition.

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B-082a
THE DEVELOPMENT AND PSYCHOMETRIC EVALUATION OF THE 'HEALTH INCENTIVE PROGRAM QUESTIONNAIRE' (HIP-Q)

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Financial health incentives, such as paying people to exercise, are increasingly being implemented by Western nations and large corporations. To date, the effectiveness of this approach has been limited by scarce consideration of contextual factors in the design of interventions, as well as of the 7+ incentive program design features. To optimize incentive intervention, a tool is needed to capture relevant contextual data (e.g., income level) and identify acceptable and preferred incentive design features (e.g., vouchers). A multi-phase psychometric questionnaire development method was used to develop the health incentive program questionnaire (HIP-Q) and address this need. A systematic literature review and three focus groups generated a pool of themes/items. New items were developed to ensure themes were adequately covered. Content validity was evaluated by expert panel (n=11). Eight one-on-one interviews with a convenience sample of cardiac patients were conducted to establish face validity. The new HIP-Q consisted of five sections (demographic, health status, behavior, self-efficacy, self-determined motivation, incentive opinion/preference) with 60 items. The HIP-Q was pilot tested with cardiac patients (age 46-84 yrs) through self-administration to test construct validity (n=57) and reliability (n=30). Seventy-six percent of respondents who were less self-determined (relative autonomy index below the group mean) indicated they would be 'likely' or 'very likely' to participate in an incentive program confirming a priori hypotheses. Intra-class correlation coefficients (ICC) were calculated for newly devised items in the 'incentive opinion/preference' section. For the instrumental attitude items the ICC was 0.78. For probability and categorical items, the ICC ranged from 0.42 to 0.86. Preliminary findings suggest that the HIP-Q has the potential to be a useful tool for tailoring incentive-based interventions to maximise uptake and effectiveness, increasing returns on investment.

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B-089a
SOCIAL SUPPORT FOR HEALTHY AND UNHEALTHY EATING AMONG LOW-INCOME, AFRICAN AMERICAN ADOLESCENTS IN BALTIMORE CITY

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Background: Baltimore City adolescents have poor dietary intakes. Sweetened drinks, chips, candy, and milk are reported as the top contributors to caloric intake. Social support for healthy behaviors may aid in the consumption of a healthier diet, but little is known about the sources (caregivers vs. friends) and types of social support (for healthy eating [HE] vs. unhealthy eating [UNHE]) that low-income, urban, African American youth experience. Purpose: To examine low-income, urban, African American youths' perceived social support for HE and UNHE provided by caregivers and friends. Methods: A 14-item social support questionnaire was collected and analyzed from a sample of 92 youth. The questionnaire included 4 sub-scales measuring: caregiver support for HE, caregiver support for UNHE, friend support for HE, and friend support for UNHE. Responses were recorded on a 5-point likert scale, but were categorized as 'often', 'sometimes', and 'rarely'. Results: Youth reported receiving support for HE 'often' more from their caregivers (58%), than from

their friends (10%). Eleven percent of youth reported 'rarely' receiving support for HE from their caregivers, while 58% of youth reported 'rarely' receiving support for HE from their friends. For UNHE, few youth reported caregivers 'often' supported UNHE (9%), while 43% of youth reported friends 'often' supported UNHE. Sixty three percent of youth reported that caregivers 'rarely' supported UNHE, compared to 29% of youth who reported that their friends did the same. Conclusions: In this sample, the majority of youth report that caregivers provide social support for eating behaviors that would tend to promote healthy eating, but friends frequently encourage UNHE and rarely encourage HE. Addressing eating-related social support from friends may be a strategy for improving the health of adolescents, particularly as they gain independence from caregivers.

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B-111a
PROJECT MENTOR+: MENTOR-LED EXERCISE WITH COGNITIVE-BEHAVIORAL THERAPY TO IMPROVE PERCEIVED COMPETENCE, REDUCE SOCIAL ANXIETY, AND INCREASE PHYSICAL ACTIVITY IN OVERWEIGHT ADOLESCENTS

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Obese adolescents are at increased risk for peer victimization which is associated with avoidance of physical activity. Mentor-led exercise shows promise as an intervention to increase physical activity but does not directly address peer victimization. The present pilot study assessed whether mentor-led exercise with group-based CBT would improve perceived competence, perceived support, social anxiety, and physical activity. Twenty-four youth were randomized to 3-month mentor-led exercise alone or with group-based skills. All received 4-month no treatment follow-up. Participants completed the Physical Appearance Related Teasing Scale, Children and Youth Physical Self-Perception Profile, and activity assessment (accelerometer). Thirteen African American (n=8) and Caucasian (n=4) youth received group-based training and completed the Social Anxiety Scale for Adolescents and Multidimensional Scale of Perceived Social Support. Repeated measures ANOVA revealed a significant change in perceived competence by time, $F(2, 44) = 4.32$, p = .019, $\eta p2 = .164$; and a trend in physical activity change by time, $F(2, 46) = 1.846$, p = .169, $\eta p2 = .074$. Minimal weight-related teasing at baseline and floor effects may have limited change in social anxiety and social support. Most significantly, differences in physical activity between African American and Caucasian youth yielded a significant effect (d = 0.97). Results suggest that mentor-led exercise can improve perceived competence and physical activity across treatment. However, baseline differences in ethnicity limit comparison of treatment outcomes by group.

Future studies should consider the importance of ethnic differences in treatment goals as well as the presence of weight-related teasing and baseline distress in determining effective interventions.

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B-111b
UNDERSTANDING THE ROLE OF FAITH IN WEIGHT LOSS AND MAINTENANCE OF A HEALTHY LIFESTYLE: PERSPECTIVES FROM AFRICAN-AMERICANS IN SOUTHERN DALLAS, TEXAS

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Background: African-American adults have the highest obesity rate in the US (49.5%), with African-American women bearing the greatest burden of obesity and related chronic diseases. Most African-American women agree that faith is the most important component of their life. This study evaluates the role of individual faith as a barrier and solution for engaging in weight loss activities and programs. Methods: Focus groups were conducted (89% female; 95% African American; mean age 46 (SD=13.0 years) with 64 mostly African-American female and overweight church attenders, church pastors, and pastors' wives. Transcripts were analyzed using classic content analysis methods (NVivo software). Results: All participants felt that God cared about their health, and was an indispensable source of self-efficacy and perseverance when assessing health-related problems, formulating solutions, and also when performing difficult health-related activities. Many participants expressed the need for a stronger connection of faith to health, by listening to God's voice and scriptures more closely to better guide dietary habits and choices, and physical activity. The participants' strongest motivator for improving overall health and weight loss was a scripture-based view of the body as God's temple.

Conclusions: Interventions for facilitating health behavior change among African-American adults based on social cognitive theory in the faith setting have produced mixed results - sometimes the intervention is successful and sometimes not. The present study suggests African-American women's relationship to God may be the most significant single predictor of health behavior. The study suggests that the "faith-based" component of health programs may be more important than the "faith-placed" component.

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B-111c

ANXIEY DISORDERS AND BODY MASS INDEX: EXPLORING ASSOCIATIONS

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Stress influences eating behavior in humans and may play a role in overeating and obesity. While recent meta-analyses exploring the association between anxiety disorders and BMI provides moderate evidence of a small positive association, this body of research does not confirm a causal association and is limited by methodological flaws. Using the Rochester Epidemiology Project (REP) database, we identified all individuals residing in Olmsted County with International Classification of Diseases (ICD-9) codes corresponding to anxiety diagnoses (GAD, Phobias, Panic disorder, OCD, PTSD, and anxiety unspecified). We calculated age-, sex- and race adjusted odds ratios (ORs) with 95% confidence intervals (CIs), and compared normal weight (BMI >=18.5-<25) with overweight (BMI >=25-29), obese (BMI>=30) and underweight (BMI<18.5) adjusting for age, sex, and race. We identified 3985 individuals with and 71,983 individuals without an anxiety disorder diagnosis. We observed that any anxiety diagnosis was associated with an increased adjusted odds of obesity (OR 1.10; 95% CI: 1.01-1.19) but also underweight (OR 1.36; 95% CI: 1.10-1.69). Our data may support the hypothesis that the chronicity of stress may influence its effect on weight, with acute stress leading to weight loss and chronic stress leading to weight gain. More research is needed to elucidate the effect of stress chronicity on weight.

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B-111d

CHANGES IN MOTIVATION FOR WEIGHT LOSS USING MOTIVATIONAL INTERVIEWING

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Obesity rates have continued to increase over the past decade with a current estimate of 35.7% of adults who are obese in the United States. In order to increase weight loss and weight loss maintenance, more cost-effective weight-loss treatments need to be available. Self-determination theory (SDT; Deci & Ryan, 1995) states that it is important to distinguish between autonomous and controlled motivation when attempting long-term maintenance of behavior change. Motivational Interviewing (MI; Rollnick & Miller, 1995) is a directive, client-centered counseling style for eliciting behavior change and is seen as an autonomy-supportive atmosphere. The current study utilized a brief MI intervention on motivation for weight loss to determine changes in motivation ratings in individuals (N = 65). Participants were randomized to either the MI intervention group or a control group and assessed at baseline and 4-week follow-up. In the first part of the study, participants completed the Treatment Self-Regulation Questionnaire (TSRQ). The MI group then participated in a one-session 45-minute MI intervention about weight loss. To control for time, the control group watched a 45-minute video on stress and relaxation. At 4-weeks follow-up, all participants' completed the TSRQ again. It was hypothesized that individuals in the MI group would have increased autonomy ratings and decreased controlled and amotivation ratings as measured by the TSRQ from baseline to 4-week follow-up compared to the control group. A 2x3 repeated measures multivariate analysis of variance (MANOVA) was used to determine whether the groups differed on motivation ratings from baseline to 4-weeks follow-up. Results indicated that there were no significant differences in autonomy, controlled, or amotivation ratings between the two groups from baseline to 4-week follow-up. Although the primary hypotheses were not supported, when examining the confidence intervals, there are important clinical significance differences between the two groups. These findings and recommendations for future research are discussed.

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B-111e

ARE DIET AND PHYSICAL ACTIVITY ASSOCIATED WITH OBESITY IN EARLY ADOLESCENCE?

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Past research has found considerable variability in dietary and physical activity behaviors among youth of different racial/ethnic groups. Research has also found striking differences in obesity risk among youth of different groups. Few studies, however, have compared the associations between dietary and physical activity behaviors and obesity risk among racial/ethnic-gender groups. The present research examined the relationship between dietary and physical activity behaviors and obesity risk on two occasions in early adolescents in a racially and ethnically diverse sample.

A multi-site study enrolled 4,414 children from one of the three major racial/ethnic groups in the U.S. (Hispanic = 38%, African American = 36%, White = 26%), 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. Four dietary and two physical activity behaviors were indexed based on self-report. Household education indexed socioeconomic status (SES).

Complex sampling analyses, controlling for SES, revealed association between dietary and physical activity behaviors and obesity risk in fewer than half the racial/ethnic-gender groups examined. No association was found between any of the behaviors and obesity risk among African American youth. There was also unexpected directionality in the associations between fruit, fast food, and sugar-sweetened beverage intake and obesity risk. Physical activity was the only behavior examined that displayed the expected (inverse) association with obesity risk.

These findings suggest that diet and physical activity have sparse and unexpected associations with obesity risk among early adolescents, and that there is variability in these associations among racial/ethnic-gender groups. These findings argue for fur-

ther within-groups exploration of the complicated associations between diet and physical activity and obesity risk among youth across adolescence and underscore the necessity to consider unexamined moderators in these relationships.

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B-111f

12-MONTH RETENTION AND ENGAGEMENT IN THE SOCIAL MOBILE APPROACHES TO REDUCE WEIGHT (SMART) STUDY: A 2-YEAR RCT OF A TECHNOLOGY-BASED INTERVENTION FOR WEIGHT-LOSS

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Weight gain is prevalent among young adults and many are at risk for developing obesity. The SMART RCT is testing social and mobile technologies (e.g., Facebook and smartphones) to reduce weight among overweight and obese young adults over 24 months. Retention and engagement in long-term trials with limited face-to-face interactions is challenging yet necessary for maintaining comparability of data between treatment arms and intervention generalizability. We developed multi-channel retention and engagement strategies inspired by practices from marketing and sales including: customer service, incentive programs, innovative uses of digital communications media, campaigns, and mobile apps. We recruited 404 18-35 year old overweight or obese participants from three universities in San Diego, CA (Meanage + SD = 22 + 4 yrs; 70% women; 58% non-white, 31% Hispanic). Measurements were conducted at 0, 6, 12, 18, and 24 months. Retention was defined as obtaining weight and survey data at each interval after baseline. Retention was high at both 6 and 12-months (94.1% and 93.6%, respectively). A total of 5.2% of participants missed both 6- and 12-month visits. 5.2% of participants missed visits at 6 and 12 months and 5 dropped out of the study by 12 months (i.e., dropout attrition). There were no significant differences in retention at 12 months as assessed by Chi-Square or one-way ANOVA for Body Mass Index, sex, age, race, ethnicity, or university (all P >.05). Engagement was defined as at least one interaction/week. 70% of treatment participants were engaged compared to 30% non-usage attrition at 12 months. Retention and engagement at 12 months were high given this low intensity intervention. Future work will evaluate which strategies employed were most effective at keeping participants engaged. Supported by grant U01 HL096715, NHLBI, NIH

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B-111g

A PEDIATRIC PRACTICE-BASED OBESITY INTERVENTION TO SUPPORT FAMILIES: FITLINE TELEPHONE COUNSELING

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INTRODUCTION

The prevalence of childhood obesity has tripled in the US in the past 30 years, affecting 36% of preadolescent children. The American Academy of Pediatrics (AAP) recommends a staged approach, starting with encouraging families to focus on improving basic lifestyle choices to improve body mass index (BMI). Given many pediatric offices encounter barriers to addressing weight management, the AAP identified centralized referral centers as a key part of treatment. In response, we developed the FITLINE, a 6-week, 30-minute telephone counseling intervention delivered by nutritionists to guide parents in making AAP-recommended lifestyle changes.

METHODS

Forty parents of children ages 8-12 with a BMI ≥85th percentile completed assessments at baseline and 3 months post-baseline. Medical record data from a historical control of 44 children matched for age and BMI seen in the same pediatric clinic over the same time-period was collected. We used a general linear model with change in BMI as the outcome and gender, age, baseline BMI and group (FITLINE/control) as predictors.

RESULTS

Mean change in BMI from baseline to follow-up was -0.46 BMI units (SD 0.79; t-test -3.57, p=0.001) for the FITLINE group; 0.35 BMI units (SD 0.96; t-test 2.43, p=0.019) for the control group. This difference calculates to the equivalent of an 8-pound difference over 3 months. In the adjusted linear model, a significant difference was found between groups in change in BMI (0.884, t value 4.24, p<0.0001), indicating children in the FITLINE condition were 0.9 BMI units lower than the children in the control condition at 3 months follow-up.

CONCLUSION

The FITLINE counseling program showed efficacy in reducing short-term BMI. If found effective, the FITLINE program provides a model for widespread implementation of AAP guidelines, contributing to new standards of weight management care in pediatric practice.

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B-111h

PSYCHOSOCIAL FACTORS AND BODY MASS INDEX (BMI) IN YOUNG ADULTS ENROLLED IN THE CELL PHONE INTERVENTION FOR YOU TRIAL (CITY)

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Obesity is increasing in young adults. The prevention and treatment of obesity in young adults may require tailored approaches, but tailoring factors are unclear. We examined the relationship between baseline psychosocial factors and BMI in young adults enrolled CITY, an on-going randomized controlled trial testing two behavioral weight loss interventions versus control. A total of 365 study participants aged 18-35 years with BMI >/= 25 kg/m were enrolled. Multiple linear regression modeling was used to evaluate associations between psychosocial variables (depression, perceived stress, body image, social support, and perceived stigmatization) and BMI while controlling for potential confounding variables (sex, age, race, income, and education). The mean age was 29.4 years (standard deviation [SD], 4.3) and mean BMI was 35.2 kg/m2 (SD, 7.7). Seventy percent of the participants were female, and 44% were non-white. Most non-whites were African American (36% of total). In the adjusted model, baseline BMI increased with increases in both stigmatization score (scale ranges from 0-32; model estimate 0.14 [95% CI, 0.00 to 0.28]; P = 0.05) and body dissatisfaction (difference between perceived and desired body image with scale ranging from -8 to +8; model estimate 3.83 [95% CI, 3.06 to 4.60]; P < 0.001). BMI was inversely associated with having a college education (model estimate -2.45 [95% CI, -3.96 to -0.94]; P = 0.002) and white race (model estimate -2.10 [95% CI, -3.55 to -0.65]; P = 0.005). These results suggest that perceived stigma and body image may be important tailoring variables for effective weight loss interventions targeted to young adults. Future research should focus on testing techniques that will teach young adults how to identify and manage stigma and body image issues in order to prevent, achieve, and maintain a healthy weight.

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B-111i

REDUCED MALADAPTIVE COPING PREDICTS ENHANCED QUALITY OF LIFE AMONG PARTICIPANTS IN BEHAVIORAL WEIGHT MANAGEMENT

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Weight loss outcomes among individuals with obesity remain disappointing despite decades of research, but increased quality of life has been observed. While research has shown that enhanced coping during behavioral treatment predicts weight loss, few weight management studies examine the influence of coping on quality of life. This study aims to examine whether changes in coping during treatment are predictive of quality of life at program completion. Seventy-seven adults with obesity were recruited from a university-based behavioral weight management program consisting of weekly educational classes, individualized reduced-calorie dietary plans, access to exercise facilities and classes, and optional individual meetings with dietitians, exercise physiologists, nurses, health coaches, and behaviorists. Participants chose a three-month or six-month program and completed questionnaires at program start and upon program completion. Participants had a mean body mass index of 47.0 (SD=10.4) at baseline and a mean age of 46.8 (SD=11.5), with 75.32% female and 80.52% Caucasian. Assessments included the Medical Outcomes Study, Short Form-36, Impact of Weight on Quality of Life Questionnaire- Lite Version, Eating Self Efficacy Scale and Coping Orientation to Problems Experienced- Short Form. Hierarchical linear regression was used to predict quality of life at program completion from coping change during the program, controlling for quality of life at program start. Results indicated that reduced impact of weight on quality of life was predicted by increased eating self-efficacy (t=2.78, p<.01), reduced use of self-blame (t=2.39, p=.02), and less use of humor (t=2.64, p=.01) over the course of treatment. Additionally, increased physical quality of life was predicted by greater use of emotional support (t=2.31, p=.02). With the exception of humor, these changes in coping were not predictive of weight loss. Thus, change in coping styles during weight loss predicts enhanced quality of life, suggesting the relevance of addressing coping styles in behavioral weight management.

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B-133a

PREDICTING EFFECTIVE SELF-MANAGEMENT IN MIGRAINE: A PERSONALITY PERSPECTIVE

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Background: Migraine is a recurrent pain condition requiring ongoing self-management in the absence of clear treatment guidelines. While the precipitants of migraine are widely studied, research has not yet examined the specific strategies migraineurs use (or their efficacy) at different stages, or considered how personality factors may lead to more and less effective patterns of self-management.

Method: Fifty self-reported migraine sufferers completed multiple personality assessments before providing ratings regarding the frequency and efficacy of seven common self-management strategies for preventing migraine, at migraine onset, and during episodes. Intra-individual correlations between the frequency and efficacy of strategies were calculated as indicating degrees of self-contingent self-management at prevention, onset, and during migraines.

Results: Regressions controlling for age, sex, and degree of migraine-related disability found that excessive control over unhappiness (β = -.42, p <.01) and greater blunting (β = -.25, p < .05) predicted poorer preventive self-management while greater treatment efficacy perceptions (β = .39, p < .01), anger control (β = .31, p < .01), and agreeableness (β = .36, p < .01) predicted

better self-management during migraines; greater migraine disability predicted less effective preventive self-management (β = -.28, p < .05) and less effective self-management during episodes (β = -.34, p < .01).

Conclusions: Personality factors predicted better preventive self-management and management during migraines, but not at onset. Greater understanding of the determinants of effective self-management strategies will allow healthcare providers to provide more informed and tailored support for management of this condition.

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B-133b
BEYOND TRAIT AND SELF-REPORT: OBJECTIVELY-ASSESSED REGULATORY SKILL PREDICTS BETTER HEALTH AND LOWER HEALTHCARE UTILIZATION IN ADULTS

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Background: A large body of work links emotion regulation to health outcomes. Most work has, however, measured emotion regulation as a self-reported trait. The current report contrasts the ability of trait and skill metrics to predict symptoms, diagnosis counts and healthcare utilization.

Methods: 67 adults aged 18-70 years completed trait measures of emotion and regulation before completing regulatory tasks (enhance and suppress the expression of emotion during anger, happiness, and sadness-inducing films). Two raters coded expressivity relative to a neutral condition in six, 50 second videos (angry, happy, and sad emotions by enhanced and suppressed) for each participant; scores were coded to index greater expressive flexibility with each emotion, greater suppression or enhancement ability overall, or greater overall regulatory ability.

Results: Regressions controlling for age, gender, trait negative affect, inhibition, and expressivity showed that skill scores consistently predicted outcomes over and above control variables, typically explaining greater variance. While flexibility in sadness regulation predicted greater symptom frequency (B=.35; p<.01), flexibility in happiness regulation predicted lower frequency (B=.-.27; p<.05). Conversely, flexible anger regulation predicted being less bothered by symptoms (B=-.30; p<.05). Greater ability to enhance the expression of emotion predicted a lower diagnosis count (B=-.24; p<.05) and greater overall regulatory flexibility predicted greater healthcare utilization (B=-.33; p<.01).

Conclusions: These early data suggest objectively assessed emotion regulatory skill may be an important predictor of health outcomes. Interventions developing emotion regulatory skills may be a more viable target for intervention than dispositional tendencies.

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B-133c
TESTING THE HEALTH PROMOTION MODEL FOR TREATMENT ADHERENCE AND QUALITY OF LIFE IN MS

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Health-promoting behaviors are critically important to adopt in chronic diseases, such as multiple sclerosis, to slow disease progression and promote overall well-being. Treatment adherence in particular is necessary to help manage disease symptoms and prevent relapse, yet many patients struggle to follow physician recommendations. The Health Promotion Model proposes that health promoting behaviors (e.g., treatment adherence) and overall well-being are explained by individual characteristics (i.e., biological, social, psychological) and behavior-specific cognitions (e.g., self-efficacy). The current study sought to test the Health Promotion Model in explaining self-reported adherence and MS quality of life among 111 MS patients receiving care in a southeastern MS clinic (82% female, 52% White, 36% Black, 69% with relapsing-remitting type of MS, M age = 45.4 years). Demographic and study variables were included based on the literature; only those found to be significantly related to the dependent variables (adherence and QoL) in our sample were included in a hierarchical regression. Individual characteristics (i.e., employment, depression, anxiety, disease severity, and illness identity) were entered at Step 1 and self-efficacy at Step 2. The model for self-reported adherence was significant at Step 1, $F(5, 105) = 10.70$, p <.000, R2 = .34; adding self-efficacy did not significantly improve the model. Biopsychosocial variables also predicted QoL, $F(5, 105) = 24.61$, p < .000, R2 = .54; adding self-efficacy to the model did explain an additional 4% variance ($F(6, 104) = 23.82$, p < .000, R2 = .58). Thus, the Health Promotion Model may help to guide strategies used to improve QoL among individuals living with MS; however, the model was only partially supported for adherence.

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B-133d
DEVELOPMENT OF THE HEALTHCARE TRIGGERING QUESTIONNAIRE (HTQ)

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For sexual abuse survivors, healthcare procedures can resemble original abuse experience(s) and can trigger associations to the initial abuse. However, much of the literature to date has been qualitative, and to our knowledge no study has developed or tested a scale to assess healthcare triggering in sexual abuse survivors. Therefore, the goal of our study was to develop a

healthcare triggering scale. 455 adult sexual abuse survivors [male(n=233), female(n=222), mean age=30.85)] were recruited from Amazon Mechanical Turk and completed an online survey. From an item pool of 117 healthcare trigger items, a 29-item scale (Healthcare Triggering Questionnaire - HTQ) was developed using Rasch modeling. Results supported a unidimensional scale with strong reliability values (person separation reliability=0.91, item separation reliability=.98) and validity. The HTQ is a psychometrically sound scale for evaluating healthcare triggering experienced by adult sexual abuse survivors. The HTQ may be considered for use by researchers interested in studying healthcare triggering, healthcare retraumatization, and healthcare adherence. The HTQ may be also be used as an assessment tool in studies of interventions to reduce triggering, retraumatization, and non-adherence. Finally, the HTQ may be of use to clinicians interested in identifying traumatized patients who are more likely to experience triggering in healthcare settings.

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B-133e
CHILDHOOD FOOD ALLERGY AND MENTAL HEALTH: A PROSPECTIVE, LONGITUDINAL INVESTIGATION

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Objectives: To investigate the relationship between early life food allergy and mental health problems among youth in the community from childhood through adolescence, taking into account the role of potential confounders include maternal stress and family functioning.

Methods: Data were drawn from the Raine Study, a population-based birth cohort study in Western Australia. Logistic regression models and generalized estimating equations (GEE) were used to examine the relationship between parent-reported food allergy at ages 1-3 and the range of internalizing and externalizing mental health problems at ages 5-17. Analyses were adjusted for a range of potential confounders.

Results: Parent-reported food allergy in the first three years of life was associated with a significantly increased likelihood of anxiety, affective, ADHD and oppositional defiant problems by age 17, compared with those without food allergy. With the exception of oppositional defiant problems, these associations remained statistically significant after adjusting for confounding by demographics, maternal mental health problems and prenatal stress exposures. Food allergy (with IgE confirmation) was not significantly associated with subsequent mental health problems.

Conclusions: The current study reports the first population-based, prospective, longitudinal results suggesting a relationship between parent-reported food allergy early in life and vulnerability to mental health problems in childhood and adolescence, though lack of association with objective measures call for more research in this area to determine whether and to what degree this association is due to food allergy or bias related to parental reporting. Future studies are needed to understand these links and, if replicated, develop methods aimed at prevention and intervention among this growing population.

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B-133f
CLINICALLY MEANINGFUL CHANGES IN FUNCTIONAL PERFORMANCE RESULTING FROM SELF-DIRECTED INTERVENTIONS IN ADULTS WITH ARTHRITIS

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Background: Studies have shown a decline in function over time among individuals with arthritis. While a number of intervention studies have examined change in function over time, the meaningfulness of these changes has not been explored.

Purpose: To examine the clinical meaningfulness of changes in functional performance resulting from two self-directed interventions targeting adults with arthritis.

Methods: Participants were randomized to a 12-week self-directed exercise or nutrition intervention. Objective measures of functional performance (6-min walk, seated reach, grip strength, 30-sec chair stand, gait speed, balance) were obtained at baseline, 12 wks, and 9 mos. Minimally (≥0.20 base SD) and substantially (≥0.50 base SD) meaningful changes in function were examined. Changes in the percent classified as impaired and at risk for losing independence, using standards, were also examined. Group x Time interactions revealed no significant differences in changes over time between groups; groups were combined in all analyses.

Results: Participants (n=312) averaged 57±10 years of age. Most were female (88%), white (64%), and had at least some college education (89%). Minimally meaningful changes in function among participants ranged from 31-60% (12 wks) and 34-71% (9 mos); substantially meaningfully changes ranged from 13-42% (12 wks) and 18-54% (9 mos). There was a significant decrease in the percentage of participants impaired on the 30-sec chair stand (both time points) and gait speed (9 mos). The percentage of participants at risk for losing independence significantly decreased for the 30-sec chair stand (both time points) and the 6-min walk (9 mos).

Conclusion: Interventions that can, at minimum, slow functional declines, and ideally, result in clinically meaningful improvements in functional performance among adults with arthritis are needed. Meaningful improvements in various indicators of functional performance can result from self-directed exercise and nutrition programs.

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B-133g

HEALTH CARE ACCESS FOR PEOPLE WITH DEVELOPMENTAL DISABILITY: PERSPECTIVES FROM HEALTH CARE COORDINATORS

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Background: In rural areas, individuals with developmental and intellectual disabilities (DD/ID) experience significant health care disparities. Little is known about rural provider accessibility, acceptability, appropriateness, and affordability except through anecdotal reports. The goal of this qualitative study was to understand health care barriers from the perspective of Health care Coordinators (HCCs) in an extremely rural/frontier area. Methods: Participants (HCCs) included family members, guardians, case managers, or individuals with disabilities who coordinated their own care. Semi-structured telephone interviews were conducted and transcribed verbatim. Data analysis utilized grounded theory and constant comparison methods. Results: The 26 HCCs (age: M = 44) provide care for one to 25 individuals with DD/ID (age: 8 months to 60 years). Autism (n = 10), developmental delays (n = 4), intellectual disability (n = 4), and cerebral palsy (n = 4) were most often cited. HCCs identified availability problems, such as a dearth of specialists, resulting in extensive and hectic travel to medical appointments. As one noted, "By the time you have to stop, change dippers, feed kids—it's about six hours one way." Most HCCs did not highlight accessibility or affordability difficulties. In terms of appropriateness of care, HCCs voiced some complaints, such as poor communication: "It was frightening to feel like I was left out of the loop on something that was so important." In contrast, positive comments included highlighting provider attributes of compassion, kindness, and playfulness (with children) as most desirable. The key provider training needs identified included interpersonal and communication skills and enhanced disability-specific knowledge. Conclusions: Although HCCs expressed little difficulty with health care access and affordability, availability barriers and concerns with appropriateness of care are present. Data indicates a need for improved provider training related to working with individuals with DD/ID and their families.

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B-133h

PREDICTORS OF AFRICAN AMERICAN ENROLLMENT IN A UNIVERSITY-BASED CLINICAL STUDIES REGISTRY

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Objective: Historically, African Americans have been underrepresented in clinical trials despite having disproportionate rates of cancer, heart disease, and diabetes compared to whites. A growing number of research institutions have created clinical trial registries to match potential volunteers with appropriate studies. In a sample of 745 African Americans, we examined predictors of enrollment in a university-based registry. We hypothesized that mistrust and knowledge of the US Public Health Service Study of Untreated Syphilis in the Negro Male would not be associated with enrollment.

Methods: The parent project enrolled churches to receive a clinical trial education program (intervention) or an education program about healthy eating (control). We examined baseline predictors of enrollment at 12 month follow up.

Results: In total, 60 people enrolled in the registry over the 1-year period. Demographic variables were not significant predictors of enrollment, nor was patient-provider communication, personal and global benefits, global and personal barriers, or global trust. However, perceptions of inconvenience/hassle associated with a clinical trial (OR = .71, 95% CI: .53-.94; P = 0.02) was significant. Knowledge of the US Public Health Service Study of Untreated Syphilis in the Negro Male and perceptions of discrimination in a healthcare setting were not associated with enrollment.

Conclusion: Mistrust is perhaps a less salient barrier to clinical trial participation than previously thought. Reducing logistical factors such the amount of inconvenience/hassle associated with a clinical trial may warrant more attention.

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B-133i

DISEASE SELF-MANAGEMENT SKILLS OF YOUNG ADULTS WITH SICKLE CELL DISEASE RECENTLY TRANSITIONED TO ADULT CARE

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Improvements in medical care have resulted in more young adults (YAs) with sickle cell disease (SCD) transitioning from pediatric to adult medical care. It is critical for YAs to learn disease-related education and self-management skills prior to transfer of care to an adult provider. Little is known about the level of self-management knowledge and skills for this age group. This study examined disease self-management skills of YAs with SCD who recently transitioned to adult care. Data were collected during focus group sessions. Participants completed a 20-item Self-Management Skills Survey (SMS) asking them to rate their level of knowledge and skill regarding SCD management (6-point Likert scale; 1 = "No, I do not need to learn this" to 6 = "Yes, I always do this if I need to"). Twenty-one YAs participated (M=24.4 years, range=19-29; 67% female; 100% African American). Overall, participants reported actively learning and using skills to manage their health (Total SMS M=4.88, range 1-6). YAs ranked their abilities highest for understanding when to go to the hospital (M=5.38), engaging in safe sex practices (M=5.33), and naming their medications (M=5.29). YAs ranked their abilities lowest for describing the effects of street drugs and alcohol (M=4.19), participating in exercise and healthy eating (M=4.42), and preventing pain crises (M=4.57). Overall, the majority of YAs report possessing knowledge and ability to manage their SCD after transitioning to adult care (M≥5 for overall measure).

However, 45.1% of YAs had mean scores below 5.0, indicating that they do not know how to perform health management tasks. Therefore, YAs may need extra education and practice of these skills, especially prior to and during the transition to adult care as they become more independent and responsible for their healthcare.

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B-133j
EXPRESSIVE WRITING ABOUT BODY IMAGE: LINGUISTIC CHARACTERISTICS OF IMPROVEMENT IN SOCIAL COMPARISON

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Among young women, comparisons to attractive others (upward comparisons) are tied to the development of body dissatisfaction and disordered eating. Conversely, downward comparisons (to "worse-off" others) are related to improvements in body image. Expressive writing (EW) about body image has been shown to reduce appearance comparisons, which may alleviate body dissatisfaction and disordered eating. Better understanding of linguistic processes relevant to EW in this context could inform improvements. In the present study, college women (N=118) wrote about body-related experiences (expressive) or their daily activities (control) during three, 15-minute sessions. The Linguistic Inquiry and Word Count (LIWC) was used to calculate the percentage of total words used per session in several categories. EW participants increased their use of cognitive processing words from session 1 to session 3, whereas controls decreased (contrast p<.01). Greater increases in cognitive processing words were associated with increased downward comparisons (R=.24, p=.03) and decreased upward appearance comparisons (R=-.23, p=.07; marginal) from baseline to 8-week follow-up. EW participants also wrote about social experiences to a greater extent than controls (ps<.01), though overall use of social references among EW participants decreased from session 1 to session 3 (while controls increased; contrast p=.03). Specifically, greater reductions in references to friends were associated with higher increases in use of downward comparisons among EW participants (R=.26, p=.05). These findings indicate that EW about body image prompts a focus on the social environment. Reducing one's written focus on friends, as well as the expected cognitive changes resulting from EW, may lead to fewer harmful and more helpful social comparisons. Additional research is necessary to optimize this brief, cost-effective intervention for improving body image among women.

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B-142a
STAYING POSITIVE WITH ARTHRITIS: IMPACT OF A POSITIVE ACTIVITIES PROGRAM ON PAIN AND FUNCTIONING IN VETERANS WITH ARTHRITIS

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Osteoarthritis (OA) is a painful condition for which current treatments yield only modest improvements. Treatments based on the biopsychosocial model of pain that target psychosocial factors associated with OA outcomes are needed. Studies show that increased positive affect (PA; e.g., feelings of joy or contentment) is associated with less pain and better functioning. Techniques for increasing PA exist, but their impact on pain and functioning in patients with chronic pain has not been tested. We tested the hypothesis that a program of PA-boosting activities would improve pain and functioning among patients with knee or hip OA. Military veterans age 50 or older with knee or hip OA from a VA outpatient facility (N=42) were randomized to complete a 6-week PA or attention control (AC) program tailored for use in veterans. Participants completed 1 new PA or AC activity each week for the first 5 weeks and repeated their favorite activity in week 6. OA pain and functioning were assessed at baseline and 1-month post-intervention using the Western Ontario MacMaster Index. Scores could range from 0 to 100 (higher scores = worse). Linear mixed models were used to examine change in outcomes over time. Pain scores improved from 51.4 to 39.1 in the PA group, versus worsening from 51.4 to 53.3 in the AC group. The intervention by time interaction indicated a significant improvement in pain for the PA group compared to the AC group (p=0.02; Cohen's d = 0.91). The PA group also experienced significantly larger improvements for physical functioning (p=0.006; Cohen's d = 0.97). In summary, we have shown that a PA activities program improves pain and functioning in veterans with knee or hip OA. Integrating PA activities into clinical care may be a novel way to promote health in this group.

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B-142b
PAIN SYMPTOMS AND ILLICIT OPIOID USE AMONG VULNERABLE PERSONS WITH HIV/AIDS: IMPLICATIONS TO OPIOID ABUSE PREVENTION AND PALLIATIVE CARE

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Injection drug use (IDU) remains a major category of transmission for Human Immunodeficiency Virus (HIV) infection. For example, in Baltimore, Maryland, 46% of living HIV cases are

former or current IDU. This is the most prevalent exposure category; heterosexual sex (27%) and men who have sex with men (24%) are second and third respectively. Similar results have been reported in other urban areas, particularly throughout northeast USA. IDU's, especially those with HIV, are at high risk of chronic pain, Estimates of pain prevalence among persons living with HIV/AIDS (PLWHA) vary from 25-80%; pain prevalence estimates are highest among PLWHA who use illicit substances. Pain symptomatology may increase risk of opioid relapse, but this is poorly studied among this population. Methods: IDU's with HIV (N=260) from the Being Active and Connected (BEACON) study were examined for associations between pain and opioid use. Only patients initially abstinent from opioid use were included. Results: Pain was significantly associated with opioid use across all time points in bivariate correlations (all p's < .05). Consistent with trends identified in Generalized Estimating Equations, Structural Equation Modeling indicated that pain was associated with increased risk of opioid relapse (AOR:1.66, 95% CI= 1.22-2.26). Implications: Pain appears to be associated with opioid relapse among this population of IDU with HIV. Prior research shows that IDU living with HIV/AIDS are less likely to receive adequate analgesia pain treatment than other PLWHA. Our findings support investigating pain treatment among IDU with HIV both as a way to enhance palliative care and as a public health and relapse prevention intervention.

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B-163a
RANDOMIZED TRIAL OF A FITBIT-BASED PHYSICAL ACTIVITY INTERVENTION FOR POSTMENOPAUSAL WOMEN

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BACKGROUND: Direct-to-consumer mhealth devices are a potential asset to behavioral research but are rarely tested as intervention tools. This trial tested the Fitbit tracker and website as a basis for a low-touch physical activity intervention among women. The Fitbit is a small accelerometer-based device that measures physical activity levels and intensity and uploads this information to a website where users can review their progress and goals.

METHODS: Fifty-one inactive, postmenopausal women with BMI≥25.0 kg/m2 were randomized to a 16-week web-based tracking intervention (N=25) or a comparison group (N=26). Those in the Web-Based Tracking Group received a Fitbit tracker, a one-on-one goal-setting and instructional session, and a follow-up goal-setting call at 4 weeks. Those in the comparison group received a standard pedometer. Both groups were asked to perform 150 min/wk of moderate-to-vigorous physical activity (MVPA). Physical activity outcomes were measured by the ActiGraph GT3X+ accelerometer. Other measures were body weight, usage/acceptability of the Fitbit, and activity data from the Fitbit website.

RESULTS: Participants were 60±7 years old with BMI=29.2±3.5 kg/m2. At baseline, they were performing 34±55 min/wk of MVPA and accumulating 5586±2387 steps/day; 86% were Non-Hispanic White; 86% were daily internet users. As of December 2013, 28 women have completed the study. Across groups, they increased their steps by 1469±2320 per day (p<.01) and total MVPA by 60±115 min/wk (p=.01), however between-group differences were not significant. Of those in the Web-Based Tracking Group, 87% wore their tracker daily and 73% checked the Fitbit website at least once a week. Full data will be available in March 2014.

CONCLUSIONS: Preliminary analyses of this pilot trial show the Fitbit to be well accepted by middle-aged and older women and to result in increased physical activity at 16 weeks. By identifying and leveraging direct-to-consumer mhealth technologies that fit well with behavior change theories, researchers can strengthen physical activity intervention strategies.

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B-163b
FEASIBILITY OF A SIMPLE, INEXPENSIVE ECOLOGICAL MOMENTARY ASSESSMENT (EMA) TO EXAMINE RELATIONSHIPS BETWEEN SELF-WORTH AND PHYSICAL ACTIVITY (PA)

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The study purpose was to determine the feasibility of an EMA protocol administered on participants' cell phones, using text messaging and a mobile internet survey to assess dynamic relationships between self-worth and PA in middle-aged women.

Participants were 9 women (35-64 years-old) who answered 'no' to all items on the PA Readiness Questionnaire (PAR-Q) and owned a cell phone with text messaging and Internet. Women received 35 text messages over two weeks. Messages included a link to a 7-item mobile survey assessing current activity, PA self-efficacy and self-worth (general, knowledge, emotional, social, physical). Text messages were scheduled via an Internet program; the survey was administered via an Internet survey system. GENEActivs were used to objectively measure PA. Feasibility was measured via attrition, completion rates/time, and a usability survey. Multilevel modeling was used to examine self-worth variability and preliminary relationships with PA.

Of the 15 women contacted, three were ineligible (no smartphone, 'yes' on PAR-Q) and three were withdrawn (could not receive texts). Women completed on average 34 of 35 surveys. Ten surveys were marked as non-response due to completion exceeding a 2.5-hour window, resulting in 94% completion. 29.8% and 76.5% of surveys were completed in <1 and <2 minutes respectively. Women thought the survey was easy to complete and read, and did not take too long. Most thought wearing the GENEActiv was inconvenient. Multilevel models indicated significant fixed effects of mean knowledge and physical self-worth.

Favorable completion rates/times and positive perceptions of usability suggest the use of low-cost Internet software to schedule text messages and administer mobile surveys may be feasible for

assessing relationships between PA and behavioral correlates. However, considering the longitudinal design of EMA studies, researchers may need to carefully choose objective monitors that accompany momentary self-report.

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B-163c
ENVIRONMENTAL EXERCISE FOR SENIOR FALLS PREVENTION

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The goal of this study was to decrease physical injuries from falls in adults 65 and older who participated in a three month, at-home physical activity interventon. The intervention objective of the study was to determine whether seniors 65 and older who completed a three month exercise program showed greater improvement on functional measures of fitness then seniors in a comparison group. The intervention was based on a multi-disciplinary model of health providers and combined exercise with best practices in motivational interviewing, behavioral plans, and monitoring. Intervention and comparison participants received pre- and post-tests on six measures of the Rikli & Jones senior fitness test of functional fitness as well as measures of motivation and self efficacy. Team members provided support, motivation and technical instruction.Results showed that regardless of group, seniors regardless of gorup were initially enthusiastic about exercising. Group differences were obscured by several "lifetime exercisers" in each group and prior level of exercise. Paired-t test analysis did show that each group of participants improved over their pre-test scores on two of the six functional measures. Linear regression showed BMI as the significant predictor of whether seniors would try or complete the test that required getting down on the floor and rising to a standing position. Our conclusion is that seniors initial enthusiasm about exercise in the home environment was not borne out by consistently higher physical activity even with behavioral agreements and on-going monitoring. In future, we will combine physical activity in more structured settings with home practice. A one year follow-up of the seniors is currently in progress. As team members, health promoters and physical therapists spent much more time with participants than physicians, who need more training and encouragement to spend time with clients.

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B-163d
MAINTENACE OF SELF-MANAGED EXERCISE AFTER CARDIAC REHABILITATION: A FEASIBILITY INTERVENTION

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Supervised exercise in cardiac rehabilitation programs (CRP) lowers cardiovascular risk and offers health benefits. However, post CRP benefits via exercise maintenance are limited if only risk reduction exercise is maintained. Self-managed exercise (SMEx) is recommended for maintenance CR in addition to structured exercise, however, adherence to SMex is problematic. To address Rothman's call for maintenance research, we conducted a theory-based group-mediated cognitive behavioral intervention (GMCB) to increase SMex adherence. We recruited 55 post-CR participants (Mage = 70.4 ± 7.2 years) engaged only in structured, maintenance CR exercise. A quasi-experimental design compared a standard maintenance attention-control group ([AC], n = 23) to a group-mediated treatment (GMCB, n = 32). Both groups received structured maintenance exercise. GMCB participants also received training and practice in cognitive behavioural strategies to increase SMEx. AC participants received attention-control cardiac health education. We examined volume (min/week) for CR exercise and SMEx at baseline, post-intervention (8 weeks) and follow-up (12 weeks). MANOVAR revealed a multivariate effects for time, $p < .001$, and a group by time interaction, $p < .05$. Univariate follow-ups indicated both time, p's $< .001$, partial eta[2] range = .27-.38 and group by time effects, $p < .05$, partial eta[2] range = .11-.13. Increased SMex volume favored the GMCB treatment at post-intervention (GMCB = 151.6 ± 145.6; AC = 70.1 ± 70.8) and at follow-up (GMCB = 180.3 ± 127.4; AC = 97.2 ± 117.8). This SMex increase was not at a cost to structured CR maintenance volume. Chi-square indicated that 92% of GMCB individuals added SMEx to weekly volume vs 25% of AC individuals ($p < .05$). Findings are similar to other GMCB RCTs of individuals at cardiovascular risk and to a maintenance study of individuals with spinal cord injury. Results hold promise for future CR studies of maintenance adherence to SMex.

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B-163e
BEHAVIORAL ASSESSMENT AND PARTICIPANT COMPLIANCE IN AN AUTOMATED PHYSICAL ACTIVITY INTERVENTION FOR DIABETES

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Much effort is spent on the design and evaluation of automated behavioral health interventions, but aspects of evaluation meth-

odology may need attention. We examine the impact of behavioral assessment in a randomized trial of an automated physical activity intervention for diabetes and concordance between two physical activity assessment methods.

Participants receiving the intervention (N=31) were asked to wear pedometers and have weekly telephone sessions with an interactive voice response system for 6 months, during which they reported step counts and received content tailored by stage of change. Extensive behavioral and fitness assessments were done at intake, 3, 6, and 12 months and included a 7 day accelerometer measurement of physical activity. We focus on 3-month accelerometer totals, and daily step counts and compliance with step count reporting over 6 months.

Step counts were reported for 3953 of 5890 (67.1%) participant-days over 6 months. Completing a session without reporting was rare (248; 4.2%). Compliance decreased about 1.4% per week (beta-binomial regression; β=-0.009, p<0.001) and abruptly at the 3 month assessment, from 79.6% in the week prior to 59.2% two weeks afterwards. The decrease in these two weeks was significant (piecewise linear beta-binomial regression, knots every 7 days; β=-0.81, p<0.001; β=-1.17, p<=0.001). A strong correlation was found between step counts and accelerometer readings for the 7 days of accelerometer assessment (r=0.84; 95% CI [0.59,0.94]) using a bivariate mixed effect model, with both variables log-transformed, and with days grouped by participant.

We conclude that: (1) Assessment during a physical activity intervention may be associated with a subsequent reduction in compliance in reporting step counts (which may reflect a decrease in physical activity), raising concerns for the ecological validity of this methodology and (2) self-reported step counts correlate highly with accelerometer readings, suggesting that participants accurately report activity during assessment.

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B-163f
BARRIERS TO PHYSICAL ACTIVITY PERCEIVED BY 5TH - 7TH GRADE GIRLS

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Barriers preventing girls from attaining adequate physical activity (PA) warrant thorough investigation due to the low prevalence of meeting national guidelines. The purpose of this study was two-fold: To identify differences in perceived barriers to PA by academic grade, ethnicity, race, socioeconomic status (SES), and developmental stage; and to examine relationships between perceived barriers to PA and PA. Ten- to 14-year-old girls (N=509; grades 5-7) from 8 urban schools in the Midwestern U.S. participated. Perceived barriers to PA were assessed with a 16-item scale ranging from 0 (not at all true) to 3 (very true). Parents reported their daughter's academic grade, ethnicity, race, and enrollment in the free- or reduced-price school lunch program as an indicator of low SES. Developmental stage was categorized as early/middle vs. late puberty using the Peterson Pubertal Development Scale. Both moderate-to-vigorous physical activity

(MVPA) and light PA plus MVPA (LMVPA) were collected in raw accelerations and analyzed in minutes per hour with the Actigraph GT3X-plus accelerometer (3 weekdays and 1 weekend day with at least 8 hours/day of wear time were required). Girls participating in the free- or reduced-price lunch program (n=402, 84.8%) reported greater barriers to PA (M=1.16, SD=0.58) than those not enrolled (n=72, 15.2%; M=0.97, SD=0.57; t=-2.503, p=.013). Perceived barriers to PA were lower among girls in early/middle puberty (n=300, 58.9%; M=1.03, SD=0.56) than those in late puberty (n=209, 41.1%; M=1.24, SD=0.59); t=-4.05, p<.001). No other between-group differences in demographics occurred. Perceived barriers were related to LMVPA (r=-.108, p=.021) and MVPA (r=-.100, p=.032). Linear regression showed that barriers explained LMVPA (β=-.11, t=-2.32, p=.021) and MVPA (β=-.10, t=-2.15, p=.032). Assisting girls in late puberty and those of low SES to overcome personal perceived barriers to PA may increase their participation in the behavior.

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B-163g
GET IN MOTION: CORRELATES OF CLIENTS' ADHERENCE TO A TELEPHONE-BASED PHYSICAL ACTIVITY COUNSELING SERVICE

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Get In Motion (GIM) is an evidence- and theory-based telephone counseling service designed to increase leisure time physical activity (LTPA) participation among people with a spinal cord injury. Ideally, 14 one-on-one sessions are provided over 6 months, with a weaning of counselor contact to help clients gain independence and self-regulatory skills. Sessions are rooted in the Health Action Process Approach (HAPA) model, and the counselor facilitates discussion about action and coping planning, goal setting, safety tips, and intensity and types of LTPA. The purpose of the current study was to examine clients' adherence (total number and duration of counseling sessions) to the GIM service, as well as correlates of adherence. Clients' (n=45) demographics were obtained at enrollment, LTPA participation was collected throughout service, and feedback was obtained at end of service. Mean number of sessions was 6.40±3.58 (range 1-13) and mean duration of total sessions was 103.31±57.80 min (range 14-231 min). Women were more likely to engage in a greater number of sessions (7.52±3.65 vs. 5.32±3.02; t(40)=2.10, p=.04) and have longer total session duration (129.21±60.00 vs. 76.55±37.21, t(39)=3.56, p=.001) than men. Separate repeated measures ANCOVAs, controlling for number and duration of sessions, revealed no significant change in weekly LTPA between enrollment and 6 months (ps>.22). No clients reached the recommended 14 sessions potentially explaining a lack of significant change in LTPA. Clients' perceptions of information credibility and importance were positively correlated with number and duration of sessions (rs≥.48, ps≤.03). To increase clients' adherence

to GIM, further research should examine strategies that may be incorporated into the sessions to keep clients, particularly men, engaged in the service, as well as enhance clients' perceptions of the credibility and importance of the information discussed.

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B-163h
CHANGES IN PERCEIVED PLEASANTNESS OF LEISURE-TIME ACTIVITIES DURING AN ADULT BEHAVIORAL PHYSICAL ACTIVITY INTERVENTION

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Background: The perceived enjoyment of an activity can be a highly influential variable regarding the engagement in a behavior. Most adults do not get enough physical activity (PA), but do watch many hours of TV/week. Various PA prescriptions may differ on how they impact perceived enjoyment of PA and TV viewing.

Purpose: Compare the effects of 2 PA prescriptions, one that focused solely on PA and the other that increased PA during TV viewing, on the perceived pleasantness of engaging in PA and TV viewing during a 6-month (mo) behavioral PA intervention.

Methods: 58 sedentary, overweight (BMI 33.5 ± 4.8 kg/m2) adults (age 52.0 ± 8.6 y) were randomized to one of two behavioral PA interventions: TV Commercial Stepping; or Walking. Two dependent measures, pleasantness of engaging in PA and TV viewing, were assessed using a 10 cm visual analogue scale, anchored with "very unpleasant" (0) and "very pleasant" (10). Using intent-to-treat analysis, repeated-measures ANOVAs tested changes in the dependent measures by time (0 and 6 months) and PA prescription.

Results: Of 58 subjects, 47 were retained for follow-up at 6-mo. At baseline, TV viewing was more pleasant than PA for both groups [6.7 ± 1.5 vs. 3.9 ± 2.1 (TV Commercial Stepping); 7.2 ± 1.3 vs. 4.3 ± 2.2 (Walking); P<0.05]. At 6 mo pleasantness of TV viewing did not change, but pleasantness of PA significantly increased for both TV Commercial Stepping (6.1± 1.3); and Walking (6.0 ± 1.7); P<0.05. At 6-mo, pleasantness of PA and TV were not different for TV Commercial Stepping (P=0.43), but Walking still preferred TV viewing to PA (P=0.02).

Conclusions: Over time engaging in PA may become more enjoyable for previously sedentary overweight adults when participating in a behavioral PA intervention. TV-related PA did not appear to decrease the pleasantness of TV viewing, but did assist in making these two activities more equivalent in terms of pleasantness.

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B-166a
EXPRESSIVE WRITING ENHANCES BENEFIT FINDING AMONG WOMEN WITH INFERTILITY

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The experience of infertility is often associated with psychological distress and maladaptive coping strategies. Written emotional disclosure has demonstrated positive effects on psychological and physical health in a number of populations, but the efficacy of expressive writing has not yet been examined in women diagnosed with infertility. We tested an expressive writing intervention compared to a non-expressive writing control group, using a pilot sample of women undergoing treatment for infertility. Participants were 18 women (mean age = 33, range 25-44). All women completed a battery of psychosocial measures each day over the course of nine days. For three days (days 4-6) the women randomized to the active intervention engaged in 20 minutes of expressive writing about their experience of infertility or a traumatic experience. The control group wrote about a non-emotional topic. Descriptive analyses at baseline suggested high levels of distress in the sample with 41% of the women meeting clinical threshold for depression on the Center for Epidemiological Studies Depression Scale. A significant negative association was found between depression and benefit finding (r=-.56, p<.05). Scores on the Benefit Finding Scale were compared between baseline and day 9 among the women in the expressive writing condition (n=11). Participation in expressive writing was associated with significant increases in benefit finding (M change = 4.72, t = -2.41, p<.05), but no differences in benefit finding were found in the control group. These findings suggest that perceptions of the positive aspects of one's infertility diagnosis can be enhanced through written emotional expression. These positive changes in benefit finding may predict better psychological adjustment in the future and warrant further investigation.

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B-170a
MY ILLNESS OR OUR ILLNESS? SHARED RESPONSIBILITY FOR ILLNESS MANAGEMENT AND RESPONSES TO RECEIVING GENOMIC SEQUENCING INFORMATION

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Genomic sequencing has considerable potential for advancing clinical medicine. Yet, its clinical promise ultimately depends on how it is perceived by patients and families, both individually and in interaction (i.e., the social dynamics surrounding sequencing results). Theory and research suggest that one important determinant of patients' post-sequencing psychological well-being and health decisions is whether they perceive that people close to them share responsibility for their illness management. The NCGENES study is investigating psychological and behavioral responses to receiving diagnostic whole exome

sequencing results in adult patients and parents of child patients. One factor being investigated is whether these participants perceived that they equally share responsibility for illness management with a spouse or partner (yes/no). Data collection is ongoing. Preliminary analyses on data from 26 participants who have received sequencing results demonstrate that, compared to participants who feel they equally share responsibility for illness management with their partner, those who do not feel equally shared responsibility experienced more distress from sequencing results, $t(22.3) = -2.10$, $p = .047$, and sought more information about those sequencing results, $t(19.9) = -2.10$, $p = .049$. Positive responses to sequencing results or regret about having genomic sequencing did not significantly differ by shared responsibility. Although preliminary, these findings highlight the importance of considering family social dynamics surrounding illness management when anticipating patients' and families' psychological and behavioral responses to receiving genomic sequencing information.

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B-174a
CONDOM USE AND GOAL DIRECTED BEHAVIOR IN COLLEGE STUDENTS

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Background: Emotion regulation deficits are a factor in many maladaptive behaviors, including substance abuse and anxiety disorders. Despite research in such areas, little attention has been given to emotion regulation and the maladaptive behavior of unsafe sex. The aim of this study was to examine the relationship between difficulties in emotion regulation and safe sex behaviors of condom use and sexual assertiveness. Method: A sample of 104 undergraduates (64 female, 40 male; mean age 19.95) completed the Difficulties in Emotion Regulation Scale (DERS) and a modified version of the Safe Sex Behavior Questionnaire (SSBQ) through an online survey. The DERS assesses difficulties in emotion regulation and includes six subscales: nonacceptance of emotional response, difficulties engaging in goal directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotional regulation strategies, and lack of emotional clarity. The modified SSBQ measures use of safe sex practices and includes four subscales: use of condoms, use of assertiveness skills, avoidance of risky behaviors, and avoidance of bodily fluids. A higher score on each subscale suggests greater difficulties in emotion regulation and higher involvement in safe sex practices, respectively. Linear regression models were used with two DERS subscales (difficulties engaging in goal directed behavior and impulse control difficulties) hypothesized to be significantly associated with two SSBQ subscales (use of condoms and assertiveness skills). Results: A marginally significant negative relationship was found between difficulties engaging in goal directed behavior and condom use (p=.052). Other subscale relationships were not found to be statistically significant. Conclusion: Individuals who engage in goal directed behavior are more likely to use condoms. Interventions that improve emotion regulation skills may also impact condom use. While other subscale relationships were not significant, more research should be done with larger samples to assess these relationships.

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B-177a
LATENT CLASSES OF SLEEP PROBLEMS AMONG TAIWANESE OLDER ADULTS

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It is well documented that poor sleep quality is linked to older age, and several risk factors or/and correlates of loss of sleep have been identified among older adults, such as physical morbidities/disabilities, mental disturbances, medication side effects, and other social and cultural factors. However, there is considerable variation in the estimates of prevalence of elderly insomnia among previous studies, largely due to different definitions of insomnia and data collection procedures (e.g., self-administered questionnaire, telephone survey, or in-depth interview). Instead of relying on any arbitrary diagnostic criteria, this study wishes to investigate whether there are identifiable subgroups among older sleepers that may be characterized by endorsing distinctive major sleep difficulties, based on a national representative sample from the "Elderly Nutrition and Health Survey in Taiwan (1999-2000)." With the help of latent class analysis (LCA), four relatively homogenous groups of older adults in Taiwan are revealed according to nine indicators of major sleep difficulties. While the majority (around 70%, labeled as "Smooth Sleeper") showed little sleep complaints, one tenth (labeled as "Rough Sleeper") experienced comprehensive insomnia symptoms. The remaining 20 percent can be divided into two equal halves: the first half (labeled as "Inefficient Sleeper") suffered from major difficulty in initiating sleep and expressed low subjective sleep quality, whereas the second half (labeled as "Interrupted Sleeper") reported greater difficulty in maintaining sleep without complaining much about their sleep quality. Further analyses indicate that, being female, decreased self-rated health, and escalated depressive symptoms may put older adults at greater risk for insomnia characterized by distinctive symptom profiles.

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B-184a
SMOKERS' BELIEFS ABOUT THE TOBACCO CONTROL POTENTIAL OF 'A GENE FOR SMOKING'

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Background: Genomics research has uncovered a number of

genetic variations associated with nicotine dependence and lung cancer. Such findings have the potential to influence tobacco control practice and policy, but it is unknown how smokers perceive such possibilities.

Objective: To understand the extent to which smokers believe that research regarding genomics and tobacco use might be used for tobacco control.

Method: Participants were 89 smokers recruited from the general population of a medium-sized Midwestern city. Focus groups (N=13) were conducted. Groups were stratified by race (8 African American, 5 White) and education (7<Bachelor's degree, 6 Bachelor's or more). Data were analyzed by 2 independent coders using standard analysis and validation techniques (Creswell).

Results: Nearly all groups mentioned using information about the 'gene for smoking' as a component of tobacco prevention education targeted to children and adolescents. There was wide variability in the anticipated effectiveness of such actions. There was general agreement that informing long-time smokers about their specific genetic information or simply informing them about the existence of a gene would not motivate people to quit, but a few participants dissented and indicated that it would be motivating for them personally. All smokers emphasized the need for improved smoking cessation treatment options. The idea of using genomics research to develop gene therapies and personalized drug treatments were mentioned, but perceptions of such treatments were mixed. Whereas some participants viewed the possibility as "hopeful," others were very concerned about cost and access. Participants were also apprehensive about potential misuse of genomics information for discriminatory or stigmatizing purposes.

Conclusion: Participants generated several possible tobacco control uses for genomics research findings. Tobacco control experts should consult with smokers prior to implementing a tobacco control program or policy to avoid generating mistrust or backlash.

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B-184b
SMOKERS' UNDERSTANDING OF FACTORS THAT INFLUENCE PHENOTYPIC EXPRESSION

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Background: Extensive research shows that most laypeople do not endorse genetic determinism. However, little is known the public's beliefs about factors that influence phenotypic expression of genetic variants, particularly those that have a strong behavioral co-risk factor such as tobacco use.

Objective: To understand smokers' understanding of the factors that influence whether a smoker with a genetic variation that increases the risk of strong nicotine dependence and lung cancer will be able to quit smoking and/or avoid developing lung cancer.

Method: Participants were 89 smokers recruited from the

general population of a medium-sized Midwestern city. Focus groups (N=13) were conducted. Groups were stratified by race (8 African American, 5 White) and education (7<Bachelor's degree, 6 Bachelor's or more). Data were analyzed by 2 independent coders using standard analysis and validation techniques (Creswell).

Results: Participants acknowledged that the penetrance of a genetic variation could vary (e.g., "some genes are more impactful than others"), but there was near universal rejection of genetic determinism. Participants indicated that a gene might be "triggered" by exposure to environmental toxins or prevented by engaging in healthy lifestyle behaviors or, in the case of a 'gene for smoking,' not 'taking that first puff'. Willpower could overcome the addictive properties of the gene for current smokers. Lay epigenetic beliefs (e.g., smoking changes one's genes, "cells," and "molecules", and these changes are "passed down") were mentioned in several groups.

Conclusion: Participants had a highly nuanced understanding of the factors that influence phenotypic expression of genetic variation, although they did not use scientific terminology when describing the processes. Communication of genomic information should not underestimate the public but should also be absent of jargon.

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B-184c
ASSESSING RELATIONS AMONG MATERNAL SMOKING DURING PREGNANCY, SOCIOECONOMIC STATUS, AND PSYCHOLOGICAL DISTRESS: ANALYSIS WITH STRUCTURAL EQUATION MODELING

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Background. Maternal smoking during pregnancy (MSDP) is a pervasive public health concern. Despite medical and societal sanctions, 9% to 30% of pregnant women smoke in the United States, with rates highest in disadvantaged populations. Consistent with this disparity, two key correlates of MSDP in studies conducted to date are low socioeconomic status (SES) and psychological distress (e.g., stress, depression). Yet, studies to date have assessed these relations using inconsistent operational definitions of SES and varying psychological symptoms, precluding the ability to easily generalize findings beyond the study samples, and no study to our knowledge has assessed the comprehensive nature of these relations in a structural equation model (SEM) including a mixture of measured and unobserved (latent) variables. Purpose. The purpose of this study was to assess a comprehensive SEM in which latent variables representing multiple indicators of SES and psychological distress predict MSDP, including not smoking, quitting, and continued smoking during pregnancy. We were also interested in whether psychological distress mediates the SES relation with MSDP. Methods. Timeline Followback interviews along with biochemical verification was employed to assess MSDP in a diverse sample of 132

pregnant women. Results. Consistent with past studies, continuing pregnancy smokers and women smoking and quitting during pregnancy were more likely to have low education and income, and to have symptoms of psychological distress. However, only SES, not psychological distress affected MSDP in the SEM. Conclusions. This is among the first studies to use a comprehensive measure of maternal smoking during pregnancy, and to model relations among SES, psychological distress, and MSDP in a SEM and using a diverse sample with a comprehensive MSDP assessment. Our finding highlights the need to tailor MSDP prevention and intervention initiatives to lower SES women.

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B-184d
PSYCHOMETRIC PROPERTIES OF THE BRIEF MOTIVATION SCALE FOR SMOKING CESSATION

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Motivation to change behavior is an important construct in health behavior research, but there is little consensus on the best conceptualization (e.g., desire, self-efficacy, attitude) and there are few well-established brief measures. The Brief Motivation Scale (BMS) is a six-item self-report instrument based on analysis of patient language during Motivational Interviewing sessions that predicts outcomes by measuring patients' desire, reasons, need, ability, commitment, and readiness for change. We evaluated the psychometric properties of the BMS when administered to participants in a smoking cessation trial. Participants (n=334) were predominantly African American (66.8%) males (57.5%) aged 18 to 71 (M=46.0) smoking 16.6 cigarettes/day. BMS demonstrated strong internal consistency (α=.89). Principal axis factoring extracted a single component explaining 58.3% of variance. Convergent validity was demonstrated by strong correlations with Contemplation Ladder (r=.73, p<.01), Motivation Ruler (r=.76, p<.01), Autonomous Motivation (r=.74, p<.01) and Decisional Balance (r=-.56, p<.01). Discriminant validity was demonstrated with medium and weak correlations with Confidence Ruler (r=.46, p<.01) and Self-Efficacy (r=.13, p=.02), respectively and nonsignificant correlations (r's<.07, p's >.29) with measures of perceived stress, depressive symptoms, extroversion, and neuroticism. Predictive validity of the BMS was demonstrated using change in BMS score from baseline to 12 weeks to predict quit attempts (OR=1.06, p<.01) and cessation (OR=1.07, p=.02) at 12 and 26 weeks using GEE analysis. Incremental validity was demonstrated with predictive validity above and beyond Autonomous Motivation and Decisional Balance. Results confirm and extend evidence of BMS validity for assessing motivation among smokers in clinical and research settings.

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B-193a
ASSOCIATIONS OF NICOTINE USE, PAIN, AND QUALITY OF LIFE WITH SUBTHRESHOLD VERSES DIAGNOSTIC-LEVEL PTSD IN OEF/ OIF VETERANS WITH CO-OCCURRING SUBSTANCE MISUSE

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OEF/OIF veterans experience relatively high rates of PTSD and substance use, which often co-occur and are related to poor quality of life (QOL). PTSD and subthreshold PTSD (sPTSD) are associated with a number of health risks. The related risks of pain, nicotine use, and QOL in this population are currently lacking in the literature. This research sought to 1) describe nicotine use, pain and QOL in OEF/OIF veterans with co-occurring PTSD and substance use and 2) determine if differences exist between sPTSD and PTSD according to socio-demographic and health risk variables. We hypothesized that veterans with sPTSD versus PTSD would not differ on health risks or QOL. 107 OEF/OIF veterans completed questionnaires assessing PTSD, nicotine use, alcohol and substance dependence, pain severity and QOL. About one-quarter (24%) of our sample met criteria for sPTSD; the remainder met for PTSD. Illicit substance dependence was low (20%), while alcohol dependence and nicotine use were high (56%; 65%). Participants reported moderate to severe pain (6.42 ± 2.24). T-tests and chi-square analyses revealed that participants with sPTSD tended to be older and report better QOL. As hypothesized, no other differences were found, suggesting that sPTSD is not associated with less nicotine use, substance use or pain than PTSD. These results provide useful clinical information that OEF/OIF veterans may not need to have PTSD to experience the health risks associated with PTSD. Contrary to our hypothesis, veterans with sPTSD report better QOL than those with PTSD, indicating that these health risks may cause less impairment in physical, social, psychological and environmental functioning. This line of inquiry would benefit from future investigation of mechanisms underlying QOL in veterans with sPTSD and PTSD.

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B-193b
FUNCTIONAL IMPACT OF NEUROFEEDBACK ON VETERANS WITH PTSD

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Post Traumatic Disorder (PTSD) is a debilitating condition and approximately 50 percent of military veterans present symptoms when returning from deployment (Kessler et al., 2005). Maguen and colleague (2011) reported that the disorder has also contributed to the alarming rate of suicides in this group. Symptoms of

this disorder include dysfunctions in all areas of life such as disturbance in emotionality, attention, memory, arousal and sleep. The neural correlates of these dysfunctions are actively being examined and recent studies report hypoactivations in brain areas (prefrontal cortex, anterior cingulate cortext, thalamus) important for regulation of emotions, inhibition, and arousal in PTSD. Niv (2013) reported that Neurofeedback is superior and effective in treating neurobiological dysfunctions such as those observed in PTSD. This present study examined the efficacy of neurofeedback training on PTSD symptoms in homeless veterans of mixed age and race. Scores on a likert scale questionnaire (rating scale of 1-5) tracking 23 symptoms of PTSD pre-treatment, during treatment, and post treatment were obtained for both the experimental and control groups. Data analyses yielded a significant remediation of PTSD symptoms in the experimental group as a result of undergoing 20 sessions of neurofeedback training (p < .01). Neurofeedback procedure is an effective treatment in alleviating PTSD symptoms that include emotional regulation, sleep, volition, concentration, and attention. The treatment promoted an increase in functionality and productivity in the overall well-being of veterans with PTSD.

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B-198a
COPING STYLES AND DEPRESSION AMONG HEAVY DRINKING LATINOS

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Understanding social stressors and individual coping response will increase the efficacy of substance abuse interventions targeting under-resourced minority populations. However, little is known about the co-occurrence of discrimination, depression, and coping styles among heavy drinking Latinos. Data from an ongoing randomized clinical trial recruiting non-treatment seeking, heavy-drinking Latinos are reported. Latinos (n=32) who met criteria for hazardous drinking (> 5 drinks/occasion or > 14 drinks/week men; > 4 drinks/occasion or > 7 drinks/week women), ages of 18-65 years completed assessments including: the CES-D, the Ways of Coping Scale, and the Everyday Discrimination Scale. Results: Participants averaged 43 years, 72% were male, 45% were married, 48% reported an average annual household income of < $30,000, and 41% had a high school equivalent. About half the sample was less acculturated. Older U.S. age of arrival correlated with lower acculturation level(r=-.65, p < .01). 80% of participants were hazardous drinkers (AUDIT > 8), and 66% met AUDIT criteria for Alcohol Dependence (> 15 for men; > 13 for women). The average CES-D score was 19 (SD = 12.9). CES-D scores significantly correlated with alcohol dependence (r=.41, p < .05), hazardous drinking (r=.48, p < .01) and everyday discrimination (r=.63, p < .001). Alcohol dependence, not hazardous drinking, was significantly associated with discrimination (r=.37, p < .05). Depression was significantly correlated with avoidant coping (r=.68, p <.001), not active coping. Discrimination was significantly associated with active coping (r=.42, p < .05) and with avoidant coping (r=.48, p < .01).

Discussion: In this sample of heavy drinking Latinos, poor mental health was strongly associated with heavy drinking. Social stressors like discrimination are risk factors for clinical depression and alcohol dependence. Consistent with the Lazarus model of Stress and Coping, an avoidant coping style was associated with depression and approached a trend (p = .091) with hazardous drinking. Multi-level intervention models for addictions are needed.

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B-198b
INTERNALIZED HOMOPHOBIA, ALCOHOL, AND PEER SUPPORT IN YOUNG BLACK MEN WHO HAVE SEX WITH MEN

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Recent research into situational correlates of unprotected sex suggest that alcohol use has an event-specific effect on sexual decision-making, interfering with people's ability to make good judgments (Boone, Cook, & Wilson, 2013). Young Black men who have sex with men (YBMSM) with higher levels of internalized homophobia (IH) brought on by their marginalized social position may be more likely to use alcohol during sexual situations to 'cognitively escape' from the distress they face as marginalized members of society and relieve the anxiety they feel (McKirnan et al., 1996; McKirnan et al., 2001). One factor that may lessen the impact of IH on alcohol use before or during a sexual encounter, however, is peer social support. YBMSM who feel more supported by their peers may be less inclined to turn to alcohol use as a way to lessen anxiety surrounding sexual situations

To test these hypotheses, data were collected from a sample of 228 Black men between the ages of 18 and 35. Internalized homophobia was measured with a 9-item scale developed from interview items used by Martin and Dean (1988). Peer support was measured using the 10-item Perceived Social Support from Friends Scale (Procidano & Heller, 1983). Participants were then followed for eight weeks and asked to answer a series of questions about their most recent sexual episode for each week, including about alcohol use surrounding the episode. Generalized structural equation model analysis was used to examine associations between IH, resilience, and alcohol use.

Participants with higher levels of IH were more likely to have used alcohol before or during a sexual encounter during the eight weeks of the study [OR: 1.08, 95% CI: 1.02-1.14]. The interaction term between peer support and IH was also positive and significant. As peer support increased, in the influence of IH on alcohol use decreased.

Through understanding the contextual influences of substance use, researchers may apply this knowledge to constructing behavioral substance use and sexual behavior interventions for YBMSM.

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B-198c

LIQUOR IS QUICKER: HARD ALCOHOL CONSUMPTION IN COLLEGE STUDENTS

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Despite an extensive literature on college alcohol consumption, there is surprisingly little research on hard alcohol (HA) specifically. Some empirical evidence, reflected in media portrayals, suggests that HA is used in binge drinking and for so-called "drunkorexia." The current study set out to gain a better understanding of the prevalence and motives of hard alcohol use. In three consecutive fall semesters, students at a small liberal arts college were assessed on their alcohol consumption with an online survey. Prevalence and demographics were assessed in all waves, (N1 = 256; N2 = 270 ; N3 = 118). In the second wave, motives, consequences, and social norms were also assessed. And, in the third wave, these were assessed by preference for type of alcohol. Results indicated fairly consistent rates of hard alcohol consumption across waves with 90% of respondents indicating use and approximately 50% of all drinks consumed being HA. On average, 5-6 HA drinks were consumed 1-2 times per week within a 30-60 minute time span. Though, HA shots were consumed significantly more quickly than mixed drinks, beer, and wine. Motives were fairly similar between participants who preferred HA and beer than for wine, with some notable differences. The biggest discrepancy was the motive "to get drunk faster" which was positively rated for participants who preferred HA and rated negatively for participants who preferred other forms. Having fewer calories, feeling more confident, and forgetting problems were also rated significantly higher, while enjoying the taste was rated significantly lower by HA drinkers relative to others. HA and beer consumers perceived stronger social norms for consumption and experienced more frequent and severe consequences. There were also several demographic differences in regards to gender, class, and ethnicity. Together the findings yield a foundational assessment of hard alcohol as a specific category of college alcohol consumption. Results further indicate that HA and beer consumption are similar in many respects, yet are also distinct in important ways. Several avenues for future research and intervention are suggested.

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B-198d

CHANGES IN HEPATITIS C ILLNESS PERCEPTIONS AMONG METHADONE MAINTAINED ADULTS

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Introduction

Hepatitis C virus (HCV) causes over 16,000 deaths annually. Five million individuals in the United States have been infected with HCV. Yet, a minority of HCV-infected injection drug users (IDUs) have initiated antiviral treatment. The Common Sense Model of Illness theorizes that an individual's illness perception, often based on visible or tangible adverse symptoms, is the primary impetus that drives engagement in illness-related behaviors (e.g. initiating treatment and adhering to medication regimens). Since individuals with HCV can be asymptomatic for many years and treatment is known to have adverse side effects, HCV treatment initiation is challenging, perpetuating the epidemic. To improve treatment initiation and medication adherence among HCV-infected IDUs, we explored attitudes toward and beliefs about HCV and HCV treatment.

Methods

We conducted 30 semi-structured qualitative interviews with HCV-infected individuals enrolled in a methadone maintenance treatment program. We explored participants' perceptions of HCV and HCV treatment. Interviews were recorded, transcribed, coded, and analyzed using thematic analysis.

Results

The majority of asymptomatic participants only recognized the fatality of HCV after witnessing friends and family deteriorate and die from advanced stages the disease. This new illness perception positively impacted the majority of participants' decision to initiate, adhere to, and complete HCV treatment despite adverse medication side effects.

Conclusion

Our findings highlight the importance of understanding or witnessing the physical sequelae of a disease in motivating individuals to seek and adhere to HCV treatment. Visual education, support groups, and peer educators who can share their experiences of having HCV may be beneficial in increasing treatment initiation and medication adherence. By exploring how these notions impact participants' willingness to engage in treatment, our study also offers a context for which treatment providers can encourage infected individuals to initiate treatment and remain in care.

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Rapid Communications
Poster Session C

Friday, April 25, 2014
6:25 PM-7:45 PM

C-042a

IMPACT OF A TARGETED CRC SCREENING INTERVENTION AMONG LATINOS IN PA

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Although the incidence of colorectal cancer is no higher among Latino men and women than among Whites, non-Latinos in the USA the five-year survival rates for Latinos are lower than they are for Whites. Differences in survival are due in part to Latinos being diagnosed at a later stage of the disease; an ethnic gap in the use of CRC screening explains some of these differences. In an effort to reduce this ethnic disparity among Latinos, screening rates among this population must increase. The specific objectives of this study were to develop, implement and evaluate a targeted CRC screening intervention to increase CRC screening uptake. We measured actual CRC uptake in both the C and I arm as a method to determinate completion rates. The study design was a RCT, CBPR design to determine completion of a provider-recommended, take-home FIT kit without (control) and with social support (intervention) among a sample of average-risk, urban and rural Appalachian Latino adults age 50 and older not currently adherent to national CRC screening guidelines (N=264). Each consented participant attended a one-time, community-based CRC screening opportunity offered at one of the eight study sites located in Central PA. Results: a total of 164 (62%) returned a completed FIT kit, which is higher than the reported 10%. Of these, 30 (18%) had a positive FIT test result, a rate 3X higher than the reported 5% for this pop. A higher return rate was observed among participants with social support (69%) when compared to the control (57%). The role of social support is an effective method for increasing CRC screening rates among these Latinos. These findings can be used to inform best practices for addressing cancer health disparities efforts for Latinos in a community-based setting.

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C-042b

OUTCOMES OF A FREE CRC SCREENING AMONG MEDICALLY UNDERSERVED ADULTS UTILIZING MEDICAL FACILITIES AND FQHCS: A CDC-PADOH FUNDED PROJECT IN PA

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The purpose of this work was to develop, implement and evaluate a targeted CRC screening intervention to increase CRC screening uptake among nonadherent medically underserved adults residing in central PA. We measured actual CRC uptake as a method to determinate completion rates. The project was a CBPR design to determine completion of a provider-recommended, take-home FIT kit with education and social support components among a sample of average- or increased-risk adults age 50 and older not currently adherent to national CRC screening guidelines (N=250). This screening opportunity was offered at our partnered community-based sites utilizing 5 medical facilities (one academic institution, one medical center, two FQHC, and a community clinic). Methodology: Each consented participant attended a one-time, CRC screening offered at one of the participating project sites located in Central PA. Results: 164 of 250 (66%) returned the FIT kit within a one-week timeframe. 10 tests were abnormal (positive FIT results). Of these six colonoscopies were referred to medical center with four complete, 1 was a "no show' and 1 was cancelled due to hypertension (BP reading taken prior to performing the colonoscopy- patient was sent home). The remaining four scheduled with their own provider; the other 3 were seen at our partnered FQHCs. Conclusion: this project demonstrated increased completion rate from baseline 24% to 66% at post project intervention among previously non-adherent medically underserved adults in Central PA. A CBPR approach utilizing these 5 medical facilities seems to be effective strategy for improving CRC screening uptake among these medically underserved adults.

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C-042c

PREDICTING PROSTATE CANCER SCREENING ATTENDANCE AMONG UNDERSERVED AA AND WHITE MEN USING THE ATTITUDE - SOCIAL-INFLUENCE - EFFICACY MODEL

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This study examined (1) motivating factors (social influences) for prostate cancer screening with education and with the cognitive element of informed-decision making; (2) the role of social support in prostate cancer screening; and (3) the intention to be screened among medically underserved, low-income AA men of the recommended screening age of ≥ 50 years and older residing in PA. Methods: 151 eligible AA engaged in one of five community-based prostate screening offered. Survey 1

(pre-test) and Survey 2 (post-test) assessing SES variables (age, sex, race/ethnicity, marital status, level of education/ income, poverty level, insurance status, and employment status) and screening health behaviors (prostate screening status, intention to screen, attitude, belief and knowledge about prostate cancer and screening, attendance of a prostate cancer education session, role of social influence on their decision-making to get screened, and cues to action to get screened for prostate cancer) were administered prior to screening. Differences in individual social measures for AA were also observed. 42% of the individuals who attended the prostate cancer screening reported being influenced by another individual in their decision to be screened for prostate cancer. Results: We found significant differences (p=0.04) between agreement on the necessity of screening by race and ethnicity. The social construct indicated that on average screening decisions for men in all groups were affected by their social structure.Conclusions: A community-based targeted intervention with a church and social support component appears to have potential for improving prostate screening uptake among AA men in PA.

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C-042d
PERCEPTIONS OF A MOBILE INTERVENTION FOR REDUCING SITTING TIME IN PROSTATE CANCER SURVIVORS: RISETX

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Background: Prostate cancer survivors (PCS) who are prescribed androgen deprivation therapy (ADT) are at risk for chronic disease that may be preventable with a reduction in sedentary behavior (SED)-yet there are no known SED interventions among cancer survivors. This study is the first stage of a two-phase feasibility study aimed at developing and testing a SED intervention using a mobile application to reduce sitting time among PCS. The purpose of this formative stage is to examine perceptions of SED, and acceptability and preferred features of a mobile application to reduce SED.

Methods: Three focus groups of 90 minutes each were conducted. PCS were recruited between Nov-Dec 2013 in Toronto, Canada. Probe questions assessed perceived health risks associated with SED, strategies to interrupt sitting time, and design preferences of a mobile application. Data were transcribed verbatim and a thematic analysis was conducted.

Results: Nine men (Mage = 69.0±6.8 years) participated, with the majority having metastatic prostate cancer (55.6%) and ADT administered continuously (77.8%). PCS self-reported 8 hrs/day of sitting. Most PCS were aware of the health risks associated with SED and were interested in a mobile application to reduce SED. Four themes emerged regarding the design where it should

be easy to use; have an alerting function to interrupt prolonged sitting; be able to track and monitor physical activity; tailored to the individual; and have a goal-setting function. PCS were also interested in having an interactive discussion board and reward system.

Conclusions: PCS were aware of the health risks of SED and expressed interest in a mobile application to reduce SED that is easy to use and individualized. These findings will now be used to tailor the development and evaluation of a novel mobile application to improve the health of PCS on ADT.

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C-042e
EXPERIENTIAL AVOIDANCE AND DISTRESS IN BREAST CANCER PATIENTS

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Strategies categorized as "avoidant coping" have been identified as important predictors of psychosocial outcomes (distress, anxiety, depression) among individuals with breast cancer. However, this construct has been defined in several ways, resulting in the use of differing measures across research studies. It is therefore difficult to compare study results, and to translate findings into clear recommendations for screening and treatment. Experiential avoidance (EA) is a clearly-defined construct that has significant theoretical overlap with avoidant coping, and is associated with distress in other populations. Conceptualized as an unwillingness to experience unpleasant thoughts and emotions, EA is thought to increase the likelihood that an individual will engage in avoidant coping strategies inflexibly. As such, it was hypothesized that EA would more strongly predict distress among breast cancer patients than would other popular measures of avoidant coping.

METHODS: 102 women aged 33-86 (Mean=58.59, SD=10.92) with breast cancer completed measures to assess distress (NCCN Distress Thermometer), anxiety and depression (HADS), EA (AAQ-II), and avoidant coping (COPE scales of denial, mental disengagement, and behavioral disengagement).

RESULTS: Pearson correlations indicated that depression was more strongly associated with EA (r=.723, p<.0001) than with the COPE scales of denial (r=.241, p=.015), and mental (r=.307, p=.002) and behavioral (r=.573, p<.0001) disengagement. Partial correlation suggested that controlling for each of the COPE scales had little effect on the strength of the relationship between EA and depression (r=.520, p<.0001). However, when controlling for EA, the relationships between each COPE scale and depression was no longer significant. Analyses were repeated with anxiety and distress in place of depression, with similar results.

CONCLUSION: The AAQ-II might be a useful screening tool for cancer patients at risk of poor psychosocial outcome, and EA is a potential treatment target for distressed patients.

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C-042f
CANCER SURVIVORS' EXPERIENCES OF PATIENT CENTERED CANCER FOLLOW-UP CARE FROM PRIMARY CARE PHYSICIANS AND ONCOLOGISTS

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OBJECTIVES: Patient-physician relationships have been shown to impact health care seeking and preventive screening behaviors among patients. After completing active treatment, some cancer survivors report feeling disconnected from their care team when their treatment transitions from oncology-led attempts for cure to primary care-led lifelong health care management. This study explores cancer survivors' experiences of patient centered cancer follow-up care provided by primary care physicians (PCP) and oncologists (ONC). METHODS: 305 early stage, breast and prostate cancer survivors at least two years post treatment were surveyed from four community hospital oncology programs in New Jersey. Participants were surveyed about receipt of patient centered care measured by care coordination, comprehensiveness of care and personal relationship with PCPs and ONCs. RESULTS: Prostate cancer survivors were older than breast cancer survivors (70 vs. 63, p=<0.001) and reported higher illness burden (p=0.017). PCPs received higher ratings for coordination of care and comprehensive care than ONCs from all survivors (p<0.01). However, prostate and breast cancer survivors rated the strengths of their personal bonds with the physicians differently. While prostate cancer survivors rated PCPs significantly higher for six out of seven items (p<0.028), breast cancer survivors only rated PCPs higher on one item and rated ONCs higher in terms of understanding what is important and knowing their medical history (p<0.01). CONCLUSIONS: Cancer survivors report different experiences with their PCPs and ONCs around the comprehensiveness and coordination of their cancer follow-up care in addition to the strength of their relationships with their physicians. It may be fruitful to consider the strength of the patient-physician bond, particularly among breast cancer survivors, as well as patient characteristics such as age and illness burden when developing and tailoring survivorship care plans.

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C-042g
PRESURGICAL SYMPTOMS OF DISTRESS AND NEUROIMMUNE DYSREGULATION IN ENDOMETRIAL CANCER

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Background: Endometrial cancer is the most common gynecologic cancer in the US and has a 5-yr survival rate of 83% (ACS, 2012). Many survivors experience facets of distress, i.e., mood disturbance, pain, sleep disturbance, which in turn have been associated with cortisol and cytokine production patterns. This study sought to describe (1) mood/pain/sleep associations and (2) the relationship between distress (mood/pain/sleep) and neuroimmune dysregulation (cortisol, IL-6, and VEGF) in women with endometrial cancer prior to surgery. Methods: Subjects were 113 women (Mage=61.4, SD=9.1) who completed presurgical assessments of depressed/anxious mood (Structured Interview Guide for the Hamilton Anxiety and Depression scales: SIGH-AD), pain intensity (Patient Clinical Outcomes Questionnaire: PCOQ), and sleep disturbance (Pittsburgh Sleep Quality Inventory: PSQI), as well as salivary cortisol and serum IL-6 and VEGF. Descriptives, correlations and structural equation modeling (SEM) were utilized to evaluate study aims. Results: For aim 1, bivariate analyses indicated significant relationships among mood disturbance, pain and sleep disturbance (sleep and mood disturbance: r(94)=0.7, p<0.001; pain and sleep disturbance: r(69)=0.3, p<0.001; pain and mood disturbance: r(73)=0.3, p<0.001). For aim 2, SEM demonstrated good overall fit ($\chi2$=8.0, AIC=46.0), and all distress symptoms loaded significantly on a distress latent factor. However, no significant relationship between distress and neuroimmune dysregulation latent factors was found (path=0.03, p=0.7). Discussion: Mood disturbance, pain intensity, and sleep disturbance comprised a latent factor of distress in women undergoing cancer surgery; however, distress was unrelated to a neuroimmune dysregulation factor. Future research should examine inclusion of other immune variables in this model and/or examine associations at other clinically significant periods (prior to adjuvant therapy).

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C-042h
SOCIO-CULTURAL FACTORS THAT INFLUENCE HEPATITIS B SCREENING AMONG AFRICAN IMMIGRANTS IN NEW YORK CITY

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Background: Chronic Hepatitis B virus (HBV) is the most common cause of liver cancer, the fifth most common cancer and the third cause of cancer deaths. African-born individuals are at increased risk for HBV with an estimated prevalence of 13%. The lack of literature and culturally targeted interventions for African immigrants impedes efforts to effectively screen this growing at-risk population. Therefore, we aimed to understand socio-cultural factors that influence HBV screening among Africans living in New York City (NYC).

Methods: We conducted focus groups with African-born men and women living in NYC. The PEN-3 model, a framework developed for qualitative research on marginalized communities, guided the facilitation guide and thematic analysis.

Results: Seven focus groups were conducted with 32 screened and unscreened African-born individuals (segregated by gender and screening status). When discussing HBV and health-related beliefs, respondents were often unaware of HBV, lacked HBV

knowledge, found language and health literacy to be barriers, were not accustomed to preventive care, valued the faith community and the primacy of God or a higher power, and expressed a prioritization of other health problems (e.g. HIV).

Discussion: African immigrants have similar perceptions as other at-risk populations, as well as unique socio-cultural factors. Respondents expressed a distinct fear of direct or indirect disclosure. HBV specific stigma was also seen as HBV was associated with immoral behavior.

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C-042i
UNDERSTANDING THE DISCREPANCY IN PATIENT AND PHYSICIAN PERCEPTIONS OF PROGNOSTIC AWARENESS

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Intro: Several studies have found that a high percentage of patients (up to 75%) report being unaware of their prognosis, translating to poor end-of-life planning, greater psychological distress, and lower satisfaction and quality of life than patients reporting full awareness. The present study examined the discrepancy between physician and patient perceptions of the communication about prognosis in an attempt to identify barriers to patients' understanding of prognostic information (PI). The study hypotheses are that a) patients will be more optimistic about their prognosis than their physicians, and b) physicians will underestimate the amount of information patients prefer to receive regarding their prognosis.

Methods: Participants are advanced stage cancer patients and their physicians. Extensive data have been collected from 176 patients, and a questionnaire was recently added and administered to their physicians. To date, 5 physicians have responded to the questionnaires, though at least 30 are expected by completion of the study this winter.

Results: In this preliminary sample, results confirmed that patients were more optimistic about their prognosis than their physicians. Most patients rated their disease status as either "curable," "likely curable," or "I don't know" and most physicians rated their patient's disease status as "incurable". Furthermore, results also confirmed that most physicians either underestimated their patient's preferences for receiving PI, or reported not knowing what their patient's preferences were. Meanwhile, all patients reported wanting to hear as many details as possible regarding their prognosis, and most rated this information as "extremely" or "very" important. Another interesting finding was that physicians mostly cited "patient's psychological state" and "fear of discouraging the patient" as the main barriers in communicating PI, despite previous research linking prognostic awareness to lower psychological distress.

Conclusion: Most physicians are uncertain about their patients' preferences for PI, as well as their patients' level of prognostic awareness.

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C-042j
PREDICTING AVOIDANCE OF SKIN DAMAGE RISK FEEDBACK AMONG COLLEGE STUDENTS

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Ultraviolet (UV) photography shows individuals an image of their skin damage (Fulton, 1997) and the impact of UV exposure. Evidence suggests that interventions containing UV photography can encourage skin cancer preventive behaviors (e.g., Mahler et al., 2010; Stock et al., 2009). However, it is unknown whether people would opt to view their UV photograph if given the choice. People may prefer to avoid information about their personal UV damage by avoiding their photograph. We examined the prevalence of UV photography avoidance and whether coping resources and perceived risk of negative outcomes predicted avoidance, as suggested by research on health screening (e.g., Howell et al., 2013; Melnyk & Shepperd, 2012). Given that behavioral relevance can produce defensiveness in the face of health messages (Sherman & Cohen, 2006), we also studied the role of sun protection behavior on avoidance and whether it moderates the influence of coping and perceived risk.

College students (N = 257; 77 males) learned about UV photography before deciding between having versus not having their UV photograph taken. They then completed a survey on potential predictors of avoidance. Overall, 34.2% of participants (n = 88) opted not to have their UV photograph taken. Logistic regressions controlling for skin type, eye color, and gender, showed that prior sun protective behavior moderated the influence of both coping and perceived risk on avoidance (ps ≤ .03). Fewer coping resources and greater perceived risk predicted a greater likelihood of avoidance, but only among participants who engaged in infrequent sun protection behavior (ORs = .31 and 2.10, respectively, ps ≤ .01). We found similar patterns on self-reported avoidance tendencies. Our findings suggest that, for people who infrequently protect their skin, inadequate means of coping with news of skin damage and high perceived risk of skin damage outcomes may promote avoidance of skin damage risk information.

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C-042k
EXERCISE FOR HEAD AND NECK CANCER PATIENTS: RECRUITMENT FEASIBILITY FOR THE ENHANCE TRIAL

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Background: Head and neck cancer (HNC) patients experience severe muscle wasting during radiation treatment impacting treatment response, recovery time, and quality of life (QOL). Progressive strength training (PST) has been studied as an effective mediator of this muscle wasting. To date, four studies have examined PST for body composition and related QOL manage-

ment for HNC patients. Of these, only one has reported on recruitment feasibility. The objective of this report is to examine the recruitment rate among HNC patients into the ENHANCE study.

ENHANCE is a randomized controlled trial designed to evaluate the impact of a 12-week PST program among patients over two separate time points (during versus completed treatment). Outcome measures, assessed at baseline, 3, 6, 9, and 12 months, include body composition (DXA scan), fitness indices, physical activity adherence, smoking, employment, depression and QOL. This is the first study to compare an exercise intervention in HN patients during versus completed treatment, and this recruitment information is essential for designing future exercise studies for this population.

Results: Recruitment occurred from June 2011 to January 2014, and a total of 172 patients were diagnosed with HNC at the local cancer centre. Of those, 119 patients met the eligibility criteria, with 100 agreeing to be contacted by the study coordinator. Fifty-six agreed to participate (recruitment rate: 56%). Reasons for declining participation included one or more of the following: study too time consuming (n=20), patients feeling overwhelmed (n=28), not interested in exercise (n=6), unknown reason (n=5), or could not be contacted (n=9).

Conclusions and Future Directions: Provided this recruitment took place at a highly stressful time (at diagnosis) and patients needed to commit to the year study and 12-week intervention, we consider this to be a strong recruitment rate. This information can be used when designing future exercise interventions with the NHC population and to address barriers to exercise involvement.

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C-042l
FACILITATORS AND BARRIERS TO LONG-TERM FOLLOW-UP CARE IN YOUNG ADULT SURVIVORS OF CHILDHOOD CANCERS

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Background Childhood cancer survivors are at risk for late effects from treatment, other chronic health conditions, and secondary cancers. Large cohort studies estimate that although most childhood cancer survivors receive general medical care, the majority of survivors (>80%) do not receive survivor-focused long-term care necessary for early detection and treatment of late effects. Young adults may be particularly at risk given the transition from pediatric to adult care.

Methods This qualitative study employed individual telephone interviews to understand facilitators and barriers to obtaining long-term care from the perspective of young adult survivors. Nineteen survivors ages 18 to 25 were recruited via letter (local clinic), online forums for survivors of childhood cancers, Twitter,

and regional childhood cancer organizations. Phone interviews were recorded and transcribed for data analysis. Content analysis was used, with Oeffinger's (2003) model of factors influencing receipt of optimal care as a guiding theoretical framework.

Results Themes identified by young adult survivors provided support for survivor-, provider-, and health care system-factors that influence care. However, several unique themes emerged, including relationship with the medical team, concerns about health risks of follow-up procedures, family involvement in care, and the need for emotional preparation for the transition to follow-up care.

Conclusions Consistent with the Oeffinger (2003) framework, survivor-, provider-, and health care system-factors serve as facilitators and barriers to long-term care. These findings support the use of individually-tailored survivorship care plans that address these barriers by enhancing survivors' knowledge regarding their treatment, alerting survivors to their individual risks for late effects, emphasizing the importance of long-term survivorship care, preparing survivors for the emotional challenges of transition, and providing a specific plan for accessing follow-up care.

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C-042m
BEHAVIOR DYSREGULATION AS A PREDICTOR OF FAMILY BURDEN IN CHILDHOOD CANCER SURVIVORS

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Background: Many childhood cancer survivors cope with psychological and cognitive sequelae, known as neurocognitive late effects (NCLE). NCLE include specific deficits in attention, inhibition, or behavior regulation. Behavior dysregulation has been associated with parental stress, generally (Patel et al., 2013). We examined whether behavior dysregulation predicted parental stress and burden specific to NCLE to guide future family intervention. Method: Parents of 74 survivors ages 6-18 were recruited; 30% were classified "low risk" and 70% "high risk" (leukemia, lymphoma, or brain tumor) for NCLE. Parents completed the Behavior Rating Inventory of Executive Function (BRIEF) to assess behavior dysregulation, the Parent Experience of Childhood Illness Scale (PECI) to assess parenting stress, and the Family Impact of Late Effects (FILE) to assess family burden specific to NCLE. Results: Correlation coefficients indicated that total PECI and FILE scores were associated with the Behavior Regulation Index (BRI) from the BRIEF and the BRI subscales (Inhibition, Shift, Emotional Control; all ps<.05). Overall BRI was more strongly correlated than the subscales and used in subsequent analyses. Mean stress and burden scores were compared using independent samples t-tests to determine if PECI and FILE scores differed by diagnostic risk status; results were not significant. Next, independent samples t-tests based on elevated BRI indicated that those with significantly elevated dysregulation reported significantly greater parent stress (t=-2.4, p<.05) and family burden of NCLE (t=-3.6, p<.01). Finally, regression

analyses controlling for age, diagnostic risk status, and time since diagnosis significantly predicted the PECI (F=4.5, p<.05) and the FILE (F=8.4, p<.001), with the BRI acting as the significant predictor in each model (t=3.5, p<.05; and t=5.5, p<.001, respectively). Conclusions: Elevated behavior dysregulation significantly predicts family stress and burden specific to NCLE in childhood cancer survivors, more so than diagnostic risk.

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C-042n
THE PHENOMENOLOGY OF DEPRESSIVE SYMPTOMS IN PATIENTS WITH ADVANCED CANCER

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The experience of depression in patients with advanced cancer, both in terms of pathophysiology and the manifestation of symptoms, is not well understood. The Beck Depression Inventory (BDI) measures the severity of depressive symptoms, and a three-factor model, with cognitive, somatic, and affective dimensions, has been identified in the literature. This study sought to investigate the phenomenology of depression in patients with advanced cancer by examining depressive symptom severity, symptom prevalence, and group differences in terms of BDI scores and age. Patients (N = 167) were recruited from outpatient chemotherapy clinics and the Department of Psychiatry at Memorial Sloan Kettering Cancer Center for participation in a clinical trial comparing different psychotherapies (NCT00494910). A minimum level of distress or depression was not required for entry into the study, although 14.4% (n = 24) reported being currently treated for unipolar depression. The sample mean total BDI score was 14.74 (SD = 8.52; range 1 to 46). Using established clinical cutoffs, 52.1% of the sample was characterized as having minimal symptoms, 24.6% as mild, 16.8% as moderate, and 6.6% as severe. When items were dichotomized as present/absent, the most prevalent symptoms included loss of energy, changes in sleeping pattern, changes in appetite, tiredness or fatigue, loss of interest in sex, and concentration difficulty. When the sample was split at 65 years, the pattern of mean BDI factor scores was the same, with highest means observed for the somatic subscale and lowest means for the cognitive subscale. A one-way analysis of variance revealed a significant age difference in total scores, F(1,165) = 4.14, p = .04. An age-related difference was also observed for the cognitive subscale F(1,156) = 6.03, p = .02, but not for the somatic or affective subscales. Research and clinical implications are discussed.

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C-051a
CHANGING MALADAPTIVE BELIEFS AND REDUCING ANXIETY IN PATIENTS WITH CORONARY HEART DISEASE USING VIDEOTAPED INFORMATION

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Indonesia counts 1.3 million patients with Coronary Heart Disease (CHD) and only a limited number of cardiologists. Patients hardly have the occasion to ask questions to their doctors. As a consequence many have maladaptive beliefs about the disease and easily experience anxiety.

We investigated whether delivering videotaped information about the disease could change beliefs about the disease and anxiety. Anxiety was measured explicitly, implicitly, and physiologically. The videotape addressed common misconceptions about CHD (Furze, 2007).

150 individuals with CHD were randomly assigned to either a control group or to one of two experimental groups. The experimental groups viewed the videotape. One experimental group had the opportunity to ask questions, the other not.

In a baseline session, trait anxiety (BAI) and beliefs (YCBQ) were measured. After a 10-min relaxation period, state anxiety (STAI), heart rate and blood pressure were measured. Then all participants performed a Stroop task with heart-threat-related words (HTRW) after which we measured state anxiety, heart rate and blood pressure again. Then the participants in the experimental groups viewed the videotape with or without opportunity to ask questions. After the first viewing, the participants' beliefs about CHD were significantly more adaptive in the experimental groups than in the control group. Also, systolic blood pressure, diastolic blood pressure and heart rate decreased.

The participants in the experimental groups continued to watch the video at home during two weeks. After two weeks, implicit anxiety (Stroop), beliefs (YCBQ), and trait anxiety (BAI) were measured in all three groups.

The experimental groups displayed a change in maladaptive beliefs about CHD and a decrease in anxiety; the control group did not. Providing information about CHD was an effective method to change maladaptive beliefs about the disease.

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C-051b
BARRIERS TO CARDIAC REHABILITATION PARTICIPATION: PREDICTING ENROLLMENT IN AN URBAN, SAFETY-NET HOSPITAL

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We examined perceived barriers to participation as predictors of enrollment in cardiac rehabilitation (CR) in an economically diverse sample of patients with cardiovascular disease (CVD). Although CR has been shown to improve health outcomes in patients with CVD, only 20-50% of those referred participate, with lower rates in underserved populations. Research has identified barriers that predict CR participation in affluent populations, but we know less about the barriers predictive of participation in patients of low socioeconomic status. Identifying barriers across the socioeconomic spectrum is crucial for the development of effective interventions.

Prior to discharge from a Midwestern safety-net hospital, patients eligible for CR with CVD (n=77) completed a questionnaire containing demographic questions and 12 items assessing perceived barriers to enrolling in CR. The outcome, CR enrollment, was assessed six months later via medical records. Most participants were male (65%), European American (49%), and not insured (26%), with an average age of 54.6 years.

Results indicated that 53% of our sample enrolled in CR. A logistic regression model with all 12 barriers correctly classified 70% of those who did and did not enroll. Results showed those without insurance were less likely to enroll in CR, and two barriers trended toward significance: wanting to stay at home was associated with not enrolling, but worries about transportation were associated with enrolling. A trimmed model with only these three predictors was estimated and correctly classified 66% of the sample. Insurance status trended toward significance, and only one barrier, a desire to stay at home with one's family, was significant: participants without insurance were .35 times less likely to enroll in CR (p=.06) and participants who wished to stay at home were .25 times less likely to enroll in CR (p=.03). Findings suggest providers should address these concerns when promoting participation in CR.

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C-051c
SOCIAL PROBLEM-SOLVING ORIENTATION AND PTSD SYMPTOMS IN ADULTS WITH LQTS WHO EXPERIENCED CARDIAC EVENTS

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Background: Long QT Syndrome (LQTS) is a genetic condition affecting 1:2500, predisposing individuals to cardiac arrhythmias (Ellis et al., 2009). Life threatening symptoms are unpredictable though physical exertion, emotional upset, and sleep are known triggers. Severity of symptoms and psychological factors predict development of PTSD symptoms for other cardiac diseases (Whitehead et al., 2006). Effects of LQTS-related events have not been studied. Individuals with PTSD show poorer problem solving compared to those without PTSD (Sutherland & Bryant, 2008). Problem orientation is comprised of the cognitive-emotional schemas reflective of the approaches towards problem-solving ability, general life appraisals, and beliefs (D'Zurilla et al., 2004). This study aimed to determine if there is a relationship between Positive Problem Orientation (PPO) and PTSD symptoms, and Negative (NPO) Problem Orientation and PTSD symptoms in adults with LQTS who have experienced cardiac events.

Methods: 35 of 42 adults who participated in a larger Quality of Life study experienced at least 1 LQTS related cardiac event. 27 had complete data (71.4% female; mean age=36; avg. cardiac events=3.5). 40% met criteria for PTSD. Measures included Posttraumatic Checklist (PCL) and Social Problem-Solving Inventory-Revised (SPSI-R).

Results: PPO was not significantly related to PTSD symptoms. NPO was significantly correlated with many PTSD symptoms, including Emotional Reaction (r=.488, p=.01), Avoidance of Activities (r=.431, p=.025), Emotional Numbing (r=.527, p=.005), and Irritability (r=.531, p=.004).

Discussion: LQTS patients are underevaluated and underattended to for mental health care (Conlin, 2012). The current study may be the first to identify LQTS patients reporting PTSD symptoms. Preliminary findings indicate significant correlations between NPO and PTSD symptoms for adults who had experienced LQTS-related cardiac events. Further research is needed to investigate this relationship and how to target psychological interventions to address this population's needs.

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C-051d
SMART HEART TRIAL: PRELIMINARY RESULTS FROM A STRUCTURED LIFESTYLE INTERVENTION IN OVERWEIGHT AND OBESE YOUTH WITH OPERATED HEART DEFECTS

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Congenital heart disease (CHD) is the most common inborn defect. Recent research indicates that a significant portion of children with CHD are overweight and obese, which represents an additional risk factor for long-term cardiovascular health. This single arm feasibility study (N = 40) is currently assessing the effects of a 12 month-structured lifestyle intervention on body composition (dual x-ray absorptiometry), exercise capacity (VO2 max; rating of perceived exertion, RPE) and lung health (spirometry) in the aforesaid population. These variables are being evaluated at baseline, 6 month, and 12 month. The lifestyle intervention involves three in-person (clinic assessment visits) and biweekly telephone/online-based counseling with a registered dietitian and fitness specialist using smart phones provided to patients. The counseling focuses on making sustainable changes in physical activity (PA) levels and eating behaviour and knowledge and skill development to improve PA and nutrition. This study is ongoing and data for 19 overweight and obese children and youth (12 male, Mean age = 13.58 years) with operated CHD are presented. Repeated measures ANOVAs from baseline to 6 months indicate significant (p < 0.05) gains in lean mass (F

$(1, 13) = 9.494$, $\eta2 = 0.422$) and bone mineral content ($F (1, 13) = 11.427$, $\eta2 = 0.468$) and significant reductions in total body fat ($F (1, 13) = 7.453$, $\eta2 = 0.364$), maximum heart rate ($F (1, 13) = 4.750$, $\eta2 = 0.268$), and RPE ($F (1, 13) = 4.488$, $\eta2 = 0.257$). Preliminary findings suggest that this intervention is effective at ameliorating body composition, but not exercise capacity or lung health. Positive recruitment and adherence rates to the program along with positive effect size estimates will serve as a platform for conducting adequately powered trials that investigate the effects of a lifestyle modification intervention to manage over-weight and obese CHD patients.

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C-058a
CHRONIC STRESS AND GLUCOSE REGULATION IN US HISPANICS/LATINOS FROM THE HCHS/SOL SOCIOCULTURAL ANCILLARY STUDY

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Type 2 diabetes mellitus (T2DM) is prevalent in US Hispan-ics/Latinos. Fasting plasma glucose, glucose post oral glucose tolerance test (OGTT), and glycosylated hemoglobin (HbA1c) are indicators of glucose regulation that provide information about diabetes risk. Chronic psychological stress is believed to contribute to insulin resistance and increased risk for T2DM. We explored associations of chronic stress with fasting glucose, post load glucose, and HbA1c among 3923 diabetes-free partici-pants of the Hispanic Community Health Study/Study of Latinos (HCHS/SOL) and Sociocultural Ancillary Study. Participants completed the Chronic Stress Burden Scale and a physical exam with OGTT and blood draw. Participants in this sample were 44.45 years old on average (SD = 13.56); 60.51% were women and 81.56% were born outside of the US. Participants reported 1.76 chronic stressors on average (SD = 1.60). Average fasting glucose was 92.68 mg/dL (SD = 8.17), 2-hour post load glucose was 113.85 mg/dL (SD = 31.38), and HbA1c was 5.47% (SD = 0.37). Multilevel linear regression showed that after adjusting for design effects, sample weights, demographic factors and health covariates (BMI, waist circumference, diet quality, physi-cal activity, smoking, alcohol use), higher chronic stress related to higher levels of fasting glucose ($\beta=.092$, $p<0.01$), post load glucose ($\beta=.071$, $p=0.01$), and HbA1c ($\beta=.081$, $p<0.01$). Tests of effect modification showed that the associations of chronic stress with fasting glucose remained significant for men only (β for interaction effect$=.130$, $p<0.01$).The cross-sectional design prohibits assessment of causality and effect sizes were small, however, the study suggests that higher chronic stress is related to impaired glucose regulation in Latinos with no diabetes.

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C-058b
BELIEFS ABOUT MEDICATION AND INSULIN ADHERENCE IN ADULTS WITH DIABETES

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Background: Patient beliefs about medications can influence treatment adherence.

Objective: To evaluate the impact of beliefs about insulin on insulin regimen adherence.

Methods: Insulin treated adults with type 1 or type 2 diabetes were administered validated self-report medication adherence measures, adapted for use with insulin, and completed the Beliefs about Medicines Questionnaire. Glycemic control was assessed by hemoglobin A1c (HbA1c). Multiple linear regressions and moderation analyses evaluated the relationships between beliefs about insulin and adherence.

Results: Participants (n = 83, 47% female) were diverse (46% Black, 21% Latino). Mean HbA1c was 8.5±1.9% overall. Patients with type 1 diabetes reported significantly better insulin adher-ence than those with type 2 diabetes ($p < .005$), although HbA1c did not differ between groups. Insulin adherence was signifi-cantly associated with lower HbA1c ($r = -.27$, $p = .014$). Type 2 patients reported less perceived necessity of insulin treatment ($p < .001$) and significantly greater concerns ($p = .001$) about nega-tive effects of treatment than those with type 1 diabetes. They were also more likely to view prescribed medications as generally harmful ($p < .001$) and overused by doctors ($p < .043$). Each of these beliefs was significantly associated with insulin adherence, with no evidence of effect moderation by type of diabetes. Mul-tiple regression demonstrated an independent role for necessity-concerns difference scores in predicting adherence ($\beta = .35$, $p < .006$).

Conclusions: Results document evidence for the validity of self-reported insulin adherence and show that beliefs about medica-tions, such as perceived necessity and concerns, are important factors in insulin adherence. Patients with type 2 diabetes may have poorer adherence and are more likely to hold negative views of insulin, and prescribed medications in general, than adults with type 1 diabetes. Interventions to improve insulin adherence should consider the role of beliefs about medication for both groups.

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C-058c
SELF-CARE BEHAVIOR INTERVENTION HOLDS POTENTIAL FOR PREVENTING 30-DAY ALL-CAUSE HOSPITAL READMISSIONS

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The purpose of the project was to demonstrate the benefits of us-ing a self-care behavior approach to reducing all-cause hospital readmissions in a safety-net academic medical center. Barriers to

self-care behavior (ie. symptom self-monitoring, regime adherence, and resource allocation) were identified during hospitalization for 300 adults. The 30-day post-hospital discharge period was used to implement a tailored intervention designed to assist each patient with overcoming identified self-care barriers. A certified home health aide coached patients under a physician-APN-care coordination team.

Medication adherence improved significantly from the patient's self-reported baseline pattern to post-transitional care intervention at 1-month (t=106, p=.000). Care transition measures (Coleman's CTM) improved from hospital discharge to 1 month post-project intervention (t=58, p=.000). This indicates progressive satisfaction in terms of preferences being considered, understanding of symptoms and management, and understanding the purpose of the medications prescribed. The likelihood of a readmission was lower for those who scored higher on the CTM and who also had a poor previous medication adherence patterns (R= .05; β=.58, p=.02). The sample compared post project sample readmission rate is 19% to pre-project readmission rate of 22.3% demonstrating effectiveness at preventing readmissions. Ambulatory utilization as an important predictor of readmission (R= .23; β=-1.2, p=.000). Emergency department utilization contributed unique variance to the likelihood of being readmitted (β =-1.9, p=.000).

Implementing tailored behavior-focused transitional care interventions that are derived from identification of patient-perceived barriers to symptom monitoring, regimen adherence, and resource allocation holds the potential for preventing 30-day recidivism and all-cause readmissions.

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C-058d
EFFICACY OF A TWO-WAY TEXTING INTERVENTION FOR DIABETES SELF-MANAGEMENT IMPROVEMENTS AMONGST RURAL ADULTS WITH UNCONTROLLED DIABETES

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Background: A growing rural/urban diabetes disparity has created a need for innovative interventions that promote sustained diabetes self-care behaviors amongst rural communities with limited access to treatment. Text messaging approaches hold promise, yet have relied upon uni-directional, manually delivered and untailored messages, which often fail to engage users and/or promote sustained self-care behaviors. Objective. To test the efficacy of a two-way, text messaging intervention for improving diabetes self-management behaviors amongst rural type I and II diabetics with uncontrolled disease. Methods: A total of 22 rural diabetic adults (38.5+14.4 years; 63% female, BMI = 33.3+10.2 kg/m2) with uncontrolled disease (mean self-report HbA1C = 9.2+2.0%) were randomized to one of two groups: 1) diabetes education materials plus daily text messages (N=12); 2) diabetes education materials only (N=10). Diabetes self-management behaviors were measured with the Self Care Inventory. Text messaging compliance was measured via a

tracking database provided by the text message service provider (HealthCrowd). Two-way repeated measures analysis of covariance tests evaluated within and between group differences at baseline and post-intervention. Results: The text message plus education group reported significantly improved adherence to diabetes self-management behaviors (P=0.03) from baseline to post-intervention whereas the education only group did not (P=0.43). Compliance data indicate participants receiving daily text messages were highly engaged responding to 50.3% of all interactive messages. Conclusions: Findings of this pilot study support this low cost, two-way text messaging intervention as a means of improving diabetes self-management behaviors amongst rural diabetics with uncontrolled disease. Further research is necessary to test this approach on a larger scale and on physiologic outcomes.

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C-058e
SELF-MONITORING OF BLOOD GLUCOSE USE AS DECISION-MAKING TOOL MEDIATES RELATIONSHIP BETWEEN ADHERENCE AND GLUCOSE CONTROL IN INSULIN-TREATED TYPE 2 DIABETES

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Type 2 (T2) Diabetes (DM) affects millions of Americans. DM self-care is critical for prevention of complications. Self-monitoring of blood glucose (SMBG) is recommended to serve the function of patient-feedback to aid in understanding health behavior impact and informing future decisions. However, many T2DMs do not SMBG as recommended, only test for the sake of testing, or test for provider feedback only, thus, using SMBG sub-optimally. This phenomenon may help explain inconclusive study results regarding the relationship between SMBG and glucose control.

Aims: (1) Describe frequency, adherence to recommendations for, and functional use of SMBG (# days/week, SDSCA; decision-making likert-type item) in a sample of insulin users and (2) examine relationships.

Method/Result: 82 adults with T2DM using insulin (47.6% men) were recruited from a DM clinic and completed self-report measures. Hemoglobin A1c% (HbA1c) was obtained from chart review.

Frequency of SMBG was highly skewed; most tested daily (56.8%). Frequency of SMBG adherence to SMBG recommendations was bimodal (0 or 7 days/wk). Glucose control (HbA1c) was generally suboptimal [M= 8.24(1.63)]. About half (56.4%) reported frequently using SMBG to make decisions.

Linear regression results indicated relationships between: adherence and SMBG function (R2=.24,p<.001) and better HbA1c (R2=.08,p=.015), and SMBG function and better HbA1c (R2=.137,p=.001). A full statistical mediation (MacKinnon's

method) was supported. SMBG function mediated the relationship between adherence to SMBG recommendations and HbA1c; SMBG adherence was no longer related to HbA1c when controlling for function ($\beta=-.069,p=.305$).

Conclusion: SMBG use for decision-making, rather than just feedback for providers or for the sake of compliance, may play a key role in the link between adherence to SMBG recommendations and improved glucose control. Prior studies that have failed to find an association between SMBG use and glucose control may be missing an important consideration.

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C-060a
PREVENTION OF NOSOCOMIAL INFECTION SPREAD BY STUDENT NURSES: AN APPLICATION OF SOCIO-ECOLOGICAL MODEL

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Background:2 million cases of nosocomial infection(NI)occur yearly; these cases affect about 10% of hospital patients, and are associated with 80,000 annual deaths.Nurses play a critical role in patient care and recovery, and are therefore targeted in efforts to decrease the incidence of these infections. Proper hand hygiene techniques are included in most nursing curricula, however, little is known about the retention of infection control knowledge among student nurses (SN).A socioecological model (SEM)based intervention might assist in increasing retention of infection control knowledge and compliance among SN entering the practice setting.

Purpose: Determine what knowledge regarding NI SNs have and examine their practices pre-registration stage to make sure the right knowledge and practices are instilled so that they may be kept throughout their careers.

Methods:Based on constructs from the SEM,a cohort of student nurses (N=50),aged 20-30 years were surveyed to examine their knowledge, attitudes, and practices regarding hand hygiene in the prevention of nosocomial infections. Students were also assessed regarding their experiences and preferences for incorporating this information into their clinical training.

Results:Although 62% of SNs said they knew the 3 most common pathogens responsible for NI, none identified them correctly.Additionally,96% of SNs said they knew 3 most common ways spread NI, however 0 SNs correctly identified the methods correctly. 46 SNs said they"frequently" wash hands during their shift;3 participants said often, and 1 participant said "sometimes." 21 SNs said they would prefer soap and water, 24 SNs said they prefer hand sanitizer. 3 SNs said that a patient had questioned their hand hygiene procedure.

Conclusion:The results illustrate a knowledge deficit among SNs in aspects about NI. Results indicate that SNs believe they are knowledgeable about NI, but fail to provide accurate information. Since nurses are a critical element in the reduction of NI, this is useful information for both nursing school faculty and hospital infection control programs.

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C-067a
A PROSPECTIVE STUDY OF THE RELATIONSHIP OF PSYCHOLOGICAL SYMPTOMS WITH THE EXPERIENCE OF STIGMA AMONG PEOPLE WITH HIV: DOES STIGMA PUT PEOPLE AT RISK OF POOR MENTAL HEALTH OR VICE VERSA?

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A consistent finding about the psychological health of stigmatized people is that they have poorer mental health outcomes than nonstigmatized people do. As yet, however, evidence is lacking about why stigma and mental health symptoms, such as anxiety and depression, are so consistently related. One set of explanations emphasizes the harmful effects of stigma on self esteem, stress levels, interpersonal relationships, access to appropriate health care, including mental health care, and access to other resources that promote psychological well-being such as educational and employment opportunities. Another set of explanations suggests that people with mental health challenges are more vulnerable to perceiving that they are stigmatized and are more vulnerable to its effects. The present study takes a longitudinal approach to examine these issues to see if experiences of stigma prospectively predict reduced psychological well-being over a 3 month period or, alternatively, whether psychological well-being predicts perceptions of stigmatizing experiences over that same time period. Participants were 216 people with HIV from New England states who completed measures of stigma and well-being during two laboratory sessions approximately 90 days apart. Results showed that after controlling for Time 1 perceived stigma and other potential confounds (e.g., age, gender) psychological symptoms (as assessed by the SCL-90) predicted the perception of HIV stigmatization at Time 2. Perceived stigma at Time 1 also prospectively predicted psychological symptoms at Time 2 (controlling for Time 1 symptoms and other potential confounds), but these relationships were not as consistent as they were for predicting stigma from symptoms. Results suggest that mental health functioning may make people vulnerable to experiencing stigmatization. Conclusions will consider the moderating role of coping with stigma and coping in general on these relationships.

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C-078a
ROLE OF SELF-ESTEEM ON A CBT SELF-HELP INTERVENTION FOR MEXICAN AMERICAN WOMEN WITH EATING DISORDERS

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There is considerable research on self-esteem (SE) as a predictor of intervention adherence. Despite research demonstrating the

positive effect of SE, researchers argue that SE is contingent on external factors (e.g., success and appearance), so when a person fails, they may be less likely to succeed in intervention programs. The current study employs a Cognitive Behavioral Therapy-guided self-help (CBT-GSH) program to treat bulimia nervosa (BN) and binge eating disorder (BED) among Mexican-American women (n=44), a population with a high prevalence of BN and BED compared to other ethnicities. Our aim is to examine the role of SE as a predictor of adherence to a CBT-GSH program. We hypothesize that SE does not significantly predict completion of components of the CBT-GSH program such as scheduled phone sessions, self-monitoring forms, and adherence to homework assignments.

To examine SE as a predictor of homework assignment adherence, a linear regression analysis was conducted. Results were not significant (b = -.156, t(25) = -.772, p > .05). Logistic regression analyses were used to determine the likelihood of SE predicting phone session attendance and completion of self-monitoring forms across eight sessions. Overall, higher levels of SE corresponded to a higher rate of attending scheduled phone sessions and completing self-monitoring forms, however relationships were not significant. For example, at time point 1, for every one-unit increase in SE, participants were 64% more likely to attend a scheduled phone session (p = .12, CI = .36-1.13).

Our results show that SE is only partially related to intervention adherence suggesting that other factors are involved. Recent research posits that SE and self-compassion (SC) are related, however SC may be a stronger predictor of healthy functioning than SE (Neff & Vonk, 2009) as those with higher SC acknowledge that failing is part of the human condition and does not necessarily reflect one's self concept. Future research should explore the role of SC on intervention adherence.

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C-078b
MINDFULNESS AS AN INTERVENTION TARGET FOR HEALTH-RISK BEHAVIORS AMONG YOUNG ADULTS

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Young adults (under age 30) are prone to health risk behaviors associated with negative affect and impulsivity, including accidents, self-injury, depression, suicide, excessive drinking, poor food choices, inadequate physical activity, substance use, risky driving, risky sex, and tobacco use. Prior work has identified increased mindfulness as a potential mediator of the association between negative affect and impulsivity. We administered a cross-sectional survey to confirm whether mindfulness may have a role in minimizing or eliminating the effects of trait negative affect (neuroticism) on impulsivity and self-control in a diverse community sample of adults (n = 287; mean age = 29; age SD = 13, age range = 18-82). Among young adults < 30 years (n = 171), multiple linear regressions revealed that mindfulness was significantly associated with impulsivity, (β = -.38, p < .001), but neuroticism was not (β = .02, p = .85). These results suggest that mindfulness may be a useful intervention target for young adults who are prone to health risk behaviors influenced by negative affect and impulsivity. Future research should evaluate the translational utility of mindfulness interventions for young adults for specific health behaviors that have been found to be influenced by negative affect and impulsivity.

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C-078c
PREVALENCE OF MENTAL DISTRESS AND ATTITUDES TOWARD MENTAL ILLNESS

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Stigma is often cited as a contributor to worse mental health outcomes. The purpose of this study was to examine the prevalence of mental distress and adverse attitudes related to mental illness among adults from 10 states and Puerto Rico.

Methods: Using recently released data from the 2012 Behavioral Risk Factor Surveillance System (BRFSS), mental distress was computed using responses to the Kessler-6. Two questions assessing stigma asked about respondents' perceptions of whether treatment for mental illness helps and whether people are caring towards people with mental illness. Differences in attitudes between people with mental distress and without mental distress were compared with chi-square tests. The prevalence of mental distress and attitudes toward mental illness were stratified by age, race/ethnicity, education, and employment status.

Results: Approximately, 3.2% reported serious psychological distress and 4.8% reported mild-to-moderate psychological distress. Over 87% agreed that treatment helps those with mental illnesses lead normal lives, and over 61% agreed that people are caring towards those with mental illness. Those with serious psychological distress, reported similar rates of agreeing that treatment can help people with mental illnesses compared to those without serious psychological distress. However, significantly fewer of those with serious psychological distress (54.7%) agreed that people are caring towards those with mental illnesses compared to those without serious psychological distress (62.3%). Serious psychological distress was more common among Hispanics (4.6%), among those with less than a high school education (4.6%), and among the unemployed (5.2%).

Conclusion: Attitudes toward mental illnesses are generally positive, especially regarding treatment. While a majority of respondents thought people were generally caring toward those with mental illnesses, almost 45% did not agree with this statement. Furthermore, those with serious psychological distress were less likely think people were generally caring toward those with mental illness.

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C-078d

PERCEIVED INJUSTICE PREDICTS PSYCHOLOGICAL DISTRESS IN A DIVERSE TRAUMA SAMPLE

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Persistence of psychological distress after traumatic injury has been widely studied; however, few studies have examined the impact of perceived injustice—the belief that one's pain/injuries is undeserved and attributable to others- on psychological outcomes following trauma. Research suggests after physical injury, individuals endorse injustice-relevant cognitions (e.g., thoughts/feelings of blame, unfairness, and irreparable loss). Accordingly, the current study examined the relationship between perception of injustice, presence and severity of posttraumatic stress disorder (PTSD), and depression among individuals admitted to a Level I trauma center at a large urban hospital in the Southwest. Phone surveys were administered to 110 participants at 12 months following hospital admission for a traumatic injury (e.g. fall, motor vehicle collision, violent crime). Injury-related injustice perception was measured using the Injustice Experiences Questionnaire (IEQ). Presence of PTSD symptoms was measured using the Primary Care PTSD (PC-PTSD), with symptom severity measured using the PTSD Checklist - Civilian Version (PCL-C). Symptoms of PTSD were found in 29% of participants. Greater injustice perception was associated with presence of PTSD (r = .51), more severe posttraumatic symptoms (r = .57), greater depression (r = .59), and higher rated pain (r = .66; all p values < .001). In logistic regression, IEQ score did not emerge as a significant predictor of a positive PTSD screen (p = .062). However, for individuals who screened positive for PTSD, IEQ score was predictive of PTSD symptom severity (β = .52, p = .001) after controlling for demographic variables and injury etiology. Additional analysis showed patients' IEQ score and pain were the strongest predictors of depression at 12 months post injury (β = .40, p < .001; β = .31, p = .003). Discussion focuses on the role of injustice perception in long-term management of traumatic injury outcomes.

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C-089a

A 10 YEAR REVIEW OF THE NUTRITION ENVIRONMENT MEASURES SURVEY (NEMS) IN RESEARCH AND PRACTICE

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The Nutrition Environment Measures Surveys (NEMS) are reliable and valid observational measures of community and consumer nutrition environments in stores (NEMS-S) and restaurants (NEMS-R). The original measurement study began in 2004 and from the beginning, there has been a high demand for dissemination of the tools and methods. The measures have been successfully disseminated through in-person and online training options, which have allowed researchers across the United States and internationally to access and appropriately use the measures.

A review of the literature identified over 50 publications that have used the NEMS measures since 2008, when the original NEMS-S and NEMS-R development and evaluation articles were published. Most published NEMS research has focused on stores (63%, n=34) with several researchers customizing the NEMS measures to suit specific project needs. Modifications to the NEMS measures have been used to evaluate corner stores, college campuses, vending machines, and hospital/school cafeterias. Used to assess the nutrition environment, evaluate interventions, and inform policy, the versatility of NEMS has resulted in a broad base of relevant findings. While the NEMS measures were originally developed for research purposes, they have also been used for community assessment and advocacy. The use of the NEMS measures in research and in practice have made important contributions to what is known about community and consumer nutrition environments. This NEMS review explores key findings and applications of the NEMS measures and helps to identify next steps and future directions for NEMS and nutrition environment research.

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C-089b

PERCEIVED NUTRITION ENVIRONMENT MEASURES SURVEY (NEMS-P): DEVELOPMENT AND EVALUATION

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Objective measures of the nutrition environment are well established and have been adapted to study a wide range of food environments and contexts. Less studied are the perceptions of the nutrition environment, which are likely as important to the relationship between nutrition environments and obesity. Several studies have begun to evaluate the perceived nutrition environment; however, interpretation is limited as much of this research has been either qualitative or only included a small number of items. The perceived nutrition environment measures survey (NEMS-P) was developed to address the need for a valid measure to comprehensively assess the perceived food environment. This research involved five steps: 1) development of a conceptual model and inventory of items; 2) expert review; 3) pilot testing and cognitive interviews of the initial version of the survey; 4) revising the survey; and 5) administering the revised survey. The revised survey was administered to participants in four neighborhoods of high and low socioeconomic status on two occasions to evaluate neighborhood differences and to assess test-retest reliability. The community and consumer nutrition environment constructs for stores and restaurants constitute most of the survey items. The community nutrition environment describes access to stores and restaurants within the neighborhood and the consumer nutrition environment includes items on availability, affordability, food promotions, food placement, and food motiva-

tion. Descriptive statistics and neighborhood comparisons were computed for all participants completing the first survey (n=221) and test-retest reliability was assessed for all participants who completed the survey at both time points (n=215).

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C-089c

BEYOND FAST FOOD: EXPLORING HOW TO IMPROVE THE FOOD SKILLS OF UNIVERSITY STUDENTS

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Background: Contemporary eating patterns now consist of pre-prepared, fast foods that are nutrient-poor, contributing to poor health and decay of, 'from scratch' food skills. University students are vulnerable to falling prey to these convenience and fast foods. Most healthy eating initiatives on campuses focus on increasing nutrition knowledge (i.e. what to do), with little attention given to procedural knowledge (i.e. how to do). Our previous research indicates food preparation is low in this population and literature suggests inadequate food skills are associated with lower diet quality. What remains to be understood is how to effectively improve the food skills and dietary practices of this population. The purpose of this study was to build on our previous research to qualitatively explore the food skills of university students and how to promote food skill development in this population. Methods: A sample of 36 students (18 males and 18 females) participated in focus groups exploring food skill self-efficacy, barriers and motivators to preparing meals from scratch, and how to engage students in a food skills program. Data was analyzed using procedures consistent with content analysis. Results: While food skill self-efficacy varied among participants, convenience food was often the default due to time constraints and costs. Key motivators to preparing food from scratch included the social aspects associated with food preparation and the health benefits of having control over ingredients. Experiential learning (i.e. demonstrations) and socializing were highlighted as ways to engage students in a campus food skills program. Conclusions: The results suggest that while time constraints, cost and adequacy of skill are linked to food preparation behaviour, programs that incorporate socializing and experiential learning may be effective for improving food skills among university students. The results of this study will be used to design a campus health promotion initiative to develop food skills in this population.

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C-089d

COLLEGIATE ATHLETES DEMONSTRATE GREATER NUTRITION RELATED SELF-DETERMINATION THAN NON-ATHLETES

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BACKGROUND: The US adult population is suffering from an obesity epidemic, and nutritional behaviors are key contributors to the continually dramatic rise in prevalence among adult populations. Collegiate athletes are unique, sharing similar characteristics uncommon among the general population. To date, limited research has capitalized on understanding the underlying nutrition-related motivations that likely differ between athlete and non-athlete populations. PURPOSE: The primary objective was to gain a preliminary understanding of the differences between athletes and non-athletes; specifically, examining nutrition-related constructs from the Self-Determination Theory. METHODS: Collegiate athletes and non-athletes were recruited from a university in Ohio and asked to complete an online survey. Survey items gathered information on nutrition behaviors, self-determination to eat healthy, and motives to eat healthy. ANOVA analyses determined group differences with significance determined at an alpha level of 0.5. RESULTS: Participating athletes (N=111) were 89% female and 85% Caucasian, with a mean age of 19.8 years; and their non-athlete counterparts (N=197) were 68% female and 94% Caucasian, with a mean age of 23.2 years. Athletes represented both team (28%) and individual level (72%) sports. Compared to non-athletes, participating athletes reported higher levels of daily fruit intake (p=0.02) and less weekly visits to fast food restaurants (p=0.00). Self-determination and motives to eat healthy were also different between athletes and non-athletes, with athletes reporting higher amotivation (the highest self-determined level of motivation, p=0.30); and higher social-related motives to eat healthy (p=0.00). CONCLUSIONS: Participating athletes demonstrated healthier nutritional patterns compared to non-athletes. Relatedly, athletes' underlying self-determination and behavioral motives were stronger than non-athletes. Outcomes support theoretical expectations, and suggest potential in targeting similar constructs when promoting similar eating behaviors among the general adult population.

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C-111a

PILOT STUDY EXAMINING TRANSTHEORETICAL MODEL CONSTRUCTS IN MULTIPLE HEALTH BEHAVIORS FOR WEIGHT LOSS MAINTENANCE POST BARIATRIC SURGERY

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Bariatric surgery typically produces substantial amounts of weight loss in obese individuals. However, many patients report trouble with adhering to behavior change recommendations and subsequently begin regaining weight within 2 years post surgery. Few studies have applied health behavior change theories in understanding psycho-social factors related to weight regain in this population. Therefore, the purpose of our study was to examine multiple weight-related behaviors in a sample of patients that had a bariatric surgery within the past 2-4 years. Participants were 76 patients (M age = 47.84, SD = 10.20; 78.9% female) recruited from a bariatric surgery unit at a local hospital. Self-report measures of demographics, weight history (i.e.

presurgery, lowest since surgery, and current), exercise, and behavior-specific stage of change, self-efficacy, and decisional balance were collected for multiple weight loss behaviors. Mean weight loss was 112.36 lbs (SD=38.10) and mean weight regain was 14.05 lbs (SD=15.53). Weight increased significantly from 2-4 years post surgery [F(2,73)=3.70, p=.03]. A majority of individuals were in pre-action stages for 'actively trying to lose weight' (51.3%). Percent of participants in post action stages was lowest at 4 years for avoiding high fat foods, fiber intake, weight loss, exercise, reducing stress, and quitting smoking. Significant differences between stages were found for pros of weight control [F(4,71)=4.85, p=.01], pros of exercise [F(4,70)=5.69, p=.01], self-efficacy for exercise [F(4,70)=3.55, p=.01], and exercise amount [F(4,70)=3.92, p=.01]. These results suggest that behavior change interventions are needed to maintain weight loss after bariatric surgery. This study underscores the need to further understand multiple health behaviors in bariatric surgery patients and design interventions to support behavioral changes specific to weight management.

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C-111b
READINESS TO CHANGE MULTIPLE WEIGHT-RELATED HEALTH BEHAVIORS IN A SAMPLE OF POST BARIATRIC SURGERY PATIENTS

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Many individuals who undergo bariatric surgery experience dramatic weight loss within the first year post surgery, but then begin regaining weight. Failure to adhere to behavioral recommendations may be a possible explanation for why some individuals regain weight, yet few studies have examined readiness to change weight-related behaviors in this population. Therefore, the purpose of our study was to examine readiness to change multiple weight-related behaviors in a sample of patients that had a bariatric surgery within the past 2-4 years. Participants were 76 patients (M age = 47.84, SD = 10.20; 78.9% female) recruited from a bariatric surgery unit at a local hospital. Participants completed self-report measures of readiness to change avoiding high fat foods, eating a high fiber diet, actively trying to lose weight, exercise, reducing stress, and quitting smoking. Participants in Precontemplation, Contemplation, and Preparation stages of readiness to change were classified as 'at-risk' for that behavior. Mean weight loss was 112.36 lbs (SD=38.10) and mean weight regained was 14.05 lbs (SD=15.53). Weight regain increased significantly from 2-4 years post surgery [F(2,73)=3.70, p=.03]. At-risk status were as follows: 51.3% for actively trying to lose weight, 42.1% exercise, 35.5% avoid high fat food, 34.2% reducing stress, 28.9% high fiber diet, and 19.7% for quitting smoking. The mean number of risks for each participant were 2.12 (SD=1.49) and was correlated with weight regain [r=.237, p=.04]. This study also explored which behaviors clustered together for those with multiple risks. This study underscores the need to further explore the relationships among weight regain and multiple weigh-related behaviors in post bariatric surgery

populations. Results of this study indicate that many individuals are not ready to change weight-related behaviors following bariatric surgery and that behavioral interventions may help prevent weight regain.

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C-111c
PERSONAL HISTORY OF DIETING AND FAMILY HISTORY OF OBESITY: INDEPENDENT RISK FACTORS FOR WEIGHT GAIN?

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Background: Identifying predictors of future weight gain is important in obesity prevention efforts. Both family history of obesity and personal dieting history have been established as predictors of future weight gain, however it is unknown if they are independent or overlapping predictors. Objective: As studies examining prospective weight gain require substantial resources and can take years to complete, the purpose of this study was to examine the degree of overlap between these two predictors using cross-sectional data. If these two predictors appear to be largely independent, then a long-term prospective study examining these predictors would be warranted. Design: Baseline data from four studies were examined separately and in combination for a total of 561 female participants, and analyses were conducted to examine parent anthropometric variables by dieting status within and across studies. Participants: The eligibility criteria differed across the four studies. However, all participants were female university students between the ages of 17 and 30. Statistical Analyses: For each study, as well as for all participants combined, parent anthropometric variables were examined by dieting status using factorial ANOVAs. Results: No meaningful pattern was found when examining parent anthropometric variables by dieting status, which suggests that the two risk factors are largely independent. Conclusions: The processes associated with the prediction of future weight gain by each variable appear to be different; therefore, future research should use a longitudinal study to test the hypothesis that using both variables to predict future weight gain would account for more variance than using either variable alone.

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C-111d
BODY PERCEPTION AND WEIGHT LOSS BEHAVIOR DIFFERENCES AMONG AFRICAN AMERICAN, LATINO, AND WHITE ADOLESCENTS

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Over 45% of high school aged adolescents report currently trying to lose weight, and previous research suggests that differences exist among racial/ethnic groups in body perceptions and weight loss behaviors. The aims of the current study were to a) examine

the relationships between weight loss, body image perception, and body size and b) assess potential racial/ethnic group differences among high school aged adolescents. Data were obtained from the final wave of the Healthy Passages study. Participants were African American (30%), Latino (46%), and White (24%) 10th grade high school students (N = 3,775) who attended high schools in urban areas of AL, TX, and CA. Measurements included the Self-Perception Profile-Physical Appearance Scale, questions regarding body perceptions using gender-specific drawings, perception of weight (normal or overweight), current weight loss attempts, and types of weight loss methods. Results indicated that weight loss attempts were more common in Latino (52%) compared to African American (38%) and White (39%) adolescents. Structural equation model analysis indicated that larger body size and negative body perception were related to weight loss attempts for the overall sample (CFI = 0.898, TLI = 0.864, and RMSEA = .050). However, measurement invariance testing indicated that the measurement of the latent factors body perception and weight loss attempts could not be replicated across racial/ethnic groups (p's < .05 for χ^2 difference tests). Consequently, the specific influences on weight loss attempts from body size and body perceptions do not appear to be consistent across the three major racial/ethnic groups. Future research will likely need to test different models to illuminate influences on weight loss attempts among different racial/ethnic groups. Measures used to assess body perception and weight loss may need to be revised to achieve better cultural competence.

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C-111e

MIND THE GAP: EXPLORING DISCREPANCIES BETWEEN INTENDED AND ACTUAL WEIGHT LOSS IN DEPRESSED INDIVIDUALS WITH NON-ALCOHOLIC FATTY LIVER DISEASE

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The purpose of the current study was to compare dieting history and motivation in depressed versus non-depressed patients seen in clinic for non-alcoholic fatty liver disease (NAFLD). 48 adults (56.3% women; age M = 56.1) completed the eight-item Patient Health Questionnaire (PHQ-8, depression) and the Treatment Self-Regulation Questionnaire (TSRQ, motivation). Diet history was collected. PHQ-8 scores classified 27.1% of our sample as depressed; current BMI did not differ between the two groups (p=.58). We found that depressed patients reported a significantly larger discrepancy between intended and actual weight loss in previous weight loss efforts than non-depressed patients t(46) = -2.00, p=.05. Depressed patients were also significantly more likely to regain weight they had lost χ^2 (1, N=45) = 5.92, p < .02. In exploring this finding, we noted that depressed and non-depressed patients reported similar actual weight loss during previous attempts; however, depressed patients reported higher intended weight loss. These discrepancies were not statistically different. Our results also revealed that depressed patients had lower autonomous motivation for physical activity and lower confidence in their ability to improve their physical

activity and nutrition habits (all ps<.05). The study findings suggest that despite having similar current BMI and similar degree of previous weight loss success, depressed patients with NAFLD set higher expectations for themselves at the outset of a weight loss effort, were more likely to regain weight once it has been lost, and experience decreased motivation and confidence in their ability to engage in future weight loss efforts. Depressed individuals may perceive past efforts as unsuccessful due to high expectations and weight regain; these perceptions may be related to low levels of motivation/confidence to change current habits. Realistic goal setting may be an important treatment target for depressed individuals entering a weight loss intervention.

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C-111f

PSYCHOSOCIAL OUTCOMES FROM A MULTIDISCIPLINARY WORKSITE WEIGHT LOSS INTERVENTION

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Successfully treating obesity and weight problems could ameliorate the public health burden and health care costs. Many workplaces are aware that obesity and the associated consequences decrease producitivity and increase healthcare costs. Workplaces are therefore motivated to help manage the health of their employees due to the financial benefits as well improving workplace morale. Worksite interventions have had some success in targeting weight and related psychosocial challenges, however, there are few studies examining the effects of a multidiciplanry worksite intervention. Program participants of this current multipdiciplanary worksite intervention that included access excesise equipment, healthy meal, medical staff, and health related psychoeducation experienced typical weight loss results as other published weight loss interventions, and notably, these participants experienced improvements in their QOL, eating behavior, and sleep during the program. These improvements were sustained at 6 months and 12 months after the conclusion of the program.

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C-111g

ARE OBESE WOMEN WHO FEEL HEALTHY MORE LIKELY TO ENGAGE IN PHYSICAL ACTIVITY? OR DOES ENGAGEMENT IN PHYSICAL ACTIVITY LEAD TO OBESE WOMEN FEELING HEALTHIER?

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Individuals who feel healthy are more likely to engage in physical activity, and increases in physical activity improve people's perceptions of their health. In the present study, we examined these propositions in the context of a weight management program that included targeted increases in physical activity as a key component of treatment for older obese women. We investigated (a) whether health-related quality of life (HRQOL) measured prior to treatment predicted changes in physical activity (PA) at post-treatment and follow-up and (b) whether increases in PA were associated with improvements in HRQOL . Participants included 167 older obese women (M±SD: baseline BMI = 37.0±5.1kg/m2, age = 59.5±6.21 years) enrolled in an 18 month community-based, behavioral weight-loss intervention with a 6-month treatment phase and a 12-month follow up. Study measures were taken at baseline, posttreatment, and at follow-up. HRQOL was assessed with the SF36; PA was measured with the CHAMPS Physical Activity Questionnaire. Multiple regression analyses indicated that baseline HRQOL did not predict changes in physical activity at posttreatment or follow up; however, increases in physical activity during initial treatment were associated with improvements in HRQL at both posttreatment ($F_{(1, 155)} = 15.15$, $p < .001$, η = .089) and follow-up ($F_{(4, 150)} = 4.99$, $p < .001$, η = .094). The same pattern of results was obtained when controlling for weight loss. Collectively, these results suggest that increases in physical activity can enhance perceptions of health and quality of life among obese women, independent of their health-related self-perceptions prior to treatment.

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C-111h
TEEN MOM PERSPECTIVES ON PARENTING AND HEALTH FOR DEVELOPING A PROGRAM FOR OBESITY PREVENTION IN THEIR CHILDREN

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Objective. The following is qualitative results from a pilot study to develop a parenting/obesity prevention (ObP) program for teen moms (16-20 years) and their children (6 months to 5 years). Methods. Teen moms (n=19) each participated in a 90-minute interview on parenting and health, including diet and PA to inform the development of the program in collaboration with an expert panel. The expert panel was comprised of the research team and community members, including former teen moms. Participants were recruited via talks at sites, including residential homes, schools and community centers. Interviews were audio recorded and transcribed. Results. Moms' mean age=18.79 (SD=0.86); and 63% completed ≥12th grade. On average they had 1.11 children [SD=0.32]; child mean age = 1.88 years (SD=1.10). Participants often described their children as happy, friendly and loveable. Several moms reported common child-rearing challenges, including non-compliance with listening/following directions, daily tantruming; and struggles with bedtime/napping, and finicky eating. They discussed using several strategies (e.g., time out, letting child cry it out, and

soothing child). Moms described both good and strained/absent relationships with the father of the child and their own parent(s). They described their child as very active, and many believed that they get enough PA from chasing him/her. Several expressed wanting help with eating better, and cooking/recipes, and were motivated to be healthy for their child. Several expressed strong interest in participating in designing a parenting/health program for them. Conclusions. Combining parenting and ObP into one program based on input from teen moms and community members may make this program particularly useful in shaping diet and PA in young children and their teen moms, given both are in critical periods for health behavior change. The strong interest in the program suggests services and research are needed in this area.

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C-111i
STRESSFUL LIFE EVENT AND WEIGHT CLASSIFICATION IN AFRICAN AMERICAN WOMEN: THE IMPORTANCE OF SOCIAL CONTEXT IN DEVELOPING WEIGHT LOSS INTERVENTIONS

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African American women are disproportionately at risk for overweight/obesity compared to their white counterparts. Yet, effective weight loss approaches for this population have been limited. More research is needed to understand the factors that contribute to weight gain among high-risk groups. The purpose of this study was to examine the relationships between adverse life events, perceived stress, and obesity classification in African American women. Sixty-four African American women ages of 30 and 65 years (BMI 30-55) were recruited for participation in a community-based weight loss intervention study. Women were recruited through neighborhood events, health clinics and churches. Prior to randomization, all participants completed a 1-hour structured interview. Adverse life events were measured using the Crisys Scale and perceived stress was measured using the 4 item scale developed by Cohen and colleagues. Height was measured with a Seca 213 portable stadiometer and weight with a BWB800S Tanita digtal scale.

About 30% of the women were classified with Class I obesity, 22% with Class II obesity, and 44% with Class III obesity. Women in the sample reported a high prevalence of adverse life events but low perceived stress. The most reported adverse life events reported were focused on neighborhood safety, job seeking, decreases in income, and family illness/death. Women classified as extremely obese were more affected by adverse life events than women with Class I and II obesity. However, differences between women with Class I and II obesity were not statistically signifi-

cant. Results from this study suggest that it may be important to incorporate strategies and resources to help women cope with adverse life events to weight loss interventions targeting African American women.

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C-133a
THE ASSOCIATIONS AMONG EXERCISE AND WEIGHT MANAGEMENT SELF-EFFICACY AND SELF-ESTEEM AMONG BEREAVED SPOUSES

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The death of one's spouse is often considered one of the most stressful experiences in life and is associated with poorer health and lower self-esteem outcomes. Bereaved spouses with greater self-esteem experience greater resilience, an essential component to the grieving and healing processes. Widows simultaneously deal with fewer personal resources and greater demands on their time and energy, making them more vulnerable to poorer health behaviors and weight status. Despite these challenges, few studies have measured the associations of exercise and weight management self-efficacy with self-esteem among widows. The purpose of this study was to investigate the associations of exercise and weight management self-efficacy and self-esteem among participants who attended Camp Widow, an annual, weekend-long conference that provides practical tools, peer-reviewed and validated resources, and peer-based encouragement for bereaved spouses. Participants (N=692; 94.51% female, M age=50.78 ±10.58) completed the Self Esteem assessment (Rosenberg, 1989) along with self-efficacy questions related to exercise and weight management as part of a larger self-efficacy instrument created for this population. Bivariate analyses suggested significant associations among age, income and higher exercise and weight management self-efficacy and higher self-esteem (ps<.05) and were used to inform regression analyses. Multiple regression demonstrated that age (Beta=.086, t=2.476), income (Beta=.092, t=2.699), exercise self-efficacy (Beta=.244, t=6.985), weight management self-efficacy (Beta=.302, t=8.723) were significantly associated with self-esteem, F(4,687)=46.912; p=.000. Exercise and weight management self-efficacy could be associated with greater self-esteem among bereaved spouses, but these associations might be mediated by age and income levels. Clinicians and researchers should consider the impact of age and income on these relationships when creating, delivering and measuring interventions for bereaved spouses.

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C-133b
THE CHALLENGE OF HAVING FOOD ALLERGIES IN COLLEGE: TARGETS FOR INTERVENTION

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Introduction: Managing the requirements of life-threatening food allergies can be extremely challenging, especially in settings outside of the home like the move to college. The present study examined specific areas of self-management (SM) among college students, students' acceptability of options for assistance with SM, and if greater anxiety about having food allergies was associated with being better prepared.

Methods: Ninety-one college students with at least one food allergy (50 females, 41 males) were surveyed regarding their frequency of engagement (never, always, sometimes) in SM behaviors such as identifying an allergic reaction, adhering to dietary restrictions, explaining food allergy to others, and carrying self-injectable epinephrine (an "epi-pen"). Participants also were asked to indicate acceptability of possible intervention approaches; their level of anxiety about having food allergies; and whether they had experienced anaphylaxis, defined as difficulty breathing or loss of consciousness, while in college.

Results: Poor SM such as carrying an epi-pen (only done "always" by 9.6%) and explaining their allergy to others (only done "always" by 23.5%) was indicated. 63.3% responded that it would be helpful to have a contact in their doctor's office for assistance as opposed to only 24.2% who preferred to utilize personnel available on campus. Among respondents, 11% reported an episode of anaphylaxis while in college, however only two of them were carrying their epi-pen as instructed. Overall, participants who carry their epi-pens reported higher anxiety than those who do not (M =4.88, SD =.53 vs. M = 2.22 SD =.32), t(1) =18.19, p < .001.

Conclusions: College students report incomplete SM over their food allergy. Of particular concern, a large proportion did not always carry epinephrine but those who did expressed higher anxiety. It may be that low anxiety reflects poor understanding of food allergy. The present study identified specific deficits in SM and possible intervention targets to improve the management and prevention of adverse events on college campuses.

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C-133c
DRIVING HABITS OF OLDER ADULTS IN THE WOMEN'S HEALTH INITIATIVE MEMORY STUDY: RISK FACTORS AND COMPENSATORY STRATEGIES

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It is important not only to examine risk factors for driving cessation and limitation, but also driving compensatory strategies. Women's Health Initiative Memory Study Extension participants answered a telephone-administered questionnaire about their driving habits (Mean age=82.59; N=570). Women who reported stopping driving in the last year (N=99; 17.37%) or continuing to drive were compared on risk factors and use of compensatory strategies (alternative types and providers of transportation) using Fisher's Exact tests. Women who continued driving but re-

ported driving limitations were categorized by degree: minor (0-1) (39%), moderate (2-3) (30%), and major (4 or more) (31%). More women no longer driving used compensatory strategies (all p<0.0001). Fewer women still driving with moderate limitations used alternative types of transportation (p=.0009), and alternative providers of transportation (p=.0008). Risk factors for moderate and major compared to minor limitations included increased age, decreased physical function, and decreased family income (all p<0.0001). More women with major limitations reported fair or poor health (p=0.0003), use of mobility aids (p=.0002), and difficulty with obtaining everyday care (p=.004). Women who were no longer driving reported more use of compensatory strategies, although these were also used by women continuing to drive. Importantly, more women currently driving with moderate limitations reported not using driving compensatory strategies. In addition, women who reported moderate or major limitations were older, had lower physical function, poorer health, more use of mobility aids, lower income, and less social support. Given estimates that two thirds of all older adults driving over age 85 will be women, those with driving limitations may be appropriate for interventions that increase transportation access.

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C-133d
LIVE WELL SPRINGFIELD (LWS) - A COMMUNITY TRANSFORMATION INITIATIVE: BASELINE SURVEY RESULTS

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BACKGROUND. In 2012, the Pioneer Valley Planning Commission, on behalf of the City of Springfield, MA, received CDC funding to promote healthy behaviors and health equity via expansion of the Live Well Springfield (LWS) initiative. Strategies include: (1) opening a full-line grocery store, (2) increasing access to fresh produce, (3) increasing current pedestrian way usage, and (4) creating a comprehensive pedestrian/ bicycle plan. METHODS. A baseline survey developed by UMass Amherst evaluators, focused on eating and physical activity behaviors, food access and acquisition, and neighborhood characteristics, was administered in summer 2013. The survey was available in English, Spanish and Vietnamese. RESULTS. Analyses were conducted on 280 surveys completed by verified Springfield residents. Most (70%) respondents were female, with good distribution across age and ethnic groups. A majority of respondents indicated that fresh fruits/vegetables (85%), whole grains (85%), lean meats (81%), and low sodium foods (72%) were available; however, 62% did not consume the recommended 5 daily servings of fruits/ vegetables. Half the respondents reported walking at least 10 minutes/day at least 3 days/week and 69% felt their neighborhood was safe for walking alone during the day. Few

(39%) met the recommended 150 minutes of weekly exercise. Key barriers to purchasing fruits/vegetables were cost, limited quantity, and poor quality. When data were segmented by zip code, some neighborhood-level differences emerged. These will be the focus of targeted interventions in the next phase of the study. DISCUSSION. Results will inform future policy advocacy, LWS education programs, and contribute to the LWS media campaign.

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C-133e
THE RELATIONSHIP BETWEEN ILLNESS UNCERTAINTY AND PARTICIPANTS' HOPES AND EXPECTATIONS FOR WHOLE EXOME SEQUENCING

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Illness uncertainty is a part of handling a life-threatening or chronic illness. It has been associated with coping strategies and emotional difficulties in several different diseases. This longitudinal study examined the illness uncertainty of 146 participants in an ongoing study of clinical use of diagnostic whole exome sequencing (WES). They completed measures for the present study prior to receiving results, and thus were waiting for information that might give them answers about a health concern that appeared to have a genetic cause (e.g., a cardiac or neurological disorder). Participants completed Mishel's Illness Uncertainty scale and questions developed for the study that assessed what participants hoped to get from their WES results and what results they thought they were most likely to get. Response choices included: (1) Finding variants that explained the health concern, (2) Finding variants that could possibly explain the health concern, or (3) Not finding any gene variants that could explain the health concern. The majority of participants reporting hoping to receive an explanation (76%) compared to thinking it was what they were most likely to get (27%), followed by hoping for a possible explanation (18% vs 37%) , and the minority reported hoping to not find a variant (6% vs 26%). Multinomial regression models predicting these response choices showed that higher scores for illness uncertainty were significantly associated with hoping for an explanation (p = .02). There was no significant relationship between illness uncertainty scores and what participants thought they were most likely to receive. The relationship between illness uncertainty and participants' hopes and expectations could impact how results from WES are received by participants and their families. Understanding this relationship could allow physicians to tailor their communication to patients with higher illness uncertainty, or provide additional resources for patient with high levels of illness uncertainty.

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C-133f

CLUSTERING OF MULTIPLE CHRONIC DISEASE RISK BEHAVIORS AMONG MIDDLE SCHOOL YOUTH

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Introduction: Chronic diseases are among the leading causes of death in the US. Risk for chronic illnesses is heightened when modifiable behavioral risk factors such as obesity, physical inactivity, sedentary behavior, tobacco use, and alcohol consumption cluster or co-occur.

Purpose: To assess the prevalence and clustering of six chronic disease risk factors: physical inactivity, excessive television time, low fruit and vegetable intake (FVC), cigarette use, smokeless tobacco use and alcohol use.

Methods: Middle school aged children from two schools in neighboring states (n=105, 50% female, 95% 7th grade, 5% 8th grade, 39% overweight or obese, 23% BMI above 95%) self-reported their daily chronic health risk behaviors. Proportions were used to describe the prevalence of single and multiple health risk behaviors. Significant multiple health behavior clusters were revealed using an observed to expected (O/E) ratio. Expected proportions were calculated by multiplying the probability of each risk factor based on their occurrence in the current study.

Results: Sixty-one percent of youth participants were physically inactive, 33% watched excessive TV, 37% had inadequate FVC, 20% had previously smoked tobacco, 6% had previously used smokeless tobacco, and 28% had previously used alcohol. Fifty-seven percent of youth were at risk for 2 risk factors, 32% were at risk for 3 and 11% were at risk for 4 of the 6 behavioral risk factors for chronic illness. Clustering was observed in 27 combinations and 18 yielded an O/E ratio over 1. Physical inactivity clustered most frequently, appearing in 11 of 18 significant combinations; followed by alcohol consumption which clustered in 10. While no clustering occurred across all six risk factors, one combination of five risk factors (PA, TV, FVC, SMK, ALC) had an O/E ratio of 2.51 (95% CI: -2.468, 7.486), indicating this behavior cluster occurred 151% more than each contributing behavior independently.

Conclusion: Health risk behaviors were shown to co-occur and cluster, indicating a need to approach health change in a way which addresses multiple health risk behaviors.

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C-133g

PATIENT AGE AND PERCEIVED PHYSICIAN COMMUNICATION ABOUT CHOICE IN TREATMENT

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Shared decision making between healthcare providers and patients reflects conversation and agreement about medical treatment. Sharing responsibility for treatment decisions may promote optimal treatment as patients active in decision making may be more adherent to medical regimens they discussed with their physician and believe can fit into their lifestyle. Research has shown that older patients may be less active at engaging in shared decision making- increasing risk for such patients having fewer opportunities to engage in shared decision making with their providers. A survey of 812 patient participants receiving care in primary care clinics in rural communities was conducted to understand patient perspectives on care provided by their physician and satisfaction with the physician. A majority of participants (75%) reported at least one chronic illness. Patients with at least one chronic illness were more heavily recruited for the questionnaire to ensure that the participants had a need for regular follow-up care and interaction with their provider. The participants were largely female (62%, 38% male) with 42% over age 65. Participants completed a telephone interview relating their experiences with their physician over the preceding twelve months. Age was associated with higher satisfaction with the physician (r = .16). Regression analysis demonstrated that older age (b = .03) and ratings of satisfaction with the physician (b = -.06) predicted patient reports that the physician did not tell them more than one treatment choice was available above and beyond the effects of male gender (b = .- 05) (R2= .06, p <.01). Results suggest that older patients are less likely than younger patients to perceive that they discussed treatment choices with their physician suggesting that physician intervention may be necessary to promote shared decision making for geriatric patients.

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C-142a

DIFFERENCES IN PAIN-RELATED FEAR AND ANXIETY AMONG INDIVIDUALS WITH HIGH AND LOW PAIN TOLERANCE

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Background: Most pain research has focused on chronic pain. Fear or anxiety related to pain may be associated with acute pain outcomes in healthy groups. Objective: To determine whether measures of pain-related fear and anxiety are associated with acute pain tolerance. Method: Healthy participants (N=186) completed the Pain Catastrophizing Scale (PCS; with subscales of rumination, magnification, helplessness), Pain Anxiety Symptoms Scale (PASS; with subscales of fear, avoidance, cognitive, and physiological symptoms), Pain Vigilance Awareness Questionnaire (PVAQ), Tampa Scale for Kinesiophobia (TSK), and the attribution and denial subscales of the Marlowe-Crown Social Desirability Scale (MCSDS). Then, participants performed a cold pressor (CP) task in which they immersed their hand in ice water (2°C) until pain became intolerable. Maximum duration for the CP task was 5 min, and participants were not informed a priori of this limit. Interestingly, 25 participants immersed their hand for the maximum time which allowed for comparisons between those who terminated the CP under 5 min (low tolerant: LT) ver-

sus those who immersed their hand for the entire duration (high tolerant: HT). Results: GLM analysis indicated that, compared to HT participants, LT participants had greater scores on the TSK (p = .022), PASS (p = .002), PVAQ (p = .001), the fear (p < .001), cognitive (p = .009), and avoidance (p = .003) subscales of the PASS, and the magnification subscale of the PCS (p = .012). No significant MCSDS results were observed. Conclusion: Compared to HT participants, LT participants display higher pain-related fear and anxiety. Highly fearful participants may have difficulty in managing the attentional demands of the pain experience. Specifically, the interference of pain is exaggerated by pain-related fear and catastrophic thinking. Highly fearful participants may show hypervigilance and bias toward pain-relevant stimuli.

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C-142b
PERCEIVED INJUSTICE PREDICTS PAIN, DISABILITY, AND PSYCHOSOCIAL OUTCOMES AMONG INDIVIDUALS WITH CHRONIC LOW BACK PAIN

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A growing literature suggests that pain-related perceptions of injustice adversely affect physical and mental health outcomes among individuals with acute and chronic pain. Injustice perception reflects belief that one's pain experience is unfair/undeserved and attributable to others. To date, research on injustice perception has been limited, focusing primarily on whiplash and fibromyalgia. Studies have also focused on self-reported pain and disability outcomes, rather than engagement in and appraisal of real-world physical challenges. The current study examined the relationship between injustice perception (measured by the Injustice Experiences Questionnaire, or IEQ) and pain, disability, and pain-related psychological variables (catastrophizing, depression) in a community sample of individuals with chronic low back pain (CLBP). Additionally, participants were asked to appraise the pain, harm, and difficulty of everyday physical activities as measured by the Photograph of Daily Activities Scale (PHODA) and performance of three standardized physical tasks in the laboratory (lying down on a bed, sitting in a chair, picking up a crate). Bivariate analyses revealed that participants' IEQ scores were positively associated with measures of current pain intensity, disability, and depression (r= .41 - .73; all p < .01). IEQ scores were likewise positively associated with participants' pain, harm, and difficulty appraisals of physical activity depicted on the PHODA and in response to each laboratory task. In regression analyses, injustice perception significantly accounted for unique variance in disability and depression outcomes above and beyond participants' demographic information, current level of pain-intensity, and pain-catastrophizing score. This represents the first study to examine the impact of injustice perception among individuals with CLBP as well as the relationship between injustice perception and appraisal of everyday physical activity. Theoretical and clinical implications are discussed.

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C-142c
PAIN ANXIETY MEDIATES THE RELATIONSHIP BETWEEN DEPRESSION AND PAIN IN PATIENTS WITH HEPATITIS C

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Background: Depression and chronic pain are common in persons with hepatitis C virus (HCV) infection. However, little is known about the mechanisms by which depression is associated with pain functioning. This study evaluated the extent to which pain anxiety mediates the relationship between depressive symptoms and pain functioning in patients with HCV.

Methods: Participants were 175 patients with HCV receiving care at an urban VA medical center. Participants completed well-validated questionnaires that assessed demographic characteristics, mental health, and pain functioning. Path analyses examined direct effects of cognitive-affective and somatic symptoms of depression on pain interference and indirect effects of these relationships via four subscales of the Pain Anxiety Symptoms Scale: cognitive, escape/avoidance, fear, and physiological anxiety.

Results: Forty-three percent of participants met criteria for moderate to severe depression, 58% were diagnosed with chronic pain, and 26% met criteria for both depression and pain. Both cognitive-affective and somatic symptoms of depression were positively related to pain interference (r=0.21, p<0.01 and r=0.42, p<0.01, respectively). The four pain anxiety scales jointly mediated the relationship between cognitive-affective depression and pain interference (path coefficient change=-0.21,p< 0.01) and somatic depression and pain interference (path coefficient change=-0.27, p<0.01). Escape/avoidance pain anxiety predominantly accounted for the observed mediation (specific indirect effects=-0.09, p<0.01 for cognitive-affective depression and -0.14, p<0.01 for somatic depression).

Conclusion: Findings indicate a potential mediating role of pain anxiety, particularly escape/avoidance anxiety, on the relationship between depression and pain interference in patients with HCV. Future studies should examine whether reductions in pain anxiety are associated with reduced depression and improved pain functioning in this population.

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C-163a
CHILD PHYSICAL ACTIVITY LIMITATIONS AND PARENT SUPPORT BEHAVIORS IN RESPONSE TO CHRONIC DISEASE CONDITIONS

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Childhood chronic diseases such as obesity, asthma, and diabetes can be severely debilitating and lead to additional health concerns in adulthood. Intervening early by modifying physical activity and diet practices could reverse the deleterious effects of

these conditions. While we know that obese and asthmatic children tend to engage in physical activity less than their healthy peers, we do not know if there are differences in their parents' support to change based on these conditions and if these differences impact the children's actual activity levels. The present study examined the physical activity level of 178 children (7-12 years; 51% female) across three groups: 1) obese children (BMI percentile > 95th); 2) asthmatic children (based on clinic spirometry results); and 3) diabetic children (based on Hemoglobin A1C). Compared to their healthy peers, each group engaged in significantly less physical activity (mean days/week: healthy comparison = 5.2; obese = 3.4; asthmatic = 3.6; diabetic = 4.1). We then explored parent support of physical activity across the four groups using six parental physical activity support items (e.g., how often do you encourage your child to engage in physical activity) on a five-point Likert scale with 5 representing "daily". The extent to which parents supported their children through encouragement, travel, and attendance at events differed based on the child's health concerns. Parental encouragement was lowest among parents of asthmatic children (X = 2.5; SD = 0.42). Obese children's parents reported less attendance and physical support for their participation (X = 3.1; SD = 0.21). Our findings support known limitations obesity and asthma might have on children's physical activity while also expanding on our understanding of this association by identifying differences in mechanisms of change through parent support behaviors. Future work will need to explore reasons these differences occur. Perhaps the origin and other fears related to a particular illness begin to influence parents' supportive strategies.

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C-163b
AN EXPLORATORY STUDY OF PHYSICAL ACTIVITY IN COLLEGE STUDENT APARTMENT COMPLEXES

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Many health behaviors are established during the life-transition time of college, however there is a sharp decline in physical activity (PA) participation during this time. In order to develop effective interventions to combat this decline, it is important to understand the influences on PA in this population. Therefore the purpose of this study was to examine how students' residential environment can influence their PA. Methods: A cross-sectional online survey was conducted to with a volunteer sample of students residing in an active living apartment complex(ALAC) (extensive PA resources, walkable complex, expansive greenspace) compared to students in a standard apartment complex (SAC)in the same neighborhood . Participants reported on their PA, sedentary time, perceptions of their neighborhood and access to resources. A t-test and chi-squared test compared answers of ALAC and SAC students. Results: Participants were 78% Caucasian, 52% female, and 74% undergraduate-level students (n=63). There were no demographic differences between groups. Students in the ALAC (n=26) were more likely to engage in vigorous PA (p<.05) and spent less time being sedentary (p<.05) compared with SAC students (n=32). In terms of neighborhood perception, the ALAC group were more likely to report increased access to resources (p<.001), to observe their neighbors being

active (p<.001), report better sidewalks (p=.02), and more likely to exercise in their apartment complex (p=.001) relative to the SAC students. Discussion: These results of this exploratory study indicate how one's living environment can influence PA participation. These findings provide insight for the design of future student living areas and a foundation for further study in understanding physical activity levels among this population.

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C-163c
COLLEGE STUDENT WORK HABITS ARE RELATED TO PHYSICAL ACTIVITY AND FITNESS

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Research shows a significant decline in physical activity (PA) participation and an increase in sedentary behavior (SB) during college years. Evidence suggests this decline is also linked to changes in fitness and health outcomes, though little research has examined how these changes are related to academic performance and study habits Therefore the purpose of this study was to examine the relationship between objective physical fitness measures, PA, SB, and work habits among college students.

Methods: A convenience sample of collegiate students from a large university participated in fitness testing (cardiorespiratory fitness, muscular endurance and body composition)] and completed a survey. The survey addressed demographics, organizational skills, study habits, self-reported PA and SB. Pearson correlations examined the relationships between the fitness, behavioral and work habit outcomes.

Results:The sample [n=517] was primarily white (78%), male (50.4%), and upperclassmen (67%); 76% met PA guidelines, students reported 1.57 ± 1.2 screen viewing hours, 3.01 ± 1.79 weekly sedentary hours and 3.10 ± 1.14 hours sitting in class. Body Fat % (r = .132, p = .004) was positively correlated to number of hours studying per weekday. Number of hours studying was positively related to screen time (r = -.131, p = .005) and negatively related toVO2max (r = -.110, p =. 017). BMI (r = -.091, p = .04) was negatively associated with social media use. Grade point average was negatively related to screen time (r = -.217, p <. 001), and waist girth (r = -.096, p = .040).

Discussion: This study provides insight on the relationship between behaviors (PA and SB) and the collegiate student lifestyle. Student health and wellness centers can use subjective and objective inputs to inform interventions to target behavioral, fitness and work habits constructs.

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C-163d

GENDER DIFFERENCES IN PREDICTORS OF FITNESS FACILITY USAGE DURING FRESHMEN YEAR OF COLLEGE

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Although freshmen aren't likely to gain the infamous "freshmen 15", many college students do gain some weight over their freshmen year. One factor that may contribute to this weight gain is that less than half of college students are meeting the guidelines for physical activity. The purpose of this study was to identify what factors would predict attendance at the Colleges' fitness facility over the first year of college. Participants were recruited from a college campus in the northeast during the first few weeks of school. Frequency of attendance at the fitness facility was obtained via electronic records at the end of the academic year. Participants (213 females, 90 males) were freshmen between the ages of 17-22(M= 18.2, SD=.76) and predominantly Caucasian (85%). After weight and height measurements were obtained, participants completed a survey of health behaviors as well as the Center for Epidemiological Study of Depression, Perceived Stress Scale, Multidimensional Scale of Perceived Social Support, Eating Behavior Questionnaire, Subjective Happiness Scale and the UCLA Loneliness Scale. After completion of the questionnaires, participants received a $5 gift card. Over the course of the year, males (M=34.57, SD= 32.84) attended the fitness facility more than females (M=24.98, SD= 23.67; t (301) = 2.51, p= 0.01). Hierarchical multiple regressions to examine predictors of attendance were conducted separately for males and females. For males, higher levels of depression and dietary restraint at the start of the year predicted attendance at the fitness facility (p< 0.05). There was a trend towards significance for lower levels of social support and stress predicting greater attendance at the facility for males (p<0.10). Among females, higher levels of dietary restraint and more frequent "all-nighters" at the start of the semester predicted attendance at the fitness facility over the course of the year (p<0.05). Findings from this study may help guide health promotion efforts to increase physical activity during the first year of college.

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C-163e

PROOF-OF-CONCEPT FOR RECOMMENDING SELF-PACED EXERCISE AMONG OVERWEIGHT AND OBESE ADULTS

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Current national guidelines call for exercise of at least moderate intensity. However, a prescription of self-paced exercise may lead to better adherence to exercise programs, particularly among low-active overweight adults for whom moderate intensity exercise

is sometimes aversive. We conducted a randomized pilot study to test proof-of-concept regarding the effects of recommending self-paced (versus moderate intensity) exercise on exercise-related energy expenditure over a six-month period. Fifty-nine otherwise healthy, low-active (< 60 min/week of structured exercise), overweight and obese (BMI: 25.0-39.9) adults (ages 18-65) received a six-month print-based exercise promotion program designed to help them overcome barriers to regular exercise. Participants tracked their exercise on a daily basis through use of electronic diaries, and used heart rate monitors to assess exercise intensity. The only difference between study conditions was recommendation to exercise at either self-selected (i.e., self-paced) or moderate (64-76% of age-predicted maximum HR) intensity. To reduce potential expectancy biases, participants were unaware that there were different intensity recommendations, as confirmed by post-study debriefings. Participants in the self-paced condition reported a trend toward greater exercise-related energy expenditure per week (f^2=0.12; p=0.24), corresponding to approximately 83 additional kcals/week on average during the six-month period. Results provide proof-of-concept for explicitly encouraging self-paced rather than moderate intensity exercise among overweight and obese adults; however, a larger trial is needed.

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C-163f

INCORPORATING BRIEF BOUTS PHYSICAL ACTIVITY INTO WORKPLACE IN ORDER TO IMPROVE HEALTH OF THE LOCAL PUBLIC HEALTH WORKFORCE

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INTRODUCTION: Reducing the burden and cost of obesity and physical inactivity are a great concern for employers, whose rising health care expenditures have consistently outpaced inflation. The amount of occupational physical activity has been decreasing over the past 100 years. Worksite health promotion programs center around employer sponsored initiatives that improve the health and welfare of their employees and potential family. This exploratory study examined the impact of a novel health promotion program designed to influence employee behaviors through changing company norms concerning on-the-job physical activity.

METHODS: Each organization was block-randomized into either the intervention or control study conditions. Organizations assigned to the intervention group engaged in 10-minute brief bouts of physical activity and the waitlist control group received no intervention until after the six-month follow-up. Participants were asked to wear an accelerometer for 7 days and complete a survey.

RESULTS: Four organizations (representing 63 employees) participated in the study. Participants were predominantly female (74%); majority nonwhite (58%); mean age = 41.9 yrs; college degree or higher (71.74%) and 40% overweight or obese (BMI >25.0 kg/m2); and mean WC = 34.7in. On average participants

took an average of 6,930 steps over 7 days. The intervention averaged 7,110 steps over 7 days while the control group averaged 5,235 steps. There was a significant effect by study arm, t(46) = -3.05, p <0.05, with intervention participants reporting more steps over a 7 day period.

DISCUSSION: Employees within the intervention benefited from engaging in 10-minuter brief bouts of physical activity during the workday. This study highlights the feasibility of low-cost worksite-wide wellness strategies for improving employee health.

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C-163g
PARENTAL INFLUENCES FOR PHYSICAL ACTIVITY IN YOUTH WITH PRADER-WILLI SYNDROME

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BACKGROUND: Prader-Willi syndrome (PWS) is a genetic disorder that is characterized by obesity, poor muscle tone, compulsive overeating as well as cognitive and behavioral impairments (Cassidy, 1997). Further, children and adolescents with PWS are less physically active than children and adolescents who are obese (van Mil et al., 2000). With parental influences identified as being important for physical activity (PA) in children and adolescents without disability (Pugliese & Tinsely, 2007), the purpose of this study was to explore if parental influences are also related to PA levels in youth with PWS.

METHODS: Twenty dyads consisting of one parent (2 fathers & 18 mothers) and youth ages 8-16 with PWS (11 males & 9 females; Mage= 11.0 years) participated in this study. Youth wore an accelerometer for eight days to assess moderate to vigorous PA. Parents completed a questionnaire assessing the social influence they used with their child over the past week (Wilson & Spink, 2010), categorized as: positive (encouraging), collaborative (active with them) and negative (ordering). In this study, the positive and collaborative subscales were collapsed into one subscale due to a large correlation (r=.7) between these two scales. A regression analysis was performed with positive and negative social influence as well as age and sex as predictors of moderate to vigorous PA. Alpha level was set to 0.1.

RESULTS: The overall regression model was significant (p=.05) and explained 46% of the variance in PA. Both age (beta =.35, p=.10) and sex (beta=-.45, p=.03) were significant predictors. Of the parental influences, positive social influence was significantly related to PA (beta= .30, p=.08).

DISCUSSION: These findings provide preliminary evidence of the impact that parents may have on the PA levels of youth with PWS. As in children without disability, in youth with PWS, the parents may have the potential to promote higher levels of PA by providing positive forms of influence such as encouragement and being active with the youth.

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C-163h
USING MESSAGES TAILORED TO FUTURE TIME PERSPECTIVE TO INCREASE PHYSICAL ACTIVITY AMONG WOMEN UNDERGOING TREATMENT FOR CANCER

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The purpose of this study was to test if tailoring messages to the future time perspective of women undergoing treatment for cancer could increase physical activity in this population. According to socioemotional selectivity theory (SST), time perspective plays a critical role in an individual's selection of goals; knowledge-related goals (e.g., networking with new people) are prioritized when time perspective is expansive whereas emotionally-meaningful goals (e.g., strengthening relationships with loved ones) are prioritized when time perspective is limited. We hypothesized that women undergoing treatment for cancer (i.e., women who have a relatively limited time perspective) would report engaging in more physical activity at a 3-week follow-up in response to messages highlighting more emotionally-meaningful reasons for being active as opposed to messages highlighting less emotionally-meaningful reasons. Fifty women undergoing treatment for breast and gynecologic cancers (Mage = 56.10, SD = 12.43) were assigned randomly to read brochures describing either more or less emotionally-meaningful reasons to be physically active during treatment. We used the International Physical Activity Questionnaire to measure physical activity at baseline and at a 3-week follow-up. Independent-samples t-tests showed no between-groups differences in overall physical activity or in moderate-intensity physical activity at 3 weeks (ps > .29). Women who read the emotionally-meaningful messages did, however, report engaging in more mild-intensity physical activity than women who read less emotionally-meaningful messages (t = 3.20, p = .002). These findings provide partial support for our prediction and for the applicability of SST to the creation of health promotion messages targeting individuals with a limited future time perspective.

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C-166a
TECHNOLOGY IN HEALTH CARE: UNDERSTANDING OBGYN PROVIDERS' BELIEFS ABOUT INTEGRATING E-HEALTH TECHNOLOGY IN PRENATAL CARE

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Purpose: The study purpose was two-fold: 1) To examine OBGYN providers' beliefs/preferences for and barriers to incorporating e-health technology into prenatal care for managing gestational weight gain (GWG), and 2) perceptions of their patients' barriers

in using e-health technology to monitor their diet and physical activity (PA) behaviors Hypotheses: OBGYN providers would report: 1) using minimal technology in prenatal care, 2) a lack of time as the most salient barrier preventing them from using technology to counsel prenatal patients, and 3) a lack of time and motivation would emerge as the as primary patient barriers to using technology to manage GWG. Methods: Focus groups and semi-structured interviews were conducted with OBGYN providers (n = 33). Principles of thematic analysis were used to code and analyze the data. Results: In 94% of the interviews, no technology use was reported by the providers. However, in 72% of the interviews, providers reported recommending public websites for patients to obtain additional health information. In 83% of the interviews, providers reported that an ideal patient tool would be a smartphone or tablet application with the following: behavioral monitoring (67%), specific characteristics (i.e., feedback 56%), live support (44%), and personalization (39%). Providers also reported using technology based on the patient's needs (i.e., high risk, overweight/obese; 67%). A lack of time to use technology for discussing patient diet/PA behaviors was the most salient barrier for providers (78%). Providers also reported that having access to the technology (72%) and a lack patient interest (67%) were the most relevant patient barriers. Conclusions: These findings suggest that some OBGYN providers are enthusiastic about using technology-based strategies to help patients better manage their GWG, However, the success of this approach for managing GWG lies in developing e-health strategies for diet/PA counseling that are time efficient for the provider and interesting/motivating for the patient.

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C-171a
A PILOT USING HEALTH ADVISORS TO INCREASE HEALTH COACHING ENROLLMENT

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Background: Engagement is an important issue in worksite health promotion interventions such as health coaching (HC). Health Risk Appraisals (HRAs) target individuals who might benefit from HC, but the potential success of HC is limited by enrollment. The Health Advisor (HA) program was designed to increase enrollment. HA's discuss participants' HRA results and explain/encourage participation in available programs like HC to help participants address health risks. Once interest is generated, HAs facilitate immediate HC enrollment without the need for participants to make an extra call.

Method: Client A, a large financial services company, implemented the HA program during 2011 and 2012. All individuals were offered a $150 cash card incentive to call a HA following completion of their HRA. During the second year the ability to enroll immediately during the HA call was added. Enrollment comparisons of individuals targeted for HC were made with Alere's book of business (BOB), with no HA program and with Client B, a technology company, offering a similar incentive value for HC participation but no HA calls.

Results: HC enrollment rates for Client A in both years (Y1=38.5%; Y2=88.0%) were significantly higher than Alere's general BOB (12.6%; p<0.001), suggesting that HA calls may positively impact enrollment. Just offering an incentive for HC participation also resulted in a significantly higher enrollment rate (Client B=31.1%, p<0.001), but adding HA calls resulted in significantly higher rates compared with HC incentive only (Client B = 31.1% vs. Client A, p<0.001). The ability to immediately enroll following a HA call also produced a significantly higher enrollment rate (Client A: Y1=38.5%; Y2=88.0%, p<0.001).

Conclusions: Using HAs to inform participants of the availability/helpfulness of HC and to facilitate immediate enrollment results in substantially higher rates of initial HC enrollment, a limiting step in the chain of events leading to improved health risks and reduced healthcare costs. Incentives may be essential in assuring individuals contact health advisors, but have much less impact on actual enrollment.

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C-171b
THE ROLE OF ACTIVATION IN PREFERENCES FOR SHARED DECISION-MAKING IN COMMON MEDICAL SCENARIOS

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Shared decision-making (SDM) has become an important part of healthcare. Preferences for, or barriers to SDM can vary between individuals, and the scenario in which the decision is being made. It is important to understand the underlying mechanisms of these preferences so they can be accommodated during medical decision-making.

Nationally representative US data (n=3400) were collected online (n=2700) and via telephone (n=700). Respondents completed socio-demographic assessments and the Patient Activation Measure (PAM). They were also asked whether it was beneficial (yes/no) for patients to share in decisions with their healthcare provider in 6 common medical scenarios (MS): making lifestyle changes (MS1); choosing preventive screening tests (MS2); choosing treatment options (MS3); choosing a specialist (MS4); choosing medications (MS5); and deciding the necessity of a diagnostic test (MS6).

Nearly half of the sample (45.9%) reached the highest level of activation (level 4). Individuals reporting low income (p<.001) and with less education (p<.01) were less likely to reach this level. The proportion of people who agreed that SDM was beneficial varied between each scenario (MS1-MS6 respectively=71.8%; 59.2%; 60.1%; 54.7%; 58.0%; 53.1%). After controlling for gender, age, ethnicity, income and education, people with level 4 activation were more likely to endorse SDM in each of the medical scenarios (ORs range=1.3 to 1.6; ps <.01 to <.001), apart from MS4 (OR=1.0, p>.05). Younger individuals and those with low education were consistently less likely to endorse SDM.

Preferences for SDM vary between medical scenarios. Low acti-

vation, younger age and low education were consistent predictors of SDM preferences, regardless of context. Interventions targeting patient activation may improve medical decision-making and reduce health disparities.

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C-175a

DO PEER RELATIONSHIP CHARACTERISTICS MEDIATE THE PATHWAY FROM CHILDHOOD VIOLENCE EXPOSURE TO RISKY SEXUAL BEHAVIOR IN LOW-INCOME, URBAN, AFRICAN-AMERICAN GIRLS?

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Background: Although research links childhood violence exposure (CVE) to risky sexual behavior in adolescence, less is known about the mediating mechanisms that explain this relationship. This study examined peer relationship characteristics as potential mediators in a sample of African-American girls growing up in low-income, urban neighborhoods. Methods: 177 girls participated in a 2-year longitudinal study of HIV-risk behavior involving 5 waves of data collection (mean age 14 at baseline) and an additional follow-up assessing lifetime violence exposure (mean age 17). CVE reflected reports of physical victimization, sexual victimization, or witnessed violence before age 12. Relationships with peers were self reported at baseline, and sexual behavior was assessed at wave 5. Analyses employed multiple regression, with mediation assessed through tests of indirect effects and bias corrected bootstrapped confidence intervals. Results: Girls reporting CVE were more likely to report inconsistent condom use (β=.31, p<.000), a greater number of sexual partners (β=.20, p=.009), and a higher "unsafe sex score" combining condom use and number of partners (β=.27, p<.000). All peer relationship variables were significantly associated with all risky sexual behavior variables. Furthermore, all peer relationship variables mediated the relationship between CVE and all risky sexual behavior variables. Conclusions: Results suggest that girls with a history of CVE are more likely to have peers who model or approve of problem or risky behavior, and these peer relationships increase risk for unsafe sexual behavior. These findings support psychosocial interventions focused on promoting healthy peer relationships to reduce sexual risk taking among adolescent, low-income, urban, African-American girls exposed to CVE . Funding source:This research is supported by grants from the National Institute of Mental Health (R03 MH086361-01A1; R01 HD067511-01; R01 MH65155).

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C-178a

THE IMPACT OF SLEEP APNEA ON WEIGHT LOSS IN THE MOVE! PROGRAM FOR VETERANS

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Sleep Apnea (SA) may impede weight loss, a behavioral strategy to manage SA. This study investigated the impact of SA on weight loss in MOVE!, a national weight loss program available throughout the Veterans Health Administration (VHA) health care system. Analyses were restricted to MOVE! participants with at least 2 MOVE! visits enrolled during Fiscal Years 2008-2012, who had BMI>=30 kg/m2, and who were 18-70 years of age (n=70,467). VHA administrative data identified Veterans with SA (ICD-9-CM codes=327.2, 780.51, 780.53, 780.57, 786.03) and excluded Veterans with other sleep disorders. SA was diagnosed in 23,874 Veterans (34%). At baseline enrollment, Veterans with SA weighed 24 lbs. (p<0.001) more than those without SA. The impact of SA on weight changes at 6- and 12-months was modeled using mixed effects regression controlling for age, baseline weight, gender, diabetes, race, and VA disability benefits status. At 6-months, Veterans with SA lost less weight (-2.9+0.1 lbs.) than those without SA (-3.6+0.07 lbs), p<0.001. At 12-months, Veterans with SA maintained this modest weight loss while those without SA were regaining weight. Weight loss differences were -0.71+0.11 lbs. at 6-months (p<0.001) and -0.34+0.12 lbs. at 12-months (p<0.001) between Veterans with and without SA. Our findings suggest that weight loss trajectories differed between obese Veterans with and without SA. Specifically, obese Veterans with SA exhibited delayed weight loss but sustained the weight loss longer compared to those without SA. Additional studies are warranted to determine if modest weight loss reduces the severity of SA among obese Veterans, and whether behavioral interventions tailored to Veterans with SA may accelerate weight loss to clinically significant levels.

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C-185a

GENDER DIFFERENCES IN SMOKING URGE COPING AND CUE REACTIVITY AMONG LOW-INCOME UNDERSERVED SMOKERS

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Nicotine addiction is a multi-determined and complex behavior with evidence pointing to the role of gender in smoking cessation outcomes.Utilization of cognitive and behavioral strategies to cope with smoking urges improves urge management and

promotes smoking cessation. However, gender differences in urge management as it relates to smoking reactivity, a behavior predictor of smoking cessation, has yet to be examined. Purpose: To examine gender differences in reactivity to smoking cues and smoking urge coping (SUC) among low-income smokers enrolled in a smoking cessation program. Method: After completing baseline assessments, 48 male and female smokers were exposed to a non-reinforced smoking cue exposure trial. All participants were >18 years, smoked > 6 cigarettes per day, and had expired CO <10ppm at start of session. Smoking cues included visual, tactile, and olfactory cues with a lit cigarette and smoking-related motor behaviors without smoking. Smoking urge was measured pre- post cue exposure. Frequency of SUC use was assessed using self-report measures with scores dichotomized at the median (high vs. low coping). 2X2 ANOVA [Gender X SUC] controlling for baseline urge and nicotine withdrawal showed a significant gender interaction (F=4.68; p=.04) suggesting that females with higher levels of baseline SUC scores reporting lower smoking urge post-test compared to males. Further exploration of data revealed that males with greater FTND scores exhibited a trend toward increased reactivity (F=2.31; p=.07) reinforcing role of nicotine dependence in smoking behavior among men. Conclusion: These data suggest that within an in-vivo smoking cue reactivity paradigm, females may experience lower reactivity due to greater utilization of urge coping strategies compared to males. Smoking cessation strategies for male smokers could be bolstered by incorporating greater urge coping skills training. This hypothesis requires further examination in the context of a longitudinal trial.

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C-185b
RECALLING MESSAGES FROM CHURCH MEMBERS ABOUT SECONDHAND SMOKE DANGERS RELATES TO LOWER CHILD EXPOSURE AMONG LOW-INCOME MATERNAL SMOKERS

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Children's second hand smoke exposure (SHSe) is a complex public health problem requiring targeted interventions. Messages from key sources in an individuals' social milieu about child SHSe dangers may influence smoking behavior and augment intensive intervention efforts to reduce child exposure. However, little is known of the potential impact of specific sources' SHSe messages on parental smoking behavior and child SHSe reduction. Purpose: To assess associations between sources of SHSe messages and children's SHSe among low-income African American (AA) maternal smokers. Methods: A baseline sample of 317 AA maternal smokers enrolling in a clinical trial to reduce children's SHSe were asked to recall the frequency of SHS messages received at community institutions (church, high school), from medical professionals (e.g., pediatricians), personal (friends, family), and media sources (e.g., TV, radio). Child SHSe was measured via maternal-reported cigarette exposure and child urine cotinine. Multivariate regressions analyzed the relationship between source of message and child SHSe in the context of controlling variables (nicotine dependence, child age, maternal depressive symptoms,social support). Results: Only SHS messages received by church members was significantly associated with lower child cotinine (B= - 0.794; p<.01) and suggested a trend toward lower maternal-reported exposure (B=-5.24; p=.07), but was not associated with maternal cigarettes smoked or intention to quit smoking. Conclusion: Public health messaging about dangers of child SHSe and benefits of SHSe reduction delivered through community churches may influence maternal smoking behavior in low-income populations and bolster the efficacy of intensive intervention for SHSe reduction. Results suggested that improvements are needed to enhance messaging frequency and efficacy among medical professionals given evidence in the extant literature that provider advice can motivate smokers to change behavior.

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C-185c
PICK IT UP, PUT IT DOWN: A GROUNDED THEORY STUDY OF HOW AFRICAN AMERICANS IN THE SOUTH START SMOKING AND QUIT SMOKING

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In order to explain the process and act of initiating and of quitting smoking among low income African American patients in the Deep South, this qualitative study used data extracted from the narrative stories to generate a grounded theory. Data were analyzed from interviews conducted in 2005 as part of the Stories Project and supplementary interviews conducted in 2011. Convenience sampling strategies guided participant recruitment for primary interviews and theoretical sampling strategies guided supplementary interviews. The researcher asked open-ended questions regarding smoking initiation and quit experiences. Analysis was conducted using systematic design of grounded theory, which included open, axial and selective coding. Categories emerged during open coding and were connected during axial coding; categories were integrated to form a theory using selective coding. The core category was labeled "Cigarette Use." Both smokers and quitters had similar experiences in initiating smoking, specifically that they were encouraged to smoke by someone in close relationship with them. Both groups also had a common experience of continuing their smoking behavior after their initial smoking experience but some were eventually able to quit while others sustained their smoking. Both groups also relied on their faith in God to quit. Although both quitters and smokers expressed a high level of self-efficacy in quitting, smokers experienced a much more difficult time in quitting and more frequently expressed that they were struggling to quit.

Both groups also were resistant to using nicotine replacement therapy in quitting. Based on these findings, future intervention programs should assess barriers to using nicotine replacement therapy in order to improve smoking cessation rates.

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C-185d
ETHNOCULTURAL DIFFERENCES IN LIGHT AND INTERMITTENT SMOKERS

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Although smoking prevalence has declined overall in the past decade, light and intermittent smoking has increased within the general population. Given the limited information on light and intermittent smokers (LITS) as a group, and the disproportionate number of HispanicLITS, examining ethnocultural differences in tobacco use, attitudes, and psychosocial factors is needed to improve targeted cessation interventions. The aim of this study was to examine differences between Hispanic and non-Hispanic LITS in the U.S./México border region.

Data from five iterations of a brief light and intermittent smoking intervention (N=1,223; Mage = 33.42; SD = 14.26; 50.3% female; 60.2% light smokers) were analyzed for the current study. Participants completed baseline measures assessing demographics and tobacco use. We conducted error controlled, univariate analyses to identify potential descriptive and tobacco related variables associated with Hispanic and non-Hispanic LITS. Once identified, we conducted a backward elimination logistic regression model using ethnocultural differences (1 = Hispanic, 0 = non-Hispanic) as the dependent variable.

Statistically significant univariate tests indicated that relative to non-Hispanic smokers, Hispanic smokers showed differences in increased age, being female, lower likelihood of seeking mental health services, more weight concern, less weekly alcohol use, and lower scores on the Fagerstrom test of nicotine dependence score. The final multivariate model was statistically significant, $\chi2$ (2) = 20.149, p < .001, Nagelkerke R2 = .09. Two significant covariates were associated with Hispanic smokers: increased likelihood of general weight concern (OR = 2.45, p = .004) and decreased likelihood of seeking mental health services (OR = .26, p < .001).

Taken together, these results suggest ethnocultural differences for Hispanic LITS compared to non-Hispanic LITS, and suggest that culturally relevant interventions may wish to take advantage of weight concern and be thoughtful about the potential need for mental health referral to promote cessation.

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C-193a
THE ANXIOLYTIC EFFECTS OF ACUTE BOUTS OF EXERCISE AND MINDFULNESS

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Anxiety is prevalent and associated with high comorbidity and reduced quality of life. The efficacy of disseminable, inexpensive methods of anxiety management need to be studied. Such methods, including exercise (EX) and mindfulness training (MT), have been shown to be effective compared to traditional treatments, such as Cognitive Behavioral Therapy or pharmaceuticals. However, there is limited work investigating these methods, or their combination, in an anxious population. Females (N=970) were screened from the university population to identify those with high levels of anxiety (≥3 on GAD-2 screen). Fifty-six anxious females (M age=19.3 yrs) were recruited to participate in one of four randomized 20-min conditions in a 2x2 design. The conditions included: EX+MT; noEX+MT; EX+distraction video (noMT); and noEX+noMT. A 2x2 repeated measures ANOVA was used to test the effects of EX, MT, and their interaction on state anxiety at baseline, immediately post-task, 5, 10, and 20 mins post-task. There were significant effects of EX [F(2.73,142)=5.03, p<.05, partial η²=.09], MT [F(2.73,142)=7.71, p<.05, partial η²=.13], and time [F(2.73,142)=18.71, p<.05, partial η²=.27] on state anxiety, but no apparent interaction. Simple effects tests showed that immediately post-task, the EX groups (M=35.17, SD=9.58) had higher anxiety scores than the noEX groups [M=29.65, SD = 6.86; t(54)=2.44, p<.05], and lower in the MT groups (M=30.14, SD=7.10) compared to the noMT groups [M=35.10, SD=9.77; t(54)=-2.16, p=.05]. Overall, MT had the greatest anxiolytic effect. Although there were reductions in state anxiety in the EX groups, the effects were notably stronger immediately post-task in those who did not exercise. Future studies should investigate exercise and mindfulness treatments over more variable time frames to further explicate the dynamics of these disseminable anxiety management strategies.

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C-198a
HAZARDOUS ALCOHOL INTAKE IN CONNECTION WITH PERCEIVED STRESS, WELL-BEING AND PERSONALITY CHARACTERISTICS

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We studied the connections between alcohol intake, perceived stress, well-being and temperament and character dimensions of the personality on the basis of the psychobiological model of Cloninger in a representative population sample. Methods: During the Hungarostudy 2013 survey 2000 individuals completed structured interviews. The sample was representative of the Hungarian adult population according to gender, age groups, education and type of settlement. Two dimensions of the Cloninger Temperament and Character Inventory (TCI) Novelty seeking (NS) as temperament (4 facets) and Self-directedness (SD)

as character (5 facets) were included. Further measures were: AUDIT for hazardous alcohol intake, Cohen's Perceived Stress Scale (PSS10); WHO Well-Being (WHOWB) questionnaire, gender, age, education, subjective economic status. Pearson correlation and stepwise linear regression were the main statistics. Results: AUDIT scores positively correlated with PSS10 and NS; negatively with WHOWB and SD (r values 0,12-0,18), also with education level and subjective economic status, but not with age. AUDIT scores were higher in men than women. In multivariate analysis Novelty seeking and low economic status were the most important predictors of AUDIT; further predictors among men were low WHOWB and low SD. Stepwise regression including the 9 TCI facets found in men that SD2-Lack of goal-direction; NS3-Extravagance, lack of Well-being, NS1- Stoic rigidity; low NS5-Enlightened second nature; low economic status, NS4-Disorderliness and SD4-Self-acceptance predicted AUDIT scores. In women only low NS5-Enlightened second nature; and SD4-Self-acceptance were predictors of AUDIT scores. Conclusions: Contrary to our hypothesis, perceived stress and level of education did not predicted hazardous alcohol consumption when other indicators were included. Both temperament (biological prediposition) and character (social learning) factors should be considerd when planning focused interventions.

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C-198b
THE EFFECT OF HEALTH COMMUNICATIONS TAILORED BY PERSONAL RELEVANCE AND MODE OF DELIVERY ON MESSAGE TRANSPORTATION, BELIEVABILITY AND ATTITUDES TOWARD ALCOHOL DRINKING

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One hundred thirty four participants completed an online study investigating the effect of health communications tailored to recipients' personal involvement on message transportation, believability and attitudes about alcohol use. Method: We generated narratives focusing on three different alcohol-related problems that a drinker might face (i.e., interpersonal relationships, career or health). In addition, we assessed the relative importance of each of these problems to the recipient's self-concept (i.e. domains of importance). We operationally defined personal relevance as a match between the individual's domain of importance and the narrative focus. We delivered the narratives in one of two different modes: as written text on a computer screen or as an audio recording. We examined how personal relevance affects message transportation (i.e., the level of emotional absorption into the narrative), message believability, and message persuasiveness (i.e., the perceived harm of excessive alcohol drinking). Finally, we conducted multiple linear regression to examine if the effect of personal relevance on message persuasiveness depends on believability and transportation level of the narrative. Results: Personal relevance did affect persuasiveness and believability of audio messages, but had no effect on written messages. Message transportation affected the believability of

the written, but not of the audio message. No message or recipient characteristics measured in the study affected the message transportation. Conclusion: It might be possible to improve the effectiveness of narrative health communications by matching it to personal core interests. However, this effect depends on the mode of delivery (i.e., audio vs. written). This result might inform future behavioral health interventions.

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C-198c
A SNAPSHOT OF PATIENT NAVIGATION SERVICES FOR HIV-POSITIVE ADULTS ABUSING SUBSTANCES: EVALUATION OF AN EMERGING MODEL

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HIV-positive adults from traditionally underserved populations often face many barriers (e.g., financial, low motivation, lack of support) to engaging in needed treatment. Patient navigation has been used to reduce health disparities in medical populations such as cancer and HIV and now is being applied with patients needing substance abuse/mental health treatment. This study examined treatment utilization (measured by number of services accessed) among adults enrolled in a patient navigation program for HIV-positive, substance-using adults (N = 96, 87% African American, 51% male, M age = 44.7 years) over the first three years of the program. Program participants receive motivational interviewing and navigation to remove barriers to care through a minimum of once-monthly contact with their navigator for six months. Participants were classified as program completers if they maintained contact through the six-month program (n = 65) and were classified as non-completers if they were unable to be located at six-month follow-up (n = 31). Kruskal-Wallis tests of medians indicated significant differences (p < .05) in service utilization between completers and non-completers. In general, program completers (M1) accessed more services than did non-completers (M2) (e.g., case management (M1 = 8.58, SD = 5.14; M2 = 4.10, SD = 3.52), individual counseling (M1 = 1.78, SD = 4.43; M2 = .68, SD = 2.23), group counseling (M = 1.23, SD = 4.31; M2 = .03, SD = .18), brief intervention (M1 = 1.02, SD = .48; M2 = 1.06, SD = .73), and referral to recovery support (e.g., 12-step programs, M1= .52, SD = 2.63; M2 = 1.58, SD = 3.87). These results can help to inform implementation of patient navigation programs as an emerging model of care in behavioral medicine, particularly for individuals with many barriers to accessing care.

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Rapid Communications Poster Session D

Saturday, April 26, 2014
10:10 AM-11:30 AM

D-042a

AN EXPLORATORY STUDY OF CO-OCCURRENCE OF BREAST CANCER AND DIABETES IN MEDICALLY UNDERSERVED LATINAS

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Purpose: Cancer and diabetes are two severe chronic illnesses that often co-occur. The presence of diabetes in cancer patients is associated with increased risk for poor health outcomes and decreased overall survival. Lack of access to care and under-diagnosis of diabetes makes this co-occurrence particularly troubling among the Latino population. This preliminary study explored the association of diabetes with functioning and physical health outcomes among underserved Latina breast cancer survivors (BCS).

Methods: 137 low income Latina BCS were recruited from the California Cancer Registry and hospital cancer registries. Participants completed a self-report questionnaire that assessed demographic and cancer-related medial characteristics, the co-occurrence of diabetes, and functional and physical health.

Results: Among Latina BCS, 98 (72%) were non-diabetic and 39 (28%) were diabetic. Latina BCS with diabetes were more likely to report less than a high school education, being uninsured, and unemployed (p<0.01), and more likely to report later stage at diagnosis than BCS without diabetes. BCS with diabetes reported more lymphedema symptoms than BCS without diabetes (p<0.05). Although not statistically significant, BCS with diabetes had lower general health, experienced more pain, and reported greater social functioning and physical role limitations than BCS without diabetes.

Conclusions: This preliminary investigation sheds new light on emerging evidence documenting the negative associations of comorbid chronic conditions such as diabetes on patients' outcomes. More attention to the co-occurrence of cancer and chronic disease is warranted for addressing cancer health disparities. Our descriptive analysis offers support for additional inquiry to the co-occurrence of cancer and chronic disease as a target for action in improvements in quality, patient-centered care and in the reduction of persistent health disparities.

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D-042b

OCCURRENCE OF COMORBIDITIES AMONG MULTI-ETHNIC BREAST CANCER SURVIVORS

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Purpose: Comorbidities are concurrent, etiologically independent chronic health conditions, unrelated to the disease under study. Of adult cancer patients, 68-85% are diagnosed with other chronic illnesses. Comorbid conditions can negatively influence health and survivorship outcomes. Ethnic minorities report more co-occurring illnesses and poorer survivorship outcomes.

The purpose of this study was to document the occurrence of comorbidities among African-American and Latina (English language preferred (ELP) and Spanish language preferred (SLP)) breast cancer survivors (BCS).

Methods: In total, 88 African-American, 95 ELP Latina, and 137 SLP Latina BCS were recruited via the California Cancer Registry and hospital registries. Participants completed a self-report questionnaire assessing demographic and cancer-related medcial characteristics, including comorbidities.

Results: Overall, 75% of BCS endorsed at least one comorbid condition with arthritis (37%), high blood pressure (37%), psychological difficulties (29%), and diabetes (19%) most commonly endorsed. The occurrence of comorbidities differed by ethnic and linguistic group. SLP Latinas were more likely to report having diabetes (29%), psychological difficulties (42%); and >3 comorbidities (p<0.05). Latina BCS were twice as likely to endorse osteoporosis and headaches compared to African-Americans. Hypertension (49%) and arthritis (48%) commonly co-occurred in African-American BCS. Older age was correlated with arthritis, diabetes, glaucoma, high blood pressure, and osteoporosis.

Conclusions: Findings suggest that investigating the occurrence of comorbidities in ethnically diverse groups may shed some light in understanding cancer risk, outcomes and cancer health disparities. Having a better grasp of comorbid conditions in specific ethnic groups may aid in more appropriate early co-occurring chronic illness assessment and integration into cancer treatment regimens, and better follow-up care and management of the cancer and the comorbid condition(s). Integrated control and management of comorbidities has the potential to improve quality of care, increase survival and decrease morbidity.

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D-042c

PUBLIC KNOWLEDGE AND PERCEPTIONS OF PROSTATE AND BREAST CANCER

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Introduction and Objectives:

A comparable number of people are diagnosed with prostate (PCa) and breast (BCa) cancer in the United States each year. However, BCa advocacy and awareness campaigns appear to be more prominent in American culture. We aim to 1) evaluate the public's general knowledge of PCa and BCa and 2) assess differences in the perceptions of PCa and BCa prevalence and patient functioning.

Methods:

209 Americans completed a 43-question Internet survey on Amazon Mechanical Turk. General knowledge was evaluated through incidence, prevalence, and mortality questions.

Results:

The sample was 63% female, on average 39.3 years old, and represented 41 U.S. states; 60.3% had at least a college education.

While 79.9% of respondents reported encountering the Susan G. Komen pink BCa awareness ribbon "Frequently" or "Very frequently," 67% reported never having seen the blue Prostate Cancer Fund awareness ribbon.

Respondents reported being better informed about BCa (t = 9.9; p < .001). Analyzing responses separately by gender, self-reported knowledge was lower for PCa (p < .01). Both genders rated the likelihood of being diagnosed with BCa as "Very likely, 1 in 10" (12.7%) more than PCa (4.5%). Men underestimated the prevalence of PCa more than women did for BCa; 4.1% of men believed acquiring PCa is "Very likely," while 14.6% of women believed the same of BCa.

Overall, 49.3% of participants believed BCa is more prevalent in the United States and limits activities of daily living to a greater extent (67.2% vs. 59.3% indicated "Quite a bit" or "A great deal" for BCa and PCa, respectively). Furthermore, 28.4% indicated that more resources should be allocated to BCa. Respondents also reported that they were willing to donate more money towards BCa.

Conclusion:

Our findings suggest deficits in the public's understanding of PCa and BCa. The greater deficiencies in PCa comprehension may be secondary to a larger BCa advocacy system. There is a need for more extensive PCa outreach and awareness campaigns to increase the public awareness of the disease.

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D-042d
CLINICAL, PSYCHOSOMATIC, AND EMOTIONAL PREDICTORS OF SEXUAL DYSFUNCTION FOLLOW RADICAL CYSTECTOMY: A META-ANALYSIS

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Introduction:

The purpose of this study is to comprehensively evaluate the impact of radical cystectomy (RC) on sexual function (SF) by patients' demographic and clinical characteristics, to examine concurrent psychosocial factors influencing SF, and to discuss the methodological limitations of studies evaluating SF following RC in current literature.

Methods:

A systematic literature search was made in the following databases for studies published from 1995-2013: MEDLINE (PubMed), Bibliotek.dk, CINAHL, Cochrane, EMBASE, PsycIN-FO, and SveMed+. We evaluated the measures used to assess SF for the inclusion of physical and psychosomatic components.

Results:

24 investigations reporting on SF in 1,522 RC patients were identified (Mean age = 56.7 years; 23.3% female). Overall studies indicate that sexual dysfunction is highly prevalent following RC modulated by urinary diversion procedures, with rates as high as 92% in males and 52% in females. Ileal conduit patients experienced a greater decrease in sexual activity, sexual satisfaction, and sexual desire than other forms of reconstruction (P < .05).

Post-operative psychosomatic and emotional factors such as body image dissatisfaction, lower perceived attractiveness, embarrassment, lack of sexual counseling, fears of urinary leakage during sexual activity, and partner's fear of inflicting damage or pain are independently associated with further decline in SF (p < .05). The existing literature is limited by a dearth of studies that concurrently investigate both organic and psychosomatic factors of sexual dysfunction, as well as a global failure to explore SF in other forms of intimacy (same-sex partnerships, oral sex, manual stimulation, or comfort with nakedness).

Conclusions:

Sexual dysfunction following RC is multifaceted. Current studies are deficient in assessing the psychosomatic and emotional components of SF post RC. The development of a validated SF questionnaire specifically for RC patients and their partners may help clinicians to better understand and treat sexual dysfunction in this population.

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D-042e
LUNG CANCER SCREENING: EVALUATION OF A PILOT CONTINUING EDUCATION PROGRAM FOR PRIMARY CARE PROVIDERS

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The National Lung Screening Trial (NLST) demonstrated a significant reduction in lung cancer mortality following lung cancer screening (LCS) based on low-dose computed tomography (LDCT) as compared to chest x-ray (CXR). However, the NLST also revealed potential harms including substantial rates of false positive test results, raising the need for shared decision making (SDM) in implementing LCS. However, healthcare providers may not be adequately informed about the potential benefits, harms, and uncertainties associated with LCS. This pilot study examined the impact of a continuing education (CE) program designed to provide primary care providers with accurate information about LCS and to improve their ability to engage in SDM about LCS. The sample consisted of 45 primary care providers (N=45; male=51%; mean age 40.6±12.3) who completed a survey directly before and after the CE program, which assessed feasibility and acceptability of the program as well as knowledge, attitudes, and practices. A majority of participants (82%) reported that they were satisfied and would recommend (82%) the CE program to their colleagues, supporting acceptability. Paired-samples t-tests demonstrated significant improvement in self-efficacy to engage in SDM about LCS (p<.01). McNemar's tests demonstrated significant improvement in objective knowledge of key facts regarding LCS (p<.01). However, self-efficacy regarding tobacco cessation counseling showed no significant improvement. These results suggest that the CE program is an

acceptable and effective approach to disseminate information and skills about LCS and SDM. Efforts are underway to enhance the program by delivering content online and examining longer-term effects on provider behavior.

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D-042f
CANCER SURVIVORS' ENDORSEMENT OF MEMORY STRATEGIES INCREASES FOLLOWING PARTICIPATION IN A COGNITIVE REHABILITATION WORKSHOP

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A significant body of literature has indicated that cognitive difficulties following cancer treatment are a common and debilitating problem for cancer survivors. The present study sought to determine the effectiveness of a seven week memory skills workshop for cancer survivors on increasing participant use of memory strategies.

The strategies sub-section of the meta-memory questionnaire (MMQ; Troyer & Rich, 2002) was completed by participants (N = 38) before and after participation in the memory-skills workshops. Additionally, 16 of these 38 participants were randomized to a wait-list control group, and completed the MMQ following the wait-list period but prior to beginning workshop participation. The majority of participants were Caucasian (89.5%) and female (76.3%). Participants were survivors of various cancers, including breast cancer (47.4%), with an average of 4.78 years since completion of primary treatment.

Results of a mixed ANOVA indicated a significant interaction effect between the condition the participant was randomized to (immediate treatment or wait-list control) and the time at which the MMQ was taken (baseline, post-waitlist, and post-treatment),Wilks' λ = .632, $F(2, 35)$ = 12.59, $p < .001$. Post-hoc analyses indicated that individuals randomized to the immediate treatment condition endorsed significantly more memory strategies following workshop participation. Individuals randomized to the wait-list control condition did not endorse significantly greater use of memory strategies following the waitlist period, but did endorse significantly greater use of memory strategies following workshop participation. These results indicate that our memory skills workshop increases participant use of memory strategies.

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D-042g
NATIONAL STUDY OF CHRONIC DISEASE SELF-MANAGEMENT: 6- AND 12-MONTH OUTCOMES AMONG CANCER SURVIVORS

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This study examined the applicability of the Chronic Disease Self-Management Program (CDSMP) for cancer survivors and compared outcomes among cancer survivors and participants with other chronic diseases. Participants were older adults (n=1,170) enrolled in a national effectiveness study of CDSMP. Detailed information about physical and psychosocial health status and health care behaviors was collected from participants (n= 116 cancer survivors; n=1,054 non-cancer survivors) via self-report before CDSMP participation and at 6- and 12-month follow-ups. Linear and generalized linear mixed models were used to assess baseline-to-6-month and baseline-to-12-month changes. Among cancer survivors general health, depression, and sleep significantly improved from baseline to 6-months; changes were sustained at 12-months. Communication with physicians, medication compliance, pain, days in poor physical health, days in poor mental health, and days kept from usual activities also improved significantly from baseline to 12-months. Among other participants all outcomes except medication compliance and stress improved significantly from baseline to 6-months. By12-months, medication compliance also improved significantly. Findings suggest that participation in CDSMP, an evidence-based chronic disease self-management intervention not specifically tailored for cancer survivorship, may significantly improve physical and psychosocial health status and key health care behaviors among cancer survivors. CDSMP holds great potential as an intervention for cancer survivors and should be considered as a valuable component of cancer survivorship care.

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D-042h
PROSTATE CANCER PATIENT AND SPOUSE REPORTS OF NEUROBEHAVIORAL SYMPTOMS FOLLOWING ANDROGEN DEPRIVATION THERAPY

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Background - Researchers have examined the effects of androgen deprivation therapy (ADT) upon neurocognitive impairment, but

not neurobehavioral functioning (i.e., behavioral symptoms of neurological dysfunction, including apathy). This preliminary study describes prostate cancer patients' neurobehavioral functioning before and after ADT as reported by patients and their spouses.

Methods - Fifteen ADT patients (mean age 67, SD = 7.97) and their spouses (mean age 63, SD = 8.17) reported pre- and post-ADT completed the Frontal Systems Behavior Scale to measure neurobehavioral symptoms (i.e., apathy, disinhibition and executive dysfunction). Wilcoxon signed-ranks tests were used to explore differences. McNemar tests were used to explore clinically significant differences.

Findings - Patients and their spouses reported significantly increased apathy (p = .001 and p = .001 respectively). In patients, this change was clinically significant (p = .008) with 8 patients (53%) reporting an increase from no apathy to a clinically significant level of apathy. Spouses reported observing significantly increased disinhibition (p = .003) from before to after ADT. This increase in disinhibition symptoms did not reach clinical significance but did increase to borderline impairment levels. There were no significant differences between patient and spouse reports of symptoms.

Discussion - ADT patients and their spouses noted increases in neurobehavioral symptoms following ADT. Since neurobehavioral symptoms (e.g., apathy) are often confused with other diagnoses (e.g., depression), understanding the nature of such symptoms has implications for intervention.

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D-042i
BEHAVIORAL ACTIVATION AND PROBLEM-SOLVING THERAPY FOR DEPRESSED BREAST CANCER PATIENTS: DEMOGRAPHIC, PSYCHOSOCIAL, AND CANCER-RELATED PREDICTORS OF TREATMENT OUTCOME

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Objective: Major depressive disorder (MDD) is the most common psychiatric disorder among breast cancer patients and is associated with substantial functional impairment. Although several outcome studies have explored the utility of psychotherapy for depressed breast cancer patients, only a few clinical trials have explored the benefits of behavior therapy for patients with well-diagnosed MDD. An additional limitation of this research is that little is known about factors that best predict treatment outcome.

Method: In the context of a recently completed randomized trial of behavioral activation therapy (BATD) and problem-solving therapy (PST) for depressed breast cancer patient (n = 80: Hopko et al., 2011), this study explored predictors of treatment outcome with selected demographic (age, education, marital status, occupational status), psychosocial (pretreatment depression and environmental reward, number of co-existent disorders, social support, history of psychotherapy) and cancer-related variables (cancer stage, duration of cancer diagnosis, and cancer treatment).

Results: Positive treatment outcome as defined by meeting patient (BDI-II) and clinician-rated (HRSD) response and remission criteria generally was associated with being married, not actively undergoing cancer treatment during psychotherapy, and having a history of psychotherapy. In terms of treatment outcome as a function of specific intervention, there were some data to suggest being unmarried and not having a history of psychotherapy might be particularly relevant in conceptualizing poorer treatment response to PST.

Conclusions: The efficacy of behavior therapy for depressed breast cancer patients may depend on several patient variables. Implications and recommendations for the provision of psychotherapy for breast cancer patients are discussed.

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D-042j
EFFECTS OF CANCER CAREGIVING AND GENDER ON CHANGES IN HEALTH BEHAVIORS

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Family members often do not pay enough attention to their own health when providing care to their family member one with cancer, particularly during the time of diagnosis and treatment. This study examined (a) changes in fruit and of the diagnosis and (b) the extent to which the impact of caregiving on caregivers' daily lives affected changes in their health lifestyle behaviors.

Family caregivers of colorectal cancer patients were recruited from five community hospitals. A total of 59 provided complete data to study variables at both 2 months (T1) and 12 months (T2) post-diagnosis. Gender (77% female) and perceived impact of caregiving on daily schedule (CRA subscale) were measured at T1 as predictors. Caregivers' ethnicity (44% African-American) and survivors' stage of cancer were measured as covariates. Daily FVC and vigorous or moderate levels of PA were assessed at T1 and T2 as study outcomes.

Caregivers' health lifestyle behaviors were at lower than recommended levels at both T1 and T2: FVC (ms=2.8 servings a day at T1; 3.1 at T2) and frequencies of vigorous PA (ms=0.62 times a week at T1; 0.77 at T2) and moderate PA (ms=1.52 at T1; 1.85 at T2). Furthermore, hierarchical regression analyses revealed an interaction between impact on schedule and gender on FVC at T2, controlling for FVC at T1 (p<.06). Study findings suggested that, among females caregivers, FVC decreased the more daily life schedules were interrupted by caregiving. Results also showed a decrease in frequency of vigorous PA as caregivers experienced greater schedule interruption (p<.05); this effect was not observed with moderate PA.

Family caregivers did not engage in healthy lifestyle behaviors during the early survivorship phase; this effect intensified with impact on schedule. Caregivers may benefit from programs that would assist them in mitigating the interruptions in daily life due to caregiving and in helping them maintain healthy behaviors through their caregiving experience.

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D-042k
THE DEVELOPMENT AND PRELIMINARY TESTING OF PROGRESS, A WEB-BASED PROSTATE CANCER SURVIVORSHIP PROGRAM

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With the number of prostate cancer (Pca) survivors growing, rates of Pca treatment-related physical, emotional, interpersonal and practical complications warrant interventions to ease transition from active treatment into survivorship. While e-health interventions have emerged to address quality of life concerns in other cancers, there is limited investigation into the use of multimedia programs to improve prostate outcomes. Guided by the Cognitive-Social Health Information Processing Model, which identifies key constructs in how individuals adapt to health challenges, and based on prior evidence-based work, this qualitative study describes the development of a best practice multimedia skills program, PROGRESS, designed to facilitate post-treatment adaptation. In addition to expert input and attention to cultural and health literacy issues, we conducted a two phase, qualitative formative research study to inform development. Phase 1 included individual (n=5) interviews and group (n=12) interviews to help determine intervention content and presentation in the web based intervention. Phase 2 employed iterative rounds of user/usability testing (n=12) to finalize intervention content. Interviews were coded independently by two raters who used consensus to resolve discrepancies. A common content issue was desire to see wellness issues, like weight gain, addressed. Surgical patients expressed a desire to understand impact of pre-existing and newly developed co-morbidities on their recovery while radiation patients expressed concerns about the radioactive nature of treatment. Usability testing feedback included suggestions to incorporate younger and more everyday looking survivors into the module. These results suggest that interactive web-based multimedia software programs may be useful in helping patients cope with and actively manage the complications and adverse psychosocial challenges associated with the Pca survivorship process.

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D-042l
PROMOTING QUALITY HEALTH CARE IN PATIENTS WITH LIMITED ENGLISH PROFICIENCY: PERSPECTIVES OF MEDICAL INTERPRETERS

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The population of cancer patients with Limited English Proficiency (LEP) is growing. LEP patients are at risk for lower quality care, particularly within cancer treatment wherein communication errors can influence treatment advice, adherence, and satisfaction. Use of medical interpreters is associated with higher quality care; yet, interpreters remain underutilized. Elucidating the barriers to interpreter use in cancer care is critical given LEP patients' elevated risk for poorer treatment outcomes. This qualitative study explored interpreters' perceptions of factors that 1) impact LEP patients' use of interpreters and 2) compromise LEP patients' quality of care. In 2013, 29 medical interpreters (mean age 47.2, 59% female; 41% Hispanic) participated in focus groups held at 3 Boston hospitals. Content analysis highlighted 3 factors that decrease interpreter use: 1) patient factors, such as pride, perceived language competence, and perceived language discordance with interpreter; 2) family factors, including a desire to interpret, maintain privacy, and withhold information; and 3) physician factors, such as saving time or perceived mastery of patients' language. Lower quality care was attributed to: 1) systems issues, such as reduced access to services due to insurance barriers, longer wait times and shorter encounters associated with waiting for interpreters; 2) patient factors, such as low health literacy; and 3) patient-doctor communication issues related to cultural discordance. Overall, interpreters stressed the need to educate patients about interpreters and the health care system via pamphlets and visual aids. These results suggest that an intervention designed to promote interpreter use should employ a patient-centered, multimedia approach to educate patients about the utility of interpreters. Findings may help guide the development of a patient empowering program that can enhance quality of care and reduce costs by reducing language barriers and enhancing patient-doctor communication.

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D-042m
AFRICAN AMERICAN BREAST CANCER SURVIVORS' PERCEPTIONS OF BREAKING OF TIME SPENT SITTING - A QUALITATIVE STUDY

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Objectives: Limited data exist on the benefits and barriers of breaking up prolonged periods of sitting. The purpose of this qualitative study were to elicit data that characterize the factors associated with time spent sitting and the benefits of, barriers to, and potential strategies to breaking up time spent sitting.

Methods: African American breast cancer survivors (N=31, Mean age 53 years) living in a large metropolitan city were recruited. Group consensus processes were used to identify themes among survivors' statement and determine the relative importance of recurrent themes.

Results: Median time spent sitting during leisure time was 430 minutes/day. Themes associated with sitting included leisure time interest (45%: e.g., watching television and reading) and health challenges (27%: e.g., pain and fatigue). Most (66%) survivors reported improved health as benefits to breaking up time spent sitting. Nonetheless, many (41%) survivors reported health (e.g., pain and fatigue) as the biggest challenge. The most commonly reported strategy was engagement in light intensity activities (e.g., staying active, keep moving).

Conclusion: African American breast cancer survivors spent a

significant portion of their day engaged in sedentary activities. Yet they readily identified the benefits of reducing time spent sitting. Encouraging survivors to weigh the benefits and barriers to breaking up time spent sitting as well as increasing light intensity activity may help these women be potential strategies to breaking up time spent sitting.

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D-042n
GOALS AND PSYCHOLOGICAL WELL-BEING OF CANCER PATIENTS NEAR THE END OF LIFE

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Patients with advanced cancer must make healthcare decisions in pursuit of multiple, potentially conflicting goals. To improve the care of patients who may be near the end of life (EOL), there is a need to better understand their goals, psychological well-being, and how they may change as patients approach death.

Patients (N=31; median days until death = 145) with advanced lung or gastrointestinal cancers completed a self-report survey, including measures of hope, optimism, and psychological distress at Time 1 and 3 months later at Time 2. At both timepoints patients also participated in an interview where they were asked to freely list their current life goals and cancer treatment goals. Then, they were asked to select five "priority goals" from among both lists. Subsequently, these goals were coded using the following categories: Anti-Cancer, Cure, Life Prolongation, Return to Normal Functioning, Symptom Palliation, Life Fulfillment, Social, Altruistic, Preparation for Death, Pragmatic, and Spiritual.

Patients listed marginally fewer life goals at Time 2 compared to Time 1, t(30)=1.708, p=.098. At Time 1, the three most popular categories for patients' priority goals were: 1) Social (80.6% of patients); 2) Anti-Cancer (64.5%); and 3) Life-Fulfillment (58.1%). At Time 2, the three most popular categories were: 1) Social (80.6%); 2) Anti-Cancer (61.3%); and 3) Return to Normal Functioning (48.4%). There was no significant difference in any category; however, patients listed marginally fewer Life-Fulfillment goals closer to the EOL, t(30) = 1.77, p=.086. There were no significant changes in hope, optimism, or psychological distress.

These results suggest that the life and treatment goals of patients with advanced cancer may change as patients get closer to the EOL. Patients may have fewer goals and the desire to return to normal functioning may become more important than life-fulfillment. Surprisingly, we found no significant changes in patient psychological well-being, even as patients approached death.

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D-042o
EFFECTS OF A MINDFULNESS-BASED WAIT-LIST CLINICAL TRIAL IN YOUTH WITH CANCER : RESULTS FROM FOLLOW-UP DATA AT SIX MONTHS ON MOOD, SLEEP AND QUALITY OF LIFE

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Objective : Mindfulness-based meditation constitutes a promising option to alleviate psychological drawbacks of cancer in youth. This pilot study was aimed at evaluating the long term effects of a mindfulness-based meditation intervention on mood, sleep and quality of life in adolescents with cancer, compared to a control group. Methods : A prospective, longitudinal, experimental design involving three time points (baseline, post-intervention, and follow-up) and two groups (experimental and control) was developed for this project. Twenty-one teenagers with cancer participated in this project. Fourteen of them took part in the mindfulness meditation program, while the remaining seven served as wait-list controls. All participants completed pre and post intervention measures of mood (Beck Youth Inventory), sleep (Pittsburgh Sleep Quality Index) and quality of life (Pediatric Cancer Quality of Life Inventory). Results : Preliminary statistical analyses on the first experimental group (N=8) were conducted using non-parametric testing. Results from the Wilcoxon Signed Rank Tests revealed trends towards significance in the reduction of depressive symptoms, z= -1.753, p=0.08, with a moderate effect size (r = .13). Similar results were found in the reduction of sleep problems in girls only, z= -1.826, p=0.068, with a moderate effect size (r = .18). No significant reduction in quality of life was observed between pre and post assessment point. Results from the six-months follow-up will also be presented. Conclusions : Despite the small sample included in these analyses, as predicted, the mindfulness-based intervention had an impact in decreasing sleep and mood problems for the experimental group. Mindfulness-based interventions for teenagers with cancer appear as a promising option to alleviate psychological drawbacks of living with cancer. Results from the six-months follow-up data will help shed light on the durable impact of this intervention.

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D-050a
HOW EFFECTIVE ARE HEALTH EDUCATION INTERVENTIONS FOR CARDIOVASCULAR DISEASE?

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Background: Health education interventions aim to enhance the patients' self-efficacy for coping with the demands of chronic illnesses. One area where health education interventions are particularly useful is cardiovascular disease, which affects approximately 1/3 of the United States population. Most often, cardiovascular disease is associated with long-term hypertension

and hyperlipidemia, both of which have become increasingly problematic in the United States over the past several decades. It is anticipated that rates of hypertension and hyperlipidemia will continue to escalate without adequate prevention and treatment options, increases which will become costly to the individual and healthcare system. Health education interventions show promise as a tool to reduce rates of hypertension and hyperlipidemia and in turn prevent cardiovascular disease. Methods: We conducted a systematic review of randomized controlled trials (RCTs) examing the effects of health education interventions for cardiovascular disease. Results: Of 3500 articles that were published between 2002 and 2013, twenty-seven RCTs meeting inclusion criteria were identified and independently reviewed by three reviewers. Data was extracted and study quality measured using the EPHPP scale for study quality in public health. Study data was synthesized by calculating effect sizes for primary outcomes. Findings suggest that health education interventions produce moderate changes in hypertension and overall cardiovascular disease risk. However, there is a lack of studies aimed at high cholesterol. Discussion: Health education interventions that provide information to patients about their condition, their medication, and ways to improve their lifestyle (i.e. diet and physical activity) seem to be most effective.When the interventionist is able to combine the context of the health education treatment with the treatment provided by a primary care physician longer lasting improvements in blood pressure and overall cardiovascular disease risk are seen.

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D-050b

THERAPEUTIC RECREATION CAMPS FOR CHILDREN WITH CONGENITAL HEART DISEASE: EXAMINING THEIR IMPACT ON QUALITY OF LIFE FOR CHILDREN AND CAREGIVERS

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It has been well documented that caregivers of children with congenital heart disease (CHD) suffer from poor psychosocial functioning and have a compromised quality of life (QOL). Therapeutic recreation camps are thought to be an effective program to improve QOL among children with CHD. However, there is limited research regarding their impact on caregivers. The purpose of this qualitative study was to identify CHD caregivers' expectations of camp for both themselves and their children, and to investigate if these expectations were met. Ten CHD caregivers (Mage = 42.4; 90% female) participated in two interviews at the Hospital for Sick Children. Interviews occurred two weeks before and one month after their child attended Camp Oki in August 2013. Interviews were audio-taped and transcribed verbatim. A thematic analysis of the interviews was conducted. There were three prominent themes. First, caregivers believed that camp could provide them with the opportunity

to allow their children to grow and to engage in less restrictive and over protective behaviours. Second, caregivers identified that camp could provide them with a form of respite care. Third, caregivers conveyed how camp could allow their children to build new friendships with peers, have the opportunity to engage in new activities, and gain independence. All expectations were perceived as being met. An increase in independence for both the caregivers and their children was the most common benefit experienced by all caregivers. This study identified the range of benefits that caregivers may also obtain from their children attending camp. In some cases, these benefits were associated with short-term improvements in QOL for the caregivers. These findings strengthen the case for therapeutic recreation camps and underscore the importance of expanding camp access to more families affected by CHD.

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D-050c

EFFECTS OF ACCULTURATIVE STRESS ON CARDIOVASCULAR HEALTH: A QUALITATIVE STUDY OF WEST INDIAN IMMIGRANTS' VIEWS

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Background: Studies of health disparities in African Americans tend to aggregate data across Black populations regardless of nativity; but subgroup differences exist. West Indian (WI) immigrants, who comprise 20% of New York City's (NY) Black population, are at higher risk of hypertension, diabetes, and stroke compared to other U.S. subgroups. Method: This study of WI New Yorkers' views of cardiovascular health utilized qualitative techniques, including Rapid Assessment Procedures, to gather data from 28 participants in 10 in-depth interviews and 2 focus groups, and from 24 hours of community participation and observations during the annual WI Day Carnival weekend and in the ensuing weeks. Data were analyzed using grounded theory and later authenticated by study participants. Results: Stress, hypertension, and diabetes were the major health concerns, whereas coronary heart disease was a less-common but growing problem. Participants' views reflected 1) stressful experiences with negative acculturation, 2) lack of confidence in medical institutions, and 3) a tradition of self-reliance. In respondents' view, prolonged exposure to NY's environment had led to increased exposure to stress, and to disruptions in WI traditions related to meal patterns, physical activity, and family cohesion. The use of herbal or 'bush' medicines had been retained and was used to control hypertension and diabetes. Spirituality and social support were considered effective methods for coping with stress. Respondents felt that prevention and management of cardiovascular disease should involve both individual and societal efforts including programs to improve patient education and doctor-patient communication. Conclusions: Concerns about exposure to stressful experiences, barriers to U.S. health care,

and cultural differences in lifestyle and health care approaches suggest needs for further research as well as interventions that target culturally held beliefs and practices regarding cardiovascular health.

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D-050d

PHYSIOLOGICAL REACTIONS TO A HYDRATION INTERVENTION DURING A LABORATORY SIMULATED BLOOD DONATION PROCEDURE

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Background: Many medical procedures rely upon donated blood and unfortunately shortages do occur. Retention of donors is hindered in part by vasovagal reactions (fainting, dizziness, etc.) to blood donation. Research indicates these reactions can be reduced by a predonation hydration intervention (PHI). Research also indicates water consumption can increase blood pressure (BP) in non-blood donation contexts. However, no study on blood donation has investigated the physiology underlying a PHI's efficacy. Methods: Participants were randomized to either a PHI (n=14) or a control group (n=15). The PHI consumed 500 mL of H2O 20 mins prior to a 498 mL blood draw (BD) and controls did not. Average BP (ABP), systolic BP, diastolic BP (DBP), cardiac output, stroke volume, and total peripheral resistance were continuously measured before, during, and after the BD. Plasma osmolality (OSM) was assessed at the start and end of the BD. After the BD, vasovagal symptoms were assessed via the blood donation reaction inventory (BDRI). Results: Results revealed group main effects for ABP and DBP (both p<.01) such that relative to controls, the PHI had lower ABP and DBP across the BD and recovery periods. There was a time main effect (p<.01) for OSM and post hoc tests found participants' OSM decreased from start to end of BD (p<.01). Although there was no group main effect, there was an interaction between group and time for OSM (p<.05) such that relative to controls, the PHI's OSM decreased more from start to end of the BD. There were no group differences in BDRI scores (p>.05). Conclusion: Although prior research suggests the attenuation of vasovagal symptoms in response to a PHI may be due to increases in BP, this study does not support that prediction. Relative to controls, a PHI had lower BP across the BD and this may be due to the greater decrease in OSM (i.e. reduced blood viscosity) over time in the PHI condition.

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D-058a

BEHAVIORAL CONSEQUENCES OF THE COMMUNICATION OF COUNTERFACTUAL DISEASE INFORMATION

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Individuals faced with a disease diagnosis may engage in counterfactual (CF) thinking which involves imagining alternative outcomes to a negative event. Upward counterfactuals involve imagining how the event could have turned out better. Downward counterfactuals involve imagining how the event could have turned out worse. CF communication entails relaying these CFs from one individual to another. The present study investigated the relationship between CF communication and both personality assessment and charitable behavior. Undergraduates (N = 117; 77 female, 40 male) were brought into the laboratory to presumably evaluate interview excerpts of professional academic advisors. The interview excerpts contained a description of overcoming a life obstacle (i.e., either diabetes or heart disease), and concluded with either an upward or downward CF statement. Participants were asked to rate the personality and job aptitude of the academic advisor, as well as the effectiveness of their response to their life obstacle. After the survey, there was a surreptitious behavioral observation where participants were given the opportunity to vote for a donation to be sent to either the American Heart Association (AHA) or the American Diabetes Association (ADA). CF condition was significantly related to the assessment of how the candidate handled their life obstacle ($F(3,103) = 7.70$, $p < .001$, eta-squared = .18). Candidates who expressed upward CFs were rated less favorably on the way in which they handled their life obstacle, and also received a decreased job recommendation ($F(3,102) = 4.03$, $p < .01$, eta-squared = .10). Participants voted significantly more often for the AHA, but exposure to upward CFs increased the likelihood of voting for the AHA to receive the charitable donation ($\chi^2 = 11.09$, $p < .025$). These results suggest that the communication of counterfactuals related to disease state may influence how individuals are perceived and treated.

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D-058b

CONCERNS ABOUT CONDUCTING HEALTH RESEARCH ON THE AMAZON MTURK PLATFORM

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Current technology provides social scientists the opportunity to collect data using online systems. In a 2011 article in Science, the Amazon MTurk platform was presented as likely to become a "mainstream" form of data collection. Some social scientists are enamored with how quick, easy, and inexpensive these data

collection opportunities are, and studies with data from MTurk are beginning to reach publication. Much of the relevant data on this platform stems from research in economics, game theory, and psychometrics. However, only a few studies exist that examine the quality of data collected using this method, and these studies offer a conflicting picture. The present study evaluated the utility of this platform for collecting health relevant data. A "Health Survey" was posted to Amazon's MTurk for a period of six months, drew 4,169 responses, and each respondent was paid $0.25. The HIT was a 20-minute survey designed to collect psychological, social, and behavioral information from individuals living with diabetes. A series of qualification pages were constructed to restrict the task to individuals with diabetes who were at least 18 years of age. The data were first examined to identify "qualified" versus "unqualified" respondents. More than 13% of this sample identified as having diabetes. Although this represents a larger percentage than would be expected (~8.3%), this could have resulted from individuals with health concerns being drawn to a "Health Survey." Closer inspection of the data revealed that some participants (~12%) made repeated attempts (2-4 attempts) to bypass the qualifications pages, submitting different answers in the same time frame from the same IP address. In addition, the mean response time for survey completion was under 13 minutes (range=2-45). Fully 75% of the sample completed the task in <15 minutes, suggesting that some participants may not have been conscientious responders. These data suggest the need for significant precautions in interpreting data from this type of platform.

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D-058c
FINDING THE HEALTH IN HEALTH LITERACY - THE MISSING LINK FOR EARLY ASSESSMENT AND TREATMENT OF PATIENTS WITH DIABETES

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Background: Traditionally, ethnicity, SES and education have been used to explain significant health disparities in the prevalence and treatment outcomes of patients with Type II diabetes. However, little is known about the role of health literacy, independent of these factors, on patient outcomes. The purpose of this study was to determine what factors would predict the presence of T2DM in patients at a rural primary care setting.

Methods: Participants were randomly recruited from a rural primary care office while waiting for their physician appointment. Participants completed a self-administered electronic assessment on an Apple I-pad (with an audio completion option). The assessment consisted of a demographic survey, health status survey, the Newest Vital Sign (NVS) and the Single Item Literacy Screener (SILS).

Results: 53 (39.6% African American, 60.3% White), middle aged (mean age = 46.6), obese (mean BMI = 32.2), men and women (n = 21, n = 32) completed the survey, with approximately 1/3 (32%) reporting a diagnosis of T2DM. Results showed that only health literacy as assessed by the NVS (OR = 53; 95% CI = .31-.92, p= .02), and BMI (OR= 1.12; 95% CI = 1.02-1.23, p= .02) were predictive of T2DM diagnosis. Demographic variables and scores on the SILS were not found to be predictive.

Conclusion: Findings suggest that health literacy, in addition to BMI, might be a better risk indicator for T2DM than literacy, ethnicity, SES or education. Primary care practitioners could utilize brief health literacy screening measures, such as the NVS, in order to potentially implement improved disease prevention and intervention strategies earlier in their care.

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D-058d
CONCORDANCE BETWEEN SELF-REPORT AND ACCELEROMETER MEASURES OF PHYSICAL ACTIVITY IN OVERWEIGHT VETERANS WITH TYPE 2 DIABETES

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Objective measures such as accelerometers are considered the gold standard in physical activity trials, and various self-report measures are also frequently used. Information about the unique attributes of and concordance between measures is valuable for informing measure selection for future trials. The purpose of this study was to compare concordance rates among two physical activity self-report measures and accelerometer data in a sample of overweight veterans with type 2 diabetes. Participants were enrolled in a clinical trial of an automated telephone-based intervention designed to promote physical activity. Data were collected at baseline, 3-, 6-, and 12 months and included the EPIC-Norfolk Physical Activity Questionnaire (EPAQ2), the Stanford 7-day Physical Activity Recall (PAR), and a 7-day accelerometer measurement. The current analysis includes data through the 6-month time point. Correlational analyses were conducted to compare the EPAQ2 Total Physical Activity Energy Expenditure, PAR Moderate Activity Total, and total accelerometer counts at each time point. Complete data were obtained from 66 participants (95% men, age 63±10). The two self-report measures were significantly correlated at each time point (baseline: r=.30, p=.02; 3m: r=.39, p<.01; 6m: r=.43, p=.001). Accelerometer total counts were significantly associated with PAR at baseline, 3 months, and 6 months (r=.34, p<.01; r=.33, p=.01; r=.50, p<.001, respectively), and were associated with the EPAQ2 at 6-months only (r=.30, p=.02). In sum, correlations between the PAR and accelerometer measurements were moderate to strong, and were higher than correlations between the EPAQ2 and accelerometer. Although the EPAQ2 was chosen because it assess a wide variety of activities, the PAR appears to be a more accurate measure of self-reported physical activity in veterans with overweight and diabetes. Additional analyses will explore whether concordance rates differ by group assignment, age, or sex.

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D-059a

THE BRIGHT AND DARK SIDES OF MOTIVATION: MEDIATORS OF CONTROLLING VS. AUTONOMY-SUPPORTIVE PRACTICES IN EXERCISE SETTINGS

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According to Self-Determination Theory (SDT), fulfillment or frustration of basic psychological needs leads to different motivational and behavioral consequences. This study explores fitness professionals' work motivational regulations and use of controlling (CONTS) and autonomy-supportive (AUTS) strategies.

In the PoEMA study, 180 fitness professionals (91 women) completed a battery covering work-related psychological need satisfaction (PNS) or frustration (PNF) (autonomy, competence, relatedness), motivational regulations, and AUTS (structure, autonomy-support, involvement) vs. CONTS (use of rewards, conditional regard, intimidation, excessive personal control). Bi-variate correlation and Preacher and Hayes multiple mediation procedures were used. Two models were created to examine the effects of PNS and PNF on AUTS vs. CONTS via each motivational regulation

PNF was negatively associated with intrinsic/identified regulations (-.19<r<-.30, p<.05), and the frustration of competence associated with AUTS (r=-.18, p<.015), while frustration of autonomy/competence were positively related with CONTS (r>.22, p<.003). PNS positively predicted all regulation types (.18<r<.41 p<.05) and AUTS (.15<r<.45, p<.05), and negatively predicted conditional regard and personal control (r<-.16, p<.05). Intrinsic/identified regulations positively correlated with all AUTS (.22<r<.36, p<.05), and negatively predicted conditional regard (r<-.19, p<.01). External and introjected regulations positively correlated with CONTS (r>.17, p<.05). In the mediated models, for PNS and AUTS significant indirect effects were observed through intrinsic motivation (partial mediation, 95% CI of .012 to 0.101). For PNF and CONTS, no indirect effects via regulations were found.

In fitness settings, need-supportive contexts predict autonomous motivation and AUTS, as proposed by SDT. Furthermore, professionals high in PNF are less likely to use motivationally adaptive strategies and more prone to use a controlling style toward clients. Results also highlight AUTS and CONTS as being promoted by different processes as result of PNS or PNF: more direct effects on CONTS and indirect on AUTS, mediated by intrinsic motivation.

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D-065a

AGING-RELATED HIV TESTING DISPARITIES AMONG CLIENTS IN HIGH HIV PREVALENCE VENUES

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BACKGROUND. The Centers for Disease Control and Prevention (CDC) recommends that all clients in high human immunodeficiency virus (HIV) prevalence venues (e.g., needle exchange sites) undergo HIV testing at least annually. Older adults (age>50 years) have poorer long term prognoses than younger adults (age<50 years) do; therefore, routine HIV testing may be particularly important for older clients in these venues.

PURPOSE. This study sought to determine if aging-related disparities in recent (past 12 months) and lifetime HIV testing exist among clients in high HIV prevalence public health venues.

METHODS. We used three-stage, probability sampling to recruit adults from three types of high HIV prevalence venues: needle exchange sites, sexually transmitted disease clinics and Latino community clinics that provide HIV testing. The sample (N=1,238) comprised n=1,012 (81.7%) adults aged <50 years and n=226 adults (18.3%) aged >50 years. Participants were 17 or older, not known to be HIV positive and not employed at the recruitment site. Using multiple logistic regression with generalized estimating equations, we estimated associations between age category (<50 years vs. >50 years) and each outcome (recent HIV test, lifetime HIV test) while controlling for covariates (e.g., recent injection drug use) and the venue-based survey design.

RESULTS. Nearly one third (31.3%, n=317) of younger adults and 44.3% (n=100) of older adults had not tested in the past 12 months; 15% (n=152) of younger adults and nearly one in four older adults (23%, n=52) had never tested for HIV in their lifetimes. Older adults had 40% lower odds than younger adults did of recent (OR=0.6; 95% CI=0.40-0.90) or lifetime (OR=0.6; 95% CI=0.40-0.90) HIV testing, controlling for covariates.

CONCLUSION. Aging-related HIV testing disparities exist among clients in high HIV prevalence public health venues, which may help to explain why older adults have poorer long term prognoses.

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D-076a

THE INFLUENCE OF ANTIDEPRESSANT USE ON THE DECISION TO BREASTFEED AMONG WOMEN ENROLLED IN A RANDOMIZED INTERVENTION TRIAL

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Breastfeeding is related to numerous health benefits for the mother including reduced risk of breast, uterine, and ovarian cancer, weight gain retention, and osteoporosis. Breastfeeding also improves the infant's health. However, only one-third of women are still breastfeeding at six months. One potential barrier to breastfeeding for some mothers is the use of antidepressant medication. Research is not conclusive regarding the safety of antidepressants; however, some clinicians prescribe antidepressants when they believe it is warranted. Given the lack of clear evidence, some mothers may be reluctant to breastfeed if taking an antidepressant. The purpose of this study was to describe the breastfeeding patterns of postpartum women and to examine the relationship between antidepressant use and the decision to breastfeed. Participants were postpartum women (n=130) who participated in a randomized trial examining the efficacy of a six-month exercise intervention for the prevention of postpartum depression. Study participants had a personal or maternal family history of depression but were not depressed at baseline (less than 8 weeks postpartum). Ninety-three percent of the participants breastfed at birth, 88% at one month, 76% at three months, and 66% at six months. Among the women who breastfed at each timepoint, 88% of their infants were exclusively breastfed at one month, 84% at three months, and 74% at six months. Twenty-nine percent of the sample took an antidepressant. Women who were taking an antidepressant were significantly less likely to breastfeed than individuals who were not taking an antidepressant, $\beta = -.188$, $p < .05$, after controlling for depressive symptoms. Our results suggest that antidepressant use may be a significant barrier to breastfeeding. It is important for clinicians to discuss this complex issue with their patients.

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D-076b
ACCULTURATIVE STRESS: A DETERMINANT OF A "FAT" SELF-DEFINITION IN MEXICAN AMERICAN WOMEN

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Disordered eating and weight control behaviors (DEWCB) are serious health risk behaviors prevalent in Mexican American (MA) women. Acculturation to Western standards is believed to contribute to body dissatisfaction and DEWCB. Recent research has shown that the total collection of identities, referred to as self-schemas, predict DEWCB in MA women and these are mediated by fat schema. However, the link between acculturation and constellation of self-schemas is unknown. In this study, the effects of acculturation and MA cultural values on self-schema properties including the availability of a fat schema are examined. Baseline data from a 12-month longitudinal study designed to investigate relationship of self-schemas with DEWCB in 477 college MA women from Arizona and Michigan were used. Outcome is fat schema (Y/N) measured using Markus methodology. Site, school activities, and SES were covariates. The first logistic regression model included predictors of acculturation (Anglo and Mexican orientations, ethnic identity, acculturative stress) and MA cultural values (familism, spirituality); total

collection of self-schemas (number of positive and negative) was added as predictors in second logistic regression model. Mediation analysis was used to determine whether total collection of self-schemas functioned as mediators. Results showed that MA women who had higher acculturative stress were more likely to have a fat schema, but this effect was no longer significant when positive and negative self-schemas were entered in the model. MA women who had many negative self-schemas were more likely to have a fat schema. Furthermore, the association between acculturative stress and fat schema was mediated by the negative self-schemas. Also, Arizona MA women were more likely have a fat schema. Findings suggest that acculturative stress, rather than level of acculturation, contributes to conceptions of the self as fat and this effect is mediated through the formation of negative self-schemas. Interventions that protect against ethnic prejudices may be central to reduce DEWCB in this population.

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D-076c
IMPROVEMENT OF DEPRESSIVE SYMPTOMS AMONG LOW-INCOME LATINO IMMIGRANTS IN A BEHAVIORAL WEIGHT-LOSS INTERVENTION PROVIDING SOCIAL AND ENVIRONMENTAL SUPPORT

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Background: Depressive disorders rank as the fourth leading cause of disease burden worldwide. Behavioral weight-loss treatment may reduce depressive symptoms independently of weight change through social support and other mechanisms. Behavioral treatment may be especially suitable for Latino immigrants, who face disparities in access to and quality of mental healthcare.

Methods: The effectiveness of two behavioral weight-loss interventions at decreasing depressive symptoms, measured with the Center for Epidemiologic Studies Depression (CES-D) scale, was compared to a usual care (UC) control using data from a 24-month weight-loss trial among low-income Latino immigrants. Participants were randomized to UC (n=41), case management only (CM) (n=84), or case management with community health worker support (CM+CHW) (n=82). CM consisted of 4 individual and 15 group sessions focused on behavior change. The CHW conducted 7 home visits to provide social and environmental support. Linear regression models were used to compare the effectiveness of the interventions with UC using intent-to-treat. A possible effect modification by poverty level was further investigated.

Results: There was no significant change in weight loss at 24 months. Participants reported a mean baseline CES-D score of 7.1 (SD±4.6) out of 19 possible points with 36.7% of participants reporting a score ≥9, which indicates possible clinical depression. Treatment group was not significantly associated with

24-month CES-D scores overall. However, among participants below the 100% poverty level, those randomized to CM+CHW had 24-month CES-D scores 3.1 points lower (95% CI: -5.3, -0.82) than those in UC (p<0.01).

Conclusion: A behavioral weight-loss intervention providing social and environmental support with in-home support from a CHW reduced depressive symptoms among Latino immigrants below 100% of the federal poverty level.

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D-076d
THE BENEFIT OF BIOFEEDBACK AND RELAXATION TRAINING IN REDUCTION OF ANXIETY AMONG COLLEGE STUDENTS IN KOREA

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High level of stress, anxiety and depression are prevalent problems among college students in Korea. Previous research indicates that biofeedback treatment and relaxation techniques were effective in reducing psychological and physical symptoms (Hammond, 2005; Manzoni, Pagnini, Castelnuovo., & Molinari, 2008; Nestoriuc, Rief, & Martin, 2008). However, few studies investigated the effect of biofeedback treatment on psychological and physical symptoms (Choi & Son, 1992; Moon & Son, 2009) among college student in Korea. Therefore, the current pilot study examined the level of anxiety before and after Heart Rate Variability (HRV) biofeedback treatment and relaxation training among students in a Science and Engineering University in South Korea. Based on the previous studies, this study also investigated the level of absorption capability to see whether different levels of absorption capability affect the degree of anxiety reduction depending on different types of treatments (i.e., biofeedback vs non-feedback relaxation training). For current study, 18 graduate students with moderate level of anxiety were recruited for 4 bi-weekly individual sessions and were randomly assigned into three groups (6 for biofeedback treatment, 6 for relaxation training, and 6 for control group). Non-Baysian statistics such as the comparison of means and SDs were used and results indicate that there were reduction in anxiety in both biofeedback and relaxation training groups whereas no change in anxiety occurred for control group. Additionally, the result reveals that there was greater reduction in anxiety for the individuals with high absorption capability in relaxation training whereas individual with low absorption capability experienced greater reduction in their anxiety in biofeedback treatment compared to relaxation training. Suggestions for future research and treatment issues will be discussed.

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D-076e
SPIRITUALITY IN SCHIZOPHRENIC PATIENTS AND FAMILY CAREGIVERS: A DYADIC INVESTIGATION

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Background: Family is one of the primary sources of spiritual care for people with schizophrenia. Failures for family caregivers to align with patients' perspectives not merely results in improper spiritual care, but also leads to family conflicts and hampers recovery. Yet, attention to mutual understanding of spirituality among both parties is lacking. It thus warrants in-depth dyadic investigation.

Method: 8 pairs of schizophrenic patient and family caregiver were recruited from an outpatient clinic of a hospital in Hong Kong. Members of each dyad were interviewed separately to explore 1) their own spirituality, 2) their understanding of other member's perspective, 3) the impacts of similar/ difference perspectives on patients' recovery, and 4) the family dynamic when differences exist. Data collection and analysis were based on grounded theory. Trustworthiness was ensured through member checking and interrater reliability.

Results: Mutual understanding of spirituality among dyads helped facilitate patients' recovery. However, the concepts of spirituality were different and rarely discussed in most dyads. Caregivers generally assumed patient held the same perspective as they did and overlooked patient's uniqueness; whereas patients were usually aware of the differences but pretended to have the same perspective as their caregiver. The masquerade was probably due to the fear of disrupting family harmony and losing family supports, but at the same time it created psychological distress in patients which impeded their recovery.

Conclusion: Alignment of spiritual perspectives in patients and caregivers is crucial for the recovery of schizophrenia. Being the primary and immediate source of influence, caregivers should be more attentive and open to patients' spiritual needs.

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D-090a
PHYSICIAN-DRIVEN NUTRITION COUNSELING IN PEDIATRIC PRIMARY CARE: RESULTS OF A CLINIC-BASED INTERVENTION

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Background: Obesity is the most common pediatric disorder in developed nations with significantly higher prevalence noted in black and Hispanic communities. Integration of physician-driven nutrition counseling for obese patients in pediatric primary care reflects Healthy People 2020 goals. The purpose of this investigation was to assess changes in BMI following initial implemen-

tation of nutrition counseling program at an urban pediatric clinic and to identify factors associated with a reduction in BMI among those patients electing follow-up care with the nutrition team.

Methods: A retrospective review of electronic medical records was conducted within the children's clinic of a tertiary care hospital. A diverse population of obese pediatric patients, age 2-18, attending at least one nutrition visit and contributing a follow-up BMI between January 2012 and November 2013 were included. Demographic characteristics, the presence of comorbid conditions, and number of nutrition visits were compared in bivariate analysis between those with and without BMI reduction. Binary logistic regression identified factors uniquely associated with BMI reduction in this at-risk population.

Results: Average initial BMI-for-age of the 186 patients in the study was 96.8. BMI was reduced for 34.9% of patients (N=65) within the average 9.5 month follow-up period. A greater proportion those with ≥ 2 nutrition visits and with comorbid conditions reduced BMI than did those without (47.7% vs 38.8%; 56.9% vs 47.9%). Overall, patients age 9-12 years old were more likely to see reductions in BMI (aOR: 1.92, 95%CI: 1.04-3.54) than were those in other age groups.

Conclusion: Over one-third of participants achieved BMI reduction following physician-driven nutrition counseling in primary care. Differential outcomes by age and health history indicate additional study is needed consistently benefit the full range of obese pediatric patients.

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D-112a

HEALTHY EATING IS EASY AND PLEASANT: THE RELATIONSHIP BETWEEN ATTITUDES AND WEIGHT STATUS

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In the United States, 69.2% of adults are overweight, and 35.9% are obese (Flegal et al., 2012). Given the alarming prevalence and detrimental impact of these conditions on public health and mortality, it is imperative that we explore novel approaches to the promotion of healthy diet.

The present cross-sectional study of healthy undergraduates (N=260) examines psychological constructs associated with healthy eating behavior. Participants responded to self-report measures regarding healthy eating. These included affective attitudes, perceived benefits, perceived behavioral control, perceived difficulty, anticipated affect while eating a healthy meal, and intentions to maintain a healthy diet in the future. Participants also reported their frequency of eating balanced meals, height, and weight.

Both the current frequency of consuming healthy meals as well as intentions to do so in the future were associated with more positive affective attitudes, higher perceived benefits of healthy eating, higher perceived behavioral control, and lower perceived difficulty of healthy eating (frequency: R^2= .53, p < .0001; intentions: R^2= .67, p < .0001).

These attitudes and beliefs about healthy eating were significantly associated with weight status. As compared to non-overweight individuals, overweight individuals reported that they would anticipate feeling less good while consuming a healthy meal [$F_{(2,253)}$ = 4.54, p < .05] and report perceiving healthy eating to be more difficult [$F_{(1,251)}$ = 4.76, p < .05]. Moreover, current body mass index (BMI) was significantly associated with anticipated affect, perceived benefits, perceived behavioral control, and perceived difficulty of healthy eating (R^2= .053, p < .05).

Many weight maintenance programs seek to alter behavior by providing nutrition information and other cognitive tools (e.g. rules, plans). Our findings suggest that interventions targeting changes in attitudes and affect associated with healthy eating behaviors may prove to be a promising novel approach to promote weight loss and reduce obesity.

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D-112b

ONLINE AND FACE-TO-FACE: HOW DO AD-HOC AND EXISTING NETWORKS SUPPORT WEIGHT-RELATED BEHAVIOR CHANGE IN YOUNG ADULTS?

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Researchers frequently examine how ad-hoc or existing networks provide social support for weight loss but do not evaluate how these networks serve complementary purposes. Ad-hoc networks (e.g., strangers who form a network based on shared goals) may provide support that existing (e.g., friendship) networks do not. This study describes how overweight/obese college students participating in a 2-year remotely delivered weight loss trial (SMART: a Social and Mobile Approach to Reduce Weight) engaged their existing networks and leveraged SMART (i.e., their ad-hoc network) to meet their weight-loss goals. Fifteen treatment and 14 control participants (N =29) were interviewed and transcripts were analyzed using principles from grounded theory. The first aim was to understand the similarities and differences between SMART and participants' existing networks. Five themes emerged: accountability, motivation, trusted source of information, and "on demand" support. Participants' felt accountable to deliver on their weight-loss intentions from the SMART network and their existing networks. Encouragement from friends and SMART motivated participants to stay on track. SMART was viewed as a trusted source of information and available "on demand." The second aim was to explore how support was provided by and enlisted from the SMART network (treatment arm only). Two themes emerged: directive vs. autonomous support and privacy vs. openness. The eHealth coach provided mostly directive informational and appraisal support whereas participants' existing networks provided mostly autonomous emotional support. Some participants were open to sharing

weight-related information/behavior online whereas others prioritized privacy. Friendship networks provide non-judgmental emotional support, which is different from an eHealth coach's expert support and advice. Individuals with access to complementary sources of support may be best equipped to meet their weight-loss goals.

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D-112c
SELF-EFFICACY SIGNIFICANTLY INFLUENCES AFRICAN AMERICAN ADULTS' MULTIPLE HEALTH BEHAVIOR

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BACKGROUND: Physical Activity, sedentary behavior, and fruit and vegetable consumption (FVC) are associated with the reduction of numerous diseases. Compared to their Caucasian counterparts, African Americans are at an increased risk for obesity-related diseases; and reduction of such disparity has been designated as an ongoing priority in Healthy People Objectives. Although research supports self-efficacy as a strong indicator of adult behavior; similar research targeting the multiple health behaviors of African Americans remains limited. PURPOSE: Analyses aimed to uncover the influence of context specific self-efficacy on African American adults' physical activity, TV viewing, and FVC. METHODS: Participants were recruited from two Ohio churches to complete a paper-pencil survey. Participants self-reported demographic and health-related information, specifically their weekly physical activity, daily TV viewing hours, and daily intake of fruit and vegetable servings. Physical activity was assessed via the International Physical Activity Questionnaire (IPAQ) and computed into metabolic equivalents (METs). Step-wise multiple regression models determined the best-fitting set of variables contributing to participants' multiple health behavior; an alpha level of 0.10 was used to determine significance. RESULTS: African American participants (n=48) were 73% female, with a mean age of 42.5 years. Participants had a mean body mass index of 30.7, and 80% of the sample was categorized as overweight/obese. Significant influences on participants' vigorous physical activity METs included education-level (β=-0.535, p=0.001), perceived health (β=0.341, p=0.029), and physical activity-specific self-efficacy (β=0.272, p=0.072). The only significant influence on participants' TV time was physical activity-specific self-efficacy (β=-0.3.36, p=0.002). Participants' FVC was significantly influenced by age (β=-0.530, p=0.001) and fruit and vegetable-specific self-efficacy (β=0.260, p=0.074). CONCLUSIONS: Results support previous research on self-efficacy as a significant contributor to African Americans multiple health behavior.

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D-112d
SIGNIFICANT SOCIAL AND ENVIRONMENTAL INFLUENCES ON MIDDLE SCHOOL CHILDREN'S OBESITY-RELATED BEHAVIORS

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INTRODUCTION: Obesity is a widespread epidemic in the US, becoming increasingly prevalent among youth. Physical activity and sedentary behavior are health-related behaviors associated with obesity risk among youth. Youth are born vulnerable to the authoritative figures within the surrounding social and physical environments. PURPOSE: Using a holistic approach, the current study examined multilevel influences on children's physical activity and television viewing behaviors. METHODS: Middle school students were recruited from two schools in neighboring states. Participating youth completed a paper-form survey proctored by the classroom teacher. The survey asked youth to self-report their health behavior, self- and proxy efficacy, and environmental accessibility to physical activity opportunities. A linear regression model was used to examine the relationship between influences and participants' weekly physical activity and daily television time. RESULTS: Participants (n=105) were 50% female. The sample consisted of 95% seventh graders and 5% eighth graders. Thirty-nine percent of the sample was categorized as overweight/obese. Participants engaged in 60 minutes of physical activity an average of 5 days a week and reported watching an average of 2 hours of television each day. Significant influences on participants' physical activity included self-efficacy (β=.454, p=.000) and neighborhood accessibility (β= 0.175, p=0.05). Significant influences on participants' television time included self-efficacy (β -0.282, p=.010), proxy efficacy (β=-0.226, p=0.03), and whether or not participant had a television in their bedroom (β= 0.192, p= 0.05). CONCLUSIONS: Results indicated significant social and environmental influences on children's obesity-related behaviors. Children reporting higher levels of physical activity had higher self-efficacy and increased access to physical activity-related resources within their neighborhood. Television viewing was inversely related to children's self- and proxy efficacy; and higher among children with increased home accessibility.

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D-112e
LIFESTYLE MODIFICATION AND WEIGHT REDUCTION AMONG LOW-INCOME PATIENTS WITH THE METABOLIC SYNDROME

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The metabolic syndrome (MetS) has been linked to cardiovascular disease and type 2 diabetes risk and its prevalence appears to be rapidly increasing as the obesity epidemic rises. Although weight is an important intervention target among patients with Mets, few trials have recruited low-income minority populations,

a highly vulnerable group in which intervention adherence is a challenge. The Community Health and Risk-reduction for Metabolic Syndrome (CHARMS) study was a randomized, 12-month trial examining the effect of a lifestyle intervention on weight, insulin resistance and Mets components among low-income minority subjects. A total of 120 adults were randomized to standard medical care (N=60) or a structured lifestyle intervention (N=60) which consisted of 18 sessions over the course of a year. All participants met NCEP-ATP III MetS criteria. Subjects underwent a baseline, 6- and 12-month assessment. Latent growth modeling was used to estimate normative and intervention changes as outcomes of interest. Participants were 53 men and 67 women with a mean age of 52.30 (SD=8.30). At study entry, mean weight was 87.76 kg. Using an intent-to-treat approach, we found significant intervention effects on weight (B=-0.452; SE=0.122; 95% Confidence Intervals [CI] =-0.653 to 0.251) and glucose levels at 6-months (B=-0.006, SE=0.003, 95% CI =-0.010 to 0.002). This indicates a weight decline of 0.45 kg per month adding to a mean estimated weight loss of 2.71 kg (3.1% of starting weight) and an estimated reduction in fasting glucose of 0.52 mg/dl per month resulting in a total decline of 3.13 mg/dl during the first 6 months of treatment. These changes were maintained through the 12-month assessment. No significant treatment effect was observed on insulin resistance or other MetS components. A structured lifestyle modification intervention was successful in achieving modest but significant weight loss and reduction in fasting glucose levels among low-income minority subjects with MetS.

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D-112f
EVALUATING COMMUNITY-LEVEL HEALTHY EATING, ACTIVE LIVING INTERVENTIONS USING ELECTRONIC MEDICAL RECORD DATA

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LiveWell Colorado (LWC), a nonprofit, has a mission to inspire and advance policy, environmental and lifestyle changes that promote health through the prevention and reduction of obesity. LWC targets vulnerable populations through investment in place-based community-level strategies related to the built environment, food access, and policy change to support healthy eating and active living (HEAL). The Kaiser Permanente (KP) evaluation team assists LWC funded communities in evaluating the impact of community-level HEAL strategies. One evaluation effort involves using Census data to match LWC funded communities with non-LWC funded communities to compare health indicators. This poster explores BMI trends in KP's electronic medical record pre and post intervention in one funded community compared to a matched control between 2005-2012.

Average BMI within the communities over time was modeled using multivariate mixed models, adjusting for age, race and ethnicity, and accounting for the correlation of individual measurements over time. The data is descriptive of trends of KP members within a neighborhood.

Overall, average BMI was lower in the funded community (26.3 vs 27.1, p<0.01) and average BMI significantly decreased by -0.2

(p<0.01) post 2007 (when interventions were implemented), versus no significant change in average BMI in control post 2007 (0.02, p=0.45). Annual trends in BMI decreased in the funded community but not in the control (year slope -0.08, p<0.01 vs -0.04, p=0.18); but the funded community BMI decrease was not distinct post 2007. A subanalysis of long-term residents from at least 2005-2008 produced consistent results. In a subanalysis limited to two intervention community census tracts containing all LWC programs within 0.25 miles and corresponding control tracts, the annual decrease in BMI is present over the entire study period for the funded community, but no such trend is present for the control (0.20, p<0.01 vs 0.09, p=0.18). While this decrease changes post-2007 (-0.03, p=0.03), it is still significant compared to the control annual BMI trend.

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D-112g
RATINGS OF CHILDREN'S HEALTH ARE ASSOCIATED WITH BODY MASS INDEX

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Research shows that simple self-rated health (SRH) is a predictor of morbidity and mortality in adults. However, the predictability of SRH in youth is less clear. This study compared girls' SRH with parent ratings of daughters' health and examined the association with an objective health indicator, body mass index (BMI).The participants were 75 girls (10-14 years; 89.3% minority) and 75 parents (84% mothers) who were part of a larger health education study. Each girl and her parent completed questions about the child's health that included ratings about overall health, physical activity level and hours of sleep. Girls self-rated their health as excellent (16%), very good (26.7%), good (41.3%), not so good (14.7%), or bad (1.3%), and their physical activity level as very active (30.7%), active (45.3%), somewhat active (21.3%), and not active (2.7%). Girls reported sleeping on average 8.3 hours a night. Girls' heights and weights were measured and BMI was calculated (M= 21.8 kg/m2).Girls' SRH was positively associated with parents' ratings of daughters' health (=.35, p=.002). Positive associations for child and parent ratings of physical activity (=.45, p<.001) and hours slept/night (r=.55, p<.001) were obtained. SRH was also positively related to child and parent ratings of physical activity and hours slept/night (s>.24, ps<.05). SRH (=-.51, p<.001) and parents' rating of health (=-.36, p=.001) were negatively associated with BMI. The concordance between child and parent ratings of health was notable, supporting the validity of SRH in middle school girls. It remains to be clarified whether this finding generalizes to boys. Furthermore, while SRH was associated with current BMI, future research needs to be directed at determining whether SRH in youth predicts distal health outcomes. The results of such studies could serve to better inform primary prevention efforts directed at youth.

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D-112h
AFRICAN AMERICAN PERSPECTIVES ON WEIGHT LOSS AND FAITH FROM AN ECOLOGICAL PERSPECTIVE

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African American (AA) women suffer from higher levels of obesity and associated health problems, and generally exhibit less weight loss during interventions compared to Caucasian women. Faith is an important component of the AA community and may improve weight loss outcomes in AA women. Thus, the goal of this study was to evaluate the role of faith in health and weight loss, concerns related to weight status and health, and barriers and solutions to engaging in weight loss programs in a faith-based setting. Focus group questions were developed from previous literature using an ecological framework. Focus groups were conducted with 64 individuals (89% female; 95% African American; mean age 46 (SD=13.0) years) in faith-based settings. Transcripts were analyzed with NVivo using classic content analysis by independent raters with adequate inter-rater reliability (kappa alpha = 0.65). Major themes included barriers, benefits, overall concern, faith, and solutions. Within barriers, individual level factors were most often mentioned with the greatest percentage related to food habits (33%) and motivation (15%). The most frequently cited benefit to weight loss was improvement to physical health (45%) followed by being better able to serve God (17%). The majority of health concerns related to weight status were individual physical health (48%) and medical concerns (24%). Individual level factors related to faith and health most frequently discussed included God's role in health (33%), prayer (20%), and scripture (13%). Solutions discussed were individual level factors including motivation (20%) and knowledge/skills (17%), and church level factors including church activities (51%) and pastor involvement (17%). These findings provide important insights on the relationship between faith and health, along with guidance for developing faith-based weight loss programs from the perspective of AA women.

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D-133a
LIMITATIONS OF UTILIZING ELECTRONIC MEDICAL RECORDS FOR CHART REVIEWS TO ASSESS WEIGHT LOSS IN AN ELDERLY PATIENT POPULATION

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Patient health records have transitioned from paper charts to electronic medical records (EMR), with the aim of improved ease of access to health information and data. Weight loss can be an adverse outcome resulting from medication use, which affects recovery rates and overall quality of life among the elderly population. Purpose: This retrospective case study investigated the feasibility of utilizing an EMR system to analyze medication use related weight change in an elderly patient population. Procedures: We examined EMR data for 70-80 years old patients receiving medical care at PCOM's Healthcare centers. Patient demographics, height and weight, diagnoses, and medications were collected from EMR records for two office visits (approximately 2-3 years apart); Patient duration of medication use and their therapeutic classifications were also determined. RESULTS: 10 out of 17 patient records were eligible, and data collection was completed in 151 days. There was a significant difference in the mean number of prescription medications used between the two time-points (T1: 2.60, 3.58; T2: 7.60, 0.89) (t=-3.37, p=0.03) in the weight loss group. However, discrepancies in patient data within EMR records threaten the validity of this finding. Two subjects in the weight gain group had chronic conditions omitted from the record of their 2nd office visit that were present in their records from their 1st office visit. Inconsistencies in patient records were also observed in height data between office visits for three subjects. Implications: Prevention of undernutrition among elderly patients could be enhanced by user-friendly EMR systems that ease navigation of data for analysis of patient risk factors associated to important secondary health concerns such as weight change. EMR system improvements must occur for both clinical and research purposes to optimize patient care outcomes.

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D-133b
PERSONAL EXPERIENCES AND HEALTH PROMOTION BEHAVIORS IN CHRONIC MANAGEMENT OF PRIMARY OVARIAN INSUFFICIENCY

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Primary ovarian insufficiency (POI), previously referred to as premature menopause or premature ovarian failure, is a chronic, life-altering diagnosis that goes beyond the physiology of infertility. No proven therapy to restore ovarian function and fertility is available to patients with karyotypically normal spontaneous POI. The hormonal deficiency resulting from ovarian insufficiency can be treated with estrogen replacement, but there is no proven therapy to restore ovulatory function for patients desiring fertility. A long-term study is being conducted to evaluate the natural history of POI and the associated outcomes of hormone replacement therapy. As part of this study, written narratives (N=72) were transcribed verbatim from a cohort of participants ranging in age from 19-42 (mean 34.1; SD 5.2). Through a series of open-ended questions, participants were asked to describe their personal experience living with POI. Thematic analyses were conducted by four independent, interdisciplinary research team members and the data were verified through two rounds of consensus building. Thematic analysis yielded 27 themes

representing the POI experience. Of these 27 themes the 10 most commonly described included: fear of the unknown; knowledge equals power; redefining self and motherhood; strength through spirituality; grief; coping and support; communication issues; symptoms and side effects; healthy lifestyle changes; and using integrative, complementary and alternative medicine (CAM) strategies. These qualitative data confirm the physiologic, psychosocial, emotional and spiritual facets of living with POI. Greater knowledge of the patient experience will guide more accurate assessments of the impact of POI. Providing a holistic and integrative approach for health promotion and chronic disease management is an essential approach in improving health outcomes in women with POI.

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D-133c
ASSOCIATIONS AMONG MINDFULNESS MEASURES AND HEALTH: COMPARISONS BETWEEN A RURAL COMMUNITY SAMPLE AND A RURAL UNDERGRADUATE SAMPLE

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Interest in the associations between health and mindful awareness has flourished. A substantial body of research has demonstrated that mindfulness is associated with health. Many published mindfulness measures have relied heavily on convenience samples of undergraduate students for instrument development; many differ on the facets of mindfulness included in each scale. We compared a sample of rural undergraduate students (n=54) with a rural community sample (n=77) to examine the performance of mindfulness measures and investigate their utility in predicting physical and mental health. Meditation-naïve participants completed 5 self-report mindfulness measures (comprised of 10 subscales) and the SF-36v2 Health Survey for course credit or a $10 incentive. The undergraduate sample's demographic characteristics were: mean age 24 yrs; 74% female; 76% White, 7% Hispanic, 17% other; 28% married; 7% divorced. The community sample's characteristics were: mean age 36 yrs; 64% female; 79% White, 13% Hispanic, 8% other; 60% married, 14% divorced. It was hypothesized that trait mindfulness scores would not differ between the two groups, as trait mindfulness is conceptualized as an innate, common element of human acceptance and awareness. A one-way ANOVA revealed significant differences (p<.05) in awareness (F=5.2; F=6.0), observe (F=6.6), and describe (F=4.4) facets of mindfulness. It was hypothesized that trait mindfulness would predict physical and mental health. While there was a significant difference in physical health between the two groups (F=20.1, p<.05), none of the mindfulness facets were significantly associated with physical health. Notably, mindfulness subscales performed differently in predicting mental health in each group. Of the 10 subscales used, 3 predicted mental health in the community sample while 7 predicted mental health in the undergraduate sample. The finding that some existing measures of mindfulness perform differently in predicting mental health should be investigated in the future.

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D-133d
SYSTEMATIC REVIEW OF LONGITUDINAL ASSOCIATIONS BETWEEN FUNCTIONAL FAMILY FACTORS AND MEDICAL ADHERENCE

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Adherence to medical regimens predicts treatment outcomes, however many patients do not follow physicians' recommendations. Identifying modifiable factors that are associated with adherence, such as family functioning, may help clinicians facilitate better adherence among their patients. This review summarizes longitudinal associations between functional family factors and adherence among adult populations suffering from illness. A focus of this review is whether the source of information for the family factor (patient, family member, or observer) impacts the strength and magnitude of these associations. PubMed and PsycInfo were searched for studies published between 2001 and 2012. Twenty-five records were identified. Each was coded for methodological quality. Social support and social control were the most common family factors, and diet and exercise were the most common adherence outcomes. Social support was generally found to have a non-significant or positive association with adherence whereas social control was found to have a non-significant or negative association with adherence. Within studies that measured support from both the patient and partner's perspectives, the source of information (patient versus partner) impacted the direction of association between social support and adherence; however, a consistent pattern did not emerge across studies. Inconsistencies are likely due to differences in the measures used to assess constructs, the length of time between predictor and outcome measurement, and the type of adherence behavior. With almost a third of studies reporting consent rates below 60%, sampling bias is a concern. Additionally, about half the family relationship variables and adherence outcomes were measured with tools that had not been validated, and most measures were self-report. Future research should use validated tools and combine both observational and self-report to help clarify the role of perception in associations between family factors and adherence.

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D-133e
INFLUENCE OF ACCULTURATION, ENCULTURATION, COGNITIVE FLEXIBILITY AND STRESS ON THE PHYSICAL AND MENTAL HEALTH OF ASIAN AMERICAN COLLEGE STUDENTS

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The effects of acculturation, enculturation, cognitive flexibility, and stress on the physical and mental health of Asian American college students were examined in the current study. Participants were recruited from a mid-size University in Hawaii and

included two groups: Asian (self-reported one or more Asian ethnicities, n = 128) and Asian-Mix (self-reported one or more Asian ethnicities and one or more non-Asian ethnicities, such as Japanese/Hawaiian, Japanese/Caucasian, n = 159). Cognitive flexibility, the awareness of choice availability and subsequent choice adaptation, was associated with enhanced physical and mental health functioning. Acculturative stress (psychological stress experienced due to differences between one's own culture and the dominant culture) and urban stress (psychological stress due to finances, housing, family, work, death of a loved, and other factors) were each associated with a decline in mental health functioning. Acculturation (adapting to the norms of the dominant culture) and enculturation (retaining the norms of the indigenous group) did not independently, or in conjunction with other variables, predict either physical or mental health functioning. However, a three-way interaction between ethnicity, cognitive flexibility, and acculturative stress emerged with respect to physical health. The analysis revealed that for the Asian-Mix group only, when cognitive flexibility was high, physical health was inversely related to acculturative stress. However, when cognitive flexibility was low, no relationship was found between acculturative stress and physical health. Cumulatively, these results suggest that cognitive flexibility, acculturative stress, and urban stress may be associated with the physical and mental health of Asian American college students. Further, the impact of these variables may differ between subgroups of the ethnically diverse Asian American college student population.

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D-133f
DISCORDANCE BETWEEN PATIENT-PERCEIVED AND PHYSICIAN-ASSESSED DISEASE ACTIVITY IN RHEUMATOID ARTHRITIS

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This research examined the influence of rheumatoid arthritis (RA) disease severity, RA patient-perceived disease activity, and psychosocial factors on physician-assessed RA disease activity. Structural equation modeling was adopted to elucidate the complexity of relations among variables in the proposed model. The data of 104 RA patients were used to evaluate a model in which disease severity (DAS-28 Swollen Joint Count and Erythrocyte Sedimentation Rate), RA patient-perceived disease activity (Rapid Assessment of Disease Activity in Rheumatology total joint score and disease activity), physician examination-based joint tenderness rating, and psychosocial factors including perceived life stress (Perceived Stress Scale), depressive symptoms (Hamilton Rating Scale-Depression) and ethnic minority status (Non-White ethnicity) influence physician assessment of global RA disease activity. Structural equation modeling revealed a good fit of the data, CFI=.954; S-B $\chi2(20)$=30.84, p =.057; RMSEA=.073. RA disease severity was positively related to patient-perceived RA disease activity, physician-rated joint tenderness and physician-rated global disease activity. Higher levels of patient-perceived RA disease activity and physician-rated joint tenderness were associated with higher levels of physician-perceived global RA disease activity. The level of depressive symptomatology and perceived life stress were related to higher levels of patient-perceived RA disease activity. Non-White ethnicity was positively associated with patient-perceived RA disease activity. However, Non-White ethnicity was found to be negatively associated with physician-rated joint tenderness. Findings confirmed the importance of a multi-dimensional framework in evaluating RA disease activity assessment. These findings suggest psychosocial factors such as ethnicity may affect concordance between patients' and physicians' disease activity ratings.

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D-133g
BEYOND ACCESS: BARRIERS TO INTERNET HEALTH INFORMATION SEEKING AMONG THE URBAN POOR

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Communication inequalities impact how groups access and use internet health information, and may deepen health disparities even once internet access is achieved. Past studies of both self-reported barrier and internet use data may rely on inaccurate estimates and often do not include individuals from lower socioeconomic position (SEP). The purpose of this study was to use detailed data from the intervention group (n=118) of a randomized control trial that provided internet access to low SEP individuals to determine the impact of subjective and objective computer and internet barriers on internet health information seeking. The outcome, internet health information seeking, was recorded through URL tracking software. Call logs were analyzed to determine the computer and internet equipment issues experienced during the study and subjective barriers were captured through surveys. Negative binomial regression models were fitted for objective and subjective predictors and were then stratified by medical status. Over the course of the study, participants experienced a median of 2 computer calls (range 0-9) each lasting a median of 6 days (range 1-100) and 2 internet calls (range 0-9) with a median duration of 6.5 days (range 1-120). Duration of internet problems was associated with a decrease in the rate of internet health information seeking by a factor of 0.991 (95% CI 0.982, 0.999) for each additional day the problem persisted. There were differences in subjective barriers by health status, with frustration in finding information resulting in 3.615 times the rate of seeking among participants without a medical problem (95% CI 1.411, 9.262). Although not significant, a negative trend was observed among those without a medical problem. Findings suggest that after initial internet access, a secondary digital divide remains due to frequent internet issues that impact health information seeking. Perceived barriers may impact seekers differently based on their health status. These findings may be used to inform future internet interventions with low SEP populations.

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D-143a
INTEGRATING BIOLOGICAL AND PSYCHOLOGICAL RISK FACTORS TO UNDERSTAND PAIN VARIABILITY IN PEDIATRIC SICKLE CELL DISEASE

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The biopsychosocial model of pain suggests that biological and psychosocial factors are integral to understanding variability in pain conditions. This model may have particular utility for understanding variability in pain for children with sickle cell disease (SCD), a group of inherited blood disorders. Although recurrent pain is considered the hallmark feature of SCD, there is significant heterogeneity in the experience of pain in children with this condition. The goal of the present study was to examine the effects of biological (sickle cell subtype) and psychological risk factors (pain coping and mood) in relation to pain rate and health care utilization in children with SCD. Seventy-six children with SCD (M = 14.05, SD = 3.26) participated in a cross-sectional study. Children completed the Coping Strategies Questionnaire for SCD (CSQ-SCD) and the Positive and Negative Affect Scale for Children (PANAS-C) to assess pain coping and mood. Pain rate was measured by computing an average of caregiver- and child-reported pain in the previous year. Sickle cell subtype and health care utilization for pain over the previous two years were measured via medical record review. A hierarchical regression approach was used to understand the contribution of biological and psychological risk factors to pain rate and health care utilization. For pain rate, the overall model was significant, $F (5, 69) = 3.07$, $p =. 015$, with psychological ($R2 = .15$, $p = .003$), but not biological risk ($R2 = .03$, $p = .143$) contributing a significant amount of variance. For health care utilization, the overall regression model was significant, $F (5, 69) = 2.95$, $p = .018$, with biological risk approaching significance ($R2 = .05$, $p = .067$) and psychological risk ($R2 = .09$, $p = .027$) contributing significant variance. The results demonstrate the utility of using the biopsychosocial model to understand pain variability in pediatric SCD and suggest a prominent role for psychological factors in this condition.

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D-143b
OBSTRUCTIVE SLEEP APNEA SEVERITY AND SYMPTOMS OF FIBROMYALGIA

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Fibromyalgia (FM) is a chronic pain condition defined by the presence of widespread chronic pain and frequently, sleep disruption. The purpose of the present study was to examine the relationship between Obstructive Sleep Apnea (OSA) severity and symptoms of FM: Average and Worst Pain (0-100 Likert Scale); Depression symptoms (Beck Depression inventory: BDI) Fatigue (Fatigue Severity Scale: FSS), and Functional Disability (Fibromyalgia Health Assessment Questionnaire: FHAQ) . PARTICIPANTS were women in the Fibromyalgia and Sleep Treatment study (Project FAST), 22 women (age, M=45.08, SD 13.24: FM symptoms, M=11.92 years, SD 12.91; 84% Caucasian) recruited from a Rheumatology clinic and from advertisements. Presence of FM was confirmed by examination and OSA by a polysomnographic (PSG) sleep study. Initial contact was made with 111 potential participants: 32 did not meet inclusionary criteria and 57 were lost to follow up. PROCEDURE: Based on an overnight sleep study 12 women were found to have mild OSA (AHI= 10-15) 10 had moderate OSA to severe OSA (AHI: 15-35). RESULTS: Participants with mild OSA were compared to those with moderate to severe OSA, controlling for age and years with FM symptoms. Women with mild OSA reported greater average and worst pain than those with moderate to severe OSA, p's<.05. There were no other significant group differences. Although participants with moderate to severe OSA reported less pain, Respiratory Distress Index (RDI) was related to higher average pain (r=.535, p=.07) and worst pain (r=.623, p=.04). RDI was not related to average pain or worst pain among women with mild OSA, correlation differences between mild and moderate to severe groups were significant (p<.05). CONCLUSION: Although women with moderate to severe OSA reported lower pain than women with mild symptoms, RDI was more strongly linked to pain, suggesting that sleep disruption may be more tightly linked among specific subgroups of FM patients, but not others.

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D-164a
IS EXERCISE USED AS MEDICINE? ASSOCIATION OF FUNCTIONAL LIMITATIONS WITH MEETING STRENGTH TRAINING GUIDELINES AMONG OLDER US ADULTS

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Background: For many older adults, the loss of independence is considered a fate worse than death. Unfortunately, functional limitations increase predictably with age due to loss of muscle mass and strength. Strength training (ST) improves physical function yet it remains unknown whether older adults with functional limitations are participating in ST. The purpose of this study was to determine the association between meeting ST guidelines (≥ 2 times per week) and the presence of functional limitations among older adults.

Methods: Data was used from the National Health Interview Survey (NHIS) conducted in 2011 in the United States to determine how often older adults participate in ST at least twice per week, consistent with exercise guidelines. A composite variable of functional limitations for each individual was created by summing

9 self-reported limitations. Covariates included demographics and past medical history, consistent with variables shown to be associated with ST in other studies. Multivariate analysis was conducted using multiple logistic regression analysis.

Results: Overall, 16.1% of older adults reported meeting ST guidelines. After adjusting for demographics and past medical history, those with no limitations and 1-4 limitations had 1.79 times (95% CI; 1.39, 2.29) and 1.35 times (95% CI; 1.04, 1.75) the odds of meeting ST guidelines, respectively, versus those reporting 5-9 limitations.

Conclusions: Our results show a consistent and troubling pattern; those with functional limitations were less likely to meet ST guidelines. This suggests great potential for using ST to improve the public's health and alternative strategies are needed to engage older adults, particularly those with functional limitations. Without a change in approach, unfortunately, the profound beneficial effects of ST will continue to be used least by those who need it most, threatening the best intentions of "Exercise is Medicine."

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D-164b
IS STRENGTH TRAINING ASSOCIATED WITH MORTALITY BENEFITS? A 15 YEAR COHORT STUDY OF US OLDER ADULTS

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Background:

Aerobic activity has consistent and powerful relationships with future mortality. Although several smaller studies have observed that greater amounts of muscle strength are associated with lower risks of death, few have studied the relationship between strength training behavior and mortality in a national sample. We undertook this investigation to understand the association between meeting ST guidelines and future mortality.

Methods:

Data were analyzed from the 1997-2001 National Health Interview Survey (NHIS) linked to death certificate data in the National Death Index. The main independent variable, guideline-concordant ST (i.e. twice each week). Covariates included demographics, past medical history, and other health behaviors, consistent with other studies. Analysis was limited to adults of 65 years or older. Multivariate analysis was conducted using multiple logistic regression analysis, with the dependent variable being all-cause mortality.

Results:

Overall, 9.6% of NHIS adults age 65 and older (N=30,162) reported doing guideline-concordant ST and 31.6% died during the follow-up period. After adjusting for demographic covariates, those who reported guideline-concordant ST had 46% lower odds of all-cause mortality than those who did not (adjusted odds ratio: 0.64; 95% CI: 0.57, 0.70; p<0.001). This association remained when adjusting for past medical history and health behaviors.

Conclusions:

Guideline-concordant ST is significantly associated with decreased overall mortality in older US adults, although only a minority met ST recommendations. Identifying interventions to successfully engage older adults in guideline-concordant ST has the potential to significantly reduce all-cause mortality in this population.

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D-164c
CANNABIS USE AND EXERCISE PERFORMANCE: IS THERE A RELATIONSHIP?

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Policies regarding cannabis use are rapidly changing, yet public officials have limited access to scientific information that might inform the creation of these policies. Colorado is an ideal context in which to begin such investigations, given recent legalization of cannabis use for recreational purposes and clear emphasis on health (in 2012, Colorado was ranked as the most physically active state in the US). There are anecdotal reports that cannabis is commonly used prior to athletic activity. In fact, the World Anti-Doping Agency includes cannabis as a prohibited substance in sport, partly because it is believed that it may enhance sports performance (Huestis, 2011). On the other hand, there are also anecdotal reports that cannabis decreases motivation to exercise. While there have been few laboratory studies on the effects of cannabis use on exercise behavior, there have been a number of studies on the effects of exercise on endocannabinoids (eCBs). Given the role of eCBs, it is possible that some exogenous cannabinoids may either have beneficial effects on exercise or interfere with the function of eCBs. Clearly, research is needed to evaluate these possibilities.

Our preliminary findings indicate a potential relationship between cannabis use and exercise behavior, specifically amount of time spent exercising during an aerobic exercise bout. In a small sample of college students selected on the basis of their cannabis use, individuals who entered the study as heavy (i.e. daily) cannabis users (n=18) indicated that they exercised more than double the number of minutes in one week (M=157.22) as individuals who started out never having used cannabis (n=15, M=67.67; p<.09). Frequency of exercise in days per week did not differ (heavy users M=2.5, never users M=2; p<.527). Infrequent cannabis users (n=19) were intermediate in minutes of aerobic exercise. Future research should further examine these relationships in a large sample, using objective, rather than self-report, exercise measures, as well as experimentally evaluate the impact of cannabis use on exercise performance.

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D-164d

AEROBIC AND MENTAL EXERCISE: A PILOT OF FACTORS IMPACTING FLOW AND COGNITION

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INTRODUCTION: Enhanced cognitive benefit of exercise was found for older adults who used a stationary bicycle with a virtual reality tour (cybercycling) compared with a stationary bike alone (Anderson-Hanley, et al., 2012). It appears that interactive physical and mental stimulation may yield added benefit. This study explored a variety of mental factors that might enhance and maximize the benefit. This study aimed to maximize cognitive benefits by adjusting the level/type of mental challenge while exercising (either freeing in meditation; Chiesa et al., 2011), or stimulating as in a working memory task; Morrison & Chein, 2011).

METHODS: A pilot of 18 college students (X = 18.4) were randomly assigned to a 30' single bout of aerobic, mental or combined exercise in one of six conditions: cycling (stationary bike only), cybercycling (interactive virtual bike tour on screen), meditation (guided imagery), mindful cybercycling (same guided imagery), videogame only, working memory cybercycling (attend to stimuli along bike path, and reporting every nth occurrence). Executive function was assessed before and after the single bout, along with post-flow experience.

RESULTS: A pattern of differing flow experiences emerged across conditions, revealing greater to lesser mean experiences of flow: meditation (73.0) > mindful cybercycling (60.7) > cybercycling (57.4) > cycling (56.8) > videogame (49.0) > working memory cybercycling (43.7). This manipulation check suggests, as hypothesized, that the conditions provide varied levels of mental engagement. Preliminary evidence indicates that increased mental challenge yields a hypothesized greater improvement in executive function as seen in a significantly greater improvement in Trails 2-1 scores for those in the working memory training + cybercycling condition compared with those in the cybercycle only condition (p = .03).

DISCUSSION: We will extend this line of research to see if similar differential flow experiences and resultant cognitive benefits occur among older adult exercisers when varying the mental exercise components as above.

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D-164e

UNIVERSITY STUDENTS' AWARENESS AND ACCESS TO CAMPUS RESOURCES FOR PHYSICAL ACTIVITY

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BACKGROUND: Evidence suggests that campus-level accessibility to environmental resources support students' recreation and active transport, decreasing their risk of overweight/obesity. PURPOSE: The current research objective was to discover university college students' awareness of outdoor recreational services on/near campus, as well as accessibility to active transport opportunities. METHODS: College students were recruited from a coeducational public research university in Ohio via email. Students agreeing to participate were asked to complete a 10 to 15 minute online survey. RESULTS: Participating students (N=219) were enrolled at the time of data collection, residing both on-campus (75%) and off-campus (25%). The sample was 79% Female and 87% Caucasian, with good representation across academic class (38% sophomores; 31% juniors; & 30% seniors). Participating students reported overall good health (perceived health: 10% excellent; 47% Very Good; 38% Good; 4% Fair; & 1% Poor). Self-reported height and weight was used to calculate body mass index (BMI); on average, participants were within normal weight status (mean BMI= 23.19) with a large standard deviation (SD=4.17). Relevant to participants' awareness of resources on and near the university, 55% of students had never visited the nearby state park, and 63% reported they would visit the park if it were more accessible. Over half of participating students (57%) reported they would be more active if the university recreational center was more accessible; more specifically, 65% of students believed the recreational facility was too crowded, and 57% believed there was not enough equipment. When asked to report accessibility to active commute opportunities, 88% of students reported not having a bike on campus; and reported less than one of their friends had a bike on campus (mean=0.71, SD=1.02). CONCLUSION: Results inform future promotional efforts targeting increased campus-level opportunities for student recreation and active transport.

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D-164f

COLLEGIATE ATHLETES REPORT SIGNIFICANTLY HIGHER PHYSICAL ACTIVITY SELF-DETERMINATION THAN NON-ATHLETES

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BACKGROUND: Physical Activity (PA) is associated with the reduction of numerous diseases, while inactivity contributes greatly to morbidity and mortality. Despite ongoing efforts, research reports limited success in promotion of PA maintenance among the general adult population. Conversely, the typical collegiate athlete is intrinsically motivated to be regularly active; which may be a motivation public health research can learn from. PURPOSE: Examining constructs from the Self-Determination Theory (SDT), the current study aimed to examine potential differences between athletes' and non-athletes' motivation to be physically active. METHODS: Collegiate athletes and non-athletes were recruited from a university in Ohio, and self-reported their PA levels, sedentary behavior, PA self-efficacy, PA self-determination, and PA motives via an online survey. RESULTS: Participating athletes (N=111) were 89% female and 85% Caucasian, with a mean age of 19.8 years; and their non-athlete counterparts (N=197) were 68% female and 94% Caucasian, with a mean age of 23.2 years. Athletes represented both team (28%) and individual level (72%) sports. Compared to non-athletes,

athletes reported significantly more moderate PA (p=0.00), vigorous PA (p=0.00), and less sedentary time (p=0.00). Athletes' also demonstrated higher levels of PA self-efficacy (p=0.00), autonomy (p=0.01), and amotivation (the highest self-determined level of motivation, p=0.00); and athletes reported higher levels of multiple physically active motives (interest/enjoyment, p=0.00; competence, p=0.00; appearance, p=0.01; and social, p=0.00). CONCLUSIONS: In comparison to less active adults, participating collegiate athletes demonstrated impressive underlying self-determination and behavioral motives for PA. Outcomes support theoretical expectations, and suggest potential in targeting similar constructs when promoting PA among the general adult population.

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D-164g
EXAMINING POSSIBLE MEDIATING FACTORS BETWEEN ACCULTURATION AND PHYSICAL ACTIVITY AMONG MEXICAN-AMERICAN ADULTS

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Background: The present study assessed the relationship between acculturation and physical activity (PA), and associations with potential mediating factors such as perceptions of environmental barriers and social support among Mexican-American (MA) adults.

Methods: A cross-sectional study was conducted and a survey was completed by 75 MA adults (18-60 y) to gather socio-demographic information, acculturation level (ARMSA-II scale), ethnic self-identification, level of PA (RAPA), intensity of PA (SBAS), minutes of leisure-time PA per week, intention to exercise, environmental barriers such as safety (mean score of 22 items, grater score=lower barriers) (NEWS), and social support (mean score of 21 items) (MSPSS).

Results: Participants were 64% female, aged 37±9.2 y, and had low Anglo acculturation (mean ARMSA score =-0.42). Participants with greater Mexican orientation had lower leisure time PA (r=-0.24, p<0.05) and those who self-identified as Mexican reported lower PA intensity (r=-0.73, p<0.01). Greater Mexican orientation was associated greater social support (r=0.54, p<0.01). Self-identification as Mexican was associated with greater social support (r=0.43, p<0.01) and to greater environmental barriers (r=-0.38, p<0.01). Greater social support was related to lower intention to exercise (r=-0.36, p<0.01), lower level of PA (r=-0.24, p<0.05) and lower intensity of PA (r=-36, p<0.05). Lower environmental barriers were related to greater leisure time PA (r=0.31, p<0.01), and level (r=0.22, p<0.05) and intensity (r=0.29, p<0.05) of PA.

Discussion: Factors such as social support and perceived environmental barriers are related to acculturation and physical activity among MA adults. Further studies should experimentally examine specific social support and environmental barriers that mediate the relationship between acculturation and PA behaviors.

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D-164h
THE POWER OF BELIEVING: SALIENT BELIEF PREDICTORS OF PHYSICAL ACTIVITY BEHAVIOR IN NORMAL WEIGHT, OVERWEIGHT, AND OBESE PREGNANT WOMEN

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There is an important need to understand how to motivate overweight and obese pregnant women to engage in healthy behaviors such as physical activity (PA). Purpose and Methods: The purpose of this study was to examine salient, self-reported belief predictors of PA behavior in 401 normal weight, overweight, and obese pregnant women across the second and third pregnancy trimesters using the framework of the Theory of Planned Behavior. Results: The behavioral belief that PA decreases discomfort/soreness during pregnancy was the strongest predictor of PA behavior in normal weight (2nd and 3rd trimester PA behavior) and obese (3rd trimester only) pregnant women whereas controlling weight gain most strongly predicted 3rd trimester PA behavior in overweight women. The normative influence of friends was the strongest predictor of 2nd and 3rd trimester PA behavior in only normal weight women. The most salient control beliefs predicting low PA behavior among normal weight women were tired/fatigued (2nd trimester) and no time (3rd trimester). Among overweight women, having no motivation most strongly predicted low 3rd trimester PA behavior. Lastly, among obese women, soreness (2nd trimester) and family responsibilities (3rd trimester) most strongly predicted low PA behavior. Conclusions: These study findings illustrate that pregnant women's beliefs are salient predictors of their PA behavior and they suggest that interventions aimed at overcoming barriers to PA should be specific to both a woman's weight status and the unique changes of the pregnancy trimesters. This study is the first to prospectively examine and identify weight-status specific, intervenable TPB beliefs that predict PA behavior during pregnancy.

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D-166a
ASSOCIATIONS BETWEEN HEALTH LITERACY AND PRENATAL ORAL HEALTH

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Introduction: Health literacy is the ability to obtain, process, and understand basic health information and services needed to make appropriate health decisions and is an important predictor of healthcare utilization, adherence to treatment, and health outcomes.

Objectives: The purpose of this study was to examine the relationship between health literacy and oral health perceptions and practices in a sample of pregnant women.

Methods: While waiting for their regularly scheduled appointment at a public, university-affiliated prenatal care center,

211 socioeconomically diverse pregnant women completed an anonymous questionnaire containing well-validated measures, and received oral health supplies for their participation. Health literacy was assessed using the Newest Vital Sign; a brief (6-item), evidenced-based screening tool.

Results: More than three quarters of participants (78%) had adequate health literacy; 22% had questionable or limited health literacy. Participants with greater health literacy scores were more likely to be Caucasian (r=.36) and married (r=.29), and reported greater income (r=.39) and education levels (r=.35). Additionally, health literacy was associated with perceived control over oral health and greater self-efficacy for oral health behaviors. Limited health literacy was associated with less frequent flossing (r=.16) increased oral health care problems (r= -.16), greater number of missing teeth (r= .-17), and more barriers to oral health care (r= -.17).

Conclusion: These results suggest that health literacy is associated with demographic, socioeconomic, psychosocial, and behavioral determinants of oral health, and is an important consideration during pregnancy because of the potential impact on health outcomes.

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D-171a
COGNITION, AFFECT, AND TYPES OF ROMANTIC RELATIONSHIPS: THE ROLES OF RISK, WORRY, AND ANGER IN INTENTIONS TO USE CONDOMS

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Research has generally conceptualized sexual relationships as casual or romantic. However, within these broad categories are relationship types that may differ in cognitive and affective perceptions of risk. The purpose of this study was to examine cognitions and affect associated with different types of casual and romantic relationships and investigate whether cognitions and affect across relationship types might be associated with intentions to use condoms. In a cross-sectional study on Mechanical Turk, 571 adults (ages 18 to 73, M = 33.41, SD = 11.91, 59.4% women) were surveyed on cognitive and affective perceptions of risk across five relationship types: boyfriend and girlfriend (BFGF), someone you date, friends with benefits (FWB), hook-ups, and one-night stands (ONS), and the associations they had with condom use intentions. Cognitive assessments of STI risk were positively correlated with intentions to use condoms for every relationship (someone you date, FWB, hook-ups, and ONS) except BFGF. Affective assessments of STI risk (anger and worry) were also positively correlated with condom use in every relationship except worry of getting an STI after unprotected sex within the BFGF relationship. A full regression model including sex, relationship status, and all the cognitive and affective assessments across each sexual relationship revealed that adults who reported more STI risk after unprotected sex from the hook-up relationship (β = .32, p < .05) and more worry over getting an STI after unprotected sex from a ONS (β = .32, p < .05), had greater intentions to use a condom with a new partner (ΔR2 = .13, F(15, 381) = 3.74, p < .01). Taken together, both cognitive

and affective assessments of risk explain sexual risk behavior in casual sex relationships. By understanding the nature of sexual relationships and how they influence adult's sexual health decisions, we can use cognitive and affective perceptions of risk for developing health communication interventions that reduce STI transmission among at-risk populations.

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D-171b
RUMINATION, MINDFULNESS, AND HEALTH BEHAVIORS IN COLLEGE STUDENTS

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Students in college form the health habits they will maintain throughout their lives (Kwan et al., 2012), so understanding the way in which cognitive processes affect their eating, exercise, and sexual risk behaviors is significant. Preliminary research suggests that some variables may predict health behaviors. Rumination, thinking about one's feelings repetitively, comprises both adaptive (reflective) and maladaptive (brooding) aspects (Nolen-Hoeksema, 2000). Being stuck in one's head may result in an inability to make health decisions. Mindfulness, focusing one's attention non-judgmentally on experiences in the present, may increase awareness around health behavior decisions (Chatzisarantis & Hagger, 2007). The current study examined these relationships.

Method

147 college freshmen (63.2% female, mean 18.1 years, 74.4% Caucasian) completed a cross sectional online battery of questionnaires assessing rumination (Response Styles Questionnaire; Treynor, Gonzalez, & Nolen-Hoeksema, 2003), mindfulness (Cognitive and Affective Mindfulness Scale; Kumar, 2005), and health behaviors in the way eating (NCI Fruit & Vegetable Screener), exercise (Godin Leisure Time Questionnaire; Godin & Shepherd, 1985), sexual risk taking (Quinn & Fromme, 2010), and intention to engage in a healthy lifestyle (Food Choice Questionnaire; Steptoe et al., 1995).

Results and Discussion

Bivariate correlations revealed significant (p <.05) positive relationships between maladaptive rumination and fat intake and negative relationships between reflective (adaptive) rumination and sexual risk taking behavior. When including intention for a healthy lifestyle as a moderator, maladaptive rumination positively related to total fat intake and sexual risk taking behavior and mindfulness negatively related to total fat intake and sexual risk taking behavior.

Rumination is a generally unstudied variable that may be important in predicting health behaviors. Mindfulness may help to increase health by decreasing rumination or increasing awareness. Also, measuring intention appears to be important. More research is needed to further understand these linkages.

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D-176a

PERCEIVED RISKS AND BENEFITS OF PARTICIPATING IN TEXT MESSAGE-BASED SEXUAL HEALTH INTERVENTIONS

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This poster details perceived risks and benefits of participating in a text message-delivered sexual health intervention compared to a traditional small-groups intervention for at-risk, young, African American women, and how perceptions of the risks and benefits affected willingness to participate in these types of interventions. This information may be particularly relevant for Institutional Review Board (IRB) members being asked to consider the ethical issues inherent in the use of new technologies to deliver interventions. In preliminary qualitative research using focus groups, benefits often included practical considerations such as travel, childcare, and convenience, while risks were driven by privacy and fear of social judgment. Qualitative participants cited more privacy concerns regarding the face-to-face intervention due to the potential for judgment by the other participants in the group and the inability to guarantee that private information would not be shared outside the group. ACASI surveys were conducted with the same population (N = 102) using scales developed from the qualitative results regarding the identified risks and benefits. Qualitative findings were replicated in these results, as the text message-based intervention seen as more convenient, and the face-to-face intervention was associated with more concerns with lack of privacy. Some risks and benefits were implicated in how willing potential participants would be to participate in either the face-to-face or text message-based interventions (e.g., lack of privacy and comfort with discussing sexual topics, respectively). However, when asked to pick one intervention to participate in, preferences were almost equally split, and surprisingly none of the hypothesized risks or benefits were implicated in this choice. Conclusions include the lack of justification for arguing that the risk-benefit analysis of text message-based interventions is different from than that of traditional, small-groups interventions, which are often approved with little concern by IRBs.

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D-179a

RELATIONSHIP FACTORS AND SLEEP QUALITY: THE ROLE OF ANXIETY AND DEPRESSIVE SYMPTOMS

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Prior research suggests that poor relationship quality negatively impacts sleep quality, and it has been hypothesized that increased anxiety and depression are potential mechanisms. This study's purpose was to examine whether anxiety and depressive symptoms significantly mediate the relationships between three relationship factors and sleep quality. A representative sample of US citizens in committed relationships (N = 168; 53% female; 75% Caucasian) completed surveys of sleep quality, relationship factors (relationship satisfaction, negative communication, and relationship instability), depressive symptoms, and anxiety. Results showed that poorer sleep quality was positively associated with poorer relationship quality (βs ranged from .28-.60) and more depressive and anxiety symptoms (r = .50 and .60, respectively; all ps < .001). All three measures of poor relationship quality were significantly associated with anxiety (βs ranged from = .30-.50) but only marital instability was positively related to depression, β = .56, p < .001. Using a regression framework and controlling for relevant confounders, anxiety significantly mediated the relationship between all three relationship factors and sleep quality, accounting for 49-64% of the relationships. Depression also significantly mediated the relationship between marital instability and sleep quality, accounting for 79% of the relationship. These results suggest that relationship factors are important to consider when assessing sleep quality. Moreover, increased anxiety is one possible pathway in the relationship between poor relationship quality with sleep quality, and depressive symptoms are another potential pathway between relationship instability and sleep quality. Future studies could explore whether addressing anxiety and depressive symptoms, when a person is experiencing relationship problems, is related to improved sleep quality.

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D-186a

ALTERNATIVE TOBACCO PRODUCT ADVERTISEMENTS AND PERCEPTIONS AMONG YOUNG MEN

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Background: In an effort to renew the smokeless tobacco market in the U.S., industry has introduced a smokeless tobacco product called snus. Companies producing and marketing snus in the U.S. are prohibited from making claims that these products pose less risk or are less addictive than cigarettes. However, advertisements for snus seem to have made such claims implicitly.

Methods: Participants were 22 male smokers age 18-29 (M=26.64, SD=2.92). Tobii Studio TX300 was used to display 5 snus advertisements (branding removed, images randomized) for 20 seconds each and track eye movements. After each advertisement, participants responded to questions about harm and addictiveness. Analyses were conducted to examine the eye tracking results (e.g. fixation duration for areas of interest), harm and addictiveness perceptions, and the associations between them.

Results: On average, participants' total fixation duration on the warning labels across all five advertisement was 1.60 (SD=0.86) seconds, time to first fixation was 6.14 (SD=2.56) seconds, and fixation count was 6.72 (SD=3.3). Regression analysis revealed that harm was significantly associated with the total fixation duration on the warning label controlling for having heard of snus prior to the study (b=1.490 , t(18)=2.90, p=.010) for one advertisement.

Conclusions: This study indicates that eye tracking results are

associated with harm and addictiveness perceptions among young male smokers. Understanding how smokers perceive and understand products after viewing advertisements may inform regulations regarding implicit claims about product harm and addictiveness. Our results may guide public health efforts to educate smokers on the risks of emerging products.

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D-186b
OBSTETRICIAN-GYNECOLOGISTS' BARRIERS TO PROVIDING TAILORED SMOKING CESSATION CARE TO PATIENTS WITH LOW LITERACY

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Introduction: Higher levels of reading and numeracy have been associated with increased odds of quitting smoking (Martin et al., 2011). Obstetrician-gynecologists (ob-gyns) are the primary healthcare providers for women. Little is known about how ob-gyns assistant patients with low literacy to quit smoking. Method: National survey study of a quasi-random sample of ob-gyns who voluntarily participated. Results: Of the 1024 ob-gyns invited, 46% responded. This analysis is among the 236 responders who answered the questions about literacy. A total of 45.8% manage pregnant patients who have below average literacy skills differently than pregnant patients with average or above average literacy skills. Among those who do not (n = 128) 32.0% they did not do so because different management is not needed from them, 28.1% indicated lack of resources for low literate patients, 25.8% indicated lack of training on how to help low literate patients, 19.5% indicated no time, 18.0% indicated that literacy is not relevant to smoking and health, and.8% indicated that it is not their responsibility. Most disagreed that assisting those with low health literacy was more the role of nurses than physicians (76%). Three quarters agree that low health literacy skills impede patients' ability to stop smoking (76.1%). Over half agreed that tobacco cessation packaging is written at appropriate reading levels (57.2%) and that their practices need to incorporate more resources for patients with low literacy (60.8%). Ob-gyns serving underserved populations ($\chi2 = 3.96$, p = .046) and those with a higher percentage of Medicaid patients being more likely to treat low literacy patients differently ($\chi2 = 8.2$, p = .042). Those who manage low literacy patients differently were more likely to agree that literacy impedes a patients' ability to stop smoking ($\chi2 =11.2$, p = .048). Discussion: To address key barriers to ob-gyns' assisting low literacy patients quit smoking, more education about the literacy challenges encountered when quitting smoking, and more training on helping low literacy patients are needed.

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D-186c
IMPLICIT SMOKING COGNITION: STRUCTURE AND PREDICTIVE UTILITY

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Self-report measures of smoking attitudes are a useful tool for determining an individual's intention to smoke cigarettes, yet such attitudes generally serve as weak predictors of smoking behavior. More recently, researchers have discovered that implicit cognitions—i.e. cognitions related to smoking that operate automatically and outside of conscious awareness— provide a potentially fruitful avenue toward a better understanding of smoking-related behaviors.

Two research questions guided the direction of the current study: (RQ1) What is the structure of implicit smoking cognition? and (RQ2) how do implicit smoking cognitions compare to explicit smoking attitudes as predictors of behavior?

Methods: In order to address these automatic implicit cognitions, implicit measures were modified to address four distinct cognition domains pertinent to smoking behavior including: health, social, self/other, and positive/negative valance. Each participant completed all four implicit measures in addition to explicit self-report items that tap into conscious beliefs within the same four domains of cognition.

Results: A factor analysis of the four implicit measures suggests implicit attitudes are best represented by a single factor. When both the implicit and explicit measures were included in the analysis a three-factor solution emerged representing: explicit health attitudes, explicit social attitudes, and implicit smoking cognitions. Regression analyses (using factor scores derived from the 3-factor solution as predictors) suggest the implicit cognition factor predicts unique variation in self-reported smoking behavior above and beyond explicit health and social factors.

Conclusions: Our results suggest that responses to the four implicit measures were driven by a general implicit smoking attitude (RQ1). This implicit attitude was useful as a predictor of smoking behavior (RQ2). These findings suggest that interventions might increase effectiveness by addressing implicit attitudes directly; however, experimental work is necessary to better investigate the plausibility of targeting implicit cognitions for the purpose of intervention.

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D-186d
ECOLOGICAL MOMENTARY ASSESSMENT OF MOOD AND SMOKING BEHAVIOR IN CHRONIC PAIN PATIENTS

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Smoking and psychological distress are prevalent in chronic pain populations. However, little is known about the association

between mood and smoking behavior in pain patients. We evaluated the role of mood as an antecedent for smoking behavior in chronic pain patients using ecological momentary assessment. Eligible outpatients had chronic pain, smoked > 3 cigarettes daily, and completed sociodemographic, mood, and tobacco use measures. Participants completed M=31.0 (SD=15.4) daily assessments on handheld computers over 1 week (N=1,118 total assessments). Participants (N=36; 66.7% women, 38.9% Caucasian) smoked M=17.6 (SD=9.4) cigarettes daily. The mean baseline worst pain rating in the past week=8.6 (SD=1.5) and participants had high levels of psychological distress (mean total score on the Mental Health Inventory=44.9 [SD=22.7]). EMA mood ratings were represented by two factors: positive/high arousal (cheerful, peppy, active, calm, low anxiety; M=0, SD=.6) and negative/low arousal (sad, high anxiety, tired, calm, quiet; M=0, SD=.8). Multilevel modeling showed that participants reported higher levels of negative mood when they were "about to smoke" than when not smoking (p=.05), but positive mood levels were not different. Participants also reported greater negative mood before smoking if they had "just smoked in the past 30 minutes" than after smoking (p=.02). Multilevel modeling, controlling for sociodemographic characteristics and tobacco use, showed that participants reported greater positive mood after smoking in the past 30 minutes than before smoking in the past 30 minutes (p=.03). These findings suggest that negative mood may be an antecedent for smoking behavior in pain patients and that smoking may increase positive mood. Future studies should evaluate whether pain modifies the association between mood and smoking, and clarify whether tobacco interventions in pain populations should target negative mood states prior to smoking behavior.

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D-187a

DOES SPIRITUALITY CONFER MEANING? CROSS-LAGGED PANEL ANALYSIS AMONG CONGESTIVE HEART FAILURE PATIENTS

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Among individuals dealing with highly stressful experiences such as life limiting illness, spirituality is thought to confer a sense of meaning by providing individuals with a framework to make sense of their lives and helping them feel that their lives matter (Park, 2013). Although spirituality is often assumed to provide a sense of meaning, few studies have directly tested this assumption.

We employ cross-lagged panel analysis to examine the effect of spirituality on meaning. While cross-lagged panel analysis cannot establish a causal effect, they do provide for a more rigorous test of a causal relationship (Finkel, 1995). Cross-lagged panel analyses have the advantage of showing temporal precedence of spirituality, and of examining the effect of spirituality on changes in meaning. We test for the relationship among a sample of Congestive Heart Failure (CHF) patients. CHF can be debilitating and CHF patients are faced with many significant physical and emotional challenges, making them a suitable sample.

The sample consisted of 142 CHF patients (65% male; 84% white; 84% with family income less than $50,000; mean age: 68.7). Data were collected via mailed surveys at two time points six months apart. The Daily Spiritual Experiences Scale (Underwood & Teresi, 2002) and an abbreviated version of the Perceived Personal Meaning Scale (Wong, 1998) were administered at both time points.

Results supported the idea that spirituality may confer a sense of meaning. Cross-lagged effects showed that even after controlling for Time 1 meaning, Time 2 meaning was significantly predicted by Time 1 spirituality (β = .17, p < .01). In other words, participants' Time 1 spirituality predicted changes in meaning across the six month period. These results add to the literature on spirituality and meaning providing more compelling evidence that spirituality provides a sense of meaning. This has important implications for individuals dealing with difficult health problems and hardships, suggesting that among such individuals, spirituality may help maintain the sense that life is meaningful.

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D-193a

RESTING PLASMA LIPIDS AND CARDIOVASCULAR REACTIVITY TO ACUTE PSYCHOLOGICAL STRESS

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Objective: Prior research suggests that hyperlidemia is associated with elevated blood pressure responses to acute stress but whether lipid levels influence underlying cardiac and vascular determinants of blood pressure is not known. Thus, our goal was to examine whether lipids were associated with stress-induced blood pressure responses and responses of stroke volume (SV), cardiac output (CO) and total peripheral resistance (TPR). Method: In 19 healthy university students (15 men), blood was drawn to measure lipid levels (triglycerides, LDL-c, HDL cholesterol (HDL-c), total cholesterol) after a 10-min rest period. Participants then completed a 6-min mental arithmetic stressor and a 3-min cold pressor (separated by a 10-min recovery). Systolic (SBP) and diastolic (DBP) blood pressure, heart rate (HR), SV, CO, and TPR were measured. Results: Repeated measures analyses indicated significant task effects for SBP, DBP, HR, SV, and TPR (ps < .002) and a marginally significant task effect for CO (p = .06). Covariate adjustment for resting lipid levels did not influence these relationships. GLM analyses revealed that a model including all four predictors (LDL-c, HDL-c, total cholesterol, triglycerides) significantly predicted DBP cold pressor reactivity (adjusted $R2$ = .409, p = .012). Individually, only total cholesterol β = .66, p = .008) and LDL-c (β = .57, p = .008) significantly predicted DBP cold pressor reactivity. GLMs for other cardiovascular measures were nonsignificant. Conclusions: Resting lipids were only associated with DBP reactivity to the cold pressor but were not associated with underlying determinants of blood pressure. Restriction of range of lipids may explain these nonsignificant findings, i.e. lipids were not high enough to adversely affect cardiovascular reactivity.

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D-193b
CORTISOL AWAKENING RESPONSE AND CORTISOL RESPONSE TO STRESS IN WOMEN WITH OVERACTIVE BLADDER

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Introduction: Overactive bladder (OAB) is characterized by frequent spontaneous smooth muscle bladder contractions; OAB urinary symptoms have been associated with greater subjective stress. Physiologic stress response modulated by the hypothalamic-pituitary-adrenal axis (HPA) may contribute to urinary symptoms in women with OAB.

Methods: Postmenopausal women aged 45-75 with OAB were recruited from a urology practice; age matched healthy controls were recruited from a women's health center. Participants were excluded if they were undergoing treatment for stress reduction, using psychiatric or hormonal medications, or reported urinary infection, bladder cancer, or psychiatric illness. The Trier Social Stress Test (TSST) was used to induce psychological stress. Salivary cortisol was obtained for 3 days prior to TSST to assess cortisol awakening response (CAR). Salivary cortisol levels were obtained prior to (T-15, T-5 minutes) and at the TSST (T=0, T+30, T+40, T+50 minutes). CAR, mean cortisol levels and cortisol area under the curve (AUC) were calculated. Independent sample T-tests compared CAR in OABs and controls, and analysis of variance (ANOVA) compared cortisol AUC pre- and post-TSST in OABs and controls.

Results: Eleven patients with OAB and 7 controls completed the TSST. No difference in CAR was detected between OAB women and controls (p = 0.97). Regarding psychosocial stress response, controls showed a 2.2% mean cortisol decrease from pre- to post-TSST, while OABs showed a 72.2% increase. The TSST produced a significant increase in cortisol AUC (p = 0.001) with no significant effect of OAB status (p = 0.26), although controls showed a 3.8-fold cortisol AUC increase and OABs showed a 6.5-fold cortisol AUC increase.

Conclusion: Women with OAB have similar baseline physiologic measures of stress response as controls, reflected in CAR. Women with OAB may have greater physiologic responsiveness to stress as measured by salivary cortisol following TSST.

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D-198b
TRAUMA TYPE AND NON-MEDICAL USE OF PRESCRIPTION DRUGS IN YOUNG ADULTS

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Data from the CDC show increasing rates of the non-medical use of prescription drugs (NMUPD) among U.S. young adults. A few prior studies have documented associations between traumatic experiences and NMUPD, with most research focusing on sexual trauma. Research from the trauma field suggests that interpersonal trauma (e.g., assault) and non-interpersonal trauma (e.g., natural disasters) have different associations with mental health and behavioral outcomes. In the present study we examined both trauma types and their relation to NMUPD in a sample of 767 young adult (ages 18-25) college students. Overall, 28% of participants reported lifetime NMUPD and 17% reported NMUPD in the past 3 months. Individuals who reported lifetime interpersonal trauma were significantly more likely to report the non-medical use of prescription analgesics, anxiolytics, and stimulants in the past 3 months. No relationships were seen between non-interpersonal trauma and NMUPD. In a multivariable logistic regression analysis, interpersonal trauma was significantly related to 3-month NMUPD (OR = 1.44, 95% CI = 1.11, 1.87, p <.01) after accounting for the influence of age, gender, race, year in school, fraternity/sorority membership, and full/part-time student status. Findings suggest that interpersonal but not non-interpersonal trauma is associated with prescription drug misuse. It may be that NMUPD in this population represents an attempt at self-medication for trauma-related emotional distress, although that cannot be examined in a cross-sectional study. Whether or not trauma is causally linked to NMUPD, the present findings argue for a careful screening of substance use in young adults with a history of interpersonal traumatic experiences.

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D-201a
EFFECTS OF STRESS ON CORTISOL:DHEA-S RATIO IN BINGE DRINKING WOMEN

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Alcohol abuse is one mechanism through which college students attenuate the stress that comes with the transition to college. Undergraduate students often participate in problematic drinking; about 4 out of 5 college students report drinking alcohol and half participate in binge drinking. In young adults who binge drink (BD) alcohol, the hypothalamic-pituitary-adrenal stress axis is dysregulated, as demonstrated by blunted cortisol (catabolic hormone) and DHEA-S (anabolic hormone) levels following acute stress (Wemm et al 2013). To further examine the stress response in women who BD, we assessed cortisol and DHEA-S concurrently. We hypothesized that the ratio of salivary cortisol:DHEA-S levels would be blunted among BD women following acute stress compared to non-BD women. To test this hypothesis, we measured salivary cortisol and DHEA-S levels in response to the Trier Social Stressor Task in 46 female college students in either the luteal or follicular phase of the menstrual cycle; 10 BD and 19 non-BD in luteal phase, 17 non-BD in follicular phase. Binge drinking status was based on self-reported alcohol intake and defined as consuming > 4 drinks over a 2 hr

time span. Saliva was collected at baseline, 15 min following the stressor, and 60 min later (recovery). Overall, BD women in the luteal phase displayed a lower cortisol:DHEA-S ratio compared to non-BD women in both the luteal and follicular phase ($p < 0.05$). Further, the cortisol:DHEA-S ratio decreased in response to the stressor similarly for BD luteal and non-BD luteal and follicular women ($p < 0.05$). Results suggest that women in the luteal phase of their menstrual cycle who binge drink alcohol may display a lower overall cortisol:DHEA-S ratio as a result of blunted cortisol and elevated DHEA-S levels. Further investigation is necessary to examine whether stress-induced cortisol:DHEA-S changes are associated with other neuroendocrine (e.g, oxytocin) and psychosocial correlates (e.g., depressive symptoms, anxiety) that place women at risk to binge drink.

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