Rapid Communications
Poster Session A

Wednesday, April 22, 2015
6:00 PM-7:00 PM
ADJUVANT HORMONAL THERAPY AND ADHERENCE DECISIONS IN BREAST CANCER SURVIVORS: A MIXED-METHODS STUDY

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Adjuvant hormonal therapy (AHT) has been shown to improve survival in hormone-receptor-positive breast cancer survivors, however, up to half do not complete the recommended 5-year treatment (Chlebowski & Geller, 2006). Patient management of medication side effects and engagement with physicians are two potentially modifiable factors (Murphy et al, 2012), but their associations with adherence are not well described in the literature. Our aims were to explore survivors’ experiences with prescribed AHT to 1) describe appraisal and management of side effects and 2) deconstruct decisions to maintain AHT.

We invited 1,510 survivors from an academic hospital cancer registry to complete a survey; from the 452 who responded, we purposively sampled 15 adherent and 15 non-adherent to AHT for 30-minute, semi-structured telephone interviews. We recorded and transcribed interviews for analysis, using open coding to reduce data into themes.

Survivors consistently mentioned problematic AHT side effects, the most common being menopausal symptoms and joint pain; less common side effects were cognitive decline and cardiac distress. Some reported seeking advice and coping strategies from their medical team. Among adherent survivors, the themes of perseverance and tolerance of side effects were strong, especially when women partnered with providers to identify coping strategies. Non-adherent survivors expressed more difficulty managing side effects and perceived less benefit to AHT when side effects were bothersome or debilitating. Overall, survivors appeared motivated to maintain AHT, but identified a tolerance “limit” for side effects after which a provider’s recommendation was less influential.

This study elucidated AHT adherence as a complex continuum of behaviors and decision points. These insights may be especially useful in providing self-management strategies for survivors taking AHT and to promote timely delivery of patient and provider interventions to enhance adherence.

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BODY MASS INDEX IS ASSOCIATED WITH PSYCHOSOCIAL ADJUSTMENT IN OVARIAN CANCER PATIENTS

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Background: Studies examining body mass index (BMI) in cancer typically assess its relationship with cancer incidence. Little is known about the effect of BMI with respect to psychosocial outcomes after cancer diagnosis.

Methods: Women with ovarian cancer (N=223) were assessed prior to surgery and at 1-year post-surgery (N=137). Regression analyses were used to assess relationships between BMI and depressed mood, positive affect, social support, functional well-being, and perceived stress. Covariates for pre-surgery analyses included age, stage, grade, physical well-being, amount of tumor ascites (mL) and presence of medical comorbidities (cardiovascular events, peripheral vascular disease, diabetes, renal disease, liver diseases, and previous cerebrovascular events). For 1-year outcomes, physical well-being at 1-year and recurrence status were included as additional covariates along with the covariates stated above. Follow-up analyses analyzed group differences of BMI categories (<18.5: underweight, 18.5-24.9: normal weight, 25-29.9: overweight, >30: obese, including morbidly obese with BMI >40).

Results: Prior to surgery, BMI was associated with greater depressed mood ($\beta$=.17, $p=.02$) and perceived stress ($\beta$=.21, $p<.01$), lower levels of positive affect ($\beta$=-.16, $p=.01$) and social support ($\beta$=-.26, $p<.01$), and poorer functional well-being ($\beta$=-.15, $p<.01$), including the controls stated above. Follow-up group analyses revealed that obese patients had the highest levels of depression and significantly more perceived stress, less positive affect, and poorer functional well-being than normal-weight patients. Obese patients also had significantly less social support than normal-weight and overweight patients. In models predicting 1-year psychosocial adjustment, BMI only displayed a marginally significant relationship with poorer functional well-being ($\beta$=-.14, $p=.06$), with obese patients having the lowest levels. BMI also predicted social support at 1-year, but this was fully mediated by its effect on baseline social support.

Conclusions: These results underscore the importance of screening for psychosocial adjustment in obese ovarian cancer patients prior to surgery. Obesity may also present unique challenges when transitioning into survivorship.

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A026c

BOWEL AND GASTROINTESTINAL SYMPTOMS RELATE TO INCREASED DISTRESS INRECTAL AND ANAL CANCER SURVIVORS

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Bowel dysfunction and gastrointestinal (GI) symptoms are common after treatment for rectal and anal cancer (RACa). These symptoms have been associated with reduced quality of life; however, little research has explored the psychosocial impact of bowel and GI symptoms in RACa survivors. This study examined the relationships among bowel and GI symptoms and psychological variables in this population.

Methods: RACa survivors (N=144) more than one year post-treatment completed a baseline assessment as part of a larger sexual health intervention study. Pearson’s correlation tested bivariate relations. Separate regression models tested relations among bowel and GI symptoms and depression and anxiety, controlling for age, disease type, time since treatment, stoma status and social functioning (selected a priori).

Main Outcome Measures: The eORTC-QLQ-CR30 and CR38 diarrhea, constipation, and GI symptoms and social function subscales and the Brief Symptom Index depression (DEP) and anxiety (ANX) subscales.

Results: Participants (men, n=74; women, n=70) were on average 56 years old (SD=10.3), white (81%), partnered (71%), employed (65%); 4.6 (SD=3.3) years post-treatment and 15% had a stoma. Diarrhea was endorsed by 38% of participants and 35% reported constipation in the past week; 40% felt bloated, 33% reported abdominal pain, and 67% were bothered by gas. Stoma problems were 12.50 (SD=8.05) (range = 0 - 34.00). When controlling for surgery (lumpectomy or mastectomy) and age at enrollment, greater baseline IeS-I scores significantly predicted greater sleep quality and fatigue severity in women with non-metastatic BCa. Methods: Women (N=183) with non-metastatic stage 0III BCa were recruited 2-10 weeks post surgery to participate in a psychosocial intervention prior to adjuvant therapy. Demographic and health information was self-reported and confirmed by medical chart review, and the women completed the Impact of Events Scale (intrusion scale) (IES-I), the Pittsburgh Sleep Quality Index (PSQI) and the Fatigue Symptom Inventory (severity scale) (FSI-S). Linear regressions were run on the IES-I and PSQI scores as well as on the IES-I and FSI-S scores controlling for days from surgery to study enrollment, stage of cancer, type of surgery (lumpectomy or mastectomy) and age at enrollment.

Results: Women were middle-aged (M=54.28, SD=10.06), well educated (M=15.52 years of education, SD=2.99), and had an average income of $101, 240 (SD=$73, 349). Mean IES-I scores were 1.31 (SD=0.86) (range = 0 - 3.71), mean PSQI scores were 9.67 (SD=3.50) (range = 5.00 - 19.00), and mean FSI-S scores were 12.50 (SD=8.05) (range = 0 - 34.00). When controlling for days from surgery to study enrollment, stage of cancer, type of surgery (lumpectomy or mastectomy) and age at enrollment, greater baseline IES-I scores significantly predicted greater sleep problems (β=2.51, t(175)=9.84, p<0.001; R²=0.38, F(3,170)=20.86, p<0.001), and greater fatigue severity scores (β=4.42, t(175)=6.67, p<0.001; R²=0.216, F(5,170)=9.40, p<0.001) at baseline. Conclusions: Greater cancer-specific thought intrusions were related to worse sleep quality and greater fatigue severity in non-metastatic BCa patients. Findings support that the intrusive thought about breast cancer can relate to sleep and fatigue above and beyond physical effects of surgery, stage of disease, and aging in the weeks after surgery. Future interventions targeting intrusive thoughts early in treatment may have physical benefits for the patients, as reflected in self-reported sleep quality and fatigue severity levels.

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A026d

CANCER-SPECIFIC INTRUSIVE THOUGHTS PREDICTS FATIGUE SEVERITY AND SLEEP QUALITY IN NON-METASTATIC BCA PATIENTS

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Objective: Women with breast cancer (BCa) often report high levels of psychological distress and intrusive thoughts. Less is known about the relationship between intrusive thoughts and sleep quality and fatigue. The present study explores the relationship between the cancer-specific thought intrusions and sleep quality and fatigue severity in women with non-metastatic BCa. Methods: Women (N=183) with non-metastatic stage 0III BCa were recruited 2-10 weeks post surgery to participate in a psychosocial intervention prior to adjuvant therapy. Demographic and health information was self-reported and confirmed by medical chart review, and the women completed the Impact of Events Scale (intrusion scale) (IES-I), the Pittsburgh Sleep Quality Index (PSQI) and the Fatigue Symptom Inventory (severity scale) (FSI-S). Linear regressions were run on the IES-I and PSQI scores as well as on the IES-I and FSI-S scores controlling for days from surgery to study enrollment, stage of cancer, type of surgery (lumpectomy or mastectomy) and age at enrollment.

Results: Women were middle-aged (M=54.28, SD=10.06), well educated (M=15.52 years of education, SD=2.99), and had an average income of $101, 240 (SD=$73, 349). Mean IES-I scores were 1.31 (SD=0.86) (range = 0 - 3.71), mean PSQI scores were 9.67 (SD=3.50) (range = 5.00 - 19.00), and mean FSI-S scores were 12.50 (SD=8.05) (range = 0 - 34.00). When controlling for days from surgery to study enrollment, stage of cancer, type of surgery (lumpectomy or mastectomy) and age at enrollment, greater baseline IES-I scores significantly predicted greater sleep problems (β=2.51, t(175)=9.84, p<0.001; R²=0.38, F(3,170)=20.86, p<0.001), and greater fatigue severity scores (β=4.42, t(175)=6.67, p<0.001; R²=0.216, F(5,170)=9.40, p<0.001) at baseline. Conclusions: Greater cancer-specific thought intrusions were related to worse sleep quality and greater fatigue severity in non-metastatic BCa patients. Findings support that the intrusive thought about breast cancer can relate to sleep and fatigue above and beyond physical effects of surgery, stage of disease, and aging in the weeks after surgery. Future interventions targeting intrusive thoughts early in treatment may have physical benefits for the patients, as reflected in self-reported sleep quality and fatigue severity levels.

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A026e
DEPRESSIVE SYMPTOMS PREDICT SURVIVAL TIME OVER 11 YEARS IN NON-METASTATIC BREAST CANCER
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Objective: Women with breast cancer (BCa) often report elevated levels of depression, which are linked to poorer health outcomes. Some research suggests that depression is associated with shorter survival in cancer patients. We sought to contribute to this knowledge base by focusing specifically on the relationship between depression and days survived among women with non-metastatic BCa.

Methods: Two hundred forty women with stage 0-III BCa participating in a psychosocial intervention trial were recruited at 2-10 weeks post-surgery. They reported demographic and health-related information confirmed by medical chart review, and completed the Affects Balance Scale (ABS) and Hamilton Rating Scale for Depression (HRSD). Mortality data were collected via registry linkage at 8-15 years post study enrollment (11-year median). Days survived was regressed on the ABS Depression subscale (ABS-D) and HRSD scores using linear regression controlling for days from surgery to study enrollment, use of any subsequent adjuvant treatment (chemotherapy, radiation therapy, and hormone therapy), and study condition.

Results: Women were middle-aged (M=50.34, SD=9.03), well-educated (M=15.58 years of education, SD=2.38) and largely non-Hispanic White (63.6%) and Hispanic (25.5%). Most women received some form of adjuvant therapy (92.1%), and mean survival was approximately 8 years (M=2962.66 days, SD=1354.30). Mean ABS-D scores were 9.89 (SD=3.22) and mean HRSD scores were 7.52 (SD=5.46). When controlling for days from surgery to study enrollment, use of adjuvant treatment, and study condition, greater baseline ABS-D scores significantly predicted less days survived (β=−0.14, t(223)=−2.08, p=0.039; R²=0.06, F(4,223)=3.80, p=0.005), as did greater HRSD scores (β=−0.17, t(215)=−2.59, p=0.010; R²=0.09, F(4,215)=5.15, p=0.001). Findings held when analyses were restricted to women with invasive disease (stage I-II). ABS-D (p=0.030, HRSD p=0.025).

Conclusions: Findings support that greater depressive symptoms in the weeks after surgery for non-metastatic BCa predict shorter survival after controlling for medical treatment received and study condition, suggesting that depressive symptoms early in treatment may independently contribute to survival.

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A026f
DIFFERENCES IN ILLNESS REPRESENTATIONS BETWEEN CANCER PATIENTS WITH SOLID AND “LIQUID” TUMORS
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Background and Aims: The process of adjustment to illness appears more difficult for adults with vague, diffuse symptoms than for those with clearly-defined symptoms (Petrie & Weinman, 2006). Leventhal’s common sense model provides a framework for understanding how illness-related beliefs may underlie adjustment. During a crucial step in the process, individuals develop representations of their illness. The current study compares illness representations among cancer patients with and without tumors. We predicted that those with solid tumors (more clearly-defined) would hold different illness representations than those with “liquid” tumors (i.e. blood cancers).

Methods: 305 individuals between 20-65 diagnosed with cancer > 3 months prior completed an online survey. Variables were created to index the presence of a mass or tumor. The primary outcome measure was the Revised Illness Perceptions Questionnaire (IPQ-R; Moss-Morris et al., 2001) containing 8 subscales: identity, timeline (acute/chronic), timeline (cyclical), personal control, treatment control, consequences, illness coherence, and emotional representations.

Results and Conclusions: Individuals without tumors had higher scores on treatment control that those with tumors, t = 2.74, p = .007, indicating a greater belief that treatment course determines outcomes. We then compared patients with leukemia/lymphoma (no tumor) to those with lymphoma (masses) to patients with solid tumors. The ANOVA was significant for 2 subscales: treatment control, with leukemia/lymphoma and lymphoma patients showing higher scores than those with solid tumors, F = 7.07, p = .001, and timeline (acute/chronic), F = 6.74, p = .001, with lymphoma patients representing their illness as less chronic than the other groups. A final comparison of those with leukemia (no tumors), lymphoma (masses) and breast cancer (tumors) replicated the findings for treatment control, F = 4.10, p = .019, and timeline, F = 3.61, p = .029, and also found significantly less illness coherence in those with leukemia, F = 3.46, p = .042. The fact that few group differences were found suggests there are widely shared representations within cancer populations; however, the presence of a mass or tumor may shape an individual’s representations of the illness in specific ways.

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A026g
FACTORS ASSOCIATED WITH OVERSCREENING FOR CERVICAL CANCER AMONG LOW-INCOME WOMEN
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Background: Current cervical cancer screening guidelines recommend that average-risk women be screened every 3 to 5 years depending on age and the screening test used. However, overscreening (being screened more frequently than recommended) for cervical cancer is common. Too frequent screening can increase the number of false positive test results and unnecessary follow up tests. This study aimed to determine factors associated with overscreening by comparing women who received cervical cancer screening once a year or more (defined as frequently-screened) to those who reported screening once every 2 to 3 years (defined as guideline consistent; these were the recommendations at the time of survey).

Methods: Self-reported frequency of cervical cancer screening was provided by 920 women aged 30-60 years visiting Federally Qualified Health Centers across Illinois (2009-2011). Participants completed a survey assessing demographics, health behaviors, screening knowledge, and beliefs about extending screening intervals. Of the 920 women, 583 (63.4%) reported they received annual (or more frequent) screening, 223 (24.2%) reported screening once every 2 to 3 years, and 114 (12.4%) received screening less frequently than every 3 years (excluded in this analysis). A total of 806 women were included in the study sample. Chi-square analysis was used to determine factors associated with screening frequency.

Results: Frequently-screened women were younger (44.2 years, standard deviation (SD) = 7.4 vs. 46.2 years, SD = 7.5), had lower levels of education (36.2% vs. 21.7% with less than high school diploma), and were more likely to be Hispanic (38.5% vs. 23.9%, all p < 0.05). Frequently-screened women also reported less favorable beliefs about extending screening intervals (all p < 0.05). Neither health behaviors (early age at first sexual intercourse, multiple sexual partners in last 12 months and lifetime, and cigarette smoking) nor cervical cancer screening knowledge were associated with screening frequency.

Conclusions: Our findings point to the need for improved understanding about the potential harms of overscreening for cervical cancer among low-income women. Effective strategies are needed to inform women about appropriate testing frequency.

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A026h
IMPROVING DEPRESSION SYMPTOMS IN DEPRESSED CANCER SURVIVORS THROUGH A 12 WEEK EXERCISE PROGRAM
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Depression is a debilitating condition experienced by up to 50% of cancer patients at some point during diagnosis and treatment. Evidence suggests that exercise is able to reduce depression; yet very little research has assessed the influence of exercise on the mental wellbeing of cancer survivors suffering from clinical depression. Therefore, the aim of this study was to investigate the effects of exercise on symptoms of depression and other indicators of mental health in a cohort of cancer survivors with established depressive symptoms. Further, two different exercise programs were delivered to examine whether the mode of delivery affected exercise-induced outcomes.

32 cancer survivors were allocated to supervised exercise (Sx; n = 10), home-based exercise (HBx; n = 8) or usual care (C; n = 14). Participants completed the Hospital Anxiety and Depression Scale, Satisfaction with Life Scale (SWLS), and the SF-36 at baseline and following a 12-week intervention. Sx was delivered by an accredited exercise physiologist twice per week. The HBx participants were provided an exercise booklet and instructed to accumulate 150 minutes of exercise/week.

A group x time interaction was found for changes in the primary outcome variable of depressive symptoms (HADS-D; p = .004). The two exercise groups reduced symptoms of depression (7.4±4.3 to 3.8±2.3 for Sx, 7.5±4.5 to 4.5±4.6 for HBx) whereas the control group displayed an increase (7.5±3.3 to 8.1±4.0). Similar results were found for measures of overall distress, satisfaction with life, and the mental health composite of the SF-36. Interestingly, the physical health composite remained stable in all three groups and therefore no interaction occurred (p = .706). Further examination indicated that both Sx (p = .002) and HBx (p = .016) significantly reduced depression symptoms compared to C, with no difference between the two exercise groups. However, only Sx significantly increased SWLS outperforming the home-based group (p = .008) and the control group (p < .001).

Despite the small sample size, these findings highlight potential significant mental health benefits attained from exercise in a cohort of cancer survivors with high levels of depressive symptoms. These results also suggest that structured and supervised exercise elicits a more favorable outcome over a 12-week period.

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A026i
LUNG CANCER STIGMA AMONG HEALTHCARE TRAINEES: A PILOT STUDY

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Lung cancer (LC) caused more deaths in 2014 than the next top three cancers combined. Lung cancer stigma, defined as biased attitudes and behaviors toward individuals with lung cancer, among healthcare providers has been inversely associated with quality cancer care indicators that could compromise cancer outcomes. Additionally, compared to other cancers, federal funding and charitable giving to support LC research and services remains suboptimal and may be associated with LC stigma. This study examined LC stigma among medical students and evaluated a novel approach to assessing LC stigma using vignettes about charitable giving. The sample included second year medical students (N=94) currently enrolled at a medical school in the southeast. Most participants were male (57%) and Caucasian (83%). Participants completed an online survey where they were randomized to receive one of four patient cases (2X2 design) that varied by cancer diagnosis (lung vs. colon) and smoking status (smoking vs. non-smoking) Participants were given $6 to donate however they chose to the Lung Cancer Alliance (LCA) and/or Colon Cancer Alliance (CCA). The survey also included items measuring demographic characteristics, personal/family health history, and three LC stigma measures. Most participants (55%) donated equally to both charities, while 29% donated more to CCA and 16% donated more to LCA. Participants donated and average of $3.28 to CCA vs. $2.71 to LCA, a trend that was not statistically significant ($p = .09). Participants assigned to the colon cancer/smoking scenario donated the most to LCA ($3.23) and those assigned to the LC/non-smoking scenario donated the least ($2.30). A 2X2 ANOVA revealed no statistically significant interaction or main effects of the study conditions on giving. The novel charitable giving paradigm used to assess LC stigma was well received but did not reveal LC stigma among medical students. Study limitations include the small sample size and the limited amount of variability in dollars to be donated. Future analyses will examine the relationship between charitable giving and other measures of LC stigma to evaluate the utility of this approach.

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A026j
PILOT STUDY: THE COPING AND ADJUSTMENT OF LATINA MOTHERS WITH BREAST CANCER AND THE IMPACT ON THEIR ADOLESCENT CHILDREN

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Nearly one-fifth of newly diagnosed cancer patients are parents to minor children and 14% of cancer survivors have minor children in the household (Weaver, Rowland, Alfano, & McNeel, 2010). Considering that cancer is the leading cause of death in the Latino population (Siegal, Naishadham, & Jemal, 2012), there has been relatively little psychological research examining how Latino children are impacted by their parent’s psychological experience with cancer. This mixed-method pilot study aimed to understand how the coping and psychological adjustment of Latina mothers (ages 41-57; M = 45.43) diagnosed with breast cancer (stages I-III; time since diagnosis M = 1 year) impacted coping and psychological adjustment in their adolescent children (ages 12-20; M = 15.14). Data were obtained from 7 parent-child dyads. Mothers and their children completed standard psychosocial measures of coping, stress, anxiety and depressive symptoms. Additionally, the adolescent children completed a 30-minute semi-structured interview. Bivariate correlations and a thematic analysis were used to analyze the data. Parent’s acceptance coping was found to be negatively associated with adolescent children’s depressive symptoms ($r = -.770; p = .043). Furthermore, parent’s anxiety and stress symptoms were related to children’s coping, but not depressive symptoms. More specifically, parent’s anxiety symptoms were positively associated with children’s denial coping ($r = .766; p = .045). Parent’s stress symptoms was also positively related to children’s use of emotional support coping ($r = .806; p = .029). Results from the thematic analysis demonstrated how adolescent children sought emotional support from friends or family members when they perceived that their ill mom was not emotionally stable to talk about her cancer. In contrast, adolescent children that sought emotional support directly from their ill mom expressed having an emotionally available mom to speak with, which suggests an ill mom that has accepted their cancer. Denial coping use was not expressed. The findings support future research to be conducted with larger sample sizes, in order to better understand the mutual influences of coping and adjustment between ill parent’s and their children.

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A026k
SYMPTOMS OF DEPRESSION ASSOCIATED WITH COGNITIVE DYSFUNCTION IN CANCER SURVIVORS: IMPLICATIONS FOR A NOVEL TREATMENT STRATEGY

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Cognitive dysfunction is one of the most common complaints of cancer survivors, who now number over 13 million in the United States. It is thus important to consider modifiable risk factors that could be the target of novel intervention strategies to address the needs of this burgeoning segment of the population. The purpose of this study was to explore depression as one such factor in a large sample of cancer survivors across a
wide range of different types of cancer. We then examined the impact of a novel application of problem solving therapy (PST) targeting depressive symptoms in a small sample of brain tumor survivors (BTS), the survivor population with the highest prevalence of cognitive dysfunction in the national sample. A sample of 3,108 cancer survivors completed a national online survey as part of a larger study of cancer survivorship. Respondents completed standardized questions regarding current and past cognitive dysfunction, as well as depressive symptoms. PST was tailored to BTS in a convenience sample of survivors (n=11) with cognitive dysfunction and concurrent depression. In the online survey data, current cognitive dysfunction was reported by 45.7% of respondents, across a wide range of cancer types an average of 4.6 years after diagnosis, with the highest prevalence (81%) among BTS. Current report of depressive symptoms was strongly associated with current perceived cognitive dysfunction (OR=3.54 (2.96, 4.23)). In the sample of BTS, PST was associated with significant improvement in depressive symptoms (PHQ-9, RM-ANOVA p=0.003), and marginally significant changes in standard cognitive measures (WAIS-IV and WMS-IV subscales; p’s ranging from 0.423-0.038). The national survey findings contribute to a growing appreciation of the high prevalence of cognitive dysfunction in survivors and the potential interactive effect of concurrent symptoms of depression. These findings highlight a need to develop more effective means of preventing or reducing cognitive dysfunction in cancer survivors, perhaps through targeting depressive symptoms during/after cancer treatment. The improvements in cognitive function and depressive symptoms in BTS after application of PST suggest the potential for effective intervention in cancer survivors using a well-validated and manualized treatment approach.

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A031a
EFFECT OF SMS MEDICATION REMINDERS ON ADHERENCE IN HYPERTENSIVE AFRICAN AMERICANS RECRUITED FROM ED AND PRIMARY CARE SETTINGS

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Given high rates of cell phone adoption among minority groups, mHealth is a promising approach to reach minority populations that typically suffer from pronounced health disparities. We conducted two randomized controlled trials comparing usual care to BPMeD, an automated SMS medication reminder system to improve medication adherence, among urban African Americans with uncontrolled hypertension recruited from emergency department (ED) (n=65) and primary care (PC) (n=58) settings. The goal of these trials was to establish acceptability of this approach in the target population, as well as to determine efficacy. Inclusion criteria included African American race, uncontrolled hypertension (>140/90 mmHg or >130/80 mmHg for patients with diabetes or kidney disease, on repeat measurement), and access to a cell phone. In both trials, data were collected at baseline and one-month follow-up, assessing medication adherence via the Morisky Medication Adherence Scale (MMAS), blood pressure, and participant satisfaction.

Overall, 88% of ED and 91% of PC participants completed the one-month follow-up. Both control and BPMeD participants in the ED trial exhibited improvements at follow-up on measures of medication adherence (M=.70 and 1.30 point improvement, respectively on MMAS), systolic blood pressure (control=–18.89 mmHg and BPMeD=–19.53 mmHg), and diastolic blood pressure (control=–4.74 mmHg and BPMeD=–6.50 mmHg), but between group differences were not significant. Similar results were found in the PC trial with both groups exhibiting non-significant improvements on medication adherence (M=.31 and .71 point improvement, respectively on MMAS), systolic blood pressure (control=–3.10 mmHg and BPMeD=–4.60 mmHg), and diastolic blood pressure (control=–1.68 mmHg and BPMeD=–3.00 mmHg).

Participant satisfaction with BPMeD was positive, with the majority of ED and PC trial participants agreeing/strongly agreeing that the program was easy to use (100.0% and 95.8%, respectively) and that they were satisfied with the program (96.6% and 92.0%, respectively). Although we did not find specific benefit for the use of SMS medication reminders compared to usual care in our trials, further investigation should be conducted with longer follow-up duration, as well as utilization of SMS reminders as a part of a more comprehensive behavioral approach to medication adherence and hypertension management.

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A031b
THE RELATIONSHIP BETWEEN ONLINE ACTIVITY & BIOMETRIC TRACKING AND MEDICATION ADHERENCE AMONG MEMBERS WITH HYPERTENSION

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Background: In 2013, a national community pharmacy launched an online program to help members track physical activity and biometrics. The program gives members points, redeemable for dollars off store purchases, for making healthy choices and tracking activities, such as walking, running, and cycling and logging body weight. In April 2014, the program expanded to include points for connecting devices and logging blood glucose and blood pressure (BP).

Objective: To determine the relationship between program member engagement and adherence to BP medications, with focus on physical activity and BP tracking.

Methods: This is a retrospective cohort study of members newly enrolled in the Walgreens Balance Rewards for healthy choices™ (BRhc) program between May and June 2014 who logged activities such as steps (walking and running) and biometrics (body weight, blood glucose, BP) within 3 months of enrollment and filled at least one medication in 2014. Steps logged were converted into miles on a 2,000:1 basis. Proportion of Days Covered (PDC) was used to measure adherence and was calculated from each member’s first prescription fill date (Index) in 2014 to November 30, 2014.
Results: A total of 4,727 new BRhc members met the study inclusion criteria. Of these, 1,269 members (26.8%) tracked their BP and 3,188 (67.4%) tracked steps, with 25.9% of members who tracked steps reporting more than 1 mile/day. BRhc members who filled antihypertensive medications (HTNs) were older and had more co-morbidity compared to the general BRhc member population with any prescription fill in 2014 (median age = 46.7 years vs. 38.1 years; median maintenance medication count = 4 vs. 2). Members who tracked their BP levels had significantly higher adherence to HTN medications compared to non-trackers (76.4% vs. 78.1%; Diff=1.7%; Increase = 2.2%, P=0.032). And, compared to members who logged less than 1 mile/day, members who logged at least 1 mile/day over the 90-day tracking period had significantly higher adherence to HTNs (74.8% vs. 77.7%; Diff=2.9%; Increase = 3.9%, P=0.013).

Conclusions: This study demonstrated a significant relationship between higher levels of member engagement in healthy activities and biometric tracking through Balance Rewards for healthy choices™ and greater adherence to prescribed antihypertensive medications.

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A039a

BIOLGICAL BASIS OF DEPRESSIVE SYMPTOMS IN ADULTS WITH GESTATIONAL DIABETES

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Gestational diabetes (GDM) and depressive symptoms are increasingly prevalent during pregnancy and negatively impact health outcomes of women and their newborns (e.g., cesarean birth, preterm birth, risk of T2DM, or developmental delays). Despite this burden, relatively little attention has been given to the biological processes underlying this association, even though mounting evidence suggests that neurobiological mechanisms (e.g., HPA axis hyperactivity, increased pro-inflammatory biomarkers, & reduced hippocampal volume) appear to be associated with other forms of diabetes and depressive symptoms, separately. Integrating these biological processes during pregnancy may provide a common framework for understanding the associations between GDM and depressive symptoms (including antenatal & postpartum depressive symptoms [AD or PPD, respectively]). The primary aim of this review was to summarize recent studies examining the biological processes believed to overlap in GDM and either AD or PPD.

A systematic review of Pubmed and the Cochrane Library was conducted for all English language studies with human samples published in the past 5 years. N=427 abstracts were examined for relevance & exclusion criteria (e.g., presence of Type 1 diabetes); N=45 articles including a total of N=3,824 women were included in the final review. Levels of inflammatory markers (e.g., IL-6, TNF-alpha, & CRP) were most commonly examined in studies examining either GDM or AD/PPD, separately. Thus, higher levels of inflammation were significantly associated with each of these comorbidities independently. Other biological processes underlying each of these comorbidities included Vitamin D levels and cortisol, though data was limited. Most studies differed considerably in selection criteria, sampling, assay methods, or measurement of AD/PPD. Depressive symptoms assessment occurred on average at 15 weeks for AD through use of the CES-D (N=7) and between 1-6 weeks postnatal for PPD using the Edinburgh Postnatal Depression Scale (N=4).

Integrating shared biological processes associated with GDM and AD/PPD symptoms, such as increased levels of inflammatory markers, may help to enhance future therapeutic interventions for mothers and newborns as well as disentangle the complex associations between these comorbidities.

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A039b

IMPLICATIONS OF THE PATIENT-PHYSICIAN RELATIONSHIP FOR SATISFACTION AND ADHERENCE AMONG ADULTS WITH DIABETES

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The purpose of this study was to examine aspects of the patient-physician relationship as predictors of satisfaction with health care providers and regimen adherence among Black and White adults with diabetes. We asked 99 adults with type 1 (n = 18) or type 2 (n = 77) diabetes (mean age = 60.32, SD = 10.68) to complete a questionnaire that assessed patient satisfaction with physicians, regimen adherence, and the degree to which participants viewed their physicians as warm, cold, dominant, submissive, supportive, and collaborative. White participants displayed a greater level of blood glucose testing and medication adherence than Black participants (p’s < .05), but there were no race differences in diet or exercise adherence or in any aspect of the patient-physician relationship. Physician warmth and dominance were related to greater patient-physician collaboration (p’s< .001). In addition, physician warmth was linked to greater emotional and informational support from physicians (p’s < .001), while physician cold-heartedness was marginally associated with less informational support (r = -.18, p = .07). Perception of physicians as warm and as dominant were both related to greater patient satisfaction (p’s < .001), whereas perceptions of physicians as cold was marginally related to less satisfaction (r = -.19, p = .06). Collaboration was correlated with greater patient satisfaction (p < .001) but was only related to one domain of adherence: exercise (r = .26, p = .01). In summary, this study suggests that physicians may increase patient satisfaction and regimen adherence by engaging in collaborative health care, providing emotional and informational support to their patients while projecting a dominant and warm personal style. White participants viewed their physicians as warm, cold, dominant, submissive, supportive, and collaborative. White participants displayed a greater level of blood glucose testing and medication adherence than Black participants (p’s < .05), but there were no race differences in diet or exercise adherence or in any aspect of the patient-physician relationship. Physician warmth and dominance were related to greater patient-physician collaboration (p’s< .001). In addition, physician warmth was linked to greater emotional and informational support from physicians (p’s < .001), while physician cold-heartedness was marginally associated with less informational support (r = -.18, p = .07). Perception of physicians as warm and as dominant were both related to greater patient satisfaction (p’s < .001), whereas perceptions of physicians as cold was marginally related to less satisfaction (r = -.19, p = .06). Collaboration was correlated with greater patient satisfaction (p < .001) but was only related to one domain of adherence: exercise (r = .26, p = .01). In summary, this study suggests that physicians may increase patient satisfaction and regimen adherence by engaging in collaborative health care, providing emotional and informational support to their patients while projecting a dominant and warm personal style. The extent to which these relations held for both black and white persons will be discussed.

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A039c  
POSTTRAUMATIC STRESS RELATED TO HYPOGLYCEMIA IN ADULTS WITH TYPE1 DIABETES: A REPLICATION
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Following studies that documented the fear of hypoglycemia among those with type 1 diabetes (T1D), and the resulting reactions to anticipation and concerns about hypoglycemia, only one study has evaluated posttraumatic stress disorder (PTSD) among adults with T1D. This previous study reported that over 25% of adults in the sample endorsed symptoms consistent with current PTSD related to hypoglycemia. In the present study, a direct replication, the Posttraumatic Diagnostic Scale, number and severity of hypoglycemia experiences in the past month, cognitive appraisals (fear, helplessness, and perceived death-threat) about hypoglycemia, the Self Care Inventory, Glycemic control (HbA1c) from 239 individuals with T1D (79.5% female, 83.8% identified as Caucasian, aged 18 to 79 years [Mean = 37.2, SD = 12.4], Mean years since diagnosis = 20.4 [SD = 14.1], 63.6% using Continuous Subcutaneous insulin infusion pumps, 33.9% using a basal/bolus injection regimen). Seventy-one individuals (29%) reported symptoms consistent with PTSD, with diagnostic levels of symptom cluster symptoms reported by 69.5% for Intrusive Re-experiencing symptoms, 61.1% for Arousal symptoms, and 41% for Avoidance symptoms, and 73.6% reporting that these symptoms interfered with at least one domain of functioning. Hierarchical multiple regression accounted for 27.1% of variance in PTSD (F = 6.3, p < .001). In order of strength of partial correlation within the regression, participants’ age (partial R = .249, p = .006), and severity (but not number) of hypoglycemic episodes in the past month (Partial R = .22, p = .02), related significantly with PTSD. Fear appraisal of hypoglycemia showed a Partial R of .24 (p = .009), but the contribution by fear reduced to a nonsignificant once perceived helplessness and perceived death-threat were entered. When the multiple regression was re-run, with variables in the same order, but with the cognitive appraisal variables entered as a composite score, instead of as separate variables, the equation accounted for 26.8% (F = 7.56, p < .001) of variance in PTSD. Age (Partial R = .24, p = .008) and severity of hypoglycemic episodes (Partial R = .23, p = .012) still contributed to the equation’s prediction, but overall cognitive appraisal accounted for the most variance (Partial R = .29, p < .001). This study replicates the prevalence of hypoglycemia-related PTSD among adults with T1D found in previous research.

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A039d  
SELF-MANAGEMENT BEHAVIORS AND SOCIAL SUPPORT FOR AFRICAN AMERICAN WOMEN CAREGIVERS WITH TYPE 2 DIABETES MELLITUS
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Objective: Investigate the impact of providing care to someone else (caregiving) on the caregiver’s self-care activities, social support and glycemic control among African American women with Type 2 Diabetes Mellitus (T2DM). Poor self-management behaviors and social support are associated with poor glycemic control (Griffith et all, 1990; Rhee et al., 2005), and increased risk of hospitalization and mortality (Ho et al., 2006). This study used data from the EMPOWER Trial, a twelve month randomized-controlled trial of cognitive behavioral lifestyle intervention and social support with 200 Rural AA women with uncontrolled diabetes (HbA1c>7.0), to examine caregiving status, medication adherence, self-care practices, social support and glycemic control.

Methods: Glycemic control (HbA1c) was recorded and self-report measures were used for all other variables and completed by 193 patients. Descriptive statistics and one-way ANOVA were conducted to compare means. Logistic regression was used to analyze the effect of caregiver status on medication adherence (Modified Morisky Adherence Scale), social support (Adapted Dunst Family Support Scale), and self-care (Summary of Diabetic Self Care Activities Measure).

Results: 38.5% (n=77) were caregivers who reported lower adherence to their medication [F(1, 192) = 12.855, p = .001], fewer self-care behaviors [F(1, 192) = 4.638, p = .033], and more adequate social support [F(1, 192) = 2.880, p = ns] than non-caregivers. Caregivers were more likely to report lower medication adherence [B (1.769), p = .008] and more likely to report higher social support [B (2.99), p = .039] when controlling for self-care activities.

Conclusion: This study suggests that caregivers are at increased risk of medication non-adherence and may need to be given more assistance with staying adherent. Regardless of self-care activities, caregivers report higher social support. Interventions could be tailored to better meet the demands and needs of caregivers, particularly about adherence to medication and how to best integrate available social support to assist with medication. Self-care for caregivers is of utmost importance with respect to the longevity of the caregiver and their ability to provide care for their children, spouses and others entrusted to their care.

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A039f
TO WHAT EXTENT ARE SELF-MANAGEMENT BEHAVIORS HABITUAL AMONG ADULTS WITH TYPE 2 DIABETES?
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Background: Diabetes self-management requires a sustained behavioral regimen, but adherence tends to be low. Habits are behaviors that are performed automatically; habitual behaviors are more likely to be sustained over time and improve outcomes in people with some conditions requiring behavioral regimens. Thus, habits may improve diabetes self-management and outcomes. However, little is known about habits for self-management behaviors among individuals with diabetes and how they relate to health outcomes.

Purpose: To (a) describe habits for self-management behaviors among individuals with Type 2 diabetes, and (b) test associations between habit strength and health outcomes.

Method: Data come from the fourth wave of the Montreal Evaluation of Diabetes Treatment study (n=926), which is an ongoing longitudinal study of adults with Type 2 diabetes. Habit strength for self-management behaviors was measured with the automaticity subscale of the Self-Reported Index of Habit Strength (range 1-7; higher scores indicate stronger habits). Habit strength for taking oral medication or, if not applicable, following a diet was measured for all participants. If insulin use was also reported, habit strength for insulin use was assessed.

Results: The average habit strength scores for diet, oral medication, and insulin use were 5.75 (SD=1.33, n=37), 5.13 (SD=1.55, n=885), and 4.10 (SD=2.02, n=49), respectively. Women had stronger habits for taking oral medication than men (p=.020). Habit strength for oral medication did not differ between people who were married/common-law and those who were not. Small cell sizes precluded comparisons of habit strength for diet and insulin use across gender and marital status. Habit strength for diet and oral medication were positively and significantly associated with self-rated general health and diabetes control (ps .017-.038); habit strength for insulin use was not.

Conclusion: On average, habits for diabetes self-management behaviors were moderate-strong; though there was considerable variability. Associations between habit strength and health outcomes suggest that habits may be suitable intervention targets, though longitudinal data are needed. Continuing to examine moderators (e.g., complications) may clarify the lack of association between habit strength for insulin use and health outcomes. This is the first epidemiological study of habits for chronic disease self-management.

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A042a
AN INTERPROFESSIONAL EDUCATION ACTIVITY USING ADHERENCE TO TEACH PROFESSIONAL ROLES AND RESPONSIBILITIES
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Interprofessional education (IPE) is a priority in healthcare education. Understanding the roles and responsibilities of one’s own and other healthcare professions is one of five IPE core competencies identified by IPEC. It is an important competency to establish early in healthcare education to minimize the development of professional misconceptions. This poster will describe an IPE experience that took place in a First Year Seminar course at a health sciences university. Freshmen (N = 849) enrolled in direct clinical (e.g., dental hygiene, nursing, pharmacy) and health-related (e.g., health psychology, pharmaceutical science, business) programs completed activities designed to increase (1) awareness of challenges to adherence, (2) knowledge of the roles and responsibilities of their own and others’ professions, and (3) awareness of ways in which members of the healthcare team contribute to improving patient adherence. Students completed an adherence activity in which they were prescribed oral health behaviors, behaviors for good sleep hygiene, and medications. Each student received oral and sleep hygiene instructions, a dental kit, and candy to represent medications. Students wrote about their experiences and discussed challenges to adherence. After completing an assignment to learn about their future professional roles and responsibilities, each section (organized by program) identified two truths and a myth about their respective profession. Later, an ungraded quiz with truth and myth items for each program was administered. Students then worked in teams to discuss the ways in which their own and three other professions contribute to patient adherence. Post-semester evaluations suggest the IPE experience was successful. Students indicated they learned about the challenges to adherence, their profession, and other professions through the experience. In response to open-ended questions about what they liked and would change about the adherence activity, the most frequent “like” comments (152 of 509) were about gaining the patient perspective, and the most frequent “change” comments (other than saying “nothing”; 145 of 474) were suggestions for improving the structure of the activity (100 of 474). These data suggest that IPE can have an impact at the very early stages of healthcare education.

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A042b
FUNCTIONAL MEDICINE: TRAINING CLINICIANS TO ACCOMPLISH THE SBM MISSION
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Twenty-first century medicine must address the epidemic of chronic disease in the United States. Chronic disease consumes
A046a
ASSOCIATIONS BETWEEN PHYSICIAN-PATIENT DYNAMICS AND HEALTH OUTCOMES IN ADULT HIV PATIENTS
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Background: Physician-patient dynamics, notably communication styles and modalities, are integral to maximizing health outcomes, particularly in HIV-infected patients. Little research has examined the characteristics of the relationship between the patient and the provider in an adult HIV outpatient setting.

Methods: Patients’ perceptions of their providers were determined via questionnaire (Patient Satisfaction Questionnaire) in 202 HIV-infected outpatients (mean age = 50.4 ± 10.1 years: 45.8% female; 80% Black; 19% Hispanic/Latino) from the University of Miami/Jackson Memorial Medical Center Adult Outpatient HIV Clinic. Patients were also asked about mobile phone use. Health outcomes were defined according to patients’ most recent CD4 counts, viral loads, viral suppression (<20 copies/mL).

Results: Greater ratings of physicians’ interpersonal ratings were significantly associated with greater CD4 counts (r = .21, p = .003) and lower viral loads (r = -.18, p = .014); those who were virally suppressed had significantly higher interpersonal ratings of their physician than those who did not (t(193) = 2.12, p = .036); controlling for age, gender and HIV knowledge, each 1-point increase in physicians’ interpersonal ratings were associated with a 1.46 times greater odds that the patient was undetectable (OR = 1.46, 95% CI 1.005 - 2.119). Furthermore, after adjusting for age, gender, and HIV knowledge, patients with higher interpersonal ratings of their physicians had higher CD4 counts (β = .221, p = .015; model R² = .11, p = .009).

Conclusions: Although peripheral to the standard course of treatment, communication styles and interpersonal interaction are an integral part of HIV patient care that impacts health outcomes. The additional importance of physician-patient communication should be incorporated in provider training; system-level policy changes should include the value of interpersonal style in treatment protocols and address the potential to improve communication.

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A046b
COLLECTIVE VIOLENCE, NON-INJECTION DRUG USE, AND HIV RISK
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The HIV epidemic has been largely neglected in high incidence countries such as El Salvador. Furthermore, research on the HIV-Substance Use syndemic had concentrated on injection drug use. The goal of the present study is to document the relationship between indices of collective violence, social network risk characteristics, and HIV risk. We conducted cross-sectional surveys with 400 crack users living in the metropolitan area of El Salvador, San Salvador. We employed respondent driven sampling to recruit active crack users. Participants who volunteered to participate answered a survey assessing social network characteristics, sexual risk, and frequency of violent acts and presence of gangs in participants’ community of residence. We conducted generalized estimating equations and findings indicate a strong association between number of network members with whom participants use crack and violence (B=.59, p<.05), number of network members with whom participant had sex and violence (B=.64, p<.05). Importantly violence was associated with internalized stigma about drug use (B=.42, p<.05). Results suggest the importance of investigating the role of structural factors as direct or indirect influenced on social network characteristics of risk.

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A046c
GENDER DIFFERENCES IN THE ASSOCIATION OF DEPRESSION TO SEXUAL RISK BEHAVIOR AMONG HIV+ AFRICAN AMERICAN OUTPATIENTS
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African Americans living with HIV experience high rates of depression that may contribute to poor health behavior adaptation, including engagement in sexual risk taking. Utilizing data from a sample of African American men and women recruited during outpatient HIV care, we sought to (a) characterize levels of depressive symptomatology, (b) examine the association of depression to sexual risk behavior, and (c) determine whether there are gender differences in the association of depression to sexual risk behavior. Participants (N = 93, 51% female, M age = 35) completed the CES-D to assess for depressive symptoms and self-report measures of sexual risk (unprotected anal or vaginal sex) for the past three months and their last sexual episode. Overall, participants reported moderate to severe depressive symptoms (M = 20.37 SD = 12.68 on a 60 point scale) and CES-D scores did not differ by gender. Depressive symptoms were associated with greater HIV symptoms (r = .59, p < .01) and lower levels of social support (r = -.33, p < .01). Across the entire sample, there were no differences in sexual risk behavior as a function of depression scores. However, when the sample was stratified by gender, depression scores were higher for women reporting unprotected sex at most recent sexual episode than for women who reported condom protected sex, t (1, 41) = 2.34, p = .02. Similarly, depression scores were higher among women who reported unprotected sex in the past three months compared to those reporting no sexual risk, t (1, 41) = 2.66, p = .01. In this sample of African American patients receiving care for HIV, our findings suggest that depression may be a more powerful risk factor for unprotected sex among women relative to men. Including a focus on treatment of depression may optimize health promotion intervention outcomes for HIV+ women.

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A057b
DECREASED SOUND TOLERANCE IN A COLLEGE STUDENT SAMPLE
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Decreased sound tolerance (DST) conditions, including misophonia and hyperacusis, are emerging clinical issues in behavioral medicine. Misophonia involves a strong emotional reaction to specific sounds produced by other humans, while hyperacusis is defined by over sensitivity to sounds at a normal sensory threshold. This cross-sectional survey study of 585 undergraduate students evaluated DST prevalence rates and psychological correlates. In a sample that was 63% female and 37% non-Hispanic White with an average age of 19.5 (SD = 3.3), 33% of students indicated higher sensitivity than others to certain sounds made by other humans, and 15% reported pain or physical discomfort due to sounds. Anger and disgust were the most commonly endorsed misophonic emotional responses. On a scale developed for this study, the most common misophonic aversion was to the sounds of others eating. On the Misophonia Questionnaire (MQ), participants rated their sound sensitivity as minimal (32%), mild (27%), or moderate (12%), and indicated mild to significant levels of interference in daily functioning. There was a significant correlation between the MQ and the Hyperacusis Questionnaire (HQ) (r = .56, p < .01) such that misophonic reactions were associated with generalized sound sensitivity. Correlations were found between the MQ and both the Hospital Anxiety and Depression Scale (Anxiety subscale) (HADS) (r = .40, p < .01) and the Obsessive Compulsive Inventory-Revised (OCI-R) (r = .44, p < .01), indicating that more frequent misophonic reactions was associated with increased anxiety and Obsessive Compulsive Disorder (OCD) symptoms. HQ scores also were significantly correlated with HADS-Anxiety scores (r = .28, p < .01) and OCI-R scores (r = .32, p < .01).
were relationships between the MQ and Autism Spectrum Quotient Test (AQ) \((r = .30, p < .05)\) and the HQ and AQ \((r = .31, p < .01)\) such that greater misophonic and hyperacusis symptoms were associated with more autistic traits. This study found high prevalence of sound sensitivity among college students, with significant associations between misophonia, hyperacusis, anxiety symptoms, and autistic traits. Continued research on DST conditions and their clinical correlates is warranted.

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A057c
DEMOGRAPHIC FACTORS IMPACT PARENTING STRESS AMONG PARENTS OF CHILDREN WITH SICKLE CELL DISEASE
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Background: Parents of children with a chronic illness report increased parenting stress (Cousino & Hazen, 2013). In addition, children with sickle cell disease (SCD) are more likely to come from families facing chronic financial stress (Barbarin et al., 1999) which may exacerbate the impact of illness on family adjustment. This study examined demographic predictors of parenting stress among caregivers of children with SCD.

Method: Participants were 24 primary caregivers \((N = 17\) mothers, 4 fathers, 2 grandmothers, 1 sibling) of children with SCD (ages 6-17; \(M = 9.8\)). A cumulative risk index (CR; e.g., Brody et al., 2013) was created for each participant by dichotomizing standard sociodemographic indicators (relationship status, income, education) so that participants received a score of 0 or 1, with “1” representing lesser or greater risk: single-parent status; annual family income < $25,000; education < 2 years of post-secondary school. CR scores reflected the sum, ranging from 0-3.

Participants completed the Pediatric Inventory for Parents (PIP; Streisand, Braniecki, Tercyak, & Kazak, 2001) to assess illness-related parenting stress.

Results: On the CR index 20.8% of caregivers had 0 risk factors; 33.3% 1 risk factor, 20.8% 2 risk factors, and 25.0% 3 risk factors. CR was significantly correlated with parents’ reports of Communication difficulties \((r = .44, p < .05)\) and Medical Care difficulties \((r = .42, p < .05)\) on the PIP. It was not significantly related to other sub-domains or total scores. Child age was also significantly correlated with Communication \((r = .42)\), Medical Care \((r = .46)\), and Emotional Functioning \((r = .46)\) difficulties, and increased total difficulties \((r = .49, all\ p’s < .05)\). More specifically, in comparison to younger children, parents of adolescents reported greater difficulties in Communication \((t(21) = -2.39)\), Medical Care \((t(22) = -2.32)\), Emotional Functioning \((t(22) = -2.07)\), and total difficulties \((t(22) = -2.34)\), all \(p’s < .05\).

Conclusions: Results demonstrate the cumulative impact of demographic factors on illness-related parenting stress. Further consideration of how stressors created by sociodemographic disadvantage and how developmental issues affect parents of medically ill children is necessary in order to appreciate the burdens faced by these families and develop effective psychosocial assistance programs.

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A057d
EXAMINATION OF A BEHAVIORAL MEDICINE INTERVENTION FOR Trauma Patients in a Level 1 Trauma Center: A PILOT STUDY
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Cooper University Hospital’s Level 1 Trauma serves over 2,400 new patients annually. Research on medical trauma patients is focused on mortality or medical outcomes while emotional well-being, quality of life, and posttraumatic growth have not been examined, likely due to lack of in-house Behavioral Medicine services. Frequently studied in outpatient settings, there is a need for brief psychosocial interventions in acute settings to prevent chronic posttraumatic distress, improve functional outcomes, and foster posttraumatic growth. The focus of this study is to examine a Behavioral Medicine intervention for trauma patients, excluding those with TBI, and to bridge a gap in the psychological and medical literature by evaluating a new psychosocial intervention that integrates several independent interventions proven efficacious. Adult patients \((n = 233)\), admitted to Trauma Surg for 2+ days, received information about Beh Med services and were offered a 2-session Beh Med Intervention. Of those, 33 enrolled (14.2%), 27.6% expressed disinterest, 22.8% indicated imminent hospital discharge, and 11.2% denied emotional distress. Subjects completed Impact of Event Scale-Revised (IES-R), World Health Organization Quality of Life – Brief Inventory (WHOQOL-BREF), Post-Traumatic Growth Inventory (PTGI) and Form-36 Health Survey (SF-36); baseline symptoms of acute stress disorder were assessed. Approximately half \((n = 16)\) exhibited clinically significant distress; measures of quality of life indicated difficulties in physical, social, and emotional domains. A majority of participants \((n = 30)\) indicated some post-traumatic growth. At session 1, subjects received psychoed on trauma and its consequences, were introduced to cognitive-behavioral model, and were taught basic skills to reduce physiological symptoms of anxiety. 18 subjects completed session 2, with reassessment of acute stress, stress management techniques, brief cognitive restructuring, and focus on social support. Follow-up via phone was largely ineffective so mail, e-mail, text messaging, and OP trauma clinic appointments were introduced to improve retention of an urban, frequently itinerant population. Based upon preliminary data, plans include the addition of a 3rd data collection point and completion of IES-R and PTGI after session 2.

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A057e
INFLUENCE OF TINITUS SENSATION ON EMOTIONAL AND BEHAVIORAL OUTCOMES
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Objective: One to three percent of individuals with tinnitus experience significant reduction in quality of life. Previous research has identified that tinnitus-related cognitions can impact emotional distress functioning. It is unknown whether different tinnitus sensations (i.e., ringing, buzzing, whooshing) have differential effects on impairment. Design: Participants completed an online survey that assessed tinnitus-related distress and provided qualitative descriptions of their tinnitus sensation. Study sample: Two hundred seventy individuals with tinnitus, lasting longer than three months, were recruited via email from a national tinnitus organization. Participants were asked to describe their tinnitus sensation via an open-ended response option. Participants also completed the Tinnitus Handicap Inventory and Tinnitus Reaction Questionnaire to assess for level of distress. Results: Independent coders rated the qualitative response, with a Fleiss' Kappa Coefficient of .98, indicating a high level of agreement. While most individuals reported experiencing "simple" tinnitus (i.e., only ringing or only buzzing), individuals with "complex" tinnitus were found to experience significantly greater amounts of both functional impairment and avoidant behavior. Conclusions: Based on the findings, we recommend that future research utilize more sophisticated approaches to categorize individuals’ tinnitus sensation and to examine emotional and functional differences. These approaches will allow providers to gain specific information regarding patients’ tinnitus symptoms. Moreover, providers will be able to appropriately refer patients for tinnitus management and empirically-supported therapies.

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A057f
PATIENT SATISFACTION IN PRIMARY CARE BEHAVIORAL HEALTH SERVICES: A STUDY OF THE USAF BEHAVIORAL HEALTH OPTIMIZATION PROGRAM
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The changing face of mental health care in the United States has resulted in an increased focus on the treatment of behavioral health conditions in a primary care environment. The rise of integrated behavioral health services has been driven, in part, not only by demonstrated cost savings and positive health outcomes, but also by an increase in consumer (patient) satisfaction. The Air Force Medical Service (AFMS) has employed an integrated behavioral health model for well over a decade – the Behavioral Health Optimization Program (BHOP). The initial findings of a three site pilot project in 2003 were very promising and directly influenced the expansion of this pilot project from three sites to the entire AFMS. The current study focuses on patient satisfaction measured at 35 sites across the AFMS and explores factors which may influence a patient’s satisfaction with integrated behavioral health care, likelihood to recommend services, and perception of their overall health. Results indicated high levels of overall patient satisfaction comparable to findings from the original pilot study. Further, results indicated that while larger facilities may see patients for more appointments, there were no differences in measurement of patient satisfaction. Patient’s ratings of their behavioral health provider’s knowledge about the presenting concern and quality of intervention were highlighted as key factors in patient’s satisfaction with their care. Findings provide a validation of the BHOP model and suggest key factors for promoting patient satisfaction with integrated behavioral health services.

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A057g
PHARMACOLOGICAL INTERVENTIONS FOR SOMATOFORM DISORDERS IN ADULTS
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Different medications are part of treatment routines for patients suffering from somatoform disorders characterized by chronic, medically unexplained physical symptoms. The aim of the current meta-analysis was to assess the efficacy and tolerability of pharmacological interventions for somatoform disorders in adults.

We searched the Cochrane Depression, Anxiety and Neurosis Review Group’s Specialised Register, databases of ongoing trials, and grey literature, conference proceedings and reference lists and contacted experts in the field. RCTs or cluster RCTs of pharmacological interventions versus placebo, treatment as usual, another medication, or a combination of different medications for somatoform disorders in adults were selected. We included people fulfilling standardized diagnostic criteria for somatization disorder, undifferentiated somatoform disorder, somatoform autonomic dysfunction, or somatoform pain disorder. Primary outcomes included the severity of somatoform symptoms, and the acceptability of treatment.

In total 26 RCTs with 2159 participants were included. The duration of the studies ranged between two and 12 weeks. In regard to the severity of somatoform symptoms meta-analyses of placebo-controlled studies showed no clear effect of tricyclic antidepressants (g=0.13; 95% CI: -0.13 to 0.39), but for new-generation antidepressants (g=0.91; 95% CI: 0.46 to 1.36), and natural products (g=0.74; 95% CI: 0.51 to 0.97). For most of the medications the acceptability rate (rate of all-cause drop-outs) was comparable to the placebo treatment. Percental attrition rates due to adverse effects were high in all antidepressant treatments (0% to 32%), but low for natural products (0% to 1.7%).
The current review found very low- to low-quality evidence for new generation antidepressants and natural products being effective in treating somatoform symptoms in adults when compared with placebo. However, the significant effects of antidepressant treatment have to be balanced against the relatively high rates of adverse effects. Adverse effects produced by medication can have amplifying effects on symptom perceptions, particularly in people focusing on somatic symptoms without medical causes. Only short-term conclusions can be drawn due to a lack of follow-up assessments.

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A057h
PILOT STUDY OF A MINDFULNESS-BASED GROUP INTERVENTION IN PARKINSON’S DISEASE
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This pilot study aimed to assess the effects of a mindfulness-based intervention on cognitive and emotional functioning and quality of life (QOL) for individuals with Parkinson’s Disease (PD) and their caregivers. The program was delivered to 7-10 person mixed patient and caregiver groups on a weekly basis for 1.5 hour long sessions. The sample (n=38; 73.7% patient/26.3% caregiver) was 47.4% female, 94.7% Caucasian, and ranged in age from 50-82 (M=65.92, SD=7.72). Mindfulness levels measured with the Five Facet Mindfulness Questionnaire (FFMQ) significantly increased for all participants, F(1, 31)=14.50, p<.001, η²=.32. Significant improvement for both patient and caregiver participants from baseline to post-intervention was seen on the Patient Health Questionnaire-9, F(1, 32)= 4.53, p=.041, η²=.12 and the language subscale of the Everyday Cognition Questionnaire, F(1, 30)= 4.52, p=.042, η²=.13. Patient participants uniquely showed significant improvement on cognitive tasks measuring verbal fluency (Animals), F(1, 26)= 6.10, p=.02, η²=.19 and sequencing ability (Digit Span Sequencing), F(1, 26)= 4.32, p=.048, η²=.14, and the emotion subscale of the Parkinson’s Disease Quality of Life Questionnaire, F(1, 23)= 7.83, p=.01, η²=.25. Caregivers improved more than patients on the Memory subscale of the Everyday Cognition Questionnaire, F(1, 8)= 5.30, p=.050, η²=.40. Using weekly homework tracking logs, participant compliance with the assigned home practice was measured (M=18.02 hours, SD=11.56). Compliance correlated strongly with performance on an auditory attention task (Auditory Consonant Trigrams), r=.455 and with the FFMQ, r=.475, indicating that amount of home mindfulness practice was associated with change in cognitive performance and self-reported mindfulness levels. Compliance also negatively correlated with the Patient Health Questionnaire-9 impairment item, r=-.455 and with the Generalized Anxiety Disorder-7, r=-.401, suggesting that amount of home practice was related to change in depression and anxiety symptoms. These results show promise for the use of mindfulness-based interventions to improve aspects of emotional and cognitive functioning and QOL in individuals with PD and their caregivers and suggest that efforts to improve compliance may be important for optimizing outcomes in future trials.

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A057i
PREDICTORS OF QUALITY OF LIFE IN MS: THE ROLE OF STIGMA AND DEPRESSION
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MS is a chronic neurological condition that is associated with a diverse range of health-related complications (e.g., muscle weakness, fatigue, physical disabilities, and cognitive concerns) and psychosocial concerns (e.g., depression and stigma). Quality of life generally is viewed as an indicator of overall wellbeing of individuals with chronic illness such as MS. Health status, level of disability, and mood-related concerns has been shown to impact QOL.

Patients from the Augusta MS Center completed a series of questionnaires during their medical appointments to assess psychosocial factors including quality of life, depression, anxiety, and stigma. The purpose of our study was to examine the relationship between quality of life, depression and stigma. Given the presumed impact of psychosocial concerns, we hypothesized that depression and stigma would have an inverse relationship with QOL.

The majority of our sample (N = 137) was Caucasian (55.5%) female (85%) with an average age of 45 years. We examined correlations between quality of life and demographic factors, health related factors, depression, and stigma and conducted a hierarchical linear regression to evaluate the relationship between QOL and our variables of interest, controlling for demographic factors.

Results indicate QOL was significantly correlated with depression (r=.62) and stigma (r=.49). Results of the hierarchical linear regression indicated that neither demographic nor health related variables were significantly related to QOL. Our total model accounted for 46% of the variance in QOL (F(9,112) = 12.59, p<.001). Both depression (β=.48, p<.001) and stigma (β=.35, p<.001) were significant predictors of QOL in our sample.

Our findings suggest that both depression and stigma impact QOL. Though many treatments for MS focus on disease management and symptom reduction (including medication for treatment of depression), it also is important to develop interventions targeting psychological functioning (e.g., focusing on increasing adjustment to illness and social engagement).

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PSYCHOLOGICAL AND HEALTH-RELATED QUALITY OF LIFE CORRELATES OF TRAIT MINDFULNESS IN A COLLEGE STUDENT SAMPLE

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Mindfulness interventions have become increasingly popular among mental health providers (Chiesa & Serretti, 2009). Mindfulness interventions show promise for treating physical and mental symptoms in patients with a wide array of diagnoses as demonstrated in a meta-analysis by Grossman, Niemann, Schmidt, and Walach (2004). Surprisingly, the relationship between mindfulness ability and physical and mental health has only been examined in a few studies and never within a college student population (Papis, Pronk, Keesean, & Barsalou, 2014). The present purpose was to examine trait mindfulness as well as physical and mental health correlates of trait mindfulness. Participants included 275 students enrolled at Utah State University (74% female). Trait mindfulness ability was measured with the Mindful Attention and Awareness Scale (MAAS; Brown & Ryan, 2003) and the Five Facet Mindfulness Scale (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). Psychological factors were assessed via the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). The Short Form Health Survey (SF-36; Ware, Kosinski, Dewey, & Gandek, 2000) measured mental and physical health-related quality of life. Seventy-nine percent of the sample reported engaging in a mindfulness practice at least once and 35% of the sample reported current mindfulness engagement. Significant negative correlations were found between the MAAS and mental health symptoms (BDI = r = -.36, p < .001; PSS = r = .14, p < .05; SF-36 Mental Health = r = -.40, p < .001). Trait Mindfulness, as measured by the MAAS was also correlated with the Vitality (r = .35, p < .001) and Role Emotional (r = .39, p < .001) subscales of the SF-36. Interestingly, the Physical Health subscales of the SF-36 were not correlated with trait mindfulness. Results suggest mindfulness ability might play a significant role in mental health symptoms and functioning in college students.

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THE BENEFITS OF NEUROFEEDBACK PROCEDURE IN AIDING THE RECOVERY FOR VETERANS WITH SYMPTOMS OF PTSD

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As many as fifty percent of women and men in the military present symptoms of post traumatic stress disorder (PTSD). These individuals have had increased difficulty transitioning out of military life. The majority of these individuals have shown symptoms of emotional instability, cognitive dysfunction, and disturbances in sleep and behavior. Nightmares, attention problems, and substance abuse are some of the pervasive problems in this population. As a result, many veterans often find it difficult to support themselves once they have left the military. Currently, psychotherapy and psychotropic medications are used to treat symptoms of PTSD. This approach, while helpful, has been unable to address many of the PTSD symptoms in veterans. Neurofeedback (NFB) is an alternative to psychotherapy and psychotropic medications in the treatment of PTSD. NFB is a non-invasive procedure shown to increase functionality and regulation in the brain. This study examined the effect of NFB on the brain activity related to attention and readiness. The contingent negative variation (CNV) amplitude, which indexes cognitive and motor processing is expected to have a greater negativeness across leads in the experimental condition (NFB) than the control (No-NFB) condition. Analysis of NFB condition and No-NFB condition has yielded a significant result (p < .05). Attention and preparatory response are enhanced by NFB procedure. This finding is relevant for PTSD treatment. Cognitive and motor problems are part of the symptom repertoire in women and men of the military returning from deployment. A subsequent study was performed to examine the effect of NFB on PTSD symptoms. This study hypothesized that PTSD symptoms are expected to decrease after neurofeedback treatment as indexed between the pretest and posttest measures for the experimental group. A small population of homeless and near-homeless veterans with PTSD were given NFB. The results of this study suggest that NFB actively reduces symptoms associated with PTSD (p < .05). Collectively with the latter findings, NFB is found to promote neural functionality and regulation contributing to improvement in cognition and behavior functioning. Both electrophysiological and behavioral data show that NFB is an effective treatment in alleviating the symptoms associated with PTSD.

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THE INFLUENCE OF WESTERN DIETARY INTAKE ON POSTPARTUM DEPRESSION: A NOVEL MODEL

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Postpartum depression (PPD) is a serious and highly prevalent mental health disorder with 7.1% of postpartum women experiencing a major depressive disorder and as many as 19.2% experiencing any depression within three months of childbirth. Despite the well-documented negative effects of PPD on maternal and child health outcomes, the mechanisms through which PPD develops remain unclear. Given the significant metabolic changes that occur during pregnancy and postpartum in combination with increased rates of poor dietary intake, the role of the Western diet in PPD is a novel, understudied area of research. High in both saturated fatty acids and protein/branched chain amino acids (BCAA), the traditional Western diet has been associated with metabolic dysregulation and mood disorders in women. This relationship may be exacerbated peripartum as a function of normal gestational insulin resistance, or the “diabetogenic state” of pregnancy. Thus, investigating the role of the Western diet in pregnancy may advance our understanding of the pathophysiology of PPD and provide insight regarding potential dietary interventions. The purpose of this study...
was to test the hypothesis that consumption of a Western diet increases risk for PPD using an animal model. We placed female mice on one of 4 diets: (1) high-fat diet (HFD), (2) low-fat diet (LFD), (3) HFD supplemented with BCAA (HFD-BCAA), or (4) LFD supplemented with BCAA (LFD+BCAA) for 6 weeks prior to breeding and during gestation. The HFD-BCAA diet resulted in the greatest maternal weight gain and the highest postnatal day 8 (P8) fasting glucose levels. The pup survival rate was lowest in litters from mothers consuming the HFD-BCAA diet. Mothers on BCAA-supplemented diets had increased postpartum depressive-like behavior as evidenced by more time immobile in the forced swim test and increased postpartum anxiety-like behavior as evidenced by less exploration in the elevated zero maze on P8. PCR analysis of the postpartum hypothalamus revealed that BCAA altered expression of serotonergic (5HT1A) genes. Findings suggest that consumption of a Western diet prenatally can alter serotonergic function and increase PPD risk for mothers. Future studies should further elucidate the mechanisms underlying this relationship and validate the hypothesis in human trials.

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A064b
RCT OF DIFFERENT THEORY-BASED AUTOMATED DIETARY BEHAVIOR CHANGE INTERVENTIONS FOR MAINTAINING CHANGES IN DIETARY BEHAVIOR
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Long term maintenance of health behavior change improvements achieved by an intervention program are difficult to achieve, but has been addressed in few formal research studies. We compared the efficacy of 2 totally automated interventions, each based on a different health behavior change maintenance theory, in a 3-arm RCT (theory1 vs. theory2 vs. non-intervention control) for maintaining previously achieved improvements in consumption of fruit & vegetables (F&V) in a population-based sample of adults (18+ yo) living in the Boston area who initially consumed less than the recommended 8 servings/d of F&V. We recruited 697 of these individuals to use an effective automated F&V acquisition intervention for up to 6 months; 397 of them increased their consumption of F&V by >1 serving/d. These descriptive changes in the perceptions of partners’ dietary habits were not different from each other. Results of ANCOVA models, controlling for group and baseline values for F&V consumption, revealed group differences at only the 6 month time point (p=.014) with SCT and GST subjects consuming more F&V compared to the control group (p=.004 and p=.036, respectively), but there was not a significant difference between the two intervention groups (p=.477).

This study supports the conclusion that maintenance theory-based interventions can sustain gains in dietary behaviors (F&V) obtained by a prior acquisition intervention, but that once the maintenance intervention ceases, the maintenance effects diminish.

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A064c
WOMEN’S PERCEPTION OF OWN AND PARTNERS’ DIETARY MONITORING BEHAVIOR DURING ENGAGEMENT AND FIRST MONTHS OF MARRIAGE
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Concordance of eating habits and body mass index (BMI) is common among married couples. Yet, changes in dietary behaviors and BMI that occur during the transitional period between engagement and the first 6 months of marriage are unknown. As part of a large longitudinal study, women (N=63; mean age 28.7±5.9 years) completed a survey while engaged and within the first 3-6 months of marriage; surveys were spaced approximately 8 months apart. Women self-reported their own and their partner’s dietary behaviors using the Eating Behavior Patterns Questionnaire. This questionnaire averages four items of a 5-point likert scale to assess adherence to the following dietary monitoring behaviors: portion control, weekly meal planning, eating the recommended amount of fruits and vegetables, and monitoring fat content in foods. Higher scores indicate greater dietary monitoring behaviors adherence. The four scales (own and partner behaviors at both time points) all exhibited adequate reliability (α=.62-.81). BMI was calculated using women’s report of their own and partner’s height and weight. Dietary behavior scores were not correlated at the engaged time point (r=.20, p=.12) however were strongly related at the newlywed time point (r=.79, p<.001). There were no significant changes in participants BMI or their partner’s BMI between engagement (24.24±5.0 and 26.53±4.1 respectively) and first months of marriage (24.08±5.02 and 26.04±4.6 respectively). Women’s own BMI was correlated with their partner’s BMI at engagement (r=.42, p<.001) and first months of marriage (r=.55, p<.001). Paired-sample T-tests were used to test differences between own and partners’ eating behaviors at both time points. At both time points, women reported greater adherence to dietary monitoring behaviors when rating themselves than when rating their partners (p<.001). Women did not report a significant change in their own eating behavior between engagement (M=3.33±.79 to newlywed (M=3.18±.87; t(60) = 1.89, p=.064). There were no significant changes in the perceptions of partners’ dietary habits between engagement and marriage. (p=.124). These descriptive results suggest changes in dietary monitoring behavior, but not
weight, occur during the brief transition between the several months preceding and following marriage.

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A081a
BELIEFS ABOUT TREATING DISORDERED EATING AMONG FEMALE VETERANS
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Background: Disordered eating is common among many veterans served by the Veterans Affairs (VA) healthcare system, including women. However, it is not clear whether and how female veterans want to receive treatment for disordered eating.

Objective: To describe preferences and potential service gaps related to treating disordered eating among female veterans.

Methods: Women affiliated with mental health clinics at the San Francisco VA participated in 1 of 7 focus groups about disordered eating between April 2013 and October 2014. Focus groups were semi-structured, audio recorded and transcribed verbatim. Holistic coding was used to identify treatment preferences. Participants self-reported demographics and symptoms of disordered eating.

Results: Participants (N=20) were mostly non-White (55%), unmarried or divorced (90%), and worried about “loss of control” over eating (75%). Mean age was 48 years (SD: 15.05). Few participants reported being assessed for or referred to treatment for disordered eating, but all thought the VA should provide such services. Qualitative analyses revealed four themes related to treatment preferences for disordered eating: treatment format, treatment content, treatment providers, and the referral process. Most participants preferred treatment in women-only groups due to the comradery, competition and non-judgmental atmosphere fostered by such settings. Participants preferred treatment content focused on mindfulness and interactive information on how to shop, cook, and eat as a civilian. Participants did not want treatment for disordered eating to contain information on other mental or physical health conditions. Participants preferred that providers participate in interactive components of care (e.g., exercise), but most participants did not have preferences regarding providers’ disciplines. Participants preferred a routine, but optional referral process based on open ended questions.

Conclusions: Women using VA services are interested in receiving treatment for disordered eating, particularly if conducted in women-only group settings. Treatments could be offered in conjunction with the VAs weight loss program and must allow for social support and interactive learning.

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A081b
EFFECTS OF TREATMENT DOSE ON BLOOD LIPIDS IN THE BEHAVIORAL TREATMENT OF OBESITY
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Weight loss can reduce serum cholesterol and triglyceride concentrations in obese adults. However, the dose of treatment required to produce significant reductions in individuals with elevated blood lipids remains unknown. The present study evaluated the effects of treatment dose on weight loss outcomes in a sample of 477 obese adults (M±SD: baseline BMI=36.3±3.9 kg/m², age=52.4±11.5 years). Participants were assigned randomly to low, moderate, or high doses of behavioral weight-loss treatment (i.e., 8, 16, or 24 sessions over six months) or to a control group that received 8 sessions of nutrition education without behavioral strategies such as self-monitoring. Fasting blood lipids were analyzed at 0 and 6 months by Quest Diagnostics Inc. At 6 months, weight changes were -4.8 ± 4.5 kg, -8.6 ± 6.6 kg, -10.6 ± 7.2 kg, and -12.3 ± 6.9 kg, for the control, low, moderate, and high-dose conditions, respectively. Weight losses at 6 months were correlated with decreases in triglycerides (r=0.31, p=.001), LDL cholesterol (r=0.16, p=.001), and total cholesterol (r=0.26, p=.001). Repeated-measures MANOVAs were conducted using separate subsets of participants who had clinically significant elevations at baseline using NIH guidelines (i.e., triglycerides > 150 mg/dL, n=180; LDL-cholesterol >100 mg/dL, n=184; and total cholesterol > 200 mg/dL, n=298). Analyses indicated: (a) for triglycerides, a significant interaction effect for condition x time, [F(3,180)=3.00, p=.032, ηp²=.05]; (b) for total cholesterol, a significant main effect for time only [F(3,180)=67.62, p<0.001, ηp²=.27]; and (c) for LDL cholesterol, a significant interaction effect for condition x time [F(3,294)=2.70, p=.048, ηp²=.03]. Univariate ANOVAs and Games-Howell post hoc tests revealed a significantly greater decrease for the high-dose treatment (-57.73±8.00 mg/dL) compared to the education control group (-27.52±8.43 mg/dL) for triglycerides (p=.001), and a trend toward a greater decrease for the high-dose treatment (-15.23±2.34 mg/dL) compared to the control group (-6.47±2.59 mg/dL) for LDL cholesterol (p=.054). Collectively, these findings suggest that a high dose of behavioral treatment may be required to produce weight losses of sufficient magnitude to improve blood lipids in obese adults.

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A081c
LIFESTYLE INTERVENTION IN EMERGING ADULTHOOD: A BRIEF ACCEPTANCE-BASED BEHAVIORAL INTERVENTION FOR YOUNG ADULTS
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Obesity and weight-related health problems represent an ever-growing global health crisis. In the United States, greater than two-thirds of adults are overweight or obese. Despite decades
of ongoing study, few evidence-based intervention options exist for behavioral healthcare providers to treat this costly and medically complex condition. Even more problematic has been the lack of effective brief interventions which match the context of many contemporary treatment models. The current study examined the utility of a novel acceptance-based behavioral intervention utilizing a conceptualization and treatment framework of acceptance and commitment therapy (ACT). Thirty-six young adults (ages 18-30 years) were randomly assigned to either information control or a four-week group intervention consisting of four, 90-minute sessions of ACT. No differences were observed across conditions in terms of BMI, psychological variables, or demographic variables. Control condition participants were given psychoeducation regarding CDC dietary and physical activity guidelines, strategies for self-monitoring, and were reevaluated after one month, similar to standard care for overweight and obesity. Experimental participants were given the same psychoeducation materials and participated in the four-week ACT intervention. Experimental participants lost a statistically significant amount of weight, while control participants did not. In addition, ACT participants also had significant improvements in weight-related psychological flexibility, which was correlated with several healthful changes in diet and eating behavior. While this study remains limited in scope and power due to small sample size, it raises important implications for further utilization of ACT in brief interventions for managing weight in emerging adulthood.

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A081d

OBESITY PREVENTION AND REDUCTION IN LATINO WOMEN

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Purpose: In Santa Ana, Orange County, CA, 70% - 80% of the population is overweight and more than 3/4 of the population is Latino. Obesity-related health conditions are prevalent. The goal of our obesity intervention program is to increase healthy living skills and have improved health outcomes among non-pregnant Latina women 18 years of age or older with a BMI > 25% living in Santa Ana, Southern California. The objectives of the intervention are to: 1) examine associations between knowledge and health behaviors; 2) identify the difference between emotional eating and physical hunger; 3) increase participants’ ability to identify eating triggers, and 4) increase healthy eating and physical activity.

Design Methods: Latinas (N= 223) participated in the 10-week intervention program that included nutrition classes, behavioral support groups, fitness activities, a grocery store tour and a healthy cooking demonstration. Questionnaires elicited health-related knowledge, dietary behavior, physical activity level, and self-efficacy.

Results: Women’s knowledge of appropriate serving size increased from pre- (33.3%) to post-test (97.2%). Average consumption of healthy foods increased significantly from pre-to post-test, particularly frequency of vegetables and water intake. Frequency of any form of physical activity in the past 30 days increased significantly from pre-to post-test. For example, average weekly frequency for vigorous exercise was M=1.38 hours at pretest and M=2.72 at posttest. There was a decrease in self-rated emotional eating from pretest (23%) to posttest (5%); and an increase of “rarely or occasionally” in emotional eating, suggesting increased self-efficacy in controlling the desire to eat. In addition, average BMI of women decreased significantly from pre- (M=33.58) to post-intervention (M=32.71), p < .001.

Discussion and Conclusion: The results provided preliminary evidence that this culturally tailored intervention program may be successful in increasing the healthy living skills in Latina women as well as improving their overall health outcomes.

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A081e

PSYCHOLOGICAL FLEXIBILITY AND ENGAGEMENT IN WEIGHT MANAGEMENT.

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Successful weight management treatment is essential for the VHA as 72.2% of veterans seeking health care are overweight or obese (Koepsell, Littman, & Forsberg, 2012). Treatment success is contingent upon utilization and engagement. Unfortunately, low enrollment, poor attendance, and high attrition from weight management programs are major barriers for long-term weight loss, with attrition rates as high as 81.5% (Grossi et al., 2006). Moroshko and colleagues (2011) found that psychological and behavioral factors are most strongly associated with attrition, but most studies rely on routinely collected demographic data with no underlying theoretical relationship to attrition. This study aimed to target this gap by applying the psychological flexibility model to weight management engagement. The current study evaluated the hypotheses that experiential avoidance and values congruence would be associated with treatment engagement and successful weight loss.

Participants were recruited from primary care clinics within an inner city Midwestern VA. The sample included 183 overweight and obese veterans (91.3% Male, 77.6% African American). Participants completed a demographics questionnaire, the Acceptance and Action Questionnaire for Weight-Related Problems (AAQW) and the Valued Living Questionnaire (VLQ). Program enrollment, attendance, and weight change were tracked across 3 months. Eighty-seven participants enrolled in the weight management program with 96 non-enrollees. Logistic regression analyses revealed that AAQW score significantly predicted probability of enrolling (OR=1.03, p<.01). AAQW and VLQ scores were not significantly related to attendance, and AAQW score approached significance for dropout (OR=6.54, p=.08). Hierarchical linear modeling demonstrated that AAQW was related to baseline BMI (β=-7.46, p<.001) and 3-month BMI trajectory (β=-0.03, p=.01) for enrollees, while AAQW predicted 3-month weight change for nonenrollees (β =0.28, p<.05).

The extant research on weight management suggests that much can be done to improve treatment outcomes. Increasing engagement is a major component of improving weight management success. The findings from this study suggest that targeting...
psychological flexibility can be a means to achieving this goal. Future weight management research should continue to explore this relationship.

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A081f
THE INFLUENCE OF ADIPOSITY AND DEPRESSIVE SYMPTOMATOLOGY ON COGNITIVE INHIBITION IN AFRICAN AMERICANS
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African Americans are at increased risk for accelerated cognitive decline, stroke, and dementia, as compared to other racial/ethnic groups. African Americans are also disproportionately affected by obesity, a risk factor for cognitive decline and correlate of depressive symptoms. Decrements in cognitive inhibition are associated with depressive symptoms and obesity. In addition, African Americans and obese individuals tend to report more somatic, rather than cognitive, symptoms of depression. The current study attempted to address the following questions: 1) are somatic depressive symptoms more strongly associated with cognitive inhibition than cognitive symptoms? and 2) does the association between somatic depressive symptoms and cognitive inhibition vary as a function of body mass index (BMI)? A community-based sample of 185 African Americans completed the Stroop Test and the Beck Depression Inventory II (BDI-II). Height and weight were obtained to calculate BMI. Hierarchical regression analyses showed no significant associations between somatic or cognitive depressive symptoms and Stroop performance after controlling for age, gender, and education. There was, however, a significant interaction between BMI and somatic depressive symptoms, such that at a BMI of 34.15 kg/m2 or above, greater somatic depressive symptoms were associated with poorer Stroop performance (B = -.406, p = .010). Results suggest that depressive symptom type and degree of adiposity should be considered when assessing the role of depression in cognitive inhibition. Treating depression and losing weight may help to maintain cognitive well-being among African Americans.

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A081g
THE PROMINENCE OF SOMATIC AND AFFECTIVE DEPRESSIVE SYMPTOMS AMONG WOMEN WITH DEPRESSION AND OBESITY AND RESPONSE TO TREATMENT
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In a randomized trial for women with obesity and depression, women in the condition involving both behavioral activation treatment for depression and a lifestyle intervention (BA) improved to a greater degree than women in the lifestyle intervention condition alone (LI). The present study separated depressive symptoms into cognitive, affective, and somatic clusters, and examined baseline differences in these clusters and change over time between the BA and LI conditions.

Participants completed the Beck Depression Inventory-II at baseline and 6 months. Symptom cluster subscales were created to reflect cognitive, affective, and somatic depressive symptoms. We computed the average item score for each subscale and compared baseline scores between the two groups using t-tests. We then compared change in total subscale score from baseline to 6 months using repeated measures ANCOVAs adjusted for concurrent weight change (lbs) and age. Additional ANCOVAs were used to determine if 6-month differences by condition persisted when adjusted for baseline subscale score.

Women with both baseline and 6-month depression data were included (N=142; BMI M=35.3, SD=3.3; age M=46.0, SD=10.9; 86% Caucasian). At baseline, mean scores on the cognitive cluster (M = 0.69, SD = 0.34) were lower than both the somatic (M = 1.18, SD = 0.47; p < 0.001) and affective clusters (M = 1.17, SD = 0.50; p < 0.001). Across both conditions, cognitive, affective, and somatic symptoms significantly decreased at 6 months (all p’s < 0.001). At 6 months, when controlling for baseline subscale scores, women in the BA condition showed greater reductions in affective (M = -2.1, SE = 0.19) and somatic (M = -4.0, SE = 0.31) symptoms than women in the LI condition (affective: M = -1.6, SE = 0.18; p = 0.04; somatic: M = -2.7, SE = 0.29; p < 0.01). Cognitive symptom improvement did not differ between conditions (p = 0.052).

Women with major depression and obesity had greater somatic and affective symptoms than cognitive symptoms at baseline. While all symptom clusters improved, somatic symptoms improved the most. Between the two conditions, the BA condition resulted in greater change across all symptom clusters. Considering the prominence of somatic and affective symptoms at baseline, a behavioral approach, as opposed to a more cognitive approach, may be particularly useful in the treatment of depression in obese adults.

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Objective: To determine the feasibility of behavioral economic-based incentive structures as an intervention to improve medication adherence.

Methods: This was a randomized, controlled trial comparing the effects of financial incentives vs. usual care on medication adherence in patients taking antihypertensive or dyslipidemic medications. An electronic baseline survey assessed self-reported adherence, health beliefs, and patient perspectives regarding treatment benefits and barriers. Participants were randomized to receive either usual care (UC), guaranteed pay-out (GPO) incentives, or lottery incentives. Daily adherence was measured over a 90-day period using MEMS caps. The GPO group received $30 up-front in a virtual account. For each day that a dose of medication was missed, $0.50 was deducted. Participants in the lottery group were entered into a weekly drawing. If their name was drawn and they had taken their medication as prescribed all 7 days, they received $50. Statistical analysis included descriptive statistics, t-tests to characterize bivariate comparisons of adherence, and Pearson’s correlations.

Results: 36 participants were randomized (n=11 UC, n=14 GPO, n=11 lottery.) The majority were female (61%) and had total household income of $20,000 to $69,000 (53%). Age ranged from 27 to 68 with a mean of 50 ± 10.6 years. Mean percent of days adherent was highest in the lottery group (96% ± 4%), followed by the UC group (95% ± 6%) and the GPO group (95% ± 8%). There were no significant differences among groups (p>.05). MEMS-measured adherence was not significantly correlated with patient’s self-reported adherence (p>.05), but was lower in those with self-reported depression (90%) vs. no depression (96%) (p=.01).

Conclusions: Use of financial incentives for medication adherence is a feasible intervention. Although no statistically significant differences in adherence were demonstrated in this small sample of highly adherent participants, larger studies in a more diverse population or with other medications might show otherwise.

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A092b
EXPANDED UTILIZATION TRENDS OF AN INPATIENT MEDICAL PSYCHOLOGY/CONSULTATION-LIAISON SERVICE
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This study examined utilization trends in referral requests to a medical psychology/consultation-liaison team providing hospital-wide services to the departments of Surgery, Emergency Medicine, Trauma, Medicine, and inpatient Psychiatry units in a large academic medical center. Literature documenting utilization rates of these services is scarce with a pronounced emphasis on the provision of psychiatric consultation to medical patients. However, current literature suggests that the delivery of psychological services may be vital to providing holistic care, decreasing recovery time, and contributing to overall cost-effective treatment via increasing patient satisfaction and implementing behavioral interventions to reduce premature morbidity and mortality.

Referral data were collected over a 3.5 year time period from a diverse urban university teaching hospital located in the Southeastern United States. Between the years of 2011 and 2014, a total of 5,571 consultation visits were completed for 2,795 individual patients. During this time period referral requests increased 102.29% and total visits increased 141.35% representing a significant influx in consultation requests as well as visits per request. Average number of visits per request was 1.99 (SD=2.02) with a maximum of 26 visits. Consultation requests included a variety of evaluation and intervention based services, which were distilled into 20 discrete categories. Significant increases were noted in requests for evaluations of decision making capacity, personality testing, and for assistance in coping with medical diagnosis. Additionally, an increase in requests for multiple referral or testing questions suggests that providers are seeking consultation to address the needs of increasingly complex patients with several biomedical and psychological factors impacting their health. A decrease in requests for evaluations for mood disorders suggests that referring providers may be refining the specificity of their requests.

The results of this study demonstrate the increasing demand for psychological consultation services to address the unique psychobiological needs of medical patients. In addition, the implications of these services are discussed as an important adjunct to traditional psychiatric consultation in the general hospital setting.

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A092c

EXPLORING THE DIRECT AND INDIRECT EFFECTS OF PATIENT-PROVIDER COMMUNICATION ON INTRAOCULAR PRESSURE IN GLAUCOMA PATIENTS

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Objective. We explored the direct and indirect effects of self-efficacy and six different patient-provider communication behaviors on the intraocular pressure (IOP) of glaucoma patients. We specifically examined whether patient medication adherence and eye drop technique mediated the relationship between self-efficacy, communication, and IOP.

Methods. We conducted an 8-month cohort study of 279 glaucoma patients and 15 providers in which we videotape-recorded glaucoma office visits at two time points. Videotapes were then transcribed and coded for six patient-provider communication behaviors. Patient medication adherence was measured using electronic caps, patient eye drop technique was assessed using videotape recordings, and IOP was extracted from patients’ medical records. Generalized estimating equations were used to examine the direct effects of patient-provider communication on IOP. Bootstrapping was used to test for indirect effects.

Results. Provider education about medication adherence (B=-0.99, p<0.05) and provider inclusion of patient input into the treatment regimen (B=-0.72, p<0.05) predicted improved IOP, but only including patient input in the treatment plan predicted a clinically-significant decrease in IOP (OR=0.43 95% CI 0.19, 0.98). There was no evidence of significant mediation in our sample.

Conclusion. The positive effects of provider education and provider inclusion of patient input in the treatment plan were not mediated by adherence and eye drop technique. Future studies should examine whether different variables, like patient motivation to adhere, mediate the effects of patient-provider communication on IOP.

Practice Implications. Providers should educate glaucoma patients about the importance of medication adherence and include patient input into their treatment plan.

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A092d

IDENTIFYING SUICIDE RISK IN EMERGENCY DEPARTMENTS: A QUALITATIVE STUDY OF PROVIDER PERSPECTIVES

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Background: Emergency departments (EDs) are critical suicide prevention sites as 3-11% of ED patients seeking medical treatment present with co-morbid suicidal ideation (Allen et al., 2013). The Joint Commission (2011) and the National Strategy for Suicide Prevention (2012) have called for improved assessment and management of suicide risk in emergency medicine. However, ED providers may find suicide prevention efforts difficult given the lack of validated tools and practice guidelines specific to assessing suicide risk in EDs. To better inform suicide risk assessment efforts in EDs, this project aimed to gather ED provider perspectives on the strengths and weaknesses of various methods to assess suicide risk.

Method: Nineteen ED providers from three hospitals in a Midwestern state completed a semi-structured qualitative interview. The majority of the sample was registered nurses (68%). Providers discussed their beliefs regarding the strengths and weaknesses of conducting suicide risk assessment via three approaches (paper-and-pencil, computer, or verbal) and at two points in patient care (triage or exam room). Themes were identified via grounded theory analysis.

Results: Regarding assessment approaches, ED providers noted that both paper-and-pencil and computerized formats allow for increased privacy yet are limited by a patient’s level of literacy. The usefulness of a verbal approach appears to depend on an ED provider’s comfort and skill in assessing suicide risk. Regarding ED areas in which to identify suicide risk, triage allows for early detection but may distract from quickly determining acute medical needs. The exam room was seen as a private setting, with the possible drawback of failing to mobilize resources to assess and manage suicide risk early in an episode of care.

Conclusions: While ED providers noted strengths and weaknesses for each assessment approach, methods that allowed for privacy, efficiency, and objectivity were valued. There was no clear preference for where to integrate the practice in ED care, but early detection of risk and privacy were valued. The importance of considering the perspectives of front-line ED staff and contextual factors of the ED environment in informing feasible suicide risk assessment practices in EDs will be discussed.

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**A092e**

**LONGITUDINAL TREATMENT OUTCOMES IN PAIN CATASTROPHIZING FOLLOWING A 3-WEEK COMPREHENSIVE PAIN REHABILITATION PROGRAM**

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**Background:** Comprehensive pain rehabilitation programs focused on cognitive-behavioral treatment and functional restoration are both efficacious and cost-effective for the treatment of chronic pain. A large body of research suggests that pain catastrophizing is an important contribution to the etiology of chronic pain syndromes and associated impairment (e.g., disability status, quality of life). Similarly, reduction in pain catastrophizing is a proposed mechanism that accounts for improvement in cognitive-behavioral therapies for chronic pain. However, few studies have investigated the maintenance of treatment gains in catastrophizing following treatment.

**Method:** Participants in this study will include 298 adult patients who completed the Mayo Clinic 3-Week Comprehensive Pain Rehabilitation Program between January 2013-July 2014, and completed survey measures on pain interference on functioning and pain catastrophizing at admission, discharge, and 6 months posttreatment.

**Results:** Preliminary data analysis suggests that patients reported significantly improved pain interference at completion of the 3-week program compared to admission, and gains were maintained at 6-month follow up, $F(2,88) = 22.98, p < .001$. Importantly, results of a within-subjects mediation indicated that this improvement was fully mediated by the decrease in pain catastrophizing ($\beta = .56$), implicating this construct as a mechanism of treatment change. Adj. $R^2 = .28, F(2,44) = 9.58, p < .001$. Furthermore, improvement in pain catastrophizing remained significant at 6 months posttreatment, $F(2,88) = 27.65, p < .001$.

**Conclusions:** Pain catastrophizing accounted for improvements in pain interference, and remained significantly decreased at posttreatment follow up. The results of this study add to research support for comprehensive pain rehabilitation programs utilizing cognitive-behavioral and functional restoration interventions.

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**A092f**

**META-ANALYSIS OF PSYCHOLOGICAL THERAPIES FOR TREATMENT OF IRRITABLE BOWEL SYNDROME**

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**Objective:** Irritable Bowel Syndrome (IBS) is a painful and often debilitating functional gastrointestinal disorder affecting 7-16% of the population in the U.S. (Lovell & Ford, 2012). There is currently no universally effective medical or dietary treatment available to alleviate symptoms. Several psychological therapies have shown promise for improving IBS symptoms; however, no meta-analysis to date has investigated the relative efficacy of different psychotherapies in this population.

**Methods:** Meta-analysis was used to synthesize research on the effects of psychological therapies for adults with IBS on three outcome measures (gastrointestinal symptom severity, mental health, and functioning) using a random-effects model. Data were extracted as intention-to-treat analyses and missing data were imputed whenever possible.

**Results:** An extensive literature search located 45 eligible randomized controlled trials. Compared to a mixed group of control conditions, psychological therapies were effective at improving IBS symptom severity (d = 0.53, SE = 0.08; p<.001, 43 studies), mental health (d = 0.39, SE = 0.06, p<.001, 30 studies), and functioning (d = 0.33, SE = 0.07, p<.001, 15 studies). For all outcome measures, effect sizes were larger in studies using non-active control conditions (ds = 0.61, 0.58, 0.41) compared to active control conditions (ds = 0.37, 0.28, 0.38). Cognitive, behavioral, and cognitive-behavioral therapies were evaluated in the largest number of trials (22 trials), followed by relaxation (7 trials), hypnosis (6 trials), and psychodynamic therapies (4 trials). The four modalities were comparable in their magnitudes of effect relative to a mixed group of control conditions with respect to GI symptoms (ds = 0.53, 0.35, 1.06, 0.35, p = .23) and mental health (ds = 0.44, 0.57, 0.29, 0.40, p=.67), but less so with respect to functioning (ds = 0.53, -0.07, 0.23, 0.44, p < .05).

**Conclusions** As a whole, psychological interventions are effective in reducing GI symptoms and disability, as well as improving mental health, in adults with IBS. Cognitive, relaxation, hypnosis, and psychodynamic therapies were the most commonly tested treatment modalities. These four therapies appear equally effective at improving GI symptoms and mental health, but cognitive therapies appear more effective at improving functioning in adults with IBS, although fewer than half of the trials reported this outcome.

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**A092g**

**IS COMORBID DEPRESSION A RISK FACTOR FOR NON-COMPLIANCE WITH CPAP? A HISTORICAL COHORT STUDY**

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**Introduction:** It is well-established that there is a higher prevalence of depression among people with obstructive sleep apnea (OSA) than the general population. Since depression is a commonly accepted risk factor for low medication adherence, some studies have investigated the association between depression and continuous positive airway pressure (CPAP) non-compliance, yet these studies were conducted with small sample sizes and have mixed conclusions. Therefore, this study examined the relationship between depression and CPAP compliance in a large Medicare Advantage population.

**Methods:** An observational historical cohort of individuals with a diagnosis of OSA during 2013 was collected from administrated claims. Patients with OSA were stratified by compliant vs. non-compliant with CPAP based on the presence or absence of a sleep apnea related claim within the previous 12 months. Depression, defined as a depression-related claim in the previous 12 months, was evaluated as potential risk factor for CPAP non-compliance. The rate of inpatient hospitalizations was reported.
for each patient group according to CPAP compliance status and depression status. Descriptive statistics were reported, including odds ratios and frequencies.

Results: Among 84,477 patients with OSA, 76.9% (n=64,983) were compliant with their CPAP. Depression was prevalent in 8.7% (7,335) of all patients with OSA. Patients with depression were 9.4% more likely (odds ratio=1.09, 95% confidence interval 1.04 – 1.16) to be CPAP non-compliant. Among CPAP compliant patients, inpatient hospitalizations occurred at a rate of 247 admissions per 1,000 OSA patients without comorbid depression, and 277 per 1,000 OSA patients with comorbid depression. Among CPAP non-compliant patients, those without depression were hospitalized at a rate of 418 per 1,000 OSA patients, and those with comorbid depression were hospitalized at a rate of 463 per 1,000 OSA patients.

Conclusions: Comorbid depression was a significant risk factor for CPAP non-compliance, and patients with comorbid depression who were non-compliant with CPAP had more inpatient hospitalizations. Accordingly, targeted strategies aimed at optimizing CPAP compliance, particularly in the subset of patients with comorbid depression, may be impactful in the care of both disease states.

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A092i

OPTIMISM AND NEUTROPHIL RECOVERY FOLLOWING STEM CELL TRANSPLANTATION: DIFFERENCES BY TRANSPLANT TYPE

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Purpose. The number of individuals in the US undergoing stem cell transplantation (SCT) as treatment for hematological malignancy has increased yearly, with an estimated 18,000 in 2012. Immune reconstitution following SCT is critical to recovery and survival. Although negative emotional factors such as depression and anxiety have been shown to relate to delayed neutrophil recovery, fewer studies have examined positive emotional factors such as optimism. Studies have also rarely examined differences in these effects by type of SCT (autologous versus allogeneic), despite significant variation in prognosis and treatment course for these populations. The current study, as part of a larger study investigating psychosocial predictors of SCT outcomes, investigates whether levels of optimism prior to SCT predict time to engraftment, a commonly used metric for immune reconstitution, and whether differences in this relationship exist by SCT type.

Methods. A sample of 80 SCT patients (autologous = 59; allogeneic = 21; mean age = 55.2 years) completed items assessing demographics and optimism (LOT-R; Scheier, Carver, & Bridges, 1994) pre-transplant. Time to engraftment was measured by days post-transplant until the patient’s absolute neutrophil count was 500/mm3 for 3 consecutive days. Multiple linear regression tested associations of optimism with days to engraftment, adjusting for demographics and medical confounds including physician-rated risk status, graft volume, and the provision of granulocyte colony stimulating factor. Simple slope analyses evaluated the significance of associations by SCT type.

Summary of Results. Greater optimism pre-transplant was predictive of fewer days to engraftment (B=–0.14; p<.05), although this varied by SCT type. For those with autologous SCTs, optimism was unrelated to days to engraftment (B=–0.01; p>.05); however, for those with allogeneic SCTs, optimism was related...
to fewer days to engraftment (B=−0.33; p<.01). Interestingly, optimism pre-transplant was most predictive of recovery following allogeneic SCT, which by nature involves greater morbidity and mortality risk, and consequently may require greater psychological resilience. Findings provide support for the relevance of strengths-based psychological factors to recovery following SCT.

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A105a
ADHERING TO PHYSICAL ACTIVITY GUIDELINES AND DIETARY QUALITY AMONG US ADULTS BY RACE/ETHNICITY AND INCOME

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While there is abundant evidence that meeting physical activity guidelines and adhering to a healthful diet plays a paramount role in chronic disease prevention, many Americans do not meet recommendations. Research to date has explored correlates of physical activity and consumption of a more healthful diet independent of each other, yet few studies have examined whether individuals meeting physical activity guidelines are more likely to consume a diet of higher quality (e.g., more fruits and vegetables, less sugary foods/beverages). We examined the association of physical activity and dietary quality among a US nationally representative sample of adults while stratifying by sex, age, race/ethnicity, and income.

To examine this relationship, we used data from the National Health and Nutrition Examination Survey (2003-2004; 2005-2006). Physical activity, measured via accelerometers, was dichotomized into meeting physical activity guidelines (yes/no); i.e., ≥150 minutes a week of moderate to vigorous physical activity per week. Dietary quality was assessed via the Healthy Eating Index 2010 (HEI) score (1-100) derived from dietary 24-hour recall dietary data (1-100). Descriptive analysis and multivariable ordinal least squares regression were utilized to estimate the relationship examined adjusted for covariates.

Results indicated that only 8% of adult Americans are meeting physical activity guidelines and the overall dietary quality is poor 47.6/100 (SE=0.39). Findings stemming from the multivariable analysis revealed that individuals meeting physical activity guidelines were significantly more likely to have a higher HEI score (B=−2.85, p<0.01) than those not meeting guidelines. In subgroup analysis, a significant relationship between meeting physical activity guidelines and higher dietary quality were observed among women (but not men), among the 20-40 years and ≥60 years age groups, among whites (but not African Americans and Hispanics), and among the high income strata only (p<0.05-all). Results emphasize the need for behavioral interventions aimed at increasing both physical activity levels and improving overall dietary quality, especially targeted to specific populations.

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A105b
DVD-DELIVERED PHYSICAL ACTIVITY EFFECTS IN INDIVIDUALS WITH MULTIPLE SCLEROSIS: A PILOT TRIAL

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The aging process is associated with declines in physical function, physical activity, and quality of life, which are exacerbated by the onset and progression of neurodegenerative diseases such as multiple sclerosis (MS). In the US, more than 400,000 individuals live with MS and nearly half are 55 years and older. Along with age-related declines in physical function and quality of life, those with MS experience additional mobility impairments and restricted social involvement. Due to these health concerns, home-based interventions may have a greater ability to reach the MS population. The objective of this study was to test the feasibility of delivering a DVD-based physical activity program (DVD-PA) targeting flexibility, strength, and balance to older adults with MS and to generate effect sizes to power a larger trial. Participants were randomized (n=48) to either the DVD-PA condition or a healthy aging DVD attentional control condition. The primary outcome was the Short Physical Performance Battery (SPPB). We also assessed grip strength, flexibility, quality of life, and self-reported physical activity and sedentary behavior at baseline and at the 6 month follow-up. Of the 48 participants beginning the trial 45 were retained at 6 months (~94%). Although not statistically significant, the DVD-PA group had a clinically significant improvement (.68) in the SPPB (d = .26). There were similar small effects for grip strength (d = .22), and lower extremity flexibility (d = .15). Participants in the DVD-PA group reported greater moderate to vigorous physical activity (d = .76, p = .01) and less sedentary time (d = .54 for weekdays, d = .20 for weekends) than the control condition. Finally, the intervention group reported greater satisfaction with life (d = .43). Our findings provide preliminary support for the feasibility of a home based DVD delivered physical activity program for improving physical function and quality of life in older individuals with MS.

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A105c
EXERCISE AND ALCOHOL USE: HOW ARE THEY RELATED IN THE COLLEGE POPULATION?

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Research has found that participation in varsity athletics increases the risk of hazardous drinking. These findings are
counter to the intuitive idea that increased sport involvement and physical pursuits should be associated with health-promoting behaviors. In a sample of 422 undergraduates at a liberal arts institution (38% male; 80% white; mean age 20 yrs) we explored the associations between alcohol use and exercise. We hypothesized that exercise that occurred within a team or group context (varsity, club sport, intramural) would be associated with increased alcohol use but routine exercise to promote a healthy lifestyle would be associated with decreased alcohol use. Alcohol use was common, with 73% consuming > 1 drinks/week (mean consumption = 9.8 standard drinks/week). Binge drinking was very common; 60% reported > 1 binge episodes in prior 2 weeks (mean = 1.8 binge episodes). Routine exercise was the norm as 70% reported exercising > 2 times/week; average exercise session was 61 minutes. Due to the large number of associations investigated, significance was set at p<.004 using the Bonferroni method. Counter to predictions, significant positive relations emerged between exercise frequency and both total alcohol consumption (r = .24) and binge frequency (r = .18). Additionally, as length of exercise episode increased, so did total drinking (r = .33) and binge frequency (r = .21). Total alcohol use and binge episodes were unrelated to exercising to promote health (r = -.02 and r = .05) or general diet and health concerns (r = -.02 and r = .02). However, consistent with predictions, total consumption and binge frequency were significantly associated with being part of a sports team (r = .24 and r = .20); binge frequency was associated with preferring team sports to individual exercise (r = .14). However, viewing exercise as a way to spend time with friends was unrelated to both consumption variables. Regression analyses showed that both exercise frequency and sport team membership accounted for unique variance in total alcohol consumption. As exercise increased, alcohol consumption increased but this relationship could not be accounted for by dieting, health concerns or sport-team membership. These results suggest that among college students, alcohol use and health promoting behaviors may belong to different schemas.

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A105e

PHYSICAL AND COGNITIVE BENEFITS OF COMBINING STEAM-ROOM USE WITH EXERCISE

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To date, no randomized controlled trials have examined the long-term effects of heat therapy combined with exercise. Extreme heat can induce poor physical and cognitive performance, yet acclimation and adequate hydration can attenuate these transient side effects. Moreover, an extensive literature suggests positive benefits of standalone sauna therapy as well as acute effects of brief sauna sessions after aerobic exercise. The purpose of our longitudinal study was to compare self-reported steam-room users (n=13) vs. non-users (n=104) in the context of a randomized controlled trial involving a 4-month, moderately intensive, weekly exercise intervention with 45-64 year olds (79% female; 78.2% Caucasian; 86% with pre-hypertensive or hypertensive blood pressure [BP]). Self-reported steam-room users steamed an average of 1.2 times/week for an average of 11 minutes/session to complement their weekly 50-min exercise sessions. Participants received a large battery of biometric, cognitive, physical, and psychosocial assessments. Intention-to-treat analysis with multiple imputation procedures revealed that ‘steamers’ (vs. ‘non-steamers’) showed significant improvement in resting diastolic BP (-6.69 mmHg vs. -.51), sit & reach, one-leg balance, 30-sec plank hold, 8:4t Up & Go, and cognitive functioning as assessed by Trails B-A (-11.67 vs. +.55 seconds); all p’s < .05. Additionally, a trend towards improved systolic BP (-.54 mmHg vs. +.73, p=.053) was found for steamers. No differences were found in weight change, back scratch or chair stand performance. Findings suggest that using a steamroom in conjunction with aerobic and resistance training may provide additional health benefits.

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A105f
PREDICTING DROP-OUT AMONG COPD PATIENTS RANDOMIZED TO A LIFESTYLE PHYSICAL ACTIVITY EFFECTIVENESS TRIAL

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Background: Helping patients initiate and maintain physical activity is a critical component in COPD patient treatment. However, avoiding drop-out from physical activity based clinical trials and in real-world clinical settings remains a problem. Drop-out threatens internal validity and external validity of randomized clinical trials (RCTs) and jeopardizes the health of patients in clinical settings. Indeed, data suggests that COPD target populations are not sufficiently represented in RCTs due, in part, to drop-outs. Thus, predicting those at risk of dropping-out of physical activity interventions is of utmost importance. The purpose of this study was to evaluate baseline predictors of drop-out among COPD patients randomized in a lifestyle physical activity effectiveness trial.

Methods: Patients (N=305) were randomized to either usual care (UC) or physical activity self-management (PASM). Drop-out was defined as patients who refused treatment once randomized or were lost to follow-up. Baseline measurements of interest included psychological and physical functioning, health related quality of life, self-efficacy, readiness to change, and demographic variables. Additionally we were interested in whether patients engaged in telephone conversations with the health coach prior to randomization. Among patients randomized to the treatment arm backward elimination was used to identify baseline factors associated with dropping out in a multivariable adjusted logistic regression model. Estimates are presented as adjusted odds ratios (AOR) and 95% confidence limits (CL).

Results: There was a significant difference between those that dropped-out of the UC arm compared to the PASM arm (UC=6.9% vs PASM=18.1%; x2=8.1). Backward elimination in the treatment arm found that patients were less likely to drop out if they had no depressive symptoms (AOR=0.13, CL=0.04-0.47) or had high FEV1% at baseline (AOR=0.94, CL=0.90-0.98). Patients who did not fully engage with the health coach prior to randomization were also more likely to drop out (AOR=5.97, CL=1.07-33.27).

Conclusions: These findings suggest that depressive symptoms, severity of airflow obstruction, and engagement with a health coach are predictors that may help identify COPD patients at risk for dropping out of physical activity interventions.

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A105g
STRATEGIES THAT ENHANCED ADHERENCE DURING A PILOT 4-WEEK DAILY DIARY STUDY UTILIZING PHYSICAL ACTIVITY MONITORS

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Daily measurement and diary studies offer extremely rich datasets for scientists. However, behavioral health research that utilize daily methodology often run into issues of attrition and non-adherence, particularly as the weeks go on. In preparation for a larger wave of data collection, we conducted a pilot study to ensure feasibility of a 4-week daily diary protocol. Community participants (N = 10) were asked to wear a physical activity monitor (Fitbit One®) and complete a questionnaire each day for 28 consecutive days. Adherence was monitored based on frequency of questionnaire completion and physical activity data taken from the participant’s Fitbit account. Adherence was impressive in our pilot study, with 9 out of 10 participants wearing their Fitbit One physical activity monitor on all 28 days of the research project (the final participant wore it for 25 out of 28 days). Adherence for the daily questionnaires was also impressive, with participants completing an average of 27.4 days of questionnaires out of the 28 days (97.86% adherence). We discuss our strategies that helped us to achieve these high levels of adherence. These included positive word of mouth during recruitment, a prorated incentive structure with increased payment per week including participants being allowed to keep the Fitbit if they provided at least 3 weeks of data, automated online daily questionnaires (plus a paper backup), and automated and wireless physical activity tracking. We also discuss barriers and issues that arose during the study such as scheduling and equipment difficulties. Finally, we discuss the anonymous post-study feedback from participants about their experiences in the research study and suggestions for improvement. This pilot study shows the feasibility of conducting a 4-week daily diary research project that utilizes both self-report and physical activity monitor data collection. It also provides evidence of the effectiveness of various strategies for enhancing adherence and reducing attrition.

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A105h
THE RELATIONSHIP OF LIVING ENVIRONMENT AND FITNESS MARKERS: AN EXPLORATORY STUDY IN COLLEGE-AGED STUDENTS

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Background: College is an integral period for the development of health behaviors, though many students do not participate in enough physical activity (PA) during this time. Effective interventions necessitate an understanding of the effect of environ-
MENT ON PA. THE PURPOSE OF THIS STUDY WAS TO EXAMINE THE RELATIONSHIP BETWEEN STUDENTS’ LIVING ENVIRONMENT AND OBJECTIVELY MEASURED FITNESS MARKERS.

METHODS: PARTICIPANTS WERE A VOLUNTEER SAMPLE OF COLLEGE STUDENTS WHO COMPLETED AN OBJECTIVE FITNESS ASSESSMENT (VO2MAX, BMI, BODY FAT %, BLOOD GLUCOSE AND LIPIDS) AND SELF-REPORTED THEIR PA PARTICIPATION, SEDENTARY BEHAVIOR, DEMOGRAPHICS AND PA-RELATED ENVIRONMENT (NUMBER OF RESOURCES AVAILABLE AT THEIR APARTMENT COMPLEX/NEIGHBORHOOD, ACTIVITY-FRIENDLINESS OF NEIGHBORHOOD, LOCATION OF EXERCISE). BASIC STATISTICS DESCRIBED THE SAMPLE, PEARSON CORRELATIONS, ANOVAS AND T-TESTS EXAMINED THE RELATIONSHIP BETWEEN PA PARTICIPATION AND FITNESS VARIABLES WITH ENVIRONMENTAL VARIABLES.

RESULTS: PARTICIPANTS (N=226) WERE PRIMARILY MALE (52%), AND NON-HISPANIC WHITE (74.2%) WITH A MEAN BMI OF 24.7±4.0 KG/M2, BODY FAT % 20.8±7.8, VO2MAX OF 38.3±8.0 ML/KG/MIN, AND REPORTED 195.5±138.9 MINUTES/WEEK OF PA. BMI (R=-.21, P=.005) WAS RELATED TO REPORTED NUMBER OF RESOURCES AVAILABLE AT THEIR APARTMENT COMPLEX. BODY FAT (R=+.22, P=.03) AND BMI (R=+.185, P=.05) WERE HIGHER AMONG THOSE WHO REPORT EXERCISING ON-CAMPUS COMPARED WITH THOSE WHO DON’T EXERCISE ON CAMPUS. BODY FAT WAS RELATED TO TRIPS/WEEK BY BIKE (R=-.016, P=.05), USING BICYCLES IN TOWN (R=-.22, P=.02) AND REPORTING HIGHER TRAFFIC IN THEIR NEIGHBORHOOD (R=-.23, P=.006). VO2MAX WAS RELATED TO ACTIVE TRAVEL TRIPS/WEEK (R=.16, P=.04) AND WAS HIGHER (T=2.63, P=.01; 41.4 ML/KG/MIN) AMONG THOSE WHO EXERCISE OUTSIDE COMPARED WITH THOSE WHO DO NOT EXERCISE OUTSIDE (37.1 ML/KG/MIN).

CONCLUSION: THE RESULTS OF THIS STUDY ILLUSTRATE HOW LIVING ENVIRONMENT CAN INFLUENCE PA. INDIVIDUALS WITH GREATER ACCESS TO RESOURCES HAD A LOWER BMI, WHILE THOSE EXERCISING ON-CAMPUS HAD A GREATER BMI AND % BODY FAT. THESE FINDINGS PROVIDE INSIGHT FOR THE DESIGN OF FUTURE COLLEGE-STUDENT LIVING AREAS AND A FOUNDATION FOR FURTHER STUDY IN PHYSICAL ACTIVITY IN THIS POPULATION.

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A124a

PREDICTORS OF SEXUAL FUNCTIONING IN ACTIVE-DUTY MALE SERVICE MEMBERS SEEKING HELP FOR PTSD

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OBJECTIVE: Sexual dysfunction may be a co-occurring condition experienced by Iraq and Afghanistan veterans with PTSD but few studies have examined this concern. Past research has identified potential risk factors including age, marital status, depression, PTSD, alcohol, and psychotropic meds. Most studies have been conducted within the VA. Less is known about predictors of sexual function in active duty military. The objective of this study was to examine predictors of sexual function in active duty male veterans with PTSD.

METHODS: PARTICIPANTS WERE 198 MALE ACTIVE DUTY MEMBERS SEEKING HELP FOR PTSD. AGE WAS 20 TO 53 YEARS (M=33.8, SD=7.4). PARTICIPANTS COMPLETED SELF-REPORT MEASURES THAT INCLUDED RELATIONSHIP STATUS, USE OF PSYCHOTROPIC MEDS, DEPRESSION (BDI), PROBLEM DRINKING (AUDIT) AND PTSD SEVERITY (PCL). SEXUAL FUNCTIONING WAS ASSESSED USING THE PROMIS SEXUAL FUNCTION PROFILE THAT YIELDS FOUR SUBDOMAINS (INTEREST IN SEX, ERECTILE FUNCTION, ORGASM, GLOBAL SATISFACTION) AND A SUMMED TOTAL SCORE.

RESULTS: LINEAR REGRESSION ANALYSES THAT INCLUDED ALL POTENTIAL PREDICTORS WERE CONDUCTED FOR EACH OF THE FOUR PROMIS SUBDOMAINS AND THE SUMMED SCORE. EACH ACCOUNTED FOR STATISTICALLY SIGNIFICANT (P’S <.05) PROPORTIONS OF THE VARIANCE IN THE DEPENDENT VARIABLE (R2 = .11 TO .23). DEPRESSION WAS A SIGNIFICANT PREDICTOR OF ALL SUBDOMAINS EXCEPT ORGASM, WHERE IT APPROACHED SIGNIFICANCE (P=.06). AGE WAS ALSO A SIGNIFICANT PREDICTOR OF THE SUMMED SCORE AND ALL SUBDOMAINS WITH THE EXCEPTION OF INTEREST IN SEX. SIGNIFICANCE OF PTSD SEVERITY AS A PREDICTOR WAS LIMITED TO THE ERECTILE FUNCTION SUBDOMAIN (β=.20, P<.05). PROBLEM DRINKING, RELATIONSHIP STATUS, AND USE OF PSYCHOTROPIC MEDS WERE NOT SIGNIFICANT PREDICTORS OF ANY SUBDOMAIN. AN ADDITIONAL LINEAR REGRESSION ANALYSIS WAS CONDUCTED PREDICTING THE ERECTILE FUNCTION SUBDOMAIN FROM THE SYMPTOM SUBGROUPS OF THE PCL (RE-EXPERIENCING, AROUSAL, AVOIDANCE). ONLY THE AVOIDANCE SUBGROUP WAS A STATISTICALLY SIGNIFICANT PREDICTOR (β=.38, P<.01).

CONCLUSIONS: DEPRESSION AND AGE WERE THE MOST SALIENT PREDICTORS OF SEXUAL FUNCTION IN THIS CROSS-SECTIONAL SAMPLE OF ACTIVE DUTY WITH PTSD. PTSD MAY HAVE A SPECIFIC EFFECT ON ERECTILE FUNCTIONING VIA AVOIDANCE. IMPLICATIONS OF THESE FINDINGS FOR CLINICAL PRACTICE AND FUTURE RESEARCH WILL BE DISCUSSED.

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A124b

ADHERENCE TO MISSION REQUIREMENTS AND INVOLVEMENT IN WIFE’S PREGNANCY WITHIN THE CONTEXT OF MILITARY DEPLOYMENT

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Thousands of military men are geographically separated from their wives during pregnancy due to military deployment. This may preclude involvement in the pregnancy and possibly the child’s birth. Both may delay transition to parenthood and fatherhood. Research on the burden of military deployment has focused on families and children. Little is known about the stress military deployment imposes on pregnant couples. The purpose of this study was to examine military service members’ (MSMs) ability to attend to the mission requirements and their pregnant wives within the context of military deployment. We recruited enlisted MSMs geographically separated from their pregnant wives due to deployment in a combat setting or non-combat military assignment. Using a demographic questionnaire given to pregnant military wives participating in an educational-support intervention study at a US tri-service military base, husbands who were deployed or would be deploying during the 2nd and 3rd trimester of their wives’ pregnancy were identified. Those who indicated willingness to participate were
sent information about the study and an informed consent form to sign and return. We conducted semi-structured, in-depth 1-hour telephone interviews with 7 participants in deployed settings over the course of 11 months. Interviews were digitally recorded and transcribed fully verbatim. Three researchers independently read narrative accounts several times and identified central aspects of the narrative. Précis, stanzas, initial coding and themes were developed and coding similarities and differences within and between participant narratives were compared. Final analysis was completed through discussion and consensus. Six themes were derived from the data, Just knowing. Service before Self, Closing off emotions, Military Wife, Stay-ing Connected and Social Networks. These narratives illustrate the complex emotional stressors and adjustment these MSMs faced in adhering to their dual obligations - sworn allegiance to the military and involvement in their wives pregnancy within the context of military deployment.

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A124c
IMPLEMENTING COMPREHENSIVE PMTCT IN MPUMLANGA PROVINCE, SOUTH AFRICA
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In 2011, Mpumalanga Province in South Africa had the highest HIV prevalence rate (36.7%) and one of the lowest (69%) rates of uptake of the prevention of mother to child transmission (PMTCT) protocol. Implementation science (IS) strategies were used to identify challenges to implementing the PMTCT protocol in antenatal clinics (ANC) in rural Mpumalanga.

PMTCT knowledge, ARV adherence, partner involvement and disclosure among seropositive pregnant women who were on ARV treatment were used to operationalize PMTCT protocol fidelity. Of the 418 seropositive pregnant women enrolled, 75% responded correctly to HIV transmission knowledge questions. Less than 70% agreed that an HIV positive mother could infect her baby during pregnancy or through breastfeeding. Most women (89%) self-reported ‘good’ to ‘excellent’ ART adherence, but 77% of women reported their male partner was likely to be infected even if she was on ARVs.

Most male partners (74%) did not attend ANC visits, but did provide financial support to female partners in order for them to attend (84%). More than 70% of the women reported discussing PMTCT, infant feeding options and condom use with their partners. Fifty-six percent had discussed infant HIV testing, though less than 40% of male partners had been tested for HIV. Partner HIV testing was associated with couples’ discussion of infant HIV prevention ($\chi^2 (1, N = 418) = 30.60, p < .001$), infant feeding options ($\chi^2 (1, N = 418) = 29.90, p < .001$), infant HIV testing ($\chi^2 (1, N = 418) = 27.21, p < .001$), and condom use ($\chi^2 (1, N = 418) = 8.70, p = .003$).

Serostatus disclosure to another person was higher among those who had been previously diagnosed (53% vs. 72%). Previous disclosure was associated with couples’ discussing PMTCT and with men having undergone HIV testing ($\chi^2 (1, N = 308) = 26.82, p < .001$). Most disclosures were to male partners (82%). Half of women agreed disclosure was risky, but ~ 70% did not regret doing so.

Preliminary findings suggest women have acceptable self-reported medication adherence and modest partner involvement. Challenges may arise from lack of disclosure, low rates of partner HIV testing and modest comprehension of HIV transmission risks to infants and partners. To enhance PMTCT protocol uptake, additional and ongoing education and support and increased partner involvement and HIV testing are needed.

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A131a
ASSOCIATIONS BETWEEN PAIN SEVERITY, ANXIETY, AND FREQUENCY OF CANNABIS USE
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Despite growing empirical interest in potentially bidirectional relations between pain and the use of cannabis, we are not aware of any previous research that has examined whether pain severity may covary with frequency of cannabis consumption (e.g., marijuana smoking). The goal of the current study was to test cross-sectional associations between pain severity and frequency of cannabis use among a sample of online survey respondents (N = 334; 55% male) who reported having used cannabis at least once in their lifetime. Specifically, we hypothesized that greater pain severity would be associated with more frequent use of cannabis. In addition, given that symptoms of anxiety are common among persons who endorse either pain or cannabis use, we further hypothesized that anxiety would serve to mediate this association. Past-month pain severity (0 = none to 5 = very severe) and frequency of cannabis use (0 = never to 4 = daily/almost daily) were measured using Likert scales, and symptoms of anxiety were assessed using the GAD-7. As hypothesized, linear regression revealed a positive association between pain severity and cannabis use frequency ($\beta = .131; p < .05$), even after accounting for relevant covariates (age, gender, depression, and anxiety). Also as hypothesized, we observed a significant indirect effect of anxiety (95% CI: 0.004 – 0.144), such that greater pain was associated with greater anxiety, which in turn was associated with more frequent use of cannabis. Collectively, these data provide initial evidence of covariation between pain severity and frequency of cannabis consumption, possibly as a function of anxiety symptoms. This covariance may reflect the use of cannabis to cope with pain/anxiety, the tendency for more frequent cannabis users to report greater pain/anxiety, or both. That is, the direction of causality remains uncertain.

Demand for cannabis cessation treatment is expected to double by 2020, necessitating research aimed at the identification of factors that may inform the development of novel interventions. Future research would benefit from examining experimental and prospective associations between pain and cannabis consump-
A131b
CARDIOVASCULAR CUE-REACTIVITY TO ALCOHOL IMAGES IN SOCIAL DRINKING COLLEGE STUDENTS
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Previous studies suggest that distinct profiles of cardiovascular and other electrophysiological responses to alcohol cues may index or confer risk for the development of alcohol dependence. However, the majority of such studies have focused on older, alcohol-dependent adults, often with co-morbid health conditions. Cardiovascular cue-reactivity is not as well understood for otherwise healthy, young social drinkers. The purpose of the current study was to examine heart rate variability (HRV) in response to visual cues (alcohol images, as well as neutral, positive and negative images) from the International Affective Picture System) in a sample of college drinkers (N = 11; 4 male; aged 21-26). Participants also completed questionnaires assessing personal and family alcohol use history, as well as personal drinking motives. Repeated measures ANCOVA with picture type as the within-subjects factor and alcohol use frequency as the covariate revealed significant HRV differences by picture type (F(3,27) = 3.57; p = .03). HRV to alcohol pictures was reduced in the VLF range (0 to .04 Hz) relative to neutral pictures (p = .05), but did not differ significantly from positive or negative images. The difference value (VLF to neutral minus alcohol images) was significantly, positively correlated with quantitative family history of alcoholism, as well as the conformity subscale of the drinking motives questionnaire. Participants with a greater family history of alcoholism or a greater endorsement of drinking in response to peer pressure exhibited a greater difference in VLF HRV to alcohol images relative to neutral images. Taken together, our preliminary findings suggest that cue-reactivity differences to alcohol images are detectable in otherwise healthy, young social drinkers and that these differences may be related to known risk factors for problem drinking. These findings are consistent with a growing literature, which suggests that HRV cue-reactivity patterns might be used to explore cardiovascular indicators of predisposition for the development of alcohol dependence.

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A131c
EFFECTS OF IMPULSIVITY ON DISTRESS LEVELS AFTER 24H OF SMOKING ABSTINENCE
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Levels of impulsivity among regular smokers has shown to be positively associated with greater levels of cigarette craving during smoking abstinence (Vanderveen, Cohen, Cukrowicz, & Trotter, 2008). Specifically, smokers with higher levels of impulsivity appear to experience greater levels of cigarette craving during abstinence. Despite this finding, has examined the relationship of impulsivity and self-reported distress during 24 hours abstinence. The current study examined whether smokers with higher levels of impulsivity would report experiencing greater levels of distress after a 24-hour period of abstinence. Participants (N=58) were young adults who reported smoking at least 5 cigarettes per day for at least 5 months. Levels of impulsivity were assessed using the UPPS-P, which consists of 6 behavioral subscales: Negative Urgency, Lack of Premeditation, Lack of Perseverance, Sensation Seeking, and Positive Urgency. Distress was assessed using the Subjective Units of Distress Survey (SUDS). Subjects participated in two laboratory visits that were scheduled approximately 24 hours apart and were asked to abstain from smoking between the two visits. On Day 1, participants completed the UPPS-P and SUDS. On Day 2, after confirming their abstinence via a CO monitor, participants rated their level of distress (SUDS). The difference between Day 1 and Day 2 SUDS scores was used to determine whether participants experienced increased levels of distress during the experimental period. A Pearson product-moment correlation coefficient was conducted to determine the relationship between the five UPPS-P subscales and change in SUDS scores. The results did not support the original hypothesis. No significant difference across the groups was observed in any of the five subscales. However, a trend was observed between Lack of Premeditation and Change in SUDS scores, r(57)= .24, p=.06. These findings suggest that smokers who have difficulties remaining focused on a task may experience higher levels of distress after a 24 hour abstinence period. This trend may be useful in defining a specific cognitive behavior smokers find difficult maintaining during quit attempts. Moreover, these results highlight the need for additional research aimed at understanding the relationship between impulsivity, distress, and craving.

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A139a
COLLEGE STUDENTS WITH A HISTORY OF A PEDIATRIC CHRONIC ILLNESS: INTERNALIZING SYMPTOMS AND HEALTH LOCUS OF CONTROL
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Research shows a positive relationship between health locus of control (HLOC) chance with anxiety and depression in adults with chronic health conditions. Similarly, pediatric patients who perceive poor control over their illness (e.g. epilepsy, JRA) may be at a higher risk for depressive symptoms. The impact on anxiety and stress has not been studied. Internalizing symptoms have been shown to worsen medical regimen adherence, pain symptoms, and somatization. The current study investigated the relationship between HLOC and internalizing symptoms in adults with a history of pediatric chronic illnesses.

Participants (n=197, 85.8% female, M=19.8 years) were undergraduate students at a private college recruited for course extra credit. Students completed consent and self-report measures on a secure site (psychdata.com) including a medical check-list,
the Multidimensional Health Locus of Control (MHLOC), and the Depression, Anxiety, and Stress Scale (DASS-21).

Those who have a pediatric health condition showed more anxiety (M = 7.6, SD = 7.005, p < .05) and stress (M = 8.96, SD = 7.21, p < .05) but not depression. Having multiple conditions was also significant, with greater number of health conditions positively related to depression (p < .05), anxiety (p = .001), and stress (p = .001). T-tests revealed that men (M = 26.29 ± 4.67) reported significantly higher internal HLOC than women (M = 23.83 ± 5.05, p = .017). Three hierarchical regressions were conducted to see if HLOC variables (internalizing, chance, powerful others) predict internalizing symptoms (depression, anxiety stress) above and beyond gender (Step 1) and number of health conditions (e.g. 0, 1, 2… (Step 2). HLOC explained a significant additional 9% of the variance in depression (F(5, 129) = 2.6, p < .05), 9.2% of the variance in anxiety (F(5, 129) = 4.0, p = .002), and 5.1% of the variance in stress (F(5, 129) = 2.8, p < .05).

This study shows that having a health condition and managing multiple conditions contributes to the experience of internalizing symptoms. Since HLOC continues to predict internalizing symptoms beyond this relationship, the multidisciplinary team can identify patients who may develop symptoms to prevent negative health outcomes.

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A139b

GENDER AND NEGATIVE EMOTIONS AS PREDICTORS OF PERCEIVED STRESS AND CORTISOL IN YOUNG ADULTS

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Physiological measures of reactivity (i.e., cortisol) have been suggested as the link between psychological factors (e.g., depression) and diseases such as cardiovascular disease. Both reported levels of stress and a negative appraisal of stress predict mortality in population-based studies. Research has found that negative emotions such as shame and anxiety were associated with increased cortisol and that these relationships differ by gender.

The purpose of the present study was to examine the relationship between emotions and cortisol levels in a sample of diverse university students. Participants (n = 72) were asked to provide a saliva sample and complete self-report measures including the Positive and Negative Affect Schedule and a demographic questionnaire. The sample consisted of 81% female participants (mean age = 20.56, SD = 2.05, range = 18-49) with 42% who identified as Latino/Hispanic, 33% White/European American, 13% mixed/bi or multiracial, 4% Black/African American, 4% Asian/Asian American, and 4% ‘Other’.

In an examination of negative emotions and stress, bivariate correlations showed that greater cortisol was associated with greater guilt (r = 0.32, p < .01), but not perceived stress; whereas, perceived stress was associated with fear (r = 0.60, p < .001), hostility (r = 0.58, p < .001), and sadness (r = 0.59, p < .001).

Multiple regression analyses revealed that only female gender (t = 2.31, p < .05) was a significant predictor of self-reported perceived stress (Adj. R² = .46, F(6, 65) = 11.26, p < .001); whereas, male gender (t = -2.22, p < .05), lower hostility (t = -2.54, p < .05) and greater guilt (t = 2.54, p < .05) significantly predicted mean cortisol levels (Adj. R² = .22, F(6, 65) = 4.25, p < .01). Men (M = 0.29, SD = 0.39) demonstrated greater cortisol levels than women (M = 0.14, SD = 0.09; t = 2.64, p < .01). Women (M = 2.08, SD = 0.66) reported greater self-reported perceived stress than men (M = 1.72, SD = 0.62), though the relationship was not significant (t = -1.88, p = .06). Continued research is needed to understand the biological, psychological and social risk factors that begin at an early age in order to prevent disease onset later in life.

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A139c

SLEEP, CORTISOL/DHEA IN HAIR, AND A1C IN AFRICAN-AMERICAN ADULTS

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Background: African Americans experience more psychosocial stress and worse metabolic outcomes than Whites, yet there is a lack of research in this population in both areas. The endocrine hormone cortisol, which rises in response to certain stressors, can compromise metabolic function when elevated chronically. This study examined relationships among chronic cortisol (CORT) and dehydroepiandrosterone (DHeA – a cortisol antagonist) in hair, type 2 diabetic (T2D) status, and hemoglobin A1C (A1C) in African-American adults.

Method: In this cross-sectional study, N = 74 African-American adults (37 type 2 diabetic, 37 non-diabetic) provided a hair sample for CORT and DHEA analysis, and a blood sample for A1C analysis. Health behaviors (viz., diet, exercise, sleep) were self-reported. Regression analyses were used to determine predictors of CORT, type 2 diabetic status and A1C levels.

Results: Mean number of sleep hours per night predicted CORT (b = -2.9, p < .05), controlling for age, hair washing frequency and hair treatments. DHeA predicted T2D status (b = -.19, p < .05), controlling for age, and A1C among those with T2D (b = -2.5, p < .05), controlling for age and perceived stress.

Conclusion: Sleep was associated with CORT such that those who reported less sleep had higher CORT concentration. Lack of sleep is known to impact cortisol levels acutely, and this study provides evidence that amount of sleep and cortisol are related on a long-term basis.

CORT has been previously associated with increased metabolic syndrome risk, but research on DHEA levels in hair and metabolic function is minimal. DHEA was correlated with T2D status and A1C among type 2 diabetic participants, such that those with lower DHEA are more likely to be diabetic and have higher blood glucose. The role of DHEA – an antagonist hormone of cortisol – in metabolic function may thus warrant further investigation.

Methodologically, this study is novel in its utility of scalp hair to assess cortisol in African Americans. Further, it is one of
the first to measure DHEA in scalp hair in conjunction with a metabolic function marker. More investigation is needed to determine normative levels of these hormones in scalp hair, and how they affect metabolic function, especially in the African American population.

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A139d

WERE AUTONOMIC CHANGES RELATED TO EMOTIONAL CHANGES IN RESPONSE TO AN ACUTE BIOFEEDBACK INTERVENTION?

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Behavioral interventions that increase heart rate variability (HRV), an indicator of autonomic nervous system (ANS) activity, have shown potential for improving emotional health. One promising intervention is the use of biofeedback with diaphragmatic breathing at 6 breaths per minute (bpm) to promote respiratory sinus arrhythmia (RSA). Recent studies have shown that acute biofeedback interventions can improve HRV (Wang et al., 2010) and emotional states (Prinsloo et al., 2011, 2013; Sherlin et al., 2009). This study investigated the notion, based on Polyvagal Theory (Porges, 2001), that increased HRV would be related to improved emotional states in response to an acute biofeedback intervention that promotes RSA. METHODS: College students (n=32) with high perceived stress completed two 10-minute interventions on separate days: paced-breathing with biofeedback (BF), and an attention control condition of quiet reading (QR). Using the State Anxiety Inventory and the Activation Deactivation Adjective Checklist, state anxiety, energy, tiredness, tension and calmness were measured before and immediately after the intervention. HRV data were collected for using ECG pre- and post-intervention. The standard deviation of R-R intervals (SDNN) was used as an indicator of total HRV, and these data were divided by mean RR interval prior to analysis to control for heart rate (Sacha, 2013). RESULTS: ANOVA results showed several time x condition interaction effects, indicating that BF significantly reduced state anxiety (p<.001; Cohen’s d= -.48), increased calmness (p<.001; Cohen’s d= .51) and reduced tension (p<.05; Cohen’s d= -.41) compared to QR. A time main effect demonstrated that SDNN significantly increased in both conditions, and effect sizes showed that the increase for BF was greater than for QR (p<.01; BF Cohen’s d= .40; QR Cohen’s d= .17). Pearson correlations on changes in HRV and all psychological variables only showed a negative relationship between SDNN change and Energy change (r= -.457, p<.01). CONCLUSIONS: In accordance with previous research, the acute biofeedback intervention improved anxiety, calmness, tension and total HRV. With the finding that increased SDNN was only related to reductions in energy, no support was found for the theory that increased HRV is related to improved emotional states.

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Rapid Communications
Poster Session B
Thursday, April 23, 2015
6:00 PM-7:00 PM
ACCESSIBILITY TO MAMMOGRAPHY FACILITIES IN CONNECTICUT: ASIAN VS. NON-ASIAN WOMEN

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Most American women aged 40+ (74%) have had a mammogram within the past 2 years (BRFSS, 2012); the rate in Connecticut (CT) is even higher (79.8%). However, Asian American (AA) women participate at lower rates than women from other racial/ethnic groups (American Cancer Society; ACS, 2013). Distance and accessibility to mammography facilities are related to general screening participation (Daigle et al., 2013; Elkin et al., 2010). Thus, the present study explored whether the racial/ethnic difference in mammography screening participation is related to geographical distribution of facilities. Specifically, we examined the accessibility of mammography facilities in relation to population need in CT comparing AA with non-AA women.

Data on 117 FDA accredited mammography facilities in CT were downloaded from the FDA’s website. Facility locations were geocoded. Numbers of all women aged 40-74 (796,530) and AA women aged 40-74 (23,556) across towns in CT were obtained from the 2010 US Census. The Two-step Floating Catchment Area method (Luo & Wang, 2003) was implemented in ArcGIS 10.2 with a 20-mile catchment. The accessibility ratio for each town was calculated as the number of mammography facilities per 10,000 women within the catchment area of the town. Results show that mammography facilities cover well their demand areas. The mean accessibility ratio is 1.38 (SD = .39). This is higher than the minimum recommended by Healthy People 2020, which, with its biennial screening goal of 81%, requires >.674 machines per 10,000 women. Based on this standard, 87.28% of non-Asian and 86.36% of AA women in CT are living in areas with adequate mammography capacity. However, the mean is lower than the ACS standard of 1,667 machines per 10,000 women for yearly mammograms. According to this, 63.47% of non-AA and 60.94% of AA women in CT live in areas with inadequate mammography capacity. Regardless of criteria, mammography facilities are similarly accessible to AA and non-AA women in CT. Results are limited because we did not include factors other than distance to determine accessibility to the facilities and boundary effects were not considered.

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ARE PHYSICIANS’ HUMAN PAPILLOMAVIRUS VACCINE RECOMMENDATIONS CONSISTENT WITH CLINICAL GUIDELINES?

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Background: Clinical practice guidelines do not recommend using human papillomavirus (HPV) and Pap test results to determine women who should receive HPV vaccine. Guidelines also recommend against changing Pap test screening frequency based on HPV vaccination status. Little is known about primary care physicians’ adherence to these guidelines when making HPV vaccine recommendations to female patients.

Methods: Nationally representative samples of family physicians (FPs), pediatricians, and obstetricians and gynecologists (OBGYNs) were randomly selected from the AMA Masterfile in 2011 (n = 1541). Physicians used a 5-point scale, ranging from never to always, to report the frequency with which they: 1) used HPV testing results to decide whether to recommend HPV vaccine (correct = never, and 2) recommended HPV vaccination to women (≤ 26 years old) who had an abnormal Pap test (correct = always). Physicians also reported their intention to change Pap test screening frequency for HPV vaccinated females (yes, no, don’t know; correct= no). Physicians who reported they don’t perform Pap tests were excluded from analyses.

Results: Completed surveys were received from 928 physicians (response rate = 63%), of whom 64% (n = 595) recommended HPV vaccine and performing Pap tests: 345 (of 406) FPs, 188 (of 200) OBGYNs, and 62 (of 322) pediatricians. Across the specialties, 56% reported never using HPV testing results to guide HPV vaccine recommendations; 42% always recommended HPV vaccination to patients with an abnormal Pap test result; and 78% did not plan to change Pap test frequency for vaccinated females. A higher percentage of pediatricians (68-89%) provided correct responses to individual items, compared to OBGYNs (40-84%) and FPs (38-73%). About 24% of the sample reported guideline-consistent practices with all three indicators, including 52% of pediatricians, 25% of OBGYNs, and 19% of FPs. Many physicians reported selectively recommending HPV vaccination based on HPV and Pap test results. If these clinical practices persist, many young adult women will fail to realize the benefits of HPV vaccination. Additional efforts are needed to ensure that all young women are screened and vaccinated appropriately.

Conclusion: Contrary to current recommendations, many physicians reported selectively recommending HPV vaccination based on HPV and Pap test results. If these clinical practices persist, many young adult women will fail to realize the benefits of HPV vaccination. Additional efforts are needed to ensure that all young women are screened and vaccinated appropriately.

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AWARENESS AND PERCEPTIONS OF MAMMOGRAPHY CONTROVERSY AMONG ETHNIC IMMIGRANT WOMEN

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In 2009 the U.S. Preventive Services Task Force (USPSTF) recommended against routine mammograms for women ages 40-49, igniting a firestorm of controversy that continues to play out in the media. Population-based studies have found that some women are aware of this controversy, with some reporting confusion about whether and when to begin screening. In contrast, less is known about whether women from underserved populations are aware of mammography controversy and, if so, how they react to it—a pressing concern, given persistent cancer screening disparities. Drawing on data from 6 focus groups (N=53) with women ages 35-55 from three ethnic immigrant communities (Somali, Hmong, and Latina), this qualitative study explores women’s awareness and perceptions of mammography controversy. All groups were held in community settings and
facilitated in Somali, Hmong, or Spanish by trained community researchers using a semi-structured question guide. Each 90-minute session was recorded and professionally translated and transcribed. A grounded theory approach was used to identify themes; NVivo was used to enhance these analyses. Several themes emerged, including 1) low awareness of mammography controversy across groups, despite substantial self-reported attention to health information; 2) high intentions to be screened in the future, even after being told about the controversy; 3) few reported discussions of mammography’s risks and benefits with clinicians (as recommended by USPSTF and other guidelines); and 4) substantial interest in learning more about mammography and breast cancer, but low self-efficacy to obtain such information. Given ongoing expert disagreement about the use of mammography to screen for breast cancer, it is important for clinicians to help women understand mammography’s risks and benefits so they can make an informed choice. This is particularly critical for ethnic immigrant and other underserved women, who may be less able to access, attend to, process, retain, and act on health information (a phenomenon that has been described as communication inequality). Implications for communication campaigns and public health interventions designed to reduce cancer disparities will be discussed. 

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B028c
CLIMATIC EXPOSURE RISK ASSOCIATE WITH SKIN CANCER
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Skin cancer is a public health concern due to high incidence and prevalence rates. In contrast to many other types of cancer, melanoma incidence rates have increased significantly since the 1960s. As the most common form of cancer, melanoma is a significant yet highly preventable health concern. The purpose of the present study was to explore associations between melanoma incidence rates and climate change. A review of data available from the Surveillance, Epidemiology, and End Results Program (SEER) and the National Oceanic and Atmospheric Administrations (NOAA) revealed significant changes in melanoma incidences rates and essential meteorological variables. Spending more time outdoors primary to increases in average temperatures may result in greater risk of DNA mutations in skin cells - especially as ultraviolet indices have increased along side ozone diminution. Public health interventions should situate melanoma risk within the context of climate change by encouraging both sun protective and pro-environmental behavior.

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B028d
COUNTRY OF ORIGIN, GENDER AND U.S. RESIDENCY ASSOCIATIONS WITH CRC FEAR AND WORRY IN LATINOS
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Country of origin, gender and U.S. residency associations with CRC fear and worry in Latinos

Background: Survival from colorectal cancer (CRC) is longer when detected at the earliest or pre-cancerous stage; as possible via colonoscopy. Overall, CRC screening methods have been underused, especially within Latinos [1]. Cancer fear and worry have been associated with lower CRC screening rates in this population. [2] This study aims to identify sociodemographic factors associated with fear and worry in order to tailor future CRC screening interventions.

Method: The sample included 320 Latinos, between ages 50 and 80, that had not undergone a colonoscopy examination either ever or within the last five years, were at average risk for CRC and received a physician referral for a colonoscopy.

Results: Increased worry [F (2, 317)=10.062, p=.000] and fear [F (2, 313)=6.465, p=.002] were associated with the amount of time participants lived in the United States. Post hoc analyses using the Scheffé test indicated that fear and worry were lower for those who spent less than 39 years in the U.S. as compared to those who spent 40 or more years or their entire lives in the U.S. Additionally, country of origin (Puerto Rico, United States, and Latin America) was associated with fear and worry level (ps<.01). Being female was associated with greater worry and fear as compared to males (ps<.01).

Conclusion: It is important to identify factors associated with CRC fear and worry among Latinos. Interventions that directly target fear and worry responses, especially for Latinos born within the U.S. who are female and who have spent part of their lives living in the U.S., may promote higher adherence levels for CRC screening.

Key words: Colorectal Cancer, Worry, Fear, Colonoscopy Screening

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References:

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B028e
EFFECTS OF SELF-MANAGEMENT SUPPORT FOR BREAST CANCER PATIENTS ON PATIENT OUTCOMES OVER TIME
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Multi-component Web-based self-management support systems (SMSS) have shown to successfully assist a wide range of patients. However, not many systems are implemented in regular practice, and few studies have investigated their long-term effects. Furthermore, little is known about which and how many components are needed to be effective. Therefore, this RCT tested and compared the effects of a) a practice-integrated secure e-message service (EMS), b) a multi-component SMSS (WebChoice) that also included the EMS and c) usual care on: symptom distress, anxiety, depression, self-efficacy and health related quality of life (HRQoL) in breast cancer patients who were followed over 12 months.

188 patients at three hospitals were randomized into: 1) the EMS (n=53); 2) WebChoice (n=71) or 3) the usual care control group (n=64). The EMS group could ask questions online to nurses at the hospital where they were treated, who could pass on questions to physicians if needed. WebChoice consisted of, the EMS, self-monitoring, self-management options, information resources, a forum for group discussion, a blog and a diary. Linear mixed models for repeated measures were fitted to compare effects on patient outcomes over time, using an intention to treat approach.

In the WebChoice group 63% (45/71) logged at least twice (range 2-41) during 12 months follow-up; 42% (22/53) in the EMS group sent e-messages (range 1-7). The WebChoice group, had significantly better outcomes than the control group in terms of symptom distress (Memorial Symptom Assessment Scale) (p<.001), anxiety (Hospital Anxiety and Depression Scale (HADS)) (p<.001), depression (HADS) (p<.001), self-efficacy (Cancer Behavior Inventory) (p<.001) and HRQoL (15D) (p=.001). In the EMS group symptom distress (p=.009) and depression (p<.001) were significantly reduced and HRQoL (p=.015) significantly increased compared to the control group. No effect was revealed for anxiety or self-efficacy.

Despite modest use and practice variations the study shows that a SMSS can reduce symptom distress, anxiety, depression and increase self-efficacy and HRQoL among cancer patients over 12 months. Especially promising is that an EMS alone, primarily answered by nurses, can in it self reduce symptom distress and depression, and contribute to increase of HRQoL. It is therefore an important component to include in SMSS, and can also effectively be used as a single intervention.

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B028f
INITIAL DEVELOPMENT AND ACCEPTABILITY OF AN INTERACTIVE BREAST RECONSTRUCTION DECISIONAL AID (BRDA)
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Background: Comprehensive decisional support may facilitate informed decision-making about breast reconstruction among women scheduled for mastectomy. Breast cancer patients typically navigate this complex decision-making process in a compressed time frame, while facing many psychosocial stressors. Literature suggests that reconstruction discussions with surgical oncologists often leave patients with unmet information and support needs. The current study evaluated the acceptability of a web-based breast reconstruction decision support aid (BRDA) for women facing mastectomy against a widely-available education pamphlet.

Methods: BRDA is a menu-driven program with ten voice-narrated modules. Each module contains various graphics and patient narratives, describes breast reconstruction options, and assists patients in understanding their values and attitudes regarding reconstruction. BRDA was compared against the print pamphlet in a small, randomized clinical trial. Acceptability was defined by study participation, completion of a follow-up survey, intervention use, and intervention evaluation. Intervention use was measured as the sum of three items asking whether the decision aid was viewed, discussed with family/friends, and discussed with doctors. Intervention evaluation assessed whether the intervention was helpful, easy to understand, interesting, and valid.

Results: Of the 98 women approached, 57.1% enrolled. Follow-up survey completion rate was 78.2%. More pamphlet participants completed the follow-up survey (91.7% vs. 67.7%) and this difference was statistically significant, $\chi^2(2, N = 55) = 4.54, p = .033$. Intervention use was significantly higher in BRDA ($M = 2.19, SD = 0.6$) than pamphlet intervention ($M = 1.59, SD = 0.85$), $t(37.79) = 2.67, p = .011$. BRDA participants rated the materials more favorably ($M = 6.08, SD = 0.69$) than pamphlet participants ($M = 5.37, SD = 1.15$) $t(40) = 2.43, p = .019$.

Conclusions: Although study enrollment was not very high and follow-up survey completion was lower in BRDA, key measures of BRDA acceptability were favorable. BRDA was rated higher than a widely-available breast reconstruction pamphlet. The interactive BRDA offers a unique tool to address the unmet information and support needs of women considering breast reconstruction after mastectomy.

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M-PACTING UNDER 160 CHARACTERS: USE OF HEALTH INFORMATION TECHNOLOGY IN A PROSTATE CANCER EDUCATIONAL INTERVENTION FOR AFRICAN AMERICAN MEN

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BACKGROUND: African American (AA) men suffer a greater burden of prostate cancer incidence and mortality when compared to White men. A community-based participatory research approach led to the inclusion of text-messaging as an intervention component in the Men's Prostate Awareness Church Training project, a 4-part educational intervention focused on informed decision-making for prostate cancer screening among AA men ages 40 to 69. This poster presentation will describe the development and implementation of a text-messaging strategy to disseminate intervention reminders and health messages to the AA community. METHODS: Culturally-appropriate and spiritually-grounded text messages were developed based on the analysis of focus group data, collaboration with community partners, and the review of previous empirical studies that incorporated technology into health behavior change interventions. Development of the text messages involved consideration related to the content of the messages and technological specifications. These messages served as a reminder and retention tool; they reinforced messages from previous workshops, and provided participants with motivational/spiritual messages. RESULTS: The men overwhelmingly reported cellphone use, with 76% reporting engagement in text-messaging at baseline. They also reported an interest in receiving text messages over time. Data from follow up surveys revealed that the text-messaging component was acceptable and feasible with the target population. CONCLUSION: Implications for the use of health information technology in community-based men’s health promotion will be discussed. With increased Internet penetration through the use of smart phones, it is appropriate to investigate the viability of technology as a means to reach minority communities and to reduce health disparities.

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ON-LINE HEALTH RISK ASSESSMENT IN EMPLOYEE WELLNESS PROGRAM AS AN INNOVATIVE WAY TO RECRUIT FOR CANCER PREVENTION TRIALS

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Participation rate in cancer clinical prevention trials (CPT) is lower than 3% among high-risk, unaffected individuals. Further, racial/ethnic minorities are under-represented in CPT participants, suggesting that novel recruitment strategies are needed. The US employee population is large (about 144 million) and diverse, and employer-sponsored on-line health risk assessments (HRAs) are increasingly become a gateway requirement to other components of employee wellness programs (EWP) offered by many organizations. Typical HRAs assess personal biological and modifiable cancer risk factors, and therefore can identify individuals with higher cancer risk and link them to targeted cancer prevention intervention, including CPT. To study the feasibility of this innovative recruitment approach, we developed a survey from a previous qualitative study to investigate employees’ interest in knowing more about their cancer risk, awareness of CPT, interest in participating in personalized CPT, and willingness to release their on-line HRA responses to register as potential participants of CPT. Collaborating with a large health system employer, employees who are eligible for their EWP are being recruited to complete the survey. So far, 52 employees (mean age=46.6 years, including 8 men, 3 African-Americans, 3 Hispanics) have completed the study survey on-line. From the preliminary data, we found that 96% of employees want to know more about their cancer risk for prevention, and about 90% of them are willing to disclose family history of cancer, past cancer screening behaviors and the screening results on the HRA to help better estimate their cancer risk. We also found that 92% of our sample would like to know more about CPT. About potentially participating in CPT, 94% of our sample indicated interest, and 83% of them agreed that using the on-line HRA is a good way to register for CPT. Regarding their willingness to release HRA responses as registration, 90% of them would like to see messages about CPT on the HRA, and about 96% of them were willing to register as potential CPT participants through an electronic “release” link on the HRA. In conclusion, on-line HRA in EWP shows promise for creating a large, centralized registry of racially/ethnically diverse individuals with higher cancer risk to be recruited into CPT. This is significant in making progress in translational science of cancer prevention.

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B028i

PICTURES WORTH THOUSANDS OF WORDS: SYMPTOM PERSPECTIVES OF ADOLESCENTS AND YOUNG ADULTS WITH CANCER USING AN IPAD APP

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Adolescents and young adults (AYAs) experience multiple co-occurring symptoms related to their disease and treatment. Their symptom experiences are likely to be different from older and younger patients because of the unique cancer epidemiology of this age group as well as their developmental stage, but research exploring symptoms in AYAs is sparse. The Computerized Symptom Capture Tool (C-SCAT) is an iPad app that was developed to explore symptoms from the unique perspective of AYAs through a combination of graphical images and free text responses, based on a heuristic approach. In C-SCAT, AYAs can report symptoms, indicate relationships between symptoms, group symptoms together in clusters, and indicate priority symptoms.

The purpose of this study was to describe symptoms and symptom clusters from the perspectives of AYAs with cancer using the C-SCAT. Data were collected from 72 AYAs with cancer receiving chemotherapy (57% male, median 18.5 years, range 13-29 years) and analyzed using descriptive statistics, visual analysis techniques, and content analysis. AYAs reported a median of 8 symptoms (range 1-21), and 90% identified a total of 83 symptom clusters, most frequently comprised of 3 symptoms (range 2-12). Common symptom clusters were related to nausea and eating problems, lack of energy/fatigue, difficulty sleeping, and sadness. The top five priority symptoms named in clusters were nausea, feeling drowsy, lack of energy, pain, and ‘don’t look like myself.’ Graphical images illustrate a range of complexity and highlight both unique and common threads.

The C-SCAT uses an innovative approach to gain insight into the AYA symptom experience, yielding information that may be useful to guide understanding of and self-management of symptoms. Findings from this study reveal that AYAs commonly experience symptom burden from multiple related symptoms, especially nausea, lack of energy, and sleep-wake disturbances. This iPad app has potential for use as a communication tool between AYAs and their providers and may translate for use with other highly symptomatic patient populations across other age groups.

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B028j

PREDICTORS OF IMPROVEMENT IN THE PATHWAYS TO RECOVERY AFTER BREAST CANCER TRIAL

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Title: Predictors of improvement in the Pathways to Recovery after Breast Cancer trial

Background: The reentry phase after completion of primary treatments for cancer can be difficult for patients, who are in need of information and skills for coping with the associated challenges. Successful, web-based psychoeducational interventions are available for breast cancer survivors, but little is known about which components are most effective and their associated mechanisms. Addressing these questions through the analysis of objective data on intervention use could be employed to enhance their efficacy.

Objective: To examine the association of use of web-based intervention components and a theoretically relevant psychosocial mediator with psychological outcomes among breast cancer survivors in an intervention designed to assist with reentry.

Methods: Objective web-use data were obtained from 201 participants in the Pathways to Recovery after Breast Cancer Treatment Project, which involved random assignment to three arms (i.e., Pathways psychoeducational program delivered via the internet (and DVD); Pathways + telephone callback from a cancer information specialist; print control). We performed path analysis to examine associations of the use of intervention components (i.e., Library, Patient Stories, Doctor’s Office) with the mediator of cancer-related coping self-confidence, assessed at two months after randomization, and outcomes (cancer-related intrusive thoughts [IES] and vitality [SF-36]), assessed at two and nine months.

Results: Use of web-based components was not significantly associated with the hypothesized mediator of coping self-confidence in any condition. The Patient Stories component was associated directly with improvement in vitality in the Pathways+callback group ($\beta = .22, p < .05$) and the Pathways only group ($\beta = .17, p < .05$) as well as improvement in cancer-related intrusive thoughts in the Pathways only group ($\beta = -.18, p < .01$).

Implications: Use of the peer-modeling Patient Stories component of the Pathways intervention predicted positive changes in psychological outcomes during the reentry phase, but not through the hypothesized mediator of coping self-confidence. Continued intervention development is warranted to enhance effects of peer modeling and promote active approaches to the re-entry phase of cancer survivorship.
B028k
READINESS FOR CANCER MOBILE HEALTH INTERVENTIONS IN COMMUNITY SAMPLES: DOES AGE MATTER?
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Mobile technology has great potential to facilitate delivery of cancer education interventions. However, it is critical to understand patterns of usage among diverse community groups to address cancer health disparities. The goal of this abstract is to understand community members’ current patterns of use and preferences for using mobile phones to participate in a cancer screening intervention.

Eighty men and women were recruited at community based venues to complete a cross-sectional pilot survey. Age related differences in use patterns and readiness to use in interventions were examined.

Participants were: 51% female, 42.5% never married, 42.5% unemployed, 36% Black/African Americans, and 34% White. The mean age was 46.1 (sd=17.2), with 41 in younger age group (18-49) and 39 in older age group (50-77). Majority of the sample (98%) owned a mobile phone, but only 80% owned a smartphone. There was a significant age difference in smartphone ownership; 95% of younger group and only 65% of older group owned a smartphone (p=.00). Younger group were significantly more likely to use their mobile phones to access internet (p=.00) or games, music, and movies (p=.01). 36% of the sample had a health or lifestyle application “app” on their phone. While 51% had received a text message from their health care provider about an upcoming medical appointment, only 30% of the sample ever received a text message from a health care provider related to a medical issue. Participants were asked how much they like the idea of receiving text messages from researchers to remind and encourage cancer screening; 62% of participants liked the idea a lot, 29% somewhat and 9% not at all. Participants were asked their willingness to receive text messages to encourage cancer screening on their mobile phone from a cancer researcher. The majority of participants (81.3%) stated they were willing to receive text messages. No significant age differences were found for these variables.

Mobile technology is widely available, but there are distinct age differences in type of mobile phones and usage patterns. The sample had high enthusiasm for participating in cancer screening mobile health interventions. Successful delivery of cancer screening mHealth interventions with an older population depends on tailoring of content based on type of mobile phone and usage patterns.

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B028m

STORY TYPE AND TRANSPORTABILITY IN RESPONSES TO CANCER NARRATIVES IN A HEALTHY POPULATION
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Cancer survivor narratives—first-hand accounts of people’s personal experiences with cancer—are widely available on the Internet and often used as resources to help patients cope with cancer. However, there is little empirical knowledge to guide their use. One factor that could be associated with potential harms (e.g., increased distress) and benefits (e.g., reduced distress, increased positive emotions such as hope) of reading cancer narratives are readers’ individual differences in transportability—their likelihood of becoming immersed into narratives. We investigated healthy people’s responses before testing hypothesized associations in more vulnerable cancer patients. This poster describes two online studies investigating healthy people’s reactions to cancer narratives written by stem cell transplant (SCT) survivors and effects of individual differences in readers’ transportability. **Methods:** Healthy participants (n=325 in Study 1, n=344 in Study 2) completed baseline measures and were then randomized to read an SCT survivor’s narrative that was either inspiring (primarily positive) or balanced (describing both positive and negative SCT experiences). Participants then completed measures of emotional responses to the narrative. **Results:** Participants reading the balanced narrative reported significantly lower positive affect than those who read the inspiring narrative and this relationship was strongest for participants high in transportability (p=.04 in Study 1, p=.06 in Study 2). Participants who read the balanced story reported significantly higher negative affect than those who read the inspiring story in Study 1 (p=.03). In Study 2, an interaction revealed that this relation was strongest for participants with higher transportability (p=.003). **Conclusions:** We are building a foundation for the empirically-based use of cancer narratives. Findings suggest that different types of narratives elicit various emotional reactions in healthy people, and that participants’ transportability can influence their reactions. Next steps of this research will include extending this work to cancer survivors and other types of outcomes.

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B033b

HEART DISEASE RISK: THE INTERACTION BETWEEN EXISTENTIAL WELL-BEING AND WEEKLY ALCOHOL INTAKE
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Heart disease continues to be the leading cause of death in the U.S. and worldwide. Religiosity/spirituality has been associated with a 28% reduction in cardiovascular mortality in healthy populations; however, the path or relationship among these variables is not clear. The current study investigated whether existential well-being, religious well-being and lifestyle behaviors predict young adults’ risk of suffering a heart attack. The sample consisted of 258 young adults (74% female; mean age 21.79, SD=5.26). Fifty-eight percent of the sample self-identified as European American, 18% African American, 11% Latino(a), 9% Asian American, and 4% other ethnicity. Existential well-being (M = 14.38, SD = 1.24), religious well-being (M = 17.06, SD = 1.30), body mass index (BMI; M = 24.04, SD = 5.17), weekly alcohol intake (M = 0.96, SD = 1.55), and number of days exercised per week (M = 2.49, SD = 1.88) served as independent variables and in underserved populations. Previous research has identified barriers that predict CR participation in primarily affluent populations, but has not examined these in an economically diverse sample. Thus, the present study examined demographics, clinical variables, and perceived barriers as predictors of completion of CR among an underserved cohort of patients with CVD at an urban, safety-net hospital. Prior to discharge, patients (N = 132) eligible for CR with CVD completed a questionnaire containing demographic questions and 12 items assessing perceived barriers to enrolling in CR. CR enrollment and CR completion data were collected from patient medical records. CR enrollment was defined as attending 28 of 36 exercise sessions over six months. Of those who enrolled in CR (N = 68), 53% (n = 36) completed it; the 68 patients who enrolled in CR serve as the sample for the current study examining predictors of CR completion. The majority of the sample was male (59%) and European American (51%) with an average age of 54.7 (SD = 6.8) years, although 37% were African American and 19% were uninsured. A logistic regression model including all 12 barriers to participation correctly classified 62.7% of those who did and not complete CR. Results indicated that one barrier trended toward significance: being nervous about seeing people sicker than them, and one barrier was significantly related to completion of CR: being worried about transportation to CR. Patients who reported being nervous about seeing people sicker than them were 10.8 times less likely to complete CR (p = .056). Patients who expressed a worry about transportation to CR were 5.1 times less likely to complete CR (p = .02). Findings suggest that providers should address these concerns when promoting completion of CR.

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participants’ 10-year heart attack risk score (M = 1.68, SD = 1.48) served as the dependent variable. A 10-year heart attack risk score was determined by examining age, gender, total and HDL cholesterol, smoker status, and systolic blood pressure. Age was entered as 45 years for males and 55 years for females. Results indicated that BMI and weekly alcohol intake significantly predicted 10-year heart attack risk (R^2=.08, F(5, 245)=4.16, p < .01). The interaction between existential well-being and weekly alcohol intake (t = -3.14, p < .01) was also significant (R^2= .13, F(11, 239)=3.23, p < .001). Young adults with lower existential well-being and higher weekly alcohol intake had the highest risk scores, while lower well-being and lower weekly alcohol intake was associated with the lowest risk scores. Existential well-being refers to having a sense of life purpose and satisfaction. Working with young adults to increase a sense of purpose and reduce substance use may serve an important function in the prevention of heart disease.

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B041a
DIABETES PREVALENCE AND HEALTH RELATED QUALITY OF LIFE AMONG RURAL TO URBAN IMMIGRANTS IN CHINA
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Background: China leads the world in type 2 diabetes mellitus with almost 120 million cases. Rural to urban migration – called Nong Zhuan Fei (NZF) – is contributing to the rapidly increasing prevalence of diabetes, from less than 1% in 1980 to almost 12% today. During the past decade 250,000,000 rural Chinese moved to newly constructed towns and cities, where overnight they confront unfamiliar lifestyle-based chronic disease risks that they are ill-equipped to manage or prevent. Efforts are urgently needed to address the causes of diabetes among Chinese rural to urban immigrants. Methods: Cross-sectional community-based study (N=1160) in an NZF community in Songbei District, Heilongjiang Province, Northern China. Data included health and medical history, socio-demographics, 24-hour Diet History Recall, 3-day Physical Activity Recall (PAR), Health Related Quality of Life (HRQOL, SF-36), BMI, and Fasting Blood Glucose (FBG). Multivariable logistic regression was used to examine the odds of having diabetes, and the HRQOL of those with and without diabetes was compared. Results: Diabetes prevalence was 11.60% (95% CI, 9.77-13.56) and 53.74% (95% CI, 48.88 – 58.84) of participants were overweight and obese. Diabetes increased significantly with higher age, income, obesity, hypertension, and low physical activity. Having diabetes was significantly related (p<.001) to lower scores on most HRQOL measures, especially SF-36 role-physical (62.41 versus 81.42, p<.001), general health (61.98 versus 70.16, p<.001), and the physical composite scores (73.57 versus 82.98, p<.001). Conclusions: Residents in NZF communities adopt modern ways of living which place them at high risk of diabetes. The most noticeable change is a more sedentary lifestyle leading to compromised general and physical health. Preventing diabetes in China is a national and international public health problem, and solutions must address the unique features of China’s migration and urbanization process.

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B041b
DIABETES RISK REPRESENTATIONS AS PREDICTORS OF PROTECTION MOTIVATIONS AND BEHAVIOR
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We examined illness risk representations of Type 2 Diabetes held by multiethnic young adults and their prediction of worry, protective intentions, and protective behavior. We predicted that the representational attributes of identity (identifying personal characteristic one associates with diabetes risk), causal risk (identifying factors believed to cause diabetes within one’s personal history), timeline (viewing diabetes as potentially developing in early adulthood), (low) fatalistic control beliefs, and negative consequences would predict greater worry, healthy diet and diabetes screening intentions, and healthy diet and screening behavior. At two time points, 317 university students (mean age=19.72; 27.4% male; 42.6 Hispanic/Latino, 31.2% Asian/Pacific Islander, 14.2% White, 8.8% African-American/Black) without diabetes completed the Assessment of Illness Risk Representations and measures of worry, dietary and screening intentions, and dietary and screening behavior in the past four weeks. Regressions analyses revealed that identity risk and consequences beliefs were the strongest predictors of worry (p’s < .001), with higher levels of these beliefs predicting greater worry about diabetes. In turn, worry was the strongest predictor of protective intentions (p’s < .01). Identity risk, fatalism, and causal risk beliefs were the strongest predictors of healthy diet reported one month later (p’s < .05). Higher levels of Identity risk and causal risk beliefs predicted more healthy diet behaviors whereas higher fatalism beliefs predicted poorer diet behaviors. Identity risk (p < .01) and timeline risk positively predicted intentions to screen for one’s genetic predisposition for diabetes, whereas fatalism (p’s < .01) and timeline risk beliefs positively predicted intentions to screen for diabetes with a blood test. These findings suggest that diabetes prevention communications could target beliefs about one’s characteristics that increase diabetes risk, address the potential for early onset of diabetes, and counter fatalistic beliefs as a means of potentially increasing protective intentions and behavior.

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B045a
THE IMPACT OF COCAINE USE AND SOCIOECONOMIC CONDITIONS ON ANTIRETROVIRAL THERAPY ADHERENCE
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Background: The advent of antiretroviral therapy (ART) transformed HIV from a fatal disease into a manageable illness. Despite the wide availability of ART in the U.S., disparities in adherence persist, especially among high-risk populations like drug users. Socioeconomic conditions (SES) may contribute to poor ART adherence; however more research is needed to understand their impact.

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Methods: The current study examined the role of cocaine use and SES on ART adherence among 52 cocaine-using and 65 non-cocaine-using individuals with HIV in the Southern U.S. Participants completed a structured clinical interview and computerized survey to assess substance use, ART adherence, and SES, including education, income, food insecurity, homelessness, occupational status, and conviction and incarceration history. Chi-square and t-tests were used to identify main effects and logistic regression analyses examined SES variables as moderators of cocaine use and adherence.

Results: The sample was 71% male, 90% African American, 52% heterosexual, and was on average 46 years old with 13 years of education. Compared to non-drug users, cocaine users had a higher likelihood of <95% medication adherence ($\chi^2=7.47, p = .006$), missing a dose of medication in the past 3 months ($\chi^2=6.98, p = .008$), and reporting more difficulty with ART adherence ($\chi^2=4.68, p = .030$). Non-drug users reported significantly more ART regimen changes in their lifetime ($t=2.32, p = .020$). There were no significant differences between groups on the time to treatment after HIV diagnosis, perceived ability to take medications as prescribed, number of months on current regimen, or the number of current medications. Food insecurity was associated with a higher likelihood of <95% medication adherence ($X^2=5.67, p = .017$) and those with a history of incarceration were taking significantly more medications ($t=2.32, p = .022$). No other SES variables were related to adherence outcomes. Furthermore, individual SES variables were not significant moderators of the association between cocaine use and adherence.

Implications: The results have implications for addressing substance use and social conditions, such as food insecurity, in interventions designed to improve ART adherence. The findings contribute to our understanding of disparities in HIV adherence among substance use populations.

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B058a
MENTAL HEALTH WELLNESS APPS ON MOBILE DEVICES: HOW MOBILE TECHNOLOGY IS CHANGING ACCESS AND ENGAGEMENT TOWARDS MENTAL HEALTH.
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Objective: Smartphone and tablet based apps for physical health continue to be the most common health apps available to mobile device users, however, apps that help consumers track their emotional health, manage mood, increase their cognitive skills, and/or support ongoing mental health therapy are steadily becoming more popular. The rapid growth of these apps (defined here as mental health wellness apps) makes it clear that self-directed, consumer centered therapies via mobile technologies are playing an increased role of how Americans define and self manage their mental health. To date little research exists that explores the availability of mental health wellness apps, how consumers define and categorize these kinds of apps, and once downloaded onto devices, what the user experiences. Specific research questions included: What emotional, mood management, and cognitive based health apps are currently available to smartphone and tablet users? How are users currently using these apps to complement existing mental health care? Is there an unmet need for a specific kind of mental health app or a common mental health app characteristic that users favor?

Methods: This cross sectional internet based survey study targeted US mobile device users who reported having and using at least one health app on their smartphone or tablet device. Questions on the survey focused on mental wellness apps. Semi-structured interviews were conducted with a subsample of participants who reported using at least one mental wellness related app.

Findings: Survey results of a demographically diverse US sample (N=1361) show that 34% of respondents reported using at least one mental health wellness app over the past 30 days, a number consistent with previously reported mental health wellness app use. While these apps were diverse with respect to function and desired use (targeted therapy, treatments for anxiety/depression, stress relief, and/or meditation), a significant percentage of users who downloaded apps for anxiety reduction reported an overall positive experience, consistent use of the app, and overall satisfaction with the intended outcomes.

Impact: This research has implications for how mental health providers, researchers, and policy makers can leverage existing and future mobile apps to expand the reach of mental health services.

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B058b
THE ROLE OF MENTAL HEALTH TREATMENT BELIEFS IN VETERAN’S USE OF SELF-HELP SOURCES
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Few veterans with mental health symptoms seek out mental health treatment. Self-help sources, including internet-based information seeking, have been advocated as a low-cost, convenient first step (Musiat, Goldstone, & Tarrier, 2014) to improve treatment seeking. However, there is limited research on how or why veterans engage with self-help sources. This study was designed to evaluate the degree to which mental-health-treatment beliefs are associated with the use of self-help sources and in-person sources. We predicted that veterans who had more negative treatment beliefs (e.g. not trusting practitioners, being seen as ‘weak,’ etc.) would be more likely to report using a self-help source versus a practitioner-based source. This prediction was based on Leventhal’s Common-Sense Model of Self-Regulation (1992), which posits that individuals develop an understanding of their health condition from information from multiple sources, and that this understanding guides treatment decisions (McAndrew et al., 2008).

We surveyed 73 veterans who had previously been seen at a tertiary VA post-deployment clinic. Veterans were asked about their treatment beliefs and healthcare utilization in this one-time assessment. As predicted, greater negative treatment beliefs were associated with greater utilization of self-help resources ($r=0.376, p<0.01$).
High correlations were found between most of the accessed beliefs and use of self-help (rs=0.311 to 0.433, p<0.01). There was no relationship between treatment beliefs and using in-person treatment seeking.

The results suggest that veterans with more negative treatment beliefs may be more likely to seek mental health help from self-help sources. Addressing these negative treatment beliefs through self-help sources may be one method to improve in person treatment-seeking. Limitations include cross-sectional design and querying veterans who have already sought care. Further research should use a prospective design.

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B067a

IMPACT OF ENGLISH LANGUAGE PROFICIENCY AND NATIVITY ON LATINAS’ NUTRITION IN SOUTH TEXAS
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Purpose: The Hispanic population is the fastest growing minority group in the United States and lives with disproportionately higher rates of disability due to complications associated with diabetes and obesity. While high obesity levels in Mexico indicate that Mexican immigrants might already be engaged in poor dietary practices prior to immigration, research on the relationship between dietary intake and acculturation among Hispanics have yielded inconsistent results. Furthermore, research using validated food frequency questionnaires on Hispanics living in South Texas is limited. This cross-sectional study analyzes the role of English Language Proficiency (ELP) and nativity (place of birth) in dietary intake of saturated fat, fruits, vegetables and fiber among Hispanic women residing near the United States-Mexico border in Texas. Methods: Our sample includes 237 sedentary Hispanic women ages 18-65 residing in colonias (incorporated, impoverished, underserved settlements) along the South Texas Rio Grande Valley. Participants completed an interviewer-administered demographic questionnaire (n=237) and the Block Food Frequency Questionnaire (n=231). Results: Mean age was 39.4 years (SD=9.5), mean grade level completed was 9.85 (SD=3.2) and 78.9% (n=187) were born in Mexico. Mean intake of fruits, vegetables, fiber and saturated fat was 1 serving/day (SD=0.8), 1.8 servings/day (SD=1.4), 20.3 grams/day (SD=9.7) and 22.3 grams/day (SD=11.1), respectively. An analysis of dietary variables by nativity showed that Mexican-born women consumed more fiber than U.S.-born women, 20.3 vs. 17.7 grams/day (p<0.04). In addition, ELP was positively associated with saturated fat consumption (r=.161; p<0.015). No significant differences were observed for fruit and vegetable intake. Conclusions: In our sample of Hispanic women, immigrants had a higher consumption of fiber but not fruit, vegetables or saturated fat. Also, Hispanic women that spoke more English consumed more saturated fat regardless of nativity. The influence of nativity and language use on dietary intake are different and may be indicative of different process involved in the adaptation of behaviors to a US context (social or geographic).

Culturally relevant strategies are needed to help Hispanic women increase consumption of fruits and vegetables and limit intake of saturated fat.

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B067b

PARENT HEALTHFUL EATING ATTITUDES AND MOTIVATION ARE PROSPECTIVELY ASSOCIATED WITH DIET QUALITY AMONG YOUTH WITH T1 DIABETES.
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Background: Diets of youth with Type 1 diabetes (T1D) are generally high in fat and low in whole plant foods, increasing risk for adverse future health outcomes. Understanding family influences on youth diet may inform development of interventions targeting youth eating behaviors. Given that psychosocial constructs including self-efficacy, outcome expectations, and autonomous motivation predict one’s own eating, this study examined associations of parent psychosocial constructs with youth intake of whole plant food (fruit, vegetables, whole grains, legumes, nuts, seeds), along with the moderating role of parent nutritional knowledge.

Method: Parent-youth dyads (N=136, youth age=12.3±2.5y, A1c=8.1±1.1%) participated in an 18-month efficacy trial of a family-based randomized behavioral nutrition intervention to increase intake of whole plant foods. Every 6 months, parents reported self-efficacy, outcome expectations, barriers, autonomous and controlled motivation for providing healthy food for their families, and T1D-specific nutrition knowledge; families completed youth 3-day food records, which were used to calculate Whole Plant Food Density (WPFD, cup/oz equivalents per 1000 kcal of target foods). Linear mixed models were used to test (1) the intervention effect on time-varying parent psychosocial variables, and (2) associations of time-varying parent psychosocial variables with time-varying child WPFD and the moderating role of time-varying parent nutrition knowledge, controlling for treatment assignment.

Results: There was no intervention effect on any parent psychosocial variable. Overall, higher parent self-efficacy and autonomous motivation and lower barriers and negative outcome expectations were associated with higher child WPFD (p-values<.05). Significant interactions indicated that lower perceived barriers and negative outcome expectations were associated with higher child WPFD when parents had higher nutrition knowledge (p-values<.01).

Conclusions: Although pre-adolescence and adolescence are marked by increased independence, findings suggest parent attitudes and autonomous motivation for healthful eating may influence dietary intake among youth with T1D; however, barriers and negative expectations may be less pertinent for those with lower nutrition knowledge.
B067c PORTION, PACKAGE OR TABLEWARE SIZE FOR CHANGING SELECTION AND CONSUMPTION OF FOOD, ALCOHOL AND TOBACCO: SYSTEMATIC REVIEW

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Aims: We aimed to assess:

i. the effects of manipulating different portion, package or tableware sizes on selection or consumption of food, alcohol or tobacco products;

ii. the extent to which these effects may be modified by characteristics of the study, the intervention and the participants.

Methods: Systematic review with meta-analysis and meta-regression, registered with the Cochrane Public Health Review Group. Eligible studies were randomised controlled trials (between- or within-subjects) that involved comparison of at least two sizes of a portion of a food, alcohol or tobacco product, its package or an item of tableware used to consume it. Outcomes were selection and consumption of the manipulated product.

Results: 40,982 title and abstract records were dual screened. We identified 72 studies for inclusion, all at unclear or high risk of bias. For effects of size on consumption, random effects meta-analysis of 92 independent comparisons from 61 studies (6,711 participants) showed a small-to-moderate pooled effect size (SMD: 0.37, 95% CI: 0.29 to 0.45, p<.001), providing moderate quality evidence that exposure to larger sizes increased quantity of food (SMD: 0.38, 95% CI: 0.29 to 0.46) but not tobacco (SMD: 0.25, 95% CI: -0.14 to 0.65) consumed. If sustained, the intervention effect size for food consumption would be equivalent to an increase in mean daily food energy intake of 144 to 228 kcals (+8.5% to +13.5% from a baseline of 1,689 kcals) among UK children and adults. For effects of size on selection of food, the results were similar (SMD: 0.42, 95% CI: 0.24 to 0.59, p=0.011). There was no evidence that these intervention effect sizes were modified by the target of manipulation (portion, package, tableware), participant characteristics other than age, or the relative or absolute size of the manipulation.

Conclusions: This review establishes that policies and practices which are effective in reducing people’s exposure to larger sized portions, packages, and tableware can contribute to meaningful reductions in the quantities of food people select and consume.

B079a BEHAVIORAL AND HEALTH OUTCOME CHANGES OF A FAMILY-BASED PEDIATRIC OBESITY LIFESTYLE INTERVENTION

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The purposes of this study were to 1) determine if completion of a 12-week-family-based pediatric obesity lifestyle intervention lead to behavioral and health outcomes, and 2) determine if child or parent behaviors influenced child or parent health outcomes. The program consisted of weekly nutrition education, physical activity, and behavior modification components.

METHODS: Participants included 39 children 6 – 11 years (age=9.9 ± 2.7 years) with BMI percentile ≥ 97% for age and gender. Parent participants included 14 mothers (age= 40.6 ± 7.7 years) and 15 fathers (age= 43.8 ± 6.4 years) with BMI ≥30 kg/m². For all participants, the number of high fat/high calorie foods consumed per day and daily steps were measured at baseline and 12 weeks via 3-day food diary and pedometer. Total cholesterol, HDL, LDL, triglycerides, and body composition (mass and fat free mass via DXA) were measured at baseline, 12-weeks and 3-month post-intervention. Regression models were run to determine the association between child behaviors and child health outcomes; child behaviors and parent health outcomes; parent behaviors and child health outcomes; and; parent behaviors on parent health outcomes. RESULTS: Significant pre-post changes among children included increased steps, decreased high fat/high calorie foods and decrease in fat mass (p<.05). Among fathers, significant changes in steps, high fat/high calorie foods, fat mass, HDL, LDL, and total cholesterol occurred (p<.05). The only significant decrease among mothers was in fat mass (p<.05). Regression analyses revealed that change in child steps at 12 weeks predicted child change in HDL at 3-month follow up (p=.02). No other significant associations were found between mother, father, and child behaviors and outcomes. This 12-week family-based intervention led to positive behavioral and health outcomes for children and parents, however, changes in child behavior did not significantly influence parent health outcomes nor did changes in parent behaviors significantly influence child health outcomes. Future research should examine maintenance of changes over time.

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B079b CHILDHOOD STRESS, BMI, AND GENDER DIFFERENCES AMONG CHINESE YOUTH

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Associations between stress and increased BMI among youth have been well documented in studies of Western populations, but there is limited research exploring these relationships in Asia despite the alarming rise of obesity. As China wrestles with
this progressively burdensome problem among youth, understanding factors that contribute to this epidemic has become essential. Our objective was to examine the impact of childhood stress on BMI and overweight/obesity risk in Chinese adolescent males and females. A prospective longitudinal analysis was performed using data from a school-based health promotion study conducted in Wuhan, China from 1999-2004. The sample consisted of 2179 randomly selected healthy Chinese adolescents (1156 boys and 1023 girls), aged 11–15 years (12.9±0.7). Assessments of negative stressors relating to school, peer interaction, family, and health were administered at baseline. Height and weight were obtained at baseline and at two additional annual follow-ups. Three-level random effect models were used to explore relationships between stress and BMI over time. Generalized Estimating Equations were used to investigate linkages of stress exposure to overweight risk over time, adjusting for age, birth weight, pubertal status, smoking and drinking behaviors, city residence and parental education attainment. Among females, an association was found between increased BMI and health stressors (ß=.85, SE=.19, p<.01) as well as with the sum score from all negative stressor categories (ß=.01, SE=.004, p=.01). Among males, only health stressors predicted higher BMI (ß=.50, SE=.22, p=.02). Participants were dichotomized into overweight/obese categories (yes/no) based on the International Obesity Task Force age- and sex-specific BMI cutoffs. Among females, a significantly higher risk of overweight/obesity was found with increased scores for school (p=.014) and health stressors (p<.001), and sum score for stressors for all categories (p=.016). Among males, an increased risk of overweight/obesity was only associated with health stressors (p=.027). The findings of this study contribute to the global understanding of the influences of childhood stress on overweight/obesity risk among youth in the Eastern cultural environment, with a particular focus on the impact for each gender.

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B079c
DEVELOPMENT OF A TAILORED, 5A'S-BASED WEIGHT MANAGEMENT INTERVENTION FOR VETERANS WITHIN PRIMARY CARE
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Background: Obesity is highly prevalent at Veterans Affairs (VA) Medical Centers and goal setting can promote weight loss. We created an interactive tool to facilitate goal setting for lifestyle behavior change in primary care at the VA and conducted usability testing for further development.

Methods: Using principles of User-Centered Design with stakeholder input (6 focus groups, 25 key informant interviews, and 6 initial usability studies), we created an online tool to help Veterans create weight management goals and facilitate counseling by a health coach. We then conducted usability testing with a “Think Aloud” protocol, followed by a 15-minute health coaching session and a semi-structured interview. Sessions were recorded, professionally transcribed, and analyzed to find areas for tool improvement.

Results: The resulting tool, called MOVE! Toward Your Goals (MTG), was designed at a 5th grade literacy level with low text density per page and simple navigation. It obtains information...
about a patient’s weight management behaviors and barriers and provides tailored weight loss or behavior change advice. The patient indicates how much weight he/she wants to lose, the perceived importance of each piece of advice, and then chooses a weight loss goal, nutrition goals, and a physical activity goal. The MTG tool provides an individualized patient summary, SMART goal setting worksheets, VA weight management resources, tailored educational handouts, and clinician/health coach support tools for counseling.

Usability testing of MTG on a tablet computer with 5 Veteran participants (3 male, 2 female) revealed that they appreciated the clean visual layout, the in-person support while using the tool, and had a strong positive reaction to the health coaching session and personalized materials. They left the session feeling motivated to work on their goals. Identified barriers included minor problems with navigation, tablet use, and unclear wording of some questions.

Conclusion: Initial usability testing suggests that the MTG tool can facilitate collaborative goal setting. Findings and further testing will inform iterative changes, and the tool will be used as part of a primary care-based weight management intervention.

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B079e

DOES SELF-MONITORING MEDIATE THE EFFECT OF TREATMENT DOSE ON WEIGHT LOSS IN BEHAVIORAL MANAGEMENT OF OBESITY?

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Previous findings from the Rural LITE Trial showed that moderate (MOD) and high (HIGH) doses of a behavioral weight-loss treatment produced significantly larger weight losses than low dose (LOW) treatment or a nutrition education control condition. In the current study, we investigated whether the effect of dose on weight loss was mediated by self-monitoring. We examined the relationship between three treatment doses (8 sessions for LOW, 16 for MOD, and 24 for HIGH), self-monitoring, and percent weight change during the 6-month initial intervention phase of a randomized controlled trial. The participants included 405 obese women and men from rural communities who completed the treatment phase of the trial (77.3% women; M±SD: baseline BMI=36.3±4.0 kg/m², age=53.3±11.4 years). Intervention content was the same for each dose and included daily written self-monitoring logs of food intake and physical activity. In LOW, participants lost on average 7.4% of body weight (95% CI = 6.36-8.52%) and self-monitored 50.1% (45.4-54.8) of days during the 6-month period; MOD lost 9.84% (8.67-11.0) body weight and self-monitored 79.9% (66.6-75.3) of days; HIGH lost 11.3% (10.2-12.3) body weight and self-monitored 80.1% (75.7-84.6) of days. All weight changes and self-monitoring frequencies within and between groups were significant (p<.05), except for the differences in weight loss between MOD and HIGH (p=.208). The mediating role of self-monitoring frequency on the relationship between dose and weight loss was examined using the Preacher and Hayes model. Results showed that treatment dose was directly associated with days of self-monitoring (p<.001) and weight loss (p<.001). Self-monitoring was also significantly associated with weight loss (p<.001). Controlling for self-monitoring, the direct effect of treatment dose on weight loss was no longer significant (p=.689), but the indirect effect was (p<.001), thereby indicating that self-monitoring fully mediated the relationship between treatment dose and weight loss. Higher doses of treatment led to higher self-monitoring adherence, which in turn was associated with, if not responsible for, greater weight loss. These findings provide strong support for the causative role that self-monitoring plays in the behavioral treatment of obesity.

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B079f

FEASIBILITY OF A PROLONGED NIGHTLY FAST AMONG OVERWEIGHT/OBESE POSTMENOPAUSAL WOMEN

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Postmenopausal women experience elevated centralized adiposity, and a high prevalence of obesity. It is well established that obesity increases the risks of cardiovascular disease, diabetes, and postmenopausal breast cancer. Conventional approaches for weight loss have been shown to be challenging and thus, innovative intervention strategies are needed. In animal studies, a prolonged nightly fasting regimen has been shown to positively influence health by reducing obesity and improving metabolic biomarkers linked to chronic disease. Therefore, studies aimed at translating these promising health effects in humans are warranted.

We conducted a pre-post pilot study to test if a habitual prolonged nightly fasting regimen would be feasible and would show preliminary efficacy in reducing weight. Participants were 20 overweight/obese (body mass index ≥ 25) postmenopausal women aged 50 years and older (50% Hispanic/Latina) free of diabetes who reported overnight fasting < 12 hours nightly at baseline. During the one-month intervention, participants were asked to fast at least 12 hours nightly. Participants received five motivational interviewing calls and used a short message service (SMS) texting program to record start/stop times of their nightly fast, receive reminders of their target end time of the overnight fast and support texts promoting protocol adherence.

Participants increased their nightly fasting hours by a mean of 22.4% on average and fasted ≥12 hours on 95.7% of the nights. Average fasting duration was 10.7 hours at baseline (SD = .77) and 13.1 hours at follow-up (SD = .63). Participants reported that the intervention was acceptable (90%) and pleasant (90%). Overall, the intervention yielded high compliance (>95.7%) and completion rates (100%); and showed evidence of weight loss (M = -1.07 kg; SD = 1.30).
A prolonged overnight fasting regimen is a feasible and promising intervention with potential to promote modest weight loss and possibly improve metabolic health. Replication of findings in a fully powered randomized controlled trial is warranted to determine if a prolonged overnight fasting intervention can reduce chronic disease risk by improving chronic disease biomarkers such as lipids, insulin or inflammatory markers and potentially improving other health behaviors such as sleep.

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B079g

HEALTHY PAD: FEASIBILITY OF A MULTIMEDIA-BASED OBESITY MANAGEMENT PROGRAM FOR LOW-INCOME PRESCHOOL PARENTS

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Purpose: this pilot study tested the feasibility of Healthy Pad, a multimedia-based parent education on obesity management delivered using Android tablet computers.

Methods: Participants were eight Head Start parents whose children were either overweight or obese. After completing an orientation session, each parent was given a Healthy Pad tablet and asked to complete the Healthy Pad program following a five-week schedule. Healthy Pad had four components: 1) five parental education modules created with Articulate® Storyline; 2) weekly behavioral monitoring of child behaviors based on AAP recommendations (e.g. TV <2 h/d) using an application; 3) age-appropriate child activities (eBooks with health themes, education games and videos on nutrition, PA) that provided the opportunities to learn health habits and to replace passive sedentary behavior; and 4) adult use applications. The delivery design is guided by e-learning and adult learning theories that engage adult learners and minimize the intimidation and frustration of multimedia use. Articulate® Storyline is an innovative e-Learning authoring tool that has intuitive user interface, allows embedding of various forms of multimedia content, provides revolutionary interactivity (avatars, voice narrations, animation) between users and content, has built-in assessment capability, and tracks and reports the user access and progress of the content. Access information to tablet content was collected to assess fidelity.

Results and comments: Feedback from the focus group revealed that parents were satisfied with Health Pad for its friendliness and clarity of navigation. Parents reported increased use of strategies in supporting their children’s health behaviors at home. Data collected from the tablets indicated that parents and children followed the protocol of use and completed most scheduled activities. Parents reviewed 4.4 of the 5 education modules; 70% of parents did the weekly monitoring; all parents used BMI calculator more than once; 86% of children accessed e-books and audio books (2.3-4 accesses/wk) and 75% accessed education games and video games (1.9-2.5 accesses/wk); 88% accessed entertainment games (2.4-4.1 accesses/wk); and 63% parents used adult applications (1.9 accesses/wk). This technology-based approach seemed feasible for delivering family-based weight management education targeting low-income parents.

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B079h

IMPULSIVITY MODERATES THE RELATIONSHIP BETWEEN CHANGE IN ALCOHOL USE AND WEIGHT LOSS DURING BEHAVIORAL WEIGHT LOSS TREATMENT

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It is well established that high levels of behavioral impulsivity are associated with less success during weight loss treatment and increased alcohol use in adults. Although impulsivity is common to both obesity and alcohol use, little research has focused on the relationship between these two factors during weight loss treatment. The current study explored the relationship between alcohol use, behavioral impulsivity, and weight loss in a sample (N= 68) of non-substance-abusing overweight and obese adults in a 52-week behavioral weight loss program. At baseline, participants completed a Go/No-Go task to measure impulsivity in which they were instructed to press a button when pictures appeared on a certain area of the computer screen ("go" stimulus), but not on another ("no-go" stimulus). At baseline and at end-of-treatment assessments, participants completed three 24-hour food recalls in which dieticians calculated the grams of nutrients, including alcohol, participants consumed each day. Participants’ BMI was obtained through in-laboratory weight and height measurements at baseline and end-of-treatment. Overall, at the end-of-treatment assessment, participants lost weight (p < .01) and 59% of participants who consumed alcohol at baseline decreased their intake. Change in alcohol intake correlated with change in BMI (p < .01). Furthermore, baseline impulsivity significantly moderated this relationship between change in alcohol and change in BMI (p < .02). At higher levels of impulsivity, the effect of alcohol change on BMI change was more pronounced, such that a reduction in alcohol consumption related to a greater decrease in BMI in highly impulsive participants compared to participants with low-to-average impulsivity. Thus, while reductions in alcohol related to overall treatment success, this treatment recommendation (when followed) was most relevant for success in participants with an impulsivity score above the 60th percentile in this sample. Future research should examine mediators of this effect, namely whether highly impulsive individuals may be more likely to engage in disinhibited eating or display poorer planning ability after consuming alcohol compared to less impulsive people, and further explore the possibility that these individuals gain greater benefit when reducing or eliminating these effects of alcohol use during weight loss treatment.

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47
B079i
INFORMATION ABOUT MEN ON BINGE EATING WEBSITES
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Objective: To determine whether binge eating websites provide information on men and binge eating.

Methods: The authors used content analysis to examine the first 30 websites identified by entering binge eating into Google on August 28, 2014. The authors independently coded websites based on the presence of: 1) gender specific information; 2) images of people; 3) vignettes; 4) use of only female pronouns; 5) traditionally female colors; and 6) website source. Rating discrepancies were discussed until consensus.

Results: Almost two-thirds of the websites provided information on men and binge eating, usually providing information on the prevalence of binge eating among men. One quarter of the websites included images of men, usually White men. Only one website targeted solely women and five websites used traditionally female colors. Most websites were general health websites or general eating disorder websites. Few academic websites were present on the first page of search results.

Discussion: Some binge eating websites provide information on men and binge eating. Binge eating websites could improve by providing information beyond prevalence rates. Future research should assess whether websites with information tailored to men are more likely to engage men in treatment for binge eating.

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B079j
IN-PERSON VS. ONLINE SMALL CHANGE, SELF-COMPASSION-BASED WEIGHT LOSS PROGRAM FOR UNDERGRADUATES
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Introduction: Overweight and obesity is prevalent among undergraduate students, yet there is a paucity of weight loss research specific to this population. A previously effective Small-Changes Intervention (SCI), based on the principle of integrating small, maintainable changes into one’s diet and physical activity, with an additional focus on self-compassion, was used in this longitudinal (9-month) study.

Methods: Twenty-one in-person (attended 8 weekly groups) and 22 technology (same materials provided via Facebook) freshmen and sophomore female participants (mean baseline weight = 76.04 kg) were evaluated at 3 study visits, including baseline, 8-week post-treatment, and 6 month follow-up. Both groups received coaching phone calls throughout the study. Variables of interest included: changes in weight (kgs); time (study visit); self-compassion (as measured by the short version of the Self Compassion Scale), and attrition rates.

Results: Multilevel models assessed between and within-subjects fixed and random effects. Analyses revealed a fixed effect, with significant weight loss (mean weight 67.38 kg) over study visits (β=1.50, t(29.64)=3.76, p<.001) and a random effect of study visit (β=2.33,Wald Z=2.11, p=.04), such that participants varied significantly from each other in their rates of weight loss over time. Baseline self-compassion did not significantly predict weight change over-and-above the effect of study occasion; further, an independent model found that self-compassion scores did not change over time. Attrition was high; more participants dropped out of the technology group (86%) than the in person group (52%).

Conclusion: This study found that the SCI leads to significant weight loss in college females over a 9-month period, with no differences between in-person and technology groups. Self-compassion did not change over time, nor did baseline scores predict weight loss. As predicted, attrition was high with more participants dropping from the technology group. Effective interventions that increase adherence and garner long-term commitment are needed with this at-risk population.

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B079k
LONGITUDINAL EFFECTS OF PARENTAL AND FAMILY FACTORS ON BMI AND WEIGHT STATUS OF CHINESE ADOLESCENTS
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The purpose of this study was to investigate the longitudinal linkages of parenting characteristics and family functioning variables to adolescents' BMI and risk of being either overweight or obese. The study utilized data from the Wuhan Smoking Prevention Trial, a school-based randomized trial conducted in Wuhan, China between 1999 and 2004. Study participants included 2179 randomly selected healthy Chinese adolescents (1156 boys and 1023 girls) aged 11 to 15 years (12.9±0.7) and their parents. Gender-stratified three-level (i.e. levels of repeated assessments, individual students, and schools) random-effect models and Generalized Estimating Equations were used to examine the effect of a battery of parenting practices and family functioning variables on BMI and overweight/obese status, as classified according to the age-gender-specific BMI cutoffs recommended by the International Obesity Task Force. Adolescents’ age, birth weight, pubertal status, smoking and drinking behaviors, city residence, and parental education attainment were included as covariates in the analyses. Results suggest that paternal perception of a child’s health was not only significantly positively associated with BMI (β=0.77, SE=0.20, p-value=0.0001 among boys; β=0.66, SE=0.20, p-value=0.001 among girls) but also with greater odds of being overweight or obese (OR=1.07, p-value=0.006 among boys; OR=1.05, p-value=0.04 among girls). Certain parental health practices, such as providing children with vitamins, herbs, or health food, had a significant negative association with BMI, and also were found to be associated with reduced odds of being overweight, particularly among male adolescents. Moreover, particular family functioning variables, such as child obedience (β=0.24, SE=0.12, p-value=0.04) and family conflict (β=0.38, SE=0.17, p-value=0.03), were shown to affect the BMI
of male adolescents. The results further suggest parental-child gender differences that may significantly affect adolescent BMI and overweight/obesity risk. The findings of this study highlight particular parental and familial factors that may significantly impact Chinese adolescent health and provide insight on cultural mechanisms that uniquely affect China’s population.

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B079m
REDUCING BEHAVIORAL RISK FACTORS FOR ADIPOSE TISSUE GAIN DURING MENOPAUSE: A LIFESTYLE INTERVENTION
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Background: Evidence suggests that midlife women experience a 3.8% annual gain in intra-abdominal adipose tissue during the menopausal transition, which relates to increased cardiometabolic risk. Physical inactivity, excess caloric intake, and stress are each independently associated with this gain. This study thus sought to prevent the progression of intra-abdominal adipose tissue gain in women undergoing the menopausal transition by improving behavioral risk factors in a lifestyle intervention. Methods: Participants were 71 midlife women (mean ± SD age = 47.6 ± 3.4 yrs; BMI = 33.6 ± 7.3 kg/m²; 52% African American) who met weekly for 4 months and biweekly for 8 months in a group-based lifestyle intervention. Participants were encouraged to increase physical activity to > 120 minutes/week, consume at least 3 servings of vegetables/day, and manage stress such that reported perceived stress decreased by at least 10%. Moderate/vigorous physical activity was measured using 7-day accelerometer data, dietary intake with 3 24-hour dietary recalls, and stress via the Perceived Stress Scale-10 at baseline and 12 months. As a surrogate measure of intra-abdominal adipose tissue, waist circumference was measured at baseline and 12 months. A < 3 cm gain in waist circumference over the one-year period was considered clinically significant. Results: Participants significantly increased their levels of physical activity on average from 18 to 89 minutes (p = .002) and reported significant decreases in perceived stress from 16.7 to 15.2 (p = .017). Median daily servings of vegetables increased nonsignificantly from 2.5 to 3.1 (p = .357). Overall, 56.3% of participants achieved at least one behavioral goal at 12 months. At one-year, 59% of participants showed a < 3 cm gain in waist circumference. Discussion: Findings demonstrate that the majority of midlife women are successful at modifying behavioral risk factors within a year-long lifestyle intervention. Improvements in physical activity, diet, and stress track closely with prevention of intra-abdominal adipose tissue gain. Future studies should assess outcomes of reduced behavioral risk factors on CT-assessed intra-abdominal adipose tissue gain and related cardiometabolic risk throughout the entire menopausal transition.

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B079n
SMARTPHONE PHYSICAL HEALTH APPLICATIONS: HOW DO YOUNG ADULTS USE THEM AND ARE THEY EFFECTIVE?
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Although many applications are available on smartphones for managing and modifying health behaviors, few are empirically
based. This has led the scientific community to call for the design of evidence-based health apps. The objectives of this study were to denote which characteristics and features are most appealing and most frequently used by young adults. This study also compares participants beliefs about the effectiveness of weight management apps to their BMI. An online survey of 761 undergraduates ages 18-29 was conducted with IRB approval. Although the majority of the people in this sample own smartphones (98.2%) and endorsed having at least one health issue (69.6%), only 17.7% use a health app. Quality \( M_{\text{rank}} = 4.16 \) was ranked as having the highest influence on their decision to use a health app out of 13 choices and price \( M_{\text{rank}} = 4.38 \) was second. Significant gender differences were found on both importance of quality \( F(2, 744)=3.09, p = .05 \) and family recommendation \( F(2, 744)=5.80, p = .003 \). Post hoc analysis showed males \( M_{\text{rank}} = 3.75 \) ranked quality significantly higher than females \( M_{\text{rank}} = 4.32 \) (Hochberg GT2 = .57, \( p = .05 \)) and females \( M_{\text{rank}} = 7.43 \) ranked family recommendation significantly higher than males \( M_{\text{rank}} = 8.30 \) (Hochberg GT2 = .88, \( p = .004 \)). No differences were found for transgender individuals. Significant race/ethnicity effects (Black/African American, Caucasian, Hispanic) were found on apps being scientifically validated \( F(2, 678)=7.19, p = .001 \), physician recommendation \( F(2, 678)=5.13, p = .006 \), family recommendation \( F(2, 678)=3.48, p = .03 \), advertisement \( F(2, 678)=4.92, p = .008 \), and quality \( F(2, 678)=6.41, p = .002 \). Post hoc analyses were explored for these effects and will be discussed. Health app features most frequently used by this group were pedometers and calorie counters. The majority of health app users (80%) reported the application has been successful in helping them reach their health goals. A significant relationship was found between using weight management apps and BMI \( r = .18, p = .04 \). The mean BMI for those using these apps was 24.49 (SD=5.46) compared to those not using these apps \( M = 26.55, SD = 5.27 \). To make empirically based health apps more appealing, researchers can argue scientific validation and HIPPA privacy and security protections enhance quality.

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B079e

WEIGHT LOSS RETENTION FOLLOWING A WEIGHT LOSS CHALLENGE IN SOUTH TEXAS

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PURPOSE: A three-month community-based weight loss Challenge has been held annually in South Texas since 2010. Obesity and related chronic diseases exceed national levels in this area and therefore a program to help overweight or obese participants reach and maintain a healthy weight is important. Dietary and physical activity interventions are used during each Challenge. Weekend exercise events, cooking lessons, fitness classes, online and text message support are offered for free. Individual and group winners are identified and rewarded with prize money ranging from $200 for individuals to $1100 for large groups. Other rewards and recognitions are offered during the challenge to promote participation. The current analysis examines weight status measured during the initial visit for a second Challenge following completion of an initial Challenge during a previous year. METHODS: Of 724 participants who enrolled in at least two Challenges, 341 (77% female, 48% over 40 yrs., 94% Hispanic) were included in this analysis because they had weight data available for pre and post for their first Challenge and pre for their second. At each program, percent weight loss was defined as the ratio of weight loss to original weight. Frequencies and percentages from the conclusion of the first Challenge to the initiation of a second Challenge for weight loss maintenance, some weight regain, and total weight regain are reported in this analysis. RESULTS: Of the 341 participants, 52 (15.25%) did not lose weight during their first Challenge. Of the 289 participants who lost weight during their first Challenge, 66 (19.35%) maintained their weight loss or had even greater weight loss at follow-up, 116 (34.02%) gained back some, but not all of the weight they lost during the first Challenge, and 107 (31.38%) gained back all of the weight they lost during the first Challenge. Males were more likely to gain back some or all of their weight than women (76.92% vs. 61.98%). CONCLUSION: The current weight loss Challenge appears to be successful in helping a large percentage of participants to lose weight and maintain some or all of the weight loss until they return to another annual Challenge. This potentially means that there are lifestyle changes occurring to help these positive changes persist during the intermission between annual Challenges.

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B083a

A COMPARISON OF SIT-STAND DESKS VERSUS TRADITIONAL SITTING DESKS ON LONG-TERM SEDENTARY BEHAVIOR AND HEALTH OUTCOMES

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Background: Adults working in primarily sedentary occupations are at increased risk for sedentary related chronic diseases. A growing number of employers are providing employees with sit-stand desk options to promote employee health. However, few studies have examined the long-term impact of providing employees with sit-stand workstations on occupational sedentary behaviors and/or health outcomes.

Objective: The purpose of this study was to compare differences in occupational sedentary behaviors and cardiometabolic health outcomes amongst full-time employees who have had either a sitting workstation or sit-stand workstation for a minimum of six months.

Methods: We recruited 71 full-time employees (44.3±10.6 years; 79% female, BMI = 30.5±6.6 kg/m^2) working in desk-dependent jobs who reported having either a sit-stand workstation (N=30) or sitting workstations (N=41) for a minimum of six months. Average time spent standing, sitting, and walking while at
work were measured objectively over 5 working days using an activPAL™ activity monitor. Cardiometabolic health outcomes (adiposity, blood pressure, heart rate, cardiorespiratory fitness) were also measured. T-tests were used to compare the two groups for outcomes of interest.

**Results:** Employees with sit-stand workstations stood 60 minutes more (P < 0.01) and sat 60 minutes less (P < 0.01) each work day than employees with sit only workstations. No between group differences were observed for any measured cardiometabolic health outcomes including weight, waist circumference, percent body fat, resting blood pressure, or estimated peak VO₂. These findings are important as sit-stand desks represent a passive, yet potentially effective approach for promoting employee health.

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**B092b**

**CHILDREN RAISED BY GRANDPARENTS: OPPORTUNITIES TO PROMOTE HEALTHY LIVING IN EARLY CARE AND EDUCATION (ECE) SETTINGS**

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Background: In a recent SBM position statement, Buscemi et al (2014) report that Early Care and Education (ECE) settings represent an opportunity for reducing and preventing obesity among young children. This study uses the Head Start Family and Child Experiences Survey (2009) to examine if diverse family structures, particularly those young children raised by a grandparent [1 in 10 children live with grandparent (Census, 2014)], have different experiences with physical activity, diet, and sleep.

Methods: The Head Start Family and Child Experiences Survey (FACES): 2009 Cohort, a periodic, ongoing longitudinal study of program performance with successive nationally representative samples of Head Start children. A subset of 328 child-level cases was created by stratifying subjects into four groups based on family structured including: mother and father, biological mother only, biological mother with non-biological father, and grandparent headed households and randomized into groups. Descriptive statistics and one-way between subjects ANOVA were conducted to compare means.

Results: 328 subjects (82 in each group), the mean age of the children was 46 months (47% boys). Although children raised by grandparents spend less time spent watching videos or dvds [F (3, 322) = 2.90, p = 0.035], the child’s physical activity level is significantly lower for children raised by grandparents [F (3, 307) = 3.42, p = 0.018]. Children raised by grandparents also drink sweetened beverages more often [F (3, 324) = 2.70, p = 0.045]. Even though children raised by grandparents are more likely to have a safe place to sleep at night [F (3, 323) = 3.67, p = 0.013], they are more likely to seem sleepy or tired in class [F (3, 317) = 4.82, p = 0.003]. In addition, children raised by grandparents are more likely to care for a child with a disability [F (3, 247) = 3.61, p = 0.014].

Conclusions: Data suggest that children raised by grandparents experience lower activity levels, drink more sweetened beverages, and are more sleepy or tired in class. ECE settings may benefit from designing tailored information to meet unique
needs of grandparents raising grandchildren who are in need of improving their healthy behaviors.

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B092c
IDENTIFYING THOSE WHO ARE HARDLY REACHED: A SOCIOECOLOGICAL APPROACH
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Those whom preventive and clinical services fail to reach account for disproportionate health burdens and costs. Labeling them ‘hard to reach’ suggests they are responsible for the failure to engage them. To understand better what circumstances are actually responsible for such failure, this systematic review identifies characteristics current research uses to identify those who are too often hardly reached.

A PubMed search of articles whose titles and/or abstracts included “hard to reach,” or “locate” or “treat,” etc. and published in English between 2009 and 2014 yielded 2612 citations. 334 studies were retained and abstracted to document how each identified those who are hardly reached.

Characteristics used to define hardly reached groups were sorted into three classes. The class of Individual characteristics included psychological and/or cognitive characteristics, occupation, sexual orientation, substance use, transiency, incarceration history, and disability. Demographic characteristics included SES, age, and sex. Cultural/Environmental characteristics included: ethnicity, geography, social network, infrastructure, discrimination, and small sized populations. Of the 334 studies, 78.74% utilized Cultural/Environmental characteristics, 74.85% used Individual characteristics, and 50% employed Demographic characteristics to define those hardly reached. (Percentages exceed 100% because papers could be included in several classes.) Of all possible combinations of the three classes, the most common (28.74%) was the use of characteristics from all three classes to identify those who are hardly reached. Overall, papers were more likely to use two or more classes to identify the hardly reached (74.85%) compared to using only one class (25.15%) (χ², p<0.0001).

No single characteristic or class of characteristics is used to define those who are hardly reached. This reflects a socioecological perspective, emphasizing that both intrapersonal and external elements may cause interventions to fail to reach those intended. Clearly, being hardly reached does not reflect a condition of individuals themselves. Rather, individuals are hardly reached because of environmental and social as well as individual characteristics, and, most important, the interventions that fail to reach them.

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B092d
LET’S GO! 5-2-1-0 CHILDHOOD WELLNESS GUIDELINES AND ORAL HEALTH OUTCOMES IN UNINSURED CHILDREN
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Background: Let’s Go! 5-2-1-0 has been proven to be an effective multi-setting childhood obesity prevention program that integrates healthy eating, screen time, physical activity, and sugary drink intake guidelines. To date, no research has established an association between 5-2-1-0 and children’s oral health.

Methods: Data were collected from interviews with parents of children treated at an annual free oral health event and from dental charts. Oral health needs were assessed by dental professionals the day of the event.

Results: Only 2 (1.5%) of 135 kids met the 5-2-1-0 guidelines. Within the individual components of the 5-2-1-0 metric: 25.6% of those who ate ≥5 servings per day; those who sat for ≥2 hours/day in front of an entertainment device were more likely to need restorative dental service than those who sat for <2 hours/day (28% vs 10%, p=0.02); 41.7% of those who had >1 hour of physical activity/day; 23.1% of kids who drank at least one sugary drink per day needed restorative services, compared to 0% of kids who consumed no sugary drinks per day; and 22.6% of kids who met some but not all 5-2-1-0 guidelines needed restorative services, compared to 0% of kids who met all of the 5-2-1-0 guidelines. However, other than screen time, none of the other components reached statistical significance due to sample size.

Discussion: Despite the lack of any direct oral health components in the 5-2-1-0 guidelines beyond sugary drinks, there is a consistent pattern of better oral health outcomes associated with each of the components, as measured by a need for restorative dental work. General healthy behaviors included in the 5-2-1-0 guidelines, such as healthy eating and being physically active, were also related to a reduced need for restorative dental services.

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B092e
PEER SUPPORT FOR THOSE TOO OFTEN HARDLY REACHED
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Failure of prevention and treatment programs to reach those they are intended to help contributes to avoidable health burdens and costs. Peer support (PS) may be an effective means to engage those who too frequently are hardly reached.

Provided by nonprofessionals, PS often includes assistance with daily management or preventive practices, emotional and social support, linkage to clinical care and community resources, and ongoing support. Advantages of PS include time to interact and explain health services as well as similarity to and understanding of the perspectives of those they serve, which increase
credibility. We examined three different literatures regarding PS effectiveness in hardly reached populations.

From a systematic review examining research on those who are hardly reached, we identified 5 papers reporting PS effects. Audiences were identified as hardly reached based on homelessness, ethnicity, SES, rural locale, and difficulties navigating health care. Health problems included type 2 diabetes, cancer, weight, safety, and parenting. All 5 papers reported significant PS benefits on primary outcomes, 3 through RCT or other controlled comparisons, and 2 through within-group comparisons.

From a systematic review of PS interventions, a subset of 37 articles addressed hardly reached groups, including low income groups, ethnic minorities, populations from low-income countries, individuals with stigmatized problems like HIV/AIDS or drug use. PS addressed maternal and child health (10 papers), mental health (7), type 2 diabetes (5), cardiovascular disease (5), HIV/AIDS (5), other chronic diseases (4), and drug/alcohol use (1). Of these 37, 64.9% reported significant between group differences attributable to PS, and 24.3% reported significant within group changes.

Finally, a number of papers have reported that advantages of PS relative to control conditions are actually heightened among individuals disadvantaged in terms of depression, poor clinical status, low self management, low medication adherence, or low health literacy.

Across these three literatures, and across varied health problems and characteristics identifying groups as “hardly reached,” PS appears especially effective among those whom conventional preventive and clinical services often fail to reach.

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B092f
TEACHABLE MOMENTS AND COLLEGE STUDENTS: DOES POSITIVE AFFECT PROMOTE OPENNESS TO MAKING HEALTH BEHAVIOR CHANGE?
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Introduction. A teachable moment (TM) has been viewed as a time when people are more open to health behavior change (HBC) due to cognitive and affective changes associated with a health event. Most research on TMs has examined negative reactions associated with TMs (fear, greater perceived risk). Little research has assessed whether TMs can be “created” or enhanced by use of positive health experiences. This study examined whether a brief positive health experience (a) could impact mood and affect positively; (b) could be a TM as indicated by impact on efficacy associated with HBC and HBC intentions (exercised and nutritious diet); (c) could elucidate how positive affect (PA) is related to how people make decisions about HBC (intentions). Methods: College students (n=154, mean age 21 yrs, 85% Caucasian) viewed a brief health information video (~8 minutes) tailored to college students and were randomized to one of two writing activities (~10 minutes). The control group wrote

more generally about desired HBC vs. the experimental group who wrote about personal strengths and how these strengths could be integrated with HBC goals. All subjects completed a baseline and follow-up assessment immediately after the writing activity. Results: To examine changes in PA, mood, and HBC efficacy and intentions, repeated measures ANOVA were conducted. Results indicated significant increases in mood (p<.05) across both groups; PA (p<.05) increased only in the experimental group. HBC self-efficacy associated with exercise (p<.01), HBC self-efficacy associated with eating a nutritious diet (p<.01), and intentions to exercise (p<.001) and eat a nutritious diet (p<.001) also increased across groups. Correlation analyses indicated PA was positively associated with intentions to exercise and eat a nutritious diet (p’s<.001). Discussion: In contrast to research showing the potential for a TM after a negative health event, this study illustrates a TM might occur after exposure to a brief, positive health experience. Most notably, PA increased in individuals asked to consider and write about their positive attributes vis a vis HBC goals, with PA related to greater intentions to engage in HBC. Research should examine whether brief health experiences could be designed to enhance PA and HBC efficacy, thus serving as a TM to foster HBC in the longer term.

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B092g
SCHOOL-BASED MINDFULNESS TRAINING TO PROMOTE HEALTHY DIET AND PHYSICAL ACTIVITY AMONG ADOLESCENTS: DESIGN AND METHODS.
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Introduction. Cardiovascular prevention is more effective if started early in life, but available interventions to promote healthy lifestyle habits among youth have been ineffective. Impulsivity in particular has proven to be an important barrier to the adoption of healthy behaviors in youth. Observational evidence suggests that mindfulness interventions may reduce impulsivity and improve diet and physical activity. We hypothesize that mindfulness training in adjunct to traditional health education will improve dietary habits and physical activity among teenagers by reducing impulsive behavior and improving planning skills.

Methods. This a pilot cluster randomized controlled trial examining the feasibility, acceptability and preliminary efficacy of school-based mindfulness training in adjunct to traditional health education on the promotion of a healthy diet and physical activity among adolescents. Two schools in central Massachusetts (40 students per school) will be randomized to mindfulness training plus standard health education (HE-M) or an attention-control plus standard health education (HE-AC). Students in both conditions will receive the same dose and content of health education (one 45-minute session each week for 8 weeks). Students in the HE-M condition will receive one session of mindfulness training per week for 8 weeks. Those in
the HE-AC condition will receive one “attention control” session for 8 weeks, with no active component delivered.

Assessments will be conducted at baseline, intervention completion (2 months), and 8 months. Primary outcomes are feasibility and acceptability. Secondary outcomes will include physical activity (Accelerometry and Physical Activity Recalls), diet (24-hour dietary recalls), mood, body mass index, and quality of life. Posited mediators (mindfulness and impulsivity) will be measured using the Mindful Attention Awareness Scale and the Barratt Impulsivity Scale, respectively.

Conclusions. This study will provide important information about feasibility and preliminary estimates of efficacy of a school-delivered mindfulness and health education intervention to promote healthy dietary and physical activity behaviors among adolescents. Our findings will provide important insights about the possible mechanisms by which mindfulness training may contribute to behavioral change and inform future research in this important area.

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B092g

APPLYING THE IIFF MODEL TO THE EXPRESSION OF DONATION INTENTIONS AMONG AFRICAN AMERICANS

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African Americans (AAs) are overrepresented on the organ transplant waiting list and disproportionately impacted by certain health conditions that potentially warrant a transplant. While there are a great number of AAs in need of transplantation, organ donation rates within this population are considerably low. Low registration rates are likely due to attitudinal ambivalence and low vested interest in organ donation. The **IIFF model** describes the factors that may increase interest in serving as an organ donor. It suggests that an **Immediate** and complete registration opportunity, **Information**, **Focused engagement**, and **Favorable activation** are the four factors that heavily influence interest in registering as an organ donor. This study explores the relationship among these three of these factors and the expression of written and verbal donation intentions. Self-administered questionnaires were completed by 425 AA adults residing in the Atlanta metropolitan area, including measures assessing **Information** (donation related knowledge), **Focused engagement** (beliefs/attitudes), **Favorable activation** (personal experiences with donation/transplantation), as well as written-license, written-donor card and verbal donation intentions. Logistic regression results indicate that **Information** was only negatively related to written-donor card expression of donation intentions (OR=0.83, p<.05); **Focused engagement** was positively associated with verbal (OR=1.13, p<.001) and written-donor card expression (OR=1.12, p<.01); and **Favorable activation** was positively associated with verbal expression (OR=4.10, p<.001) and written-donor card expression (OR=2.44, p<.05). These differential findings suggest that the **IIFF model** factors may not relate to verbal and written expressions of donation intentions in the same manner. Beliefs and attitudes are important in the donation decision making process, but having personal experiences with donation/transplantation is primary. While attitudes may lead one to engage in further discussion, past experience may be more important for the greater commitment of documenting donation intention. Findings have important implications for the development of effective interventions to increase public commitment to organ and tissue donation among AAs.

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B092h

SPIRITUALITY AND TREATMENT BURDEN ARE RELATED TO TREATMENT ACTIVITY IN ADULTS WITH CYSTIC FIBROSIS

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Background: Adults in the United States with cystic fibrosis (CF) are prescribed a time-consuming daily regimen of preventive airway clearance. The goal of the current study was to evaluate the relationships of spirituality and perceived treatment burden to self-reported airway clearance treatment activity (ACTA), after accounting for illness severity.

Methods: Participants (N = 130) were a subset of individuals from the Project on Adult Care in Cystic Fibrosis (PAC-CF) (Mean age=33.38, SD=10.05, range=19-63 years old). As part of the larger study, participants completed the treatment burden subscale from the CF Questionnaire - Revised (CFQ-R) and the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being scale (FACT-Sp). Self-reported treatment activity was operationalized as the number of airway clearance treatment episodes completed the prior day (range = 0 to 4 or more). Ordinal regressions were used to estimate the associations of treatment burden and spirituality (both faith and meaning/peace subscales) with treatment activity. Demographic and clinical covariates included age, gender, education, weight percentile, number of pulmonary exacerbations (hospitalizations or home IV treatment), forced expiratory volume in 1 second (FEV1), diabetes, colonization with *Staphylococcus aureus* and/or *Pseudomonas cepacia*, and pancreatic sufficiency.

Results: A greater number of recent exacerbations, but not a poorer FEV1, was associated with greater ACTA (ps<.018). Higher perceived treatment burden was associated with more treatment activity (ps<.027). While self-reported faith was related to more frequent ACTA (p=.024), self-reported meaning/peace did not significantly predict ACTA. No interactions between predictors were statistically significant.

Conclusions: Faith and perceived treatment burden may be important factors in successful completion of recommended airway clearance treatment for adults with CF, beyond severity of illness and demographic characteristics. Interventions that focus on reducing treatment burden and strengthening faith by emphasizing religious and spiritual beliefs in relation to illness...
may be important efforts to improve treatment activity in adults with CF, and consequently quality of life.

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B114a

AVAILABILITY AND QUALITY OF PHYSICAL ACTIVITY FACILITIES, PARKS, AND OTHER SETTINGS IN THE US AFFILIATED PACIFIC: CHL PROJECT

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PURPOSE: To assess the physical activity (PA) environment in US affiliated Pacific regions.

METHODS: Modified Physical activity (PA) Facility Observation Form, Park Observation Form, and School Observation Form from the Bridge the Gap Community Obesity Measures Project (BTG-OMP) were used to assess PA environments in 16 low-income communities from 4 jurisdictions of the CHL Project (Alaska, Commonwealth of the Northern Mariana Islands, Guam, & Hawaii).

RESULTS: 60 PA facilities were assessed (20 community recreation centers, 33 for-profit PA facilities, and 7 others [e.g., Boys and Girls Club, YMCA/YWCA, etc.]). The most frequent PA indoor facilities were multipurpose room (n=33), exercise machine (28), basketball court (12), pool (12), and multi-purpose court (10). Among the 47 facilities with indoor features’ conditions assessed, all were rated as OK/Good. The most frequent outdoor features were multi-use field (8), soccer field (4), playground (4), multi-use court (2) and tennis court (2). 9 rated all outdoor features as OK/Good.

Parks: Ninety-six parks were assessed of which 91 were public parks. The most frequent PA features in parks were playground (68), basketball court (64), multi-use field (55), soccer field (24), and baseball field (21). Eighty schools rated all their sports features as OK/Good.

CONCLUSION: The PA environment in Pacific communities provides various opportunities. These environments should be promoted in efforts to promote PA and health.

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B114b

DYNAMICAL HEALTH COMMUNICATIONS FOR THE TWENTY-FIRST CENTURY

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BACKGROUND: Messaging interventions, tailored to baseline demographic (age, gender) and/or psychosocial (habits, expectations) variables, have proven effective for health behavior change. However, relatively little research exists on tailoring messages to dynamic contextual variables.

Just-in-time adaptive interventions (JITAs) aim to improve user response by adapting messages to patient context and behavior in real-time. Within this framework, contextually-appropriate messages can lower barriers to patient buy-in of treatment and following through on suggested actions.

OBJECTIVE: We created a library of health messages for a mobile application, HeartSteps, designed to reduce sedentary behavior in office workers. HeartSteps uses passive assessments of context to deliver tailored messages that encourage users to be physically active in their immediate context.

RESULTS: We tailored messages on four contextual variables collected passively by phone: location, time of day, weekday or weekend, and weather. Rather than a generic “Why don’t you go for a walk?” message, which could be received during a blizzard, passive data would inform the selection of an appropriately tailored suggestion. If passive data indicated context as “work lunch outdoor weekday,” the message might be, “It’s lunchtime and the weather is beautiful. Could you take a 10 minute walk around your office building?”

To expedite message generation and curation, we crowdsourced message creation through Amazon’s Mechanical Turk. MTurk provides a workforce to perform small, repeatable tasks. We used a two-step process: 1. We provided a specific context (e.g., “John is about to ride the bus home from work; it’s nice outside.”) and tasked MTurkers to write actionable suggestions (e.g., “outside.”) and tasked MTurkers to write actionable suggestions for increasing immediate physical activity; 2. Other users rated these messages (scale 1-5); messages averaging a score of 3.5 or higher were added to our library following editing and tagging for context by our research team.

MTurk enabled creation of a library of 500 diverse, tailored messages in short time. A 12 week HeartSteps pilot study in 2015 will examine the efficacy of these tailored messages. Future work envisions a more fully specified MTurk pipeline that creates and constantly restocks message libraries intended for adaptive message delivery with minimal researcher oversight.

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B114c
EVALUATION OF A PHYSICAL ACTIVITY WORKPLACE POLICY INTERVENTION
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Objectives: One in five adults meet the physical activity (PA) guidelines and with 140 million adults spending more than half of their waking hours in the workplace occupying predominantly sedentary jobs, it is an important environment for implementing PA interventions. Although workplace PA interventions are modestly effective, to date, no tests of workplace PA policies in the form of a written, corporate framework of reference document exist. Therefore, the purpose of this study was to use the RE-AIM framework to evaluate the impact of a written workplace PA policy.

Methods: Participants were 65 employees between the ages of 23 and 64 (M = 44.9, SD = 11.4) from one company who were assigned to an intervention (n = 46; headquarters office) or control group (n = 19; satellite offices). The intervention group received a written policy that gave employees 30 minutes, in addition to lunch, to utilize walking routes. For 10 weeks, participants wore pedometers and completed the IPAQ at pre-intervention (T1), week 5 (T2), and post-intervention (T3).

Results: Only 18.3% of the employee population participated in the intervention, and the sample was overrepresented by females and non-Whites (reach). A 2 (group) x 3 (time) MANCOVA (covariate = baseline steps) revealed a significant main effect for time, Wilks’ Ψ = .5, F(6, 57) = 9.6, p < .001. Steps and total PA (MET min/week) significantly increased from T1 (M = 4785.9) to T2 (M = 25501.4), T2 (M = 25501.4) to T3 (M = 27651.0), and T1 (M = 4785.9) to T3 (M = 27651.0), and from T1 (M = 1744.2) to T2 (M = 2572.2) and T1 (M = 1744.2) to T3 (M = 2748.7), respectively (effectiveness). Only 14.3% of the companies approached adopted the intervention, but there were no significant differences on company characteristics between the participating company and the ones that declined (adoption). The company’s Health Promotion manager delivered the intervention as designed (fidelity rate = 89.0%; implementation). Conclusion: These results extend the literature because few workplace PA interventions provide information about reach, adoption, and implementation. Although the assessment of maintenance is imperative and continued work to identify strategies to improve reach and adoption is needed, these findings can inform the translation of a written workplace PA policy to other real word companies.

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B114e
INFLUENCES OF SOCIAL AND ENVIRONMENTAL SUPPORTS ON MODERATE-TO-VIGOROUS PHYSICAL ACTIVITY IN HISPANIC ADOLESCENT FEMALES
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Over the past three decades, adolescent obesity in the United States has reached epidemic proportions, with significant disparities noted in minority populations. Rates for Hispanic adolescents (ages 12 to 19) have risen to 15.5%, while overall population rates are 13%. Regular physical activity and exercise have been shown to have long term health benefits; yet more than 21% of Hispanic adolescent females do not meet the targeted recommendation for physical activity. Hispanic females demonstrate significant declines in moderate- to vigorous physical activity (MVPA) from ninth through twelfth grade, and account for one of the largest at risk groups for adult obesity.

Methods: This study, guided by Stokols’ Social Ecological Model for Health Promotion, utilized data from the National Survey of Children’s Health (2011/12) designed to examine social and physical/community level factors related to MVPA in (n = 1830) early and mid-adolescent Hispanic females. Logistic regression was used to estimate associations for factors with MVPA.
Results: Significant predictors in early adolescence included household generation OR 2.02 (95% CI, 1.10-3.71), parental attendance of activities OR .419 (95% CI, 286-685), and peer support OR 3.71 (95% CI, 2.33-5.91). Significant mid-adolescent predictors were English speaking OR 1.64 (95% CI, 1.03-2.61), parental attendance of activities OR .50 (95% CI, .31-.81), peer support OR 2.74 (95% CI, 1.75-4.29), supportive neighborhood OR 1.52 (95% CI, 1.03-2.32) and safe school environment OR 1.67 (95% CI, 1.01-2.74).

Conclusions: Findings from this study highlight the need for the development of age and culturally appropriate interventions to increase participation in MVPA among the Latina adolescent population and suggest recommendations for policy and future research.

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**B114f** INFLUENCING SOCIAL COGNITIVE CONSTRUCTS VIA SOCIAL MEDIA: CHANGES AND ASSOCIATIONS WITH PHYSICAL ACTIVITY
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Emerging evidence suggests that interventions delivered via social media may be effective at promoting health behaviors. However, there have been few theoretical attempts to inform the design, dissemination, and evaluation of such programs. The objectives of this study were to: 1) assess changes in social cognitive constructs (i.e., self-efficacy; physical, social, and self-evaluative outcome expectations; goals; and barriers) as a result of participating in an 8-week, social media-delivered lifestyle physical activity program; and 2) examine their association with changes in physical activity among a sample of low-active adolescents (N=21; M=13.48 years). Participants were randomized into a social cognitive-based condition (i.e., Behavioral group), which received weekly behavioral modules via YouTube, or an attentional control condition (i.e., Informational group). All participants were given access to a study-specific Facebook group where youth-based physical activity-related content was shared. Behavioral and psychosocial assessments occurred at baseline and follow-up. Effect sizes were calculated within groups to determine differential treatment effects on study outcomes. Correlational analyses were then performed to examine associations with changes in physical activity. Effects in the Behavioral group were consistently larger, and in the hypothesized direction, compared to those in the Informational group. The Behavioral group experienced large changes in social and self-evaluative outcome expectations (d=1.03 and .90, respectively), moderate changes in self-efficacy (d=.53), physical outcome expectations (d=.41), and goals (d=.49), and a small decrease in barriers (d=.18). Furthermore, improved self-efficacy and decreases in perceived barriers were significantly associated with positive changes in physical activity (r=.80 and -.70, respectively; p<.05). Preliminary evidence suggests that interventions delivered via social media may have a positive effect on health-related behaviors via the manipulation of theoretical constructs associated with behavior change. Further research is warranted to establish the efficacy of this promising mode of program delivery.

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**B114g** MEASUREMENT OF COMMUNAL COPING BELIEFS FOR HEALTHY LIFESTYLE AND PHYSICAL ACTIVITY AMONG NEWLY MARRIED PERSONS
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Previous work with couples has shown that when one’s romantic partner considers their chronic heart disease (Rohrbaugh et al., 2008) or their nicotine addiction (Rohrbaugh et al., 2012) as a shared problem, the person benefits. This phenomenon, labeled communal coping, has been measured through the use of first person plural pronouns (we-talk) used by the partner when describing the health problem. Among dual-smoker couples, self-reported items of communal coping were shown to reflect both communal appraisal (“this is our problem”) and communal behavior (“we can work together”) components (Grinberg et al., 2012). The current study assessed self-reported communal coping (8 items ranging from 1-7) for living a healthy lifestyle and for engaging in physical activity within newly married individuals. Participants (N=87) ranged from 21 to 57 in age and 72% were women. Support was found for a similar structure underlying items as has been previously shown. Specifically, two subscales were formed: communal appraisal, viewing health goals as a shared responsibility, for healthy lifestyle (α=.69) and physical activity (α=.75) as well as communal behavior, the ability to help each other, for healthy lifestyle (α=.83) and physical activity (α=.84). Communal appraisal and behavior were not significantly correlated for healthy lifestyle or physical activity (r=.03 and .16, respectively). Further, none of the four scales were related to age or gender. Relationship satisfaction (10-item scale, α=.91; Rusbult, Martz, & Agnew, 1998) was associated with communal behavior for both a healthy lifestyle and physical activity (r=.43, .35, ps<.01, respectively) but not with either measure of communal appraisal. Participants reported greater communal appraisal beliefs for healthy lifestyle (M=4.1, SD=1.1) than for physical activity (M=3.7, SD=.97, t(79)=3.78, p<.001). No significant difference was found between communal behavior beliefs for a healthy lifestyle (M=5.6, SD=.95) and being physically active (M=5.5, SD=1.1, t(79)=1.79, ns). We believe this communal coping construct shows promise as a key mediator of couples-based health promotion interventions. This work informs the measurement of the construct and suggests the two components are distinct from one another and from general relationship satisfaction.

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B114h
MOBILE IMAGING, SENSING AND TRACKING ETHICS: THE PARTICIPANT’S PERSPECTIVE
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Introduction: Behavioral scientists use technology to study how the built environment impacts health behaviors by having research participants wear technologies that image, sense and track daily behavior, activity and location. A Global Positioning Systems (GPS) device combined with an activity monitor provides an objective measure of where a person is most active. With a wearable camera, researchers can see the participant’s environment. While these technologies present new methods for understanding behavior in context, they also introduce new ethical and regulatory challenges that must be examined to ensure the responsible conduct of research.

Objective – Our aim was to solicit participants’ first hand experiences using these technologies with a secondary aim to determine the validity of the Kelly et al. (2013) framework for ethical use of automated wearable cameras in health behavior research.

Methods: We surveyed 48 participants upon completion of a study in which they wore an outwardly facing camera worn on a lanyard, a GPS device, and two activity monitors. Participants responded to questions about device acceptability, the informed consent process, and effectiveness of privacy practices. Qualitative responses to open-ended prompts were coded to identify salient themes and frequencies were tabulated for forced-choice responses.

Results: A majority of participants reported a positive experience and would recommend the study to others. Our queries to gauge acceptability of practices to enhance informed consent, privacy and confidentiality and respect for others (e.g. bystanders) were endorsed as appropriate. Participants generally believed the informed consent was comprehensive with few recommended changes. Practices to protect privacy including encryption, instructions of when not to image and the privacy button were effective. The script developed to facilitate participant explanation of the study to bystanders was reported by most as unnecessary. The most negative responses were associated with the devices interfering with activities.

Conclusions: Gathering participant experience is a first step in developing evidence-based guidelines for the ethical and responsible conduct of research involving pervasive computing technologies. Results confirm support for the Kelly et al. (2013) ethical framework and should be used by ethics boards in the future.

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B114i
MULTILEVEL CORRELATES OF PHYSICAL ACTIVITY AMONG A CLINICAL SAMPLE OF UNITED STATES VETERANS
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Purpose: Veterans, especially those using Department of Veterans Affairs (VA) care, face disproportionate disease burden, including overweight/obesity and related conditions. It is therefore concerning that VA users are more likely than non-VA users to be physically inactive, given activity’s role in addressing cardio-metabolic health. To identify targets for health promotion interventions, understanding barriers and facilitators to physical activity is critical.

Design: Guided by the Ecological Model, this study examined individual-, social-, and perceived neighborhood-level associations of meeting weekly physical activity recommendations (150 minutes/week of combined leisure and transportation activity) based on the International Physical Activity Questionnaire (IPAQ) among N=635 patients from a major VA medical center using a mailed survey (response rate=40%). Independent associations (p<.05) were identified using multivariate logistic regression analysis.

Results: The majority of participants were male, Caucasian, and unemployed, and had at least some college education, and an annual income ≤ $40,000. Over two-thirds (69.9%) reported meeting physical activity recommendations. In adjusted analyses, fewer days of limitations due to physical or mental health (Odds Ratio (OR)=0.97; 95% Confidence Interval (CI)=0.95, 0.99; p=.009), others doing physical activity with the Veteran (OR=2.63; 95% CI=1.24, 5.60; p=.013), receiving ideas from others regarding physical activity (OR=1.94; 95% CI=1.07,3.52; p=.028) and better perceived neighborhood aesthetics (OR=1.60; 95% CI=1.20,2.13; p=.002) were significantly and independently associated with greater likelihood of meeting physical activity recommendations.

Conclusion: This study identifies multilevel correlates of physical activity among VA-using Veterans. Targeting these factors will be important in promoting physical activity in order to address the disproportionate disease burden facing U.S. Veterans. Existing interventions may need to be tailored to account for the influence of contextual factors.

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B114j
PARTICIPANT CHARACTERISTICS AND OUTCOMES IN A WELLNESS PROGRAM DESIGNED TO IMPROVE EXERCISE RATES
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Physical inactivity is a sizeable and costly issue, affecting more than half of American adults. Therefore, the examination of factors and interventions promoting engagement in regular exercise is an important avenue for research. This investigation examined participant characteristics as well as outcomes for an organizational wellness program called Couch to 5K. Participants were 373 faculty and staff members at The University of Alabama who participated in this program designed to train minimally active (yet generally healthy) adults to run or walk a 5 Kilometer event. Participants completed questionnaires assessing exercise rates and related variables at the beginning and conclusion of the nine-week program. Sixty-four percent of the participants were overweight or obese yet their mean self-rating for overall physical health was descriptively classified as “good.” Participants endorsed minimal depression and the average number of waking hours that participants engaged in sitting behavior was in the range of 6 to 9 hours over a one-day period. As anticipated, the exercise rates of participants increased significantly over the course of the program, t (200) = -9.20, p < .001. Sleep difficulties, t (156) = 4.18, p < .001, declined from pretest to posttest. Surprisingly, there was also a slight decline for self-reported work productivity, t (156) = 2.78, p < .01. Regression analyses were run to determine predictors of exercise rates. Of these, intent to complete the 5K event, as assessed at three times throughout the program, was the strongest predictor of exercise rates at the conclusion, F (5, 159) = 6.31, p < .001. Body Mass Index predicted a small percentage of variance at the start of the program but no longer held predictive power at its conclusion. Contrary to hypotheses, there were no significant differences in exercise rates between men and women at either the beginning, t (294) = -.014, or end of the program, t (203) = -.68. A comparison of demographic and health-related variables distinguishing ‘event completers’ from those who did not complete the 5K will also be included in the poster. Overall, this investigation highlights the participant composition of a university-based wellness program, including health characteristics, and illustrates several significant changes that occurred for those enrolled.

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B114k
PEER ENGAGEMENT FOR PHYSICAL ACTIVITY IN RETIREMENT COMMUNITIES: IMPACT OF PEER LEADERS IN THE MIPARC STUDY
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Older adult volunteers are highly skilled, experienced, yet often underutilized resources to promote and support physical activity at the individual, social, and neighborhood level. This study examined the engagement of older adults as peer leaders to promote physical activity in continuing care retirement communities (CCRCs) in conjunction with a multi-level intervention (the MIPARC Study). Of the 11 CCRCs recruited, 4 were randomized to the multi-level intervention. A total of 19 peer leaders within the 4 sites (ranging from 3 to 7 peer leaders per site) were recruited and went through intensive training to become peer leaders and community advocates for physical activity promotion. The peer leaders’ average age was 81 years (range 73-94), and the majority were female and unmarried. The ratio of peer leader to community resident involved in the project was approximately 1:8. Over the course of the 12-month study, the peers led an average of 20 events at their sites (i.e., group walks, active outings and excursions), and engaged their CCRCs in 8 community-improvement projects, five of which were seen to successful completion. Successfully completed projects included addition of extra time and visual countdowns to crosswalks near the CCRCs, and removal of trash and vegetation that impeded neighborhood walkways. Ongoing, uncompleted projects were long-term efforts requiring multiple stakeholders (e.g., advocacy for new walking paths and greater connectivity into new and existing building plans at the CCRCs). Participants gave high ratings to the peer leaders and their events across the length of the project, averaging scores of 4+ on a 1-5 point scale. The project attracted highly engaged residents as peer leaders, as they demonstrated high baseline levels of social connectedness, perceived social and team cohesion, social support, and physical activity, and did not show meaningful increases over time (ps>.05). The results of this study demonstrate the high value, contributions and impact that peer leaders can bring to a community, and the types of physical activity-enhancing efforts they can successfully execute. Older adult peers have great potential as a sustainable resource for enhancing and supporting physical activity promotion.

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B114l
PRELIMINARY RESULTS OF A TECHNOLOGY-ASSISTED INTERVENTION TO PROMOTE WALKING AMONG INDIVIDUALS WITH CHRONIC PAIN
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Walking is a safe and easily adopted form of physical activity that has been shown to improve function among people with chronic pain. We describe preliminary results of a pedometer-measured, progressive walking program delivered as part of a randomized non-inferiority trial of interactive voice–response–based cognitive behavioral therapy (IVR-CBT) versus in-person CBT for patients with chronic low back pain. In the IVR-CBT condition, participants were asked to use a self-help manual and received weekly, personalized pre-recorded therapist feedback based on daily IVR-reported symptoms and behaviors. In the in-person CBT condition, participants were asked to meet with a therapist weekly for 30 minutes. Both treatments lasted 10 weeks. Beginning in the third week, participants in both conditions were given a goal of increasing their average daily step count by 10% over the prior week’s average. All participants reported their pedometer-measured step counts and information about CBT skill practice via daily automated IVR telephone calls for 11 weeks, beginning one week prior to treatment. We used mixed effect regression for repeated measures to analyze the change from baseline in the average steps per day each week (adjusted for baseline). We analyzed data for 60 participants (mean age: 56, SD: 11), 65% were Caucasian, and 15% were female. In the week prior to treatment, participants were sedentary (mean of 3631 steps, SD: 2098). There was no significant difference in steps per day between the two conditions at any time after baseline, but there was a significant increase from baseline in both groups. At week 1 the overall least square-mean change from baseline in average steps per day was +412 (95% CI -14 to 839), at week 3 +1279 (675 to 1882), and at week 10 (end of treatment) the mean change was +2294 (1433 to 3156). These preliminary findings suggest that IVR-delivered CBT may result in improvements in physical activity that are similar to those in standard 1-1, face-to-face sessions with a trained therapist. Participants in the IVR-CBT condition achieved these results with minimal therapist contact and reduced travel burden relative to in-person CBT.

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B114m
THE EFFECT OF IMPLICIT AND EXPLICIT ATTITUDES ON PHYSICAL ACTIVITY: UNDERSTANDING FAILURES TO EXERCISE
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Background: Impulsive decisions not to exercise may be a critical factor impeding regular exercise among those attempting to initiate regular physical activity behavior. When people are faced with an exercise decision (e.g. “Go back to sleep, or go exercise?”) both automatic and deliberative processes may influence decision-making (Hofmann, Friese, & Wiers, 2008). However, to date, the relative influence of automatic and deliberative processes on impulsive decisions not to exercise is unknown. In this study, we examined the effects of implicit attitudes (automatic processing factor) and explicit attitudes (deliberative processing factor) to determine their relative influence on failures to engage in previously planned exercise.

Method: Participants (n=84), physically inactive community members, completed a 5-week exercise study using either heart rate or afffective response to exercise to guide intensity. At a baseline session, participants completed the Single Category Implicit Association Test (SCIAT; Conroy et al., 2010) to measure implicit attitudes toward exercise. Explicit attitudes were measured with a self-report measure that asked participants to detail how they felt about exercise (e.g. “bad vs. good”). During the subsequent week, participants reported on daily exercise behavior. Days that participants reported no exercise, but noted that exercise was intended, were counted as missed workouts.

We used logistic and Poisson regression models to test implicit and explicit attitudes as concurrent predictors of the occurrence and count of missed workouts.

Results: When entered in to the model simultaneously, explicit attitudes were significant predictors of the number of missed workouts ($\beta = -.270, SE = .104, p = .01$), and implicit attitudes were not ($\beta = -.082, SE = .116, p = .484$). Neither implicit nor explicit attitudes were associated with the occurrence of missed workouts ($p > .05$).

Implications: Decisions not to engage in intended physical activity may be influenced by both automatic and deliberative processes, but more strongly by deliberative processes. Further development and application of dual-process models of decision-making is warranted to understand the potential interactions of automatic and deliberative processes in understanding decisions not to engage in exercise.

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B114n
UNDERSTANDING THE FACTORS THAT INFLUENCE INDOOR TANNING AMONG PHYSICALLY ACTIVE AND INACTIVE ADULTS
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Physically active adults report higher rates of skin cancer and skin abnormalities than inactive adults. Indoor tanning is as-
associated with greater skin cancer risk in the general population. Thus, indoor tanning may play a role in increased rates of skin cancer and skin abnormalities in a physically active population. This study examines whether the relationship between physical activity and indoor tanning use is influenced by perceived skin cancer risk, body image importance, tanning dependence and tanning importance.

Participants (n=278, M Age=33.5, 53.6% female) completed the Beliefs About Appearance Scale and modified CAGE scale to assess tanning dependence, and rated tanning importance and perceived skin cancer risk using a 1 to 10 scale. Average weekly physical activity was measured with the European Prospective Investigation into Cancer Physical Activity Questionnaire-2 (EPIC). Participants were categorized as active and inactive. Participants reported tanning bed use in the last 12 months and were categorized as individuals who used indoor tanning at least once in the past 12 months and those who did not. Mediation analyses were conducted to examine whether an individual's perceived skin cancer risk, body image importance, tanning dependence or tanning importance influences the relationship between physical activity and indoor tanning use. The PROCESS macro was used to test the significance of indirect effects using bootstrapping procedures.

Perceived skin cancer risk influenced the relationship between physical activity and indoor tanning use, such that physically active individuals reported higher rates of perceived skin cancer risk, which influences indoor tanning use (bootstrapped unstandardized indirect effect for perceived skin cancer risk=0.089 (95% CI [0.05, 0.40]). Body image importance, tanning dependence and tanning importance did not significantly influence the relationship between physical activity and indoor tanning use. Physically active individuals report higher rates of perceived skin cancer, which is associated with greater indoor tanning use. This suggests that physically active individuals understand the dangers of indoor tanning. Future research should examine alternate intervention approaches, such as potential substitutes for indoor tanning use.

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B114o
VALIDITY AND RELIABILITY OF THE GODIN LEISURE-TIME EXERCISE SELF-REPORTED QUESTIONNAIRE
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The Godin Leisure-Time Exercise Questionnaire assesses self-reported physical activity (PA) among adults, and was later modified for use with children. However, the modified version (Godin-Child Questionnaire) has yet to be validated among adolescents. This study evaluates the construct validity and test-retest reliability of the Godin-Child Questionnaire among adolescents.

Participants. Sixth grade students (age M = 11.06 (SD=0.436); 49.5% males, 48.6% Hispanic/Latino) at 3 time points (fall: N=109; spring: N =109; and long-term-follow-up: N =64).

Procedures. First, the study determined whether adolescents accurately reported exercise intensity based on adolescents’ ratings of perceived exertion (RPE) during moderate- and hard-intensity exercise tasks. Second, objective assessments of PA (obtained with the Actigraph® accelerometer) were correlated with PA self-reported on the Godin-Child Questionnaire. Third, interviews explored participants’ interpretations of the questions on the Godin-Child Questionnaire. Finally, test-retest correlations evaluated the Godin-Child Questionnaire for its reliability over time.

Results. RPEs suggested that on average, adolescents accurately perceived exercise intensity. There was a weak correlation between the Godin-Child Questionnaire and the Actigraph® during the fall (r=.20, p < .05) and spring (r=.23, p < .05). Interviews revealed that some respondents did not follow the written directions. Intra-class correlation coefficients (ICCs) indicated that the Godin-Child Questionnaire showed good stability over time at the individual level (ICCs [single measure] ranged from .44-.48) and better stability over time at the group level (ICCs [average measure] ranged from .61-.73).

Conclusion/ Implications: The Godin-Child Questionnaire may be a useful evaluative measure of self-reported physical activity for comparing activity levels across groups of adolescents, but is less accurate for comparing physical activity on an individual level.

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common among those doing no activity (15.8%) than among those who walked (11.2%), gardened (9.2%), biked (7.6%), ran (6.9%), golfed (5.1%) or played tennis (4.7%). After adjusting for covariates, the following activities were associated with a lower risk of FMD when compared to walking alone: running (RR=0.87, 0.78-0.96), biking for pleasure (RR=0.87, 0.79-0.97), golf (RR=0.68, 0.60-0.77) and tennis (RR=0.70; 0.55-0.89), but FMD was no less likely among those who gardened (RR= 0.94; 0.88-1.0).

CONCLUSIONS: The results suggest that social activities, even of lower intensity, are associated with less mental distress. For example, though golf and walking are of the same intensity level, those who reported golfing were 32% less likely to report FMD than those who reported only walking, even after adjusting for covariates. If experimental studies bear this out, it would suggest that guidelines should consider specific recommendations for promoting social forms of recreation activities, given the potential for additional patient-centered benefits.

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B114q
STRESS, SLEEP, DEPRESSION AND DIETARY INTAKES AMONG LOW-INCOME OVERWEIGHT AND OBESE PREGNANT WOMEN
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Objective: This study investigated the mediating roles of sleep and depression on the relationships between stress, fat intake, and fruit and vegetable intake among low-income overweight and obese pregnant women by trimesters.

Methods: Participants (N = 213) completed a self-administered survey including stress (exogenous variable), depression, sleep (mediators), fat intake, and fruit and vegetable intake (endogenous variables). Path analysis was performed to compare mediation effects among pregnant women in each trimester.

Results: Consistently across 3 trimesters, stress was related to depression but not sleep duration, night time sleep disturbance, sleep quality, sleep latency or fat intake. Sleep duration was not associated with depression. Depending on trimester, night time sleep disturbance, sleep quality, and sleep latency were related to depression; night time sleep disturbance and depression affected fat intake; stress influenced fruit and vegetable intake. Sleep duration, sleep disturbance, sleep quality, sleep latency and depression did not mediate the relationships between stress, fat intake, and fruit and vegetable intake in the second and third trimesters. However, depression mediated the relationship between stress and fat intake in the first trimester.

Conclusions: Stress management interventions may help low-income overweight and obese pregnant women decrease depressive symptoms and therefore contribute to overall nutritional health.

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B114r
THE EFFECTS OF PHYSICAL AND PSYCHOLOGICAL PARTNER VIOLENCE ON CONDOM NEGOTIATION AND CONDOM USE AMONG COLLEGE WOMEN
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Women with a history of intimate partner violence (IPV) are three times more likely to engage in sexual risk behaviors than women without IPV histories. Women’s ability to negotiate condom use may partially explain the IPV-sexual risk link. This study investigates the impact of physical IPV, psychological IPV, and commitment level of the relationship on condom negotiation and condom use among 235 heterosexual college women (M Age = 19.63, SD = 2.24). Participants completed online questionnaires assessing lifetime history of IPV, frequency of condom negotiation during the last 30 days, use of condoms during the last 30 days, and commitment level. Though the associations between IPV and condom negotiation and condom use were non-significant, there were significant associations among specific types of psychological IPV and condom negotiation and condom use. Being screamed or cursed at by a romantic partner was related to less condom use, and condom negotiation mediated this association. In addition, commitment level moderated the association between being insulted or talked down to by a romantic partner and condom negotiation. Findings illustrate the impact of specific forms of psychological IPV on condom negotiation and condom use. Findings also have implications for interventions designed to improve the sexual health of young women with histories of psychological IPV. Specifically, interventions should address the impact of psychological IPV on women’s ability and desire to negotiate condom use and promote condom negotiation skills that are appealing to women with such histories.

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B121a
EMPOWERING INFORMED DECISION-MAKING ABOUT THE HPV VACCINE AS A CERVICAL CANCER PREVENTION STRATEGY FOR HIGH-RISK POPULATIONS
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Background. HPV infection is the single, most important risk factor for cervical cancer. Several racial/ethnic groups experience elevated rates of HPV infection. The advent of the HPV vaccine presents a unique opportunity to advance primary prevention in communities at high risk for HPV infection and cervical cancer.

Significance. A culturally and linguistically appropriate intervention that empowers parents to make an informed HPV vaccination decision for their children can promote primary
Objective. The goal of this study was to empower parents to make informed HPV vaccination decisions. It’s aims were to (1) develop a multicultural, multilingual intervention DVD tailored to Korean American and Latino parents, and (2) evaluate its efficacy to increase HPV vaccine knowledge and promote informed immunization decisions.

Methods. A randomized, controlled trial with 720 parents examined the efficacy of an intervention DVD to promote informed vaccination decisions. Knowledge, decisional conflict and self-efficacy were dependent variables while language and race/ethnicity were independent variables. Study participants were randomly assigned to intervention and control groups in equal numbers after a pretest was administered. Intervention group parents received a culturally tailored, language-appropriate DVD. Control group parents received a language-congruent CDC flyer on the HPV vaccine. Four weeks from baseline, a post-test was administered to participants in both study arms.

Results. Study participants were non-English dominant: 96.4% for Korean Americans and 89.5% for Latinos. Knowledge gains regarding HPV and the HPV vaccine were significantly greater in both language groups compared to control group parents. Intervention group parents in both language groups reported significantly lower levels of decisional conflict and higher levels of informed decision-making regarding HPV vaccination of their children compared to control group parents.

Conclusions. The study findings suggest that a culturally and linguistically appropriate education intervention in communities at high risk for HPV infection and cervical cancer can empower non-English speaking parents to make an informed HPV vaccination decision and thus reduce racial/ethnic health disparities.

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B121c

ONLINE STUDY OF SUN PROTECTION BARRIERS AND FACILITATORS: ASSESSMENT OF DEMOGRAPHIC VARIATION

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BACKGROUND: Many of the more than 3 million skin cancer (SC) cases that are diagnosed annually in the United States (US) could be prevented by protecting skin from excessive sun exposure. Increased data on attitudes and beliefs about sun protection (SP) could help guide the development of policies, tailored public health messages, and programs for SC prevention. Amazon Mechanical Turk (AMT), a crowdsourcing strategy used in the present study that provides an on-demand, scalable, fast system for data collection, has been used as an inexpensive way to study a wide variety of health issues. METHOD: We assessed endorsement of SP barriers and facilitators by using a survey administered via AMT, and examined differences responses by gender, sun sensitivity, education, age, race, ethnicity, location (by Census region), and skin cancer history. A literature review yielded a list of 40 statements representing SP barriers (17 items) and facilitators (23 items). Agreement with each statement was rated using a 5-point Likert scale. The items were administered to 500 participants (60.8% male, M=±30.15, 76.8% white). They were paid $0.40 each for their participation. Data were collected from the four Census regions of the US. RESULTS: Men reported a higher level of agreement with items indicating SP barriers (e.g., “Men that protect their skin from the effects of the sun are effeminate”) and lower level of agreement with items indicating SP facilitators (e.g., “I feel better when I am protecting my skin from sun exposure”). Those who always tan or tan with ease, and people 30 years old and younger, reported lower endorsement of items indicating SP facilitators (e.g., “I prefer to avoid the sun during the midday hours”) compared with those who rarely or never tan (and older participants). Non-white participants worry that they will have a vitamin D deficiency if they avoid exposure to the sun. Results didn’t suggest differences by other demographic variables. CONCLUSION: Results support findings from previous research regarding the association between SP variables, gender, age, race, and sun sensitivity. Findings suggest that health promotion and SC prevention initiatives should focus on targeting particular SP messages to the specific needs of the population. It is feasible and informative to assess SP using online tools such as AMT.

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B121d

USING GENOMIC MEDICINE RESOURCES UNDER THREE PRESCRIBING SCENARIOS: ISSUES WITH INFORMATION-SEEKING

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Existing web-based genomic medicine resources are not optimal for primary care providers (PCP) to use when making prescribing decisions for patients with genetic test results. This pilot study aimed to (1) identify issues limiting PCP use of existing genomic medicine resources, and (2) recommend technical enhancements to mitigate those issues. Three PCP each completed a simulation study with three medication prescribing scenarios: One displayed an alert message that recommended genetic testing in a patient prescribed clopidogrel; two and three displayed alert messages that recommended considering alternate therapy given patient genetic test results (clopidogrel and simvastatin prescribing, respectively). PCP were asked what types of information they would expect from clicking on links embedded in alert messages and genetic test results, and after clicking on the links, how they would use the genomic medicine resources. A think-aloud protocol was used while audio, screenshots, and keystrokes were captured. PCP comments, thoughts, recommendations, and problems encountered were coded and analyzed by two independent coders. We found the information-seeking process was too time-consuming for PCP. Main contributors to this issue were that resources were perceived as too long, too targeted to genetics experts, and desired information was hard to locate. While clinical study and professional recommendations were present in the resource, it was perceived as missing by the use. We suggest two technical enhancements. First, we propose leveraging web annotation tools to highlight desired
information including clinical study outcomes and professional society recommendations within the existing genomic medicine resources. Highlighting the desired information has the potential to mitigate issues regarding both length and ease of locating information. Second, we propose adding a “consult link” to facilitate connecting with a domain expert. This enhancement could help reduce concerns about resources being targeted to genetics experts by providing direct access to genetics expertise. In future work we will investigate the impact of enhancements on PCP use of genomic medicine resources, as well as identify other concerns with proposed solutions.

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B132
THE INFLUENCE OF THE INFORMATION ENVIRONMENT ON TOBACCO QUIT ATTEMPTS AMONG THOSE SUFFERING FROM DEPRESSION AND ANXIETY
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The bidirectional relationship between tobacco dependence and depression and anxiety disorders is well established in the literature. Recent findings indicate an increased risk of mood disorders among smokers, as well as worsening of symptoms and decreased self-efficacy to quit among smokers who suffer from depression and anxiety. Although there is evidence that anti-tobacco communication campaigns can prompt quitting, less is known about whether routine use of mediated health information can spur quit attempts—particularly in high-risk vulnerable populations, like those suffering from depression and anxiety disorders. Using 2009-2012 data from the nationally representative Annenberg National Health Communication Survey, we restricted analyses to respondents who reported having “ever been diagnosed with depression/anxiety” and who were current smokers (n=243). Adjusting for demographic variables, we examined associations between health media use and quit attempts. Preliminary results from binary logistic regression analyses indicated a negative relationship between reading health/medical magazines and newsletters in the past 30 days and initiating a voluntary smoking quit attempt within the past year (OR=.59, 95%CI=.36-.98). Thus routine use of select media sources is negatively associated with quit attempts among smokers with depression and anxiety, and patterns of associations may have important implications for tobacco control. For example, campaigns using broadcast media could prove more effective in prompting quit attempts than those using print-based media; this could be particularly important for a vulnerable population suffering from depression and anxiety, given the difficulty in reaching and effectively promoting health behaviors in this population. Further implications for communication and health behavior interventions designed to reduce tobacco dependency among those suffering from mental health disorders will be discussed.

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B134a
E-CIGARETTES AND TOBACCO CESSATION: PERCEPTION VERSUS REALITY
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Introduction: Electronic nicotine delivery system (ENDS, also called electronic cigarettes or e-cigarettes) manufacturers entice smokers with claims of assistance in quitting smoking, and many smokers use this new product in an attempt to break free from tobacco. However, the efficacy of e-cigarettes as a tobacco cessation aid is unclear. Methods: This study sought to examine the effect of e-cigarette use on abstinence from tobacco on a population of Veterans referred for tobacco cessation treatment. Veterans were surveyed about their level of participation in smoking cessation classes and their perceived effectiveness of e-cigarette use to help them quit. Participation in the cessation classes via video tele-health technology was also examined as a factor. Actual cessation outcomes were compared for those Veterans who had used e-cigarettes versus those who had not. Results: No significant benefit of using e-cigarettes was found and there was some evidence that their use may even be detrimental to quit efforts. Discussion: The discrepancy between smokers’ beliefs about the benefits of e-cigarettes for smoking cessation and actual outcomes has implications for regulations surrounding the marketing of e-cigarettes.

Keywords: E-cigarettes, tobacco cessation, telehealth

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B134b
HOW MUCH IS TOO MUCH?: A LATENT CLASS ANALYSIS OF CIGARETTE SMOKING AND PERCEIVED HEALTH
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Tobacco smoking in the US is responsible for more preventable deaths than any other cause (Crowley, Markowitz & Tauras, 2004). Tobacco smoking has been linked to numerous physiological ailments such as heart disease and stroke (Glantz & Parmley, 1995; Higa & Davanipour, 1991) as well as psychological disorders such as depression and anxiety (Brown, Lewinsohn, Seeley & Wagner, 1996; Johnson, Cohen, Pine, Klein, Kasen & Brook, 2000). However, people are not always aware of the extent of these health dangers that smoking contains (Hammond, Fong, McNeill, Borland & Cummings, 2005). It has been shown that increased knowledge of risk can influence health behaviors. Risk perception plays a critical role in deciding to stop smoking (Romer & Jamieson, 2001). Additionally, perceived health is an important factor in behavior change (Ruis, Fernandez, Schiaffino, Borras, Rodriguez-Artalga, 2004). It is therefore important to know what level of tobacco consumption is perceived as negatively impacting one’s health.

The current study performed a latent class analysis on 42,935 adults from the California Health Interview Survey (CHIS) and looked at smoking behavior (cigarettes smoked per day), diet,
exercise, binge drinking, and perceived health. The goal of the project is to identify the number of cigarettes smoked per day by profile groups with negative versus positive perceived health. Latent class analyses (LCA) testing 3, 4, and 5 classes were fit to the data. The model fit indices show that the 5-class solution was the best fit ($\text{BIC} = 409946.741; \text{Sample-Size Adjusted BIC} = 410138.871; \text{p} < 0.001$). Latent class probabilities for each class were 59.8% (n = 25676) in class 1, 2.8% (n = 1209) in class 2, 33.0% (n = 14159) in class 3, 4.0% (n = 1712) in class 4, and 0.4% (n = 179) in class 5. Considering the conditional response probabilities those smoking 18.63 cigarettes per day perceived being healthy 68.3% of the time, where as those smoking 35.67 cigarettes per day only had positive perceived health 61.1% of the time. The data suggest that smoking over about a pack of cigarettes per day (20 cigarettes) has a significant effect on perceived health. More research should be carried out to further pinpoint a threshold of perceived health change, which might then have a profound impact on treatment effectiveness.

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**B134c**

RESIDENTIAL AREA CHARACTERISTICS OF AFRICAN AMERICAN AND WHITE LOW-INCOME SMOKERS ENROLLED IN A SMOKING CESSATION TRIAL

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Racial and ethnic differences in smoking prevalence, light vs. heavy smoking, and tobacco-related health outcomes have been well documented. While much of the literature investigating racial differences in tobacco use has focused on individual differences, a growing body of research suggests that residential area (i.e., neighborhood) characteristics are critically important in explaining health behaviors. One recent study found that area-level characteristics such as unemployment, poverty, and education were associated with smoking abstinence among African Americans (AA). The aim of this study was to describe differences in area-level characteristics among AA and White low-income smokers to understand the unique residential situations of current smokers. Data were from an ongoing cohort intervention smoking cessation study that will enroll 224 non-Hispanic AA and 224 non-Hispanic White smokers with eligibility requirements of $< 400\%$ federal poverty level (FPL). Area-level characteristics were obtained using census tract 5-year estimates (2008-2012) from the American Community Survey for 395 participants living in 227 unique tracts. Chi-square and t-tests were conducted on 189 AA and 206 White smokers. Results show that the majority of participants (90% AA and 68% White) had household income $< 250\%$ the FPL. AA participants lived in tracts with higher levels of unemployment (15.8% vs 8.3%), lower median household income ($\$37,540$ vs $\$56,427$), higher rates of poverty (24.5% vs 14.2%), higher proportion of individuals with less than a high school education (17.4% vs 11.3%) and lower rates of owner oc-
B134e
STRESS, RACIAL DISCRIMINATION, AND TOBACCO-USE DIFFERENCES ACROSS RURAL-URBAN CALIFORNIA

Amenah Agunwamba, ScD, MPH, Ichiro Kawachi, MD/PhD, David Williams, PhD, MPH, Lila J. Finney Rutten, PhD, MPH, Patrick Wilson, MPH, Kasisomayajula Viswanath, PhD
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Despite successful tobacco policies dramatically reducing tobacco use within the US, tobacco-use disparities persist. In particular, the prevalence of tobacco use in rural communities and minorities is significantly higher compared to their counterparts. In this work, we examine the impact of rurality, stress, and racial discrimination on tobacco use. Data were from the 2003 California Health Interview Survey (n = 42,044). Survey poisson regression models were adjusted for age, gender, race/ethnicity, education, income, insurance status, and marital status. Compared to urban participants, rural participants had a significantly higher risk for smoking after adjustment (RR = 1.10, 95% CI = 1.01-1.19). Those who reported having experienced racial discrimination had a significantly greater risk for smoking compared to those who did not (RR = 1.17, 95% CI = 1.07 – 1.27). Additionally, those who had high stress had a significantly greater risk for smoking (RR = 1.61, 95% CI = 1.07 – 1.67). There was evidence of interaction between rurality and race/ethnicity, and rurality and gender (p < 0.05), however there was no evidence of interaction between rurality and stress or discrimination. Merely residing in rural California carries an increased risk for smoking, above and beyond sociodemographic factors. Furthermore, surprisingly, there were no significant differences across rural-urban environments for the relationship between stress and tobacco-use—a finding that the impact of stress and discrimination is not buffered or exacerbated by environmental charactersics potentially found in either location. Mechanisms that explain rural-urban tobacco disparities need to be explored, and policies aimed at reducing stress and racial discrimination in both rural and urban settings should be considered.

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B134h
INSOMNIA AND PRESCRIPTION DRUG MISUSE IN YOUNG ADULTS

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In recent years, the non-medical use of prescription drugs (i.e., without a doctor’s prescription) has increased dramatically, particularly in young adults. Motivations to misuse prescription drugs include to get high, to try something new, and as a sleep aid. Insomnia and sleep deprivation are also commonly reported by young adult college students in the United States. Chronic sleep disturbance results in significant medical complications, including hypertension and weight gain. The present study examined relationships between insomnia and the non-medical use of prescription drugs (NMUPD) in a sample of 758 young adult college students (ages 18-25). Overall, 29.7% of participants reported lifetime NMUPD. Among NMUPD users, 16.9% reported that a motivating factor for engaging in NMUPD was use of the medication as a sleep aid. Individuals who reported lifetime NMUPD scored significantly higher on the SleepMed Insomnia Index (SMII) questionnaire (M = 16.40, SD = 8.01) than individuals who did not report lifetime NMUPD (M = 14.45, SD = 8.30), t (748) = 2.96, p < .01. In a multivariable logistic regression analysis, insomnia index scores significantly predicted NMUPD after accounting for age, gender, race/ethnicity, year in school, and fraternity/sorority membership, OR = 1.03 (95%
Introduction: To date, little is known about male couples’ use of substances despite the role that substance use plays in HIV seroconversion among gay men. The aims of the present study were twofold: 1) to assess whether panel dyadic data could be collected from HIV-negative male couples about their use of substances through an online weekly ecological momentary diary assessment; 2) to examine couples’ rates of substance use with and without sex and the contexts of their usage.

Methods: A longitudinal study design using ecological momentary weekly electronic online diaries was used to examine male couples substance use with and without sex, and the contexts of their usage over a 6-week period in 2014. Targeted Facebook ads were used to recruit the sample along with a partner referral system to invite eligible participants’ primary relationship partners. 531 men took the screener; of these, 97 were eligible, consented and enrolled into the study. Eligible men were: ≥18 years, US residents, in a concordant HIV-negative same-sex relationship, with their main male partner for ≥3 months, practicing unprotected anal sex (UAS) with their main partner; using substances within the prior 3 months of study enrollment.

Results: Although 97 partnered men enrolled, only 13 male couples with both partners and 15 male couples with one partner participated in the study. Over the 6-week period, men’s engagement in UAS with the main partner, alcohol consumption, cigarette smoking, erectile dysfunction medication, prescription pain medication (PPM), and/or illicit drug use varied. Men frequently used cigarettes, marijuana and/or alcohol in a variety of contexts including with sex. Among the 13 male couples, both partner’s use of illicit drugs including marijuana (ICC: 0.97, P < 0.05) and PPM (ICC: 0.98, P < 0.05) were highly similar to one another whereas more variability between partners existed for lifetime and 3 month smoking cigarettes (ICC: 0.67, P < 0.01).

Conclusions: Our findings suggest dyadic data collection about male couples use of substances is feasible, but additional resources are needed to bolster enrollment. Results highlight the need for further inquiry with a larger sample size for development of HIV and substance use prevention interventions for at-risk male couples, of which, few currently exist.

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B134i
ONLINE FEASIBILITY STUDY ABOUT HIV-NEGATIVE MALE COUPLES SUBSTANCE USE WITH WEEKLY ECOLOGICAL MOMENTARY DIARY ASSESSMENTS
Jason Mitchell, PhD, MPH¹, Francesca Davis, MHS², Yue Pan, MS³, Daniel J. Feaster, PhD⁴
¹University of Miami Miller School of Medicine, Miami, FL; ²University of Miami Miller School of Medicine, Department of Public Health Sciences, Miami, FL; ³University of Miami, Miami, FL.

Introduction: To date, little is known about male couples’ use of substances despite the role that substance use plays in HIV seroconversion among gay men. The aims of the present study were twofold: 1) to assess whether panel dyadic data could be collected from HIV-negative male couples about their use of substances through an online weekly ecological momentary diary assessment; 2) to examine couples’ rates of substance use with and without sex and the contexts of their usage.

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Conclusions: Our findings suggest dyadic data collection about male couples use of substances is feasible, but additional resources are needed to bolster enrollment. Results highlight the need for further inquiry with a larger sample size for development of HIV and substance use prevention interventions for at-risk male couples, of which, few currently exist.

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PARENTAL RISK PERCEPTIONS OF MARIJUANA USE AND THEIR CHILDREN
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Beliefs about the harmful effects of marijuana use are expected to influence whether or not parents discourage their adolescents from using marijuana. The recent increase of decriminalization of marijuana use in the United States could lead parents to perceive marijuana use as less harmful and, in turn, lower the likelihood that they will discuss it with their children. We conducted a longitudinal study to examine perceived risks, prototypes of youth who smoke marijuana, and worry about marijuana use by their children as well as how these factors predict parental intentions and willingness to discuss marijuana use with their children and their engagement in such discussions over the subsequent month. Guided by the Prototype Willingness Model, we hypothesized that higher levels of perceived risk of harms, worry, and negative prototypes would predict higher intentions and willingness to discuss marijuana use with children which, in turn, would predict discussion behavior. We administered a survey through Mechanical Turk to American parents of children ages 10 to 17 years old (N = 60) and a follow-up survey one month later (N = 49). A majority of parents associated marijuana use by their children with moderate or higher chances of poorer academic performance (85%), memory problems (70%), and addiction (63%); few associated it with moderate or higher chances of lung cancer (30%), brain injury (27%), or psychosis (20%). Regression analyses revealed that higher perceived risk predicted higher worry about the harms of marijuana use (β = .64, p < .01) which, in turn, predicted greater intentions to discuss it with their children (β = .56, p < .01). Contrary to predictions, negative prototypes of youth smoking marijuana were marginally associated with lower intentions (β = -.27, p = .06). Overall, 51% of the parents reported having marijuana use discussions with their children over the next month. Logistic regression revealed that higher intentions increased the odds of discussing marijuana (OR = 1.20, p < .05) whereas willingness did not. These findings are guiding a larger study of perceived risks and parental discussions of marijuana use, and they could inform the development of strategies for increasing parents’ awareness of the risks of marijuana use and promoting discussions of marijuana use with children.

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SOCIAL MEDIA USE AND HEALTH: CAN FACEBOOK PROMOTE RECOVERY FROM STRESS?
Holly Rus, BA
University of California, Merced, Merced, CA

Objectives: Social media is already being used as a platform for delivering health information and behavioral interventions; however, the effect of its use on health remains largely unknown. A conflicting body of research suggests that Facebook use may both enhance and undermine psychosocial constructs such as well-being, self-esteem, and perceived social support. Despite these associations, to date there has been no objective measurement of the potential impact of Facebook use on health. This exploratory study aimed to examine the impact of social media use on health in the context of stress recovery by manipulating exposure to Facebook after experiencing an acute social stressor. Methods: Forty undergraduate Facebook users (14 males, mean age 19.65 ±1.64) were randomly assigned to either the experimental group (Facebook use) or the control group (quietly sitting) during 30 minutes of recovery after experiencing the Trier Social Stress Test (TSST). All participants completed baseline and follow-up measures of mood, subjective well-being, and subjective stress. Objective physiological markers of blood pressure and heart rate were collected at baseline and during recovery. Results: Significant changes in objective and subjective markers indicated that participants in both groups experienced stress in response to the TSST. Participants in the control group reported significantly greater recovery from stress in terms of feeling anxious (p < .05) and tense (p < .05) compared to those in the Facebook use group. There were no significant differences in blood pressure and heart rate recovery after the TSST. Conclusion: Participants who used Facebook after experiencing the TSST showed an impaired recovery with regard to feelings of anxiety and tension compared with participants in the control group. Although these trends are small, results suggest that Facebook use may impair or delay recovery from stress. Extensions of this work are necessary. This exploratory study is the first to incorporate objective physiological markers with subjective psychosocial measures in investigating the complex relationship between Facebook use and health. Considering the current interest in leveraging social media for health promotion, understanding its general impact on health may be of primary interest before designing interventions and incorporating its use into health care.

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Rapid Communications
Poster Session C

Friday, April 24, 2015
6:00 PM-7:00 PM
The use of indoor tanning beds (IT) remains popular among young adult women despite the documented skin cancer risks. Influential body image theories posit that cosmetic behaviors, like IT, are driven by sociocultural and peer pressures as well as personal expectations of an ideal female appearance. This focus group study with young adult women IT users examined how social and cultural beliefs influence body image and IT use. Sixty-three females who used IT in the past year (mean age=19.83 years) were recruited from undergraduate courses and campus flyers. A total of nine focus groups were conducted with questions designed to explore IT users’ beliefs about an ideal tan as well as their sociocultural experiences related to IT. For data analysis, we developed an a priori coding manual of key research questions and associated terms and used Atlas.ti to identify and sort the terms. Two authors independently reviewed the sorted text and made interpretative notations. These authors then together discussed findings to identify relevant themes both within and across focus groups.

Participants in several focus groups described an ideal tan as moderately dark and appearing natural compared to “fake” as well as their personal tanning guidelines for achieving an ideal tan. However, an ideal tan was understood to vary among individuals based on ethnicity, time of year, and features such as hair/eye color. Participants described how tanning was positively reinforced by peers as well as the negative social implications of being either too pale or too tan or being viewed as a “vain” tanner. IT use was often preceded by participants comparing their tan to their ideal tan or to the tans of their peers or women in the media. These findings have implications for the design of interventions for IT users. Given that tanning is positively reinforced through IT user’s personal and social experiences, the cessation of tanning may be viewed as having undesired social implications. It may be important to encourage participants to consider healthy appearance-enhancing behaviors, like sunless tanning, as a substitute for IT as well as how to cope with peer influences to tan. Promotion efforts may also benefit from encouraging IT users to consider ways that tanning may be viewed negatively by others in an attempt to reduce pro-tanning beliefs.

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**C025a**

**“OMG I’M SO PALE. IS EVERYONE GOING TO THINK I LOOK WEIRD?”: A FOCUS GROUP STUDY OF SOCIAL INFLUENCES AND BODY IMAGE ON INDOOR TANNING**

Jerod L. Stapleton, PhD¹, Katie Darabos, MS¹, Shawna V. Hudson, PhD³, Kathryn Greene, PhD², Sharon L. Manne, PhD²

¹Rutgers, The State University of New Jersey, New Brunswick, NJ; ²Rutgers Cancer Institute of New Jersey, New Brunswick, NJ

Efficacious interventions are needed to reduce the excess burden of colorectal cancer (CRC) among Black/African-American women (AAW). Towards that end, six focus groups were previously conducted with salon owners and stylists from a predominantly African-American section of NYC, the goal of which was to determine acceptability of a salon-based intervention to promote colonoscopy screening (CS) among AAW. Results indicated that a salon-based CS-promotion intervention is highly acceptable to salon staff and that, moreover, they feel confident in their ability to be successfully trained to deliver such an intervention to their clients. Given these promising findings the present study sought to determine acceptability of a salon-based CS-promotion intervention among salon-going AAW. A total of five focus groups were conducted with AAW (N=43) who attend salons within the same, aforementioned section of NYC. Questions addressed three major areas: (1) acceptability of a salon-based CS-promotion intervention, (2) acceptability of the intervention being delivered by salon stylists, and (3) preferred content and format of the intervention. Thematic analysis resulted in several core themes, including: (1) Beauty salons are an acceptable venue for discussing CRC and CS: Some salons (e.g., those that are smaller/more intimate) may be better suited than others, but in general, salons are a good way to reach AAW; (2) Stylists who deliver the intervention must be carefully selected and thoroughly trained: Stylists who present as articulate and confident – in both themselves and in the information that they share – are those most likely to be viewed as a trusted source of health information. Further, evidence of their training (e.g., a certificate of completion) should be readily apparent; and (3) Tangible health information should be offered and should address specific points of interests: Pamphlets and flyers are among the preferred formats for receiving health information, and facts about the CS procedure (e.g., it being painless) would be particularly helpful in encouraging CS. In combination with the previous focus groups with salon owners and stylists, findings from the present study will aid significantly in the development of an efficacious salon-based, stylists delivered intervention to promote CS among AAW.

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**C025b**

**ACCEPTABILITY OF A SALON-BASED INTERVENTION TO PROMOTE COLONOSCOPY SCREENING AMONG BLACK WOMEN**

Tiffany Floyd, PhD¹, Katherine DuHamel, PhD², Jessica Rao, MA¹, Lina Jandorf, MA³

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C025c
ACCEPTABILITY OF SELF-COLLECTED HPV TESTING AMONG WOMEN AGED 36 AND ABOVE IN TAIWAN
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HPV testing has been increasingly evidenced to be an effective tool for cervical cancer screening, and therefore considered as primary testing for some organized screening programs. Much attention in the past few years has turned to the use of vaginal self-sampling with a dry swab as an alternative to clinician-collected cervical scrapes for screening. There is some evidence that self-sampling, as compared to a recall invitation, may be a better way to improve screening attendance in developed countries. Other research has also shown that self-testing is quite acceptable among women in low-resource settings, thus facilitating their access to cervical screening. In contrast, most Taiwanese are not yet familiar with self-collected HPV testing. In order to assess its acceptability in Taiwan, a survey based on the Theory of Planned Behavior (TPB) was administered to a female sample aged between 36 and 69 (N = 1104), recruited from New Taipei City, Taiwan in 2010. This sample included 674 women who had received neither pap smear nor HPV testing in the past six years. Among the remainder of the sample who had experiences of self-sampling (N=430), 247 of them collected self-samples right after the instruction was delivered during the survey. Those who had experiences of self-sampling were compared with those who had not on social-demographic characteristics and TPB-related scale variables. Socio-demographic characteristics and TPB-related scale variables achieving significant level in the bivariate analyses were then included in the logistic regression model, identifying several significant predictors of a woman’s intention to HPV self-collect for cervical cancer screening, such as family history of cancer, attitude towards the procedure, and perceived behavioral control.

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C025d
ARE STRESS AND SOCIAL SUPPORT ASSOCIATED WITH SELF-EFFICACY FOR OBTAINING CANCER DIAGNOSTIC CARE?
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Background: Previous research indicates that stress and distress may prevent patients from obtaining diagnostic care following identification of a cancer-related abnormality. It is not known whether stress or social support is associated with self-efficacy for obtaining cancer diagnostic care. This study examined the relationships between perceived self-efficacy for obtaining recommended cancer diagnostic care, perceived stress, and perceived social support among medically underserved patients who have received a screening abnormality potentially indicative of breast or colorectal cancer.

Methods: This is a secondary analysis of surveys collected from primary care patients who experienced an abnormality suspicious for breast or colorectal cancer. Data were collected following identification of the abnormality using self-report surveys, including a 12-item scale evaluating self-efficacy for obtaining recommended cancer diagnostic care (Arevalo et al., 2012; α=.85), the 12-item Perceived Stress Scale (Cohen et al., 1983; α=.81), and the 14-item Interpersonal Support Evaluation List-Short Form (Cohen et al., 1985; α=.81). Using Pearson correlations, we examined relationships between these variables.

Results: One hundred and six participants completed surveys in either Spanish or English. Most participants were female (84%), born in Mexico (43%), Spanish speaking (76%), and had completed minimal education (M = 8.84 years). Participants reported moderate to high social support (M = 3.04), moderate self-efficacy (M = 2.27), and moderate to high perceived stress (M = 2.98). While there was no statistically significant relationship between perceived stress and perceived self-efficacy for obtaining cancer diagnostic care (p = .211), high perceived self-efficacy was correlated with high social support (r = .35; p < .001). Perceived stress was also negatively correlated with social support (r = -.21; p = .031).

Conclusions: Stress was not significantly associated with self-efficacy for obtaining cancer diagnostic care, but high social support was linked with higher self-efficacy. Future research should examine the types of social support associated with higher self-efficacy for obtaining cancer diagnostic care, and the link between self-efficacy and receipt of cancer diagnostic care.

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C025e
DOES PERSONALIZED RISK INFORMATION AFFECT SHORT- AND LONG-TERM HEALTH COGNITIONS, AFFECT, AND BEHAVIOR?
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Risk perceptions are linked to cognitive, affective, and behavioral outcomes. Given the growing reliance on internet searches to gather health information, it is important to examine how online cancer risk assessment tools affect these outcomes. This study examines how personalized breast cancer risk information affects cognitions and affect immediately post-intervention, as well as health behaviors after 1 month.

Women (N=132) aged 40-78 with no personal cancer history were randomly assigned to receive either personalized breast cancer risk information (www.yourdiseaserisk.wustl.edu) or non-personalized breast cancer risk information. The internet-based intervention took approximately 15 minutes. Immediately following the intervention (Time 1), intention to engage in physical
activity, self-efficacy about physical activity, response-efficacy about physical activity, worry about breast cancer risk, and comparative risk perceptions were recorded. One month later (Time 2, N=127), participants reported engagement in physical activity and physical activity and breast cancer information-seeking.

ANCOVA and logistic regression examined if personalized risk information influenced cognitive, affective, and behavioral responses at Time 1 and 2, respectively. All analyses included race, education, and current engagement in physical activity as control variables. At Time 1, participants reported greater intention to exercise (p=.004) and higher response-efficacy about exercise reducing their risk of breast cancer (p=.014) when presented with personalized versus non-personalized breast cancer risk information. No intervention effects emerged on the self-efficacy, worry, or comparative risk perceptions measures at Time 1, ps > .05. We also examined if the personalized risk feedback intervention influenced health behaviors at Time 2. No intervention effects emerged for engagement of physical activity or seeking of physical activity or breast cancer information, ps > .05.

Personalizing risk information had a greater effect than non-personalizing on short-term intentions and response-efficacy but long term behaviors were not affected. Motivating healthy behavior likely requires a more intensive intervention than only providing personalized risk information.

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C025f
HEALTHY PEOPLE 2020: ONE SIZE DOES NOT FIT ALL
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Cancer screening is highly effective at diagnosing disease at its earliest and most curable stage. Federal initiatives to promote cancer screening are critical to reducing the public health burden of cancer-related morbidity and mortality. Research, intervention, and policy are necessary to design, implement, and support programs that identify and ameliorate barriers to preventative care. Healthy People goals are key to defining important areas of research intervention and set benchmarks by which population health is measured. Despite increasing awareness of social determinants of health and their influence on cancer risk and prevention, the Department of Health and Human Services (DHHS) continues to frame cancer screening goals from a one-size-fits-all approach using a population screening rate. This approach ignores the persistent and pervasive disparities within and between sociodemographic groups across cancer screening methodologies, e.g. a 55% screening rate for the full population but a range of 45% to 70% by educational attainment category. By using a full population rate, DHHS risks celebrating the success of meeting benchmarks when the screening rate in a group with privilege increases while the screening rate in a group without privilege stays the same or even falls.

This presentation articulates approaches to more effective policy approaches in cancer screening that reflects the need to both reduce disparities and improve population health as a whole. Using colorectal cancer screening as an illustrative model, the author proposes demographic-specific approaches that approach population health in a way that highlights, not obscures, social determinants of health.

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C025g
LEVELS OF EMOTIONAL AWARENESS DURING FIRST PSYCHOTHERAPY SESSIONS AMONG WOMEN DIAGNOSED WITH GYNECOLOGICAL CANCER
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Background: The cognitive-developmental model of emotional experience proposes that individuals experience various levels of emotional awareness. Higher emotional awareness allows an individual to possess complex and differentiated emotion information, which can support higher emotional processing. Higher levels of emotional awareness are related to better well-being despite temporary negative mood states. Greater emotional awareness may allow patients to derive benefit from psychotherapy. The Levels of Emotional Awareness Scale (LEAS) has been utilized with various populations, but has not been examined among cancer patients enrolled in psychotherapy. The current study utilized a computerized LEAS scoring system to assess levels and correlates of emotional awareness during emotion episodes in first psychotherapy sessions among gynecologic cancer patients.

Methods: Participants were women diagnosed with gynecologic cancer participating in randomized control trial comparing a coping and communication intervention (CCI), supportive counseling intervention (SC), and usual care. First session data was collected from women randomly assigned to either intervention (N=188). Psychotherapy sessions were recorded, coded via the Emotion Episode (EE) coding system, transcribed, and EE transcriptions were run through the computerized LEAS system. LEAS scores can range from 0 = no awareness to 5 = highest level of awareness. Descriptive analyses were conducted to determine emotional awareness levels during EEs. Correlational analyses were conducted to determine the relationship between LEAS scores and baseline emotion expressivity.

Results: Patients had mid-to-high emotional awareness during the first psychotherapy session (M = 3.64, SD = .36). Patients in SC (M = 3.72, SD = .35) had higher LEAS scores than CCI (M = 3.55, SD = .36) [t(185) = 3.44, p = .001]. Baseline emotion expressivity was not significantly related to emotional awareness during the session.

Conclusions: The study is the first to utilize computerized LEAS scoring on psychotherapy session data with cancer patients. Patients demonstrate moderate levels of emotional awareness during the first psychotherapy session, regardless of demographic characteristics or self-reported emotion expressivity. Future research may examine how emotional awareness may translate
to emotional processing and psychotherapeutic change among this population.

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C025h
MEASUREMENT OF INTRINSIC AND EXTRINSIC MOTIVATION FOR HPV VACCINATION IN SAFETY-NET CLINIC POPULATIONS

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Background: According to Self-Determination Theory (Ryan & Deci, 2000), the extent to which a behavior is motivated by intrinsic or extrinsic reasons influences its sustainability. This is particularly relevant for behaviors that must be repeatedly performed, such as completion of the human papillomavirus (HPV) vaccine series requiring three doses over 6 months. To date, no measures of intrinsic and extrinsic motivation for HPV vaccination have been developed.

Methods: As part of a larger study, parents (N=141) whose adolescents receive care at safety-net clinics completed a telephone questionnaire about HPV and the vaccine. We modified the Treatment Self-Regulation Questionnaire (Levesque et al., 2007) to assess parents’ intrinsic (4 items; e.g., reason to get the vaccine is because you believe it is the best thing for your child) and extrinsic motivation (4 items; e.g., reason to get the vaccine is because others would be upset with you if you did not). Parents responded to the items in their preferred language (English, Spanish) using a strongly agree to strongly disagree scale. We used confirmatory factor analysis to test a two-factor measurement model. We also examined whether factor loadings and mean scale scores differed between English- and Spanish-speaking parents.

Results: The two-factor model fit the data well (RMSEA=.09, CFI=.96, TLI=.94), and the scales’ reliability was adequate (intrinsic: α=.87; extrinsic: α=.72). The magnitude of factor loadings for 3 items differed between English- and Spanish-speaking participants (ps<.05); all others were equivalent. Although similar levels of intrinsic motivation were reported (English: M=1.87; Spanish: M=1.79), Spanish-speaking parents reported significantly greater levels of extrinsic motivation than English (M=3.25 and 3.77, respectively; d = .67).

Implications: Findings support the use of two scales for measuring intrinsic and extrinsic motivation in HPV vaccination and suggest possible cultural differences in extrinsic motivation. Measurement and clinical implications for English- and Spanish-speaking populations will be discussed.

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C025i
THE AFFORDABLE CARE ACT COMMUNITY HEALTH NEEDS ASSESSMENTS REQUIREMENT: OPPORTUNITIES FOR BEHAVIORAL RESEARCH

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The ACA legislation requires 501(c)3 hospitals to conduct a Community Health Needs Assessment (CHNA) every 3 years. The National Cancer Institute (NCI) was interested in understanding how hospitals are meeting the new requirement and opportunities for behavioral scientists working in cancer prevention and control to contribute to addressing community cancer control and prevention needs. This abstract presents findings from an environmental scan and stakeholder interviews to: 1) Understand how hospitals are working with communities to conduct CHNAs; 2) Identify scientific opportunities for cancer prevention and control researchers from the perspective of national leaders working on the CHNA requirement implementation.

The NCI contracted with Westat Inc. to conduct a qualitative study involving 1) an environmental scan of the first round of ACA-mandated CHNAs, and 2) 12 key informant semistructured phone interviews conducted between Oct.- Dec. 2014. Interviewees represented national leaders from various federal agencies, hospital systems, non-profits and think tanks, policy advisors, and researchers providing needs assessment support to 501(c)3 hospitals. Data from interviews were analyzed using thematic analysis.

The first round of CHNAs illustrated a wide diversity in scope, level of community engagement, definitions of “community,” availability of resources to collect current data, and shifting perspectives from clinical to public health. Stakeholder interviews consistently illustrated excitement regarding the CHNA mandate as a lever to move hospitals into population health. Major themes identified include an emphasis in aligning resources and effectively utilizing existing data sources, data sharing, and providing implementation plan support. A major capacity issue was raised in the need for expertise in selecting and implementing evidence-based interventions to meet identified community needs.

Findings suggest that there is wide diversity in CHNA methods across hospitals and hospital systems. For behavioral scientists interested in cancer control and prevention, opportunities for local surveillance, community engagement, intervention development and evaluation, communication, and implementation science are embedded within the three year cycle of the CHNA requirement.

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C025j
UNINTENTIONAL WEIGHT LOSS AFTER HEAD AND NECK CANCER DIAGNOSIS: A DYNAMIC RELATIONSHIP WITH DEPRESSIVE SYMPTOMS
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Background: Unintentional weight loss (UWL), an indicator of impaired nutritional status, is a critical outcome following diagnosis and treatment for head and neck cancer (HNC). Its relationship with depressive symptoms, which are also prevalent in this patient population, is unclear.

Purpose: To examine the respective trajectories of UWL and depressive symptoms during the first year following HNC diagnosis and analyze longitudinal relationships between depressive symptoms and UWL.

Methods: As part of a large, prospective study on HNC outcomes, data were collected at pre-treatment and 3, 6, 9, and 12 months following diagnosis. Growth curve modeling techniques were used to evaluate 563 patients’ depressive symptoms and percentage UWL. Depressive symptoms were measured with the Beck Depression Inventory (weight-related items excluded) and percentage UWL was calculated relative to baseline at each time point using clinic weight measurements.

Results: During the first year after HNC diagnosis, weight loss followed a negative curvilinear pattern (inverted U-shape; t (562) = -4.12, p < .001), on average. Depressive symptoms were relatively stable on average (t (562) = -1.35, p = .18), yet did increase and/or decrease across time for some patients (χ² (561) = 791.24, p < .001). Rates of curvilinear change in percentage UWL did not depend on baseline depressive symptoms (t (561) = 1.38, p = .17); however, changes in depressive symptoms over time were associated with changes in weight loss (t (1148) = 2.05, p < .05). That is, to the extent that depressive symptoms increased on a monthly basis, patients lost incrementally more weight than was lost due to the passage of time.

Conclusions: Results depict an ongoing transactional interplay between depressive symptoms and weight loss over the first year after HNC diagnosis, suggesting a malleable impact of depressive symptoms on this critical nutritional outcome. Pre-treatment depressive symptoms do not destine a patient for a particular pattern of weight loss; rather, changes in depressive symptoms over time result in deviations from average trajectories of UWL. The results have important clinical implications, indicating that ongoing screening and treatment for depression throughout the first year after HNC could benefit patients’ psychological and nutritional outcomes alike.

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C030a
EXAMINATION OF THE RELIABILITY AND VALIDITY OF A CARDIAC SELF-BLAME ATTRIBUTIONS (CSBA) SCALE
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In cardiovascular disease (CVD), a disease for which specific health behaviors have been linked to onset, patients readily search to identify a cause. For example, patients tend to attribute their cardiac events to their own behaviors, referred to as behavioral self-blame (BSB), or to stable aspects of their dispositions, referred to as characterological self-blame (CSB). There are mixed findings on the effects of both types of self-blame (SB) on health outcomes in patients with CVD. However, one possible explanation for these discrepancies is the lack of a validated, multiple-item measure of SB attributions in patients with CVD. Thus, the present study aimed to develop and validate a multiple-item measure of SB in a cohort of patients with CVD who are eligible for cardiac rehabilitation (CR) at an urban, safety-net hospital. After editing the items based on feedback from two experts and pilot-testing, the final scale included 14 items, including 7 items measuring BSB and 7 measuring CSB. Data were collected from 60 patients while they were recovering from a cardiac procedure pre-hospital discharge. A majority of the sample was male (68%) and European American (57%), with an average age of 56.1 (SD = 10.5) years, although 38% were African American and 23% were uninsured. Parallel Analysis and Velicer’s Minimum Average Partial Test were first conducted and indicated that two factors should be extracted. Next, Principal Axis Factoring (PAF) with oblimin rotation was conducted and yielded a 12-item, 2-factor structure explaining 64.04% of the variance. Two reverse-worded items were removed due to problems with process validity and reliability. Pattern coefficients ranged from .49 to .95. These two factors represented BSB (with 6 items) and CSB (with 6 items). Internal consistency for the 2 factors indicated good reliability (α = .94, and α = .86, respectively). The CSBA also showed good discriminant validity with the Health Self-Determination Index (r = .005, p > .05). These findings suggest that the CSBA scale is a reliable and valid measurement tool. Its use within a hospital or CR setting may assist providers in understanding the causal mechanisms that patients assume underlie their diagnoses. Future research should explore the predictive validity of this measure for mental and physical health outcomes in patients with CVD.

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C030b
IDEAL CARDIOVASCULAR HEALTH AMONG 10 YEAR OLD CHILDREN FROM A QUEBEC BIRTH COHORT
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Background & objectives: The American Heart Association proposed a promising set of metrics for the measurement of “ideal” cardiovascular health based on four biological risk factors (weight, glycemia, cholesterol, & blood pressure) and
three health behaviors (smoking, diet, physical activity). We estimated the prevalence of ideal cardiovascular health metrics among 10 year old Quebec youths and examined associations with living in a low-income family.

Methods: Data were from 1334 youth who participated to the 2008 follow-up the Quebec Longitudinal Study of Child Development, a birth cohort started in 1998. Prevalence estimates were obtained for measured weight status (<85th sex- and age-appropriate percentile), blood pressure (<90th sex- and age-appropriate percentile), glycemia (<5.6 mmol/l), and total cholesterol (<4.4 mmol/l) as well as self-reported smoking (never tried), diet (fruits & vegetables ≥ 5 times per day), and physical activity (≥ 1h every day & vigorous intensity activity 3 times per week).

Logistic regressions established relationships between ideal cardiovascular health metrics and socioeconomic conditions (< low-income cut-off) controlling for child’s sex and birth rank, and the mother’s age at child birth, and immigration status. Multiple imputation were applied to reduce risk of biased estimates. Analyses were replicated in non-imputed and imputed data.

Results: Prevalence estimates were as followed: 67% were in healthy weight, 93% had normal blood pressure, 95% ideal fasting glycemia and 57% had ideal cholesterol level. 96% never tried smoking. 23% consumed fruits and vegetables more than 5 times per day, and 22% did met recommended physical activity. Only 7% met ideal standards for all the seven components. A greater proportion of boys (26%) were physically active in comparison to girls (19%). Children from low-income families were less likely to smoke, eat fruits and vegetables 5 times per (p = 0.016), and be physically active (p = 0.012). Adjusted probabilities were lower by 8.06 to 12.29 percentage points in children of low-income compared to those in medium-high income families . Findings were similar across non-imputed and imputed data sets.

Conclusions: Few children meet standards for ideal cardiovascular health and living in a low-income family creates a further burden for achieving ideal cardiovascular health.

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C030c
PATHWAYS TO POSTTRAUMATIC GROWTH AND POSTTRAUMATIC DEPRECIATION IN PATIENTS WITH HEART FAILURE
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Objective. Patients with chronic diseases such as congestive heart failure (CHF) often experience psychological changes following the diagnosis. Rating these changes in a positive or negative direction allows patients to report Posttraumatic Growth (PTG) or Posttraumatic Depreciation (PTD). However, little is known about the distinct pathways underlying these positive and negative changes. This longitudinal study applied a stress and coping model to examine the differential pathways to PTG and PTD over time. A stress and coping model proposes that the extent to which more adaptive coping is used to deal with the chronic stressors associated with illnesses will be related to reports of PTG versus PTD. Further, patients’ psychosocial resources will determine, in part, the types of coping in which they engage, thereby indirectly influencing psychological changes.

Methods. A sample of patients with CHF (N = 190, ages 46-92 years, 64% males) completed self-report measures of psychosocial resources (social support, positive and negative affect, life satisfaction, meaning in life, and spiritual well-being), coping strategies and a CHF-related changes scale and were assessed again six months later with the same measures. We used non-parametric bootstrapping to test the mediation model of coping strategies as potential mediators for the relationship between psychosocial resources and PTG or PTD over time.

Results. PTG and PTD were only moderately correlated (r = -.28) and were predicted by very different resources and coping pathways. Mediation analyses showed that life satisfaction (95% CI[.004,.05]) and spiritual well-being (95% CI[.01,.09]) predicted subsequent PTG over time, mediated by approach coping. Positive affect (95% CI[-.05,-.002]), social support (95% CI[-.04,.003]), and meaning of life (95% CI[-.01,-.001]) inversely predicted subsequent PTD over time, effects mediated by avoidance coping.

Discussion. Results suggest that different psychosocial resources activate different types of coping which, in turn, promote PTG or PTD over time. This study corroborates that PTG and PTD are distinct phenomena that should be considered independently and helps to identify specific causal pathways to them.

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C030d
RELIGIOUS COPING, DEPRESSIVE SYMPTOMS, AND ADHERENCE TO HEALTH RECOMMENDATIONS IN CARDIAC REHABILITATION PATIENTS
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Research has shown that individuals often rely on religious and spiritual beliefs as a means of coping with stressful life events such as chronic illness. Moreover, religious coping has been associated with physical and mental health outcomes. However, patterns of religious coping can vary, and lead to disparate outcomes. For example, negative religious coping (e.g., blaming God) has been shown to be associated with higher levels of stress, whereas positive religious coping (e.g., secure relationship with God) is associated with lower levels. The current project examined relationships between negative and positive religious coping, depressive symptoms, and adherence to health recommendations in a sample of cardiac rehabilitation (CR) patients. Specifically, we tested depressive symptoms as a mediator of the link between religious coping and adherence.

CR patients (N=87) completed self-administered questionnaires at the beginning of CR (Time 1), twelve weeks later at the end of CR (Time 2), and 18 months after the completion of CR (Time 3). The mean age of the sample was 64 years (SD = 9.07). Most participants were male (57%) and European-American (92%). Religious coping styles were measured at Time 1 using the Brief RCOPE, depressive symptoms at Time 2 using the Beck Depression Inventory II, and adherence to health recommendations at
Time 3 by adapting a validated health behavior scale. Adherence was calculated by coding whether participants’ exercise and diet behaviors met recommendations found in the literature.

Path analysis tested whether the relationships between negative and positive religious coping and adherence were mediated by depressive symptoms. Results indicated that negative religious coping was positively related to depressive symptoms ($\beta = .37, p = .001$), which in turn were negatively related to health behavior adherence ($\beta = -.29, p = .003$). Positive religious coping was un-related to either depressive symptoms ($\beta = .19$) or adherence ($\beta = -.26$). Overall, the model fit was acceptable: $\chi^2 (2) = 7.50, p = .024$, ratio = 3.75, CFI = .95, and IIf = .96.

Our findings are consistent with prior research; they suggest that negative religious coping is associated with poor health outcomes in patients who have experienced a cardiac event. These results suggest that coping styles should be assessed at entrance to CR, with interventions implemented for patients who employ negative religious styles.

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C038a

POPULATION FOCUSED PEER SUPPORT TO CONTROL HEMOGLOBIN A1C AMONG PATIENTS WITH DIABETES

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Population-focused strategies have the potential for large public health impact since resources can be adequately distributed to most effectively reach and engage patients including those with the highest need. Additionally, even small changes in clinical measures across an entire population can translate into substantial reduced morbidity as well as healthcare costs. Although much of the rationale for peer support (PS) centers on the ability of peers to reach people, little research in the area has examined PS directed to populations, as opposed to more limited samples. Here we report on a population-focused PS program aimed at reaching and engaging all patients with diabetes at a federally qualified health center in Chicago serving a predominantly Latino population. In a tiered approach, all patients with diabetes ($N=3,700$) receive Regular Care (quarterly contacts, group classes, activities, “point of care marketing”, regular clinical care) and a High Need group ($n=471$) identified as having hemoglobin A1c (HbA1c) $>8\%$ or elevated psychosocial needs, or by physician referral receive additional contact (bi-weekly contact for 6 months and then monthly until they no longer meet criteria or progress has stabilized). After 28 months, peer supporters have reached 3,394 (90%) of all patients with diabetes. Between prior to program initiation and individuals’ most recent clinical measurements, HbA1c declined from 8.22 to 8.14% ($p<0.05$) across the entire population of patients with diabetes. Among patients in the High Need group, HbA1c declined from 9.43 to 9.16% ($p < 0.01$) and the proportion of patients with moderate to good HbA1c control ($\leq 8\%$) increased from 19% to 26%. Additionally, regression analyses showed that engagement by patients with peer supporters is associated with lower HbA1c ($\beta=-0.24, p < 0.05$) and the rate of decline in HbA1c over time for the High Need group is significantly higher than that of the Regular Care group ($\beta=-0.19, p < 0.001$). Despite the progressive nature of diabetes, PS can be instrumental in glucose control among large populations of patients with diabetes.

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C038b

PSYCHOLOGICAL CHARACTERISTICS, METABOLIC SYNDROME, AND GENDER DIFFERENCES IN CHINESE ADULTS

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Metabolic Syndrome (MetS) is defined as the coexistence of three or more risk factors for cardiovascular disease and diabetes, including excess peripheral and central fat mass, elevated blood pressure, increased fasting glucose, and abnormal lipid values. Current knowledge about the relationship between psychological risk factors and MetS is largely based on studies of Western populations, while little is known about how this condition affects Asian populations. The purpose of the study is to investigate linkages between MetS and life satisfaction, hostility, and depressive symptoms in Chinese adults. Secondary analyses were conducted using cross-sectional data from parents of elementary-middle school students in 304 randomly selected households in Qingdao, China. The sample consisted of 388 parents (204 mothers, 164 fathers) aged 30-54. Assessments of fat mass, metabolic biomarkers, personal history of illness, and health behaviors were conducted. Random-effect models and generalized estimating equations were used to explore associations between psychological characteristics and MetS or the individual related conditions, adjusting for age, education attainment, and family income levels. Within the sample population, 5.0% of women and 20.9% of men met criteria for MetS.

Among females, life satisfaction was negatively related to biceps skin fold thickness ($\beta=-0.7182, p<0.001$), LDL-C ($\beta=-0.15, SE=0.05, p<0.01$), risk of hypertriglyceridemia (OR[0.51], p=0.04), and risk of hypertriglyceridemia (OR[0.71], p<0.01). No association was observed between depression and MetS or related conditions. Among males, neither life satisfaction nor depression was significantly associated with MetS. However, relationships were identified between hostility and waist circumference ($\beta=0.25, SE=1.08, p=0.04$), waist-hip ratio ($\beta=0.01, p=0.01$), and fasting insulin ($\beta=1.86, SE=0.66, p<0.01$). Results of our study contribute to the understanding of psychological risk factors on MetS, highlighting gender differences.

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C038c

SUBJECTIVE SOCIAL STATUS IN ADULTS WITH TYPE 2 DIABETES: EXPLORING THE PSYCHOSOCIAL INFLUENCE
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Socioeconomic health disparities in diabetes are well documented. However, perceived social position may contribute to these disparities, beyond objective indicators of status. The present study explores the association between community subjective social status (SSS) and the physiological, psychological and behavioral factors related to the self-management of diabetes. Adults (n = 122) with type 2 diabetes were recruited through primary care clinics and completed validated questionnaires. The sample was predominately older adults (mean[SD] age = 56[9.6] years old), female (64%), African American (65%), had family incomes below $25,000 (53%) and had exposure to some college or less (65%).

We examined objective socioeconomic vs. subjective social status (SSS) as independent predictors of self-management and evaluated objective indicators of social status and psychosocial factors as predictors of SSS. Spearman’s rho correlation coefficients showed significant relationships between SSS and BMI (ρ = .20, p < .05), diabetes self-management (ρ = -.16, p < .05) and depressive symptoms (ρ = -.25, p < .01). Hierarchical multiple regression tested level of education, household income, ratings of neighborhood disorder and SSS as independent predictors of depressive symptoms. Both education and income were non-significant; neighborhood disorder accounted for 5% depressive symptom variability, F(3,108) = 4.50, p < .01, while the addition of SSS explained 21% of the variance in depressive symptoms, F(4,107) = 7.01, p < .001. Regression was also used to assess the ability of objective SES, depressive symptoms, neighborhood disorder and diabetes distress to predict SSS. In the final model only depressive symptoms was a significant predictor (β = -.34, p < .01).

The results suggest a meaningful association between lower SSS and increased depressive symptom severity. We also found income had a more consistent relationship with diabetes self-management, perceptions of neighborhood disorder and emotional distress. Perceived community standing may be a more salient and easily accessible measure of deprivation illuminating pathways of social inequality, access to care and discrimination. SSS could be important in understanding depressive symptoms as a risk factor for poor outcomes in diabetes.

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C038d

THE RELATIONSHIP BETWEEN SELF-BLAME, OTHER-BLAME, DEPRESSION, AND DIABETES SELF-CARE
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We hypothesized that an individual’s judgment of personal responsibility for their diabetes onset could lead to increased anger and self-blame. These increases would, in turn, be associated with higher levels of non-supportive social behavior and decreases in diabetes self-efficacy. Diabetes self-efficacy was hypothesized to be positively related to disease management. We administered a survey measuring judgments of responsibility for disease onset, anger, self-blame, other-blame, perceived non-supportive and supportive social behavior, depression, diabetes self-efficacy, and diabetes management. Participants were 99 Iranian patients (31 males, 68 females; aged 32 – 90 years, M = 55.48). Type 2 and type 1 diabetes were reported in 78.8% and 18.2% of the sample, respectively. Fully 42% of the sample rated themselves as entirely responsible for the onset of their diabetes; however, disease type (1 or 2) did not predict judgments of responsibility for disease onset, F(2, 95) = .30, p > .05. Greater perceptions of responsibility for disease onset were related to greater self-blame (r = .59, p < .01), and decreased blame directed at other people (r = -.29, p < .01). A greater likelihood to blame others for disease related issues was associated with a higher measured A1C (r = .26, p < .05), and a lowered likelihood of exercising (r = -.23, p < .025). Blaming others was also associated with less reported positive social support (r = -.24, p < .025). Individuals who reported higher levels of positive social support reported less depression [F(1, 91) = 6.86, p < .025, B = -.756, η² = .07], and these higher levels of depression were related to significantly lower diabetes self-efficacy ratings (r = -.55, p < .05, η² = .30). Even after controlling for depression, self-efficacy ratings were positively related to general diet [F(1, 96) = 43.34, p < .001, B = -.57, η² = .31], exercise [F(1, 96) = 24.04, p < .001, B = -.50, η² = .20], and blood glucose testing [F(1, 96) = 5.54, p < .025, B =-.16, η² = .06]. Given that blaming others was associated with higher measured A1C, decreased exercise, and lowered perceptions of positive social support, these data support the proposition that decreasing blame and enhancing diabetes self-efficacy may be related to better exercise, diet and blood glucose testing patterns.

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C040

ALCOHOL EXPECTANCIES FOR SEXUAL RISK MEDIATE THE ASSOCIATION BETWEEN SEXUAL ENHANCEMENT MOTIVES AND CONDOM USE
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Alcohol use is prevalent among young women and has been correlated with increased sexual risk taking. Both alcohol expectancies that drinking disinhibits sexual behaviors and sexual
enhancement motives have been associated with decreased condom use. The purpose of this study was to investigate whether alcohol expectancies for sexual risk mediated the association between sexual enhancement motives and condom use. Sexually active, female college students (N=208, 20% Hispanic; Mage = 20.8) completed an online survey assessing alcohol expectancies, sexual motives, and characteristics of their most recent sexual encounter involving alcohol. 67.3% reported unprotected sex during their last sexual encounter involving alcohol. In separate logistic regression models, greater sexual enhancement motives (OR=1.08, p=.019) and alcohol expectancies for sexual risk (OR=1.24, p<.001) were associated with increased likelihood of unprotected sex during the last sexual encounter involving alcohol. Mediational analyses using Preacher and Hayes’ (2008) approach indicated that alcohol expectancies for sexual risk fully mediated the association between sexual enhancement motives and condom use during the last sexual encounter involving alcohol. Namely, when alcohol expectancies for sexual risk were included in the model, sexual enhancement motives were no longer a significant predictor of condom use. Results suggest that within the context of sexual encounters involving alcohol, expectancies that drinking may result in sexual risk taking were associated with decreased likelihood of condom use. Future studies using within-person designs are warranted to further examine the role of alcohol expectancies and sexual motives in relationship to alcohol-related sexual risk behaviors.

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C041a
PATTERNS OF HIV-STATUS DISCLOSURE AMONG A SAMPLE OF HIV-INFECTED MEN AND WOMEN
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Disclosure of human immunodeficiency virus (HIV) status has important implications for the prevention and treatment of HIV. Research suggests that the consequences of HIV-status disclosure are different for men and women which may affect likelihood to disclose to certain individuals. However, studies have shown mixed results in patterns of HIV-status disclosure. The current study seeks to determine whether disclosure of HIV-status to certain targets differs as a function of gender. Participants were 177 HIV-infected men and women recruited from hospitals and specialty clinics. Participants rated the degree to which they had disclosed their HIV-status to several different targets (i.e., mother, father, brother, sister, co-workers, employer, spouse, and friends) on a 5-point Likert scale. For the purpose of this analysis, the scale was condensed into 3 points: non-disclosure/misrepresentation, general/full disclosure, and not applicable. Results from chi-square tests of independence revealed that disclosure of HIV status to mothers (χ² = 4.79, p < .05), gay male friends (χ² = 14.88, p < .001), and spouses (χ² = 4.78, p < .05) differed as a function of gender. In disclosing to their mothers, a higher percentage of females (89.5%) reported disclosing either fully or in general terms compared to males (71.6%). In disclosing to spouses, a higher percentage of males (91.7%) reported disclosing either fully or in general terms compared to females (75.0%). Lastly, in disclosing to male homosexual friends, a higher percentage of males (91.4%) reported disclosing either fully or in general terms compared to females (50.0%). However, the latter result must be interpreted with some caution as 62% of females reported not having a male homosexual friend compared to only 37.7% of males. Generally, results indicate that disclosure of HIV status operates independently of gender in many cases; however, a few situations exist in which the degree of disclosure may depend on the gender of the person disclosing. This study lends important data that may be helpful in elucidating the nature of HIV disclosure in HIV-infected men and women. Future work might account for involun-

cary disclosure, look at reasons for disclosure, and / or examine effects of disclosure on HIV disease progression markers (i.e., CD4 cell count and viral load).

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C052a
ACCEPTANCE MEDIATES THE RELATIONSHIP BETWEEN TINNITUS-RELATED COGNITIONS AND ANXIETY SENSITIVITY
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Objective: Anxiety sensitivity (AS) is a fear of bodily sensations that mimic physical experiences (Reiss & McNally, 1985), which further intensifies fear and anxiety response (Taylor et al., 2007). Among tinnitus patients, AS significantly predicts tinnitus-related distress, even when controlling for hearing loss (Andersson & Vretblad, 2000) and other psychiatric problems (Hesser & Andersson, 2009). Research suggests that enhancement of acceptance among individuals with chronic conditions, such as tinnitus, can improve emotional distress. This study examined whether acceptance mediates the relationship between tinnitus-related cognitions and anxiety sensitivity. Design: Two hundred sixty eight individuals were recruited from a national tinnitus organization. Participants completed online surveys that assessed tinnitus-related cognitions, anxiety sensitivity, and acceptance. Mediation was tested using the steps provided by Baron and Kenny (1986). Results: Negative tinnitus cognitions significantly predicted the anxiety sensitivity, β = .45, (t(265) = 7.45, p < .001). Tinnitus cognitions significantly predicted acceptance, β = .49, (t(265) = 9.27, p < .001, and the AAQ significantly predicted scores on the ASI when THI Total Score was controlled, β = .34, (t(2, 266) = 5.60, p = < .001. Conclusions: Acceptance was shown to fully mediate the relationship between tinnitus-related thoughts and anxiety sensitivity. It is suggested that future studies focus on improving individuals’ acceptance of tinnitus, in order to adequately target AS and alleviate distress. Acceptance and Commitment Therapy (ACT) is one approach that utilizes acceptance and mindfulness, and has preliminarily shown to be beneficial for tinnitus patients (Westin et al., 2008).

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78
ATTACHMENT STYLE AND INTRINDIVIDUAL VARIATION IN WE-TALK PREDICT PSYCHOLOGICAL DISTRESS FOLLOWING DIVORCE

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Background: Adults in romantic relationships develop an interdependent self-concept that is often reflected in increased first-person plural pronoun use (we-talk; Agnew et al., 1998). Prior research on we-talk as a marker of relational interdependence suggests that it may be adaptive for individual and relational health (Rohrbaugh et al., 2008). In the context of divorce, though, maintaining a relational self-construal may have maladaptive consequences. The current study examines we-talk as a behavioral indicator of maladaptive coping through its association with psychological distress following divorce. Given that attachment style is important for understanding how adults adjust to romantic separations (Birnbaum et al., 1997), we also explore the moderating role of attachment style in associations between we-talk and psychological distress.

Method: Participants were 106 recently-divorced adults (39 men) who completed a 4-minute stream of conscious task at baseline, 3-month, and 6- or 9-month follow-ups, during which they spoke about their recent divorce. Frequency of first-person plural pronoun use (we-talk) was derived via automatic text analysis. Participants provided reports of attachment style (ECR; Fraley et al., 2000) at baseline and separation-related psychological distress (IES-R; Weiss & Marmar, 1997) at each assessment occasion. Data were analyzed using multilevel models with between and within person variability in we-talk as separate predictors (Bolger & Laurenceau, 2013).

Results: Analyses revealed a significant within-person we-talk by avoidant attachment style interaction (b = 1.42, p = .047, 95% CI [.05, 2.80]), such that participants reporting an avoidant attachment style showed increased separation-related distress on occasions when they used more than their average level of we-talk.

Discussion: Using an unobtrusive measure of interdependent self-concept following marital dissolution, we found that adults with an avoidant attachment style experience greater distress when using higher than average we-talk while discussing their separation. Findings may aid clinicians by providing clinically relevant, idiographic information about adults at heightened risk for psychological distress following divorce, with potential longer-term implications for health.

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DIFFICULTY IN EMOTION REGULATION IS ASSOCIATED WITH DEPRESSION AND PERCEIVED STRESS BUT NOT HEART RATE VARIABILITY

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Difficulty in emotion regulation has been associated with depression, perceived stress, and disease risk, potentially via dysregulation of the autonomic nervous system (ANS). While both depression and perceived stress are associated with poor ANS tone as evidenced by lower heart rate variability (HRV), the recently defined 6-factor model of emotion regulation has not been investigated in connection with HRV. This study investigated relationships between emotion regulation and depression, perceived stress, and HRV.

Twenty-one undergraduate females (mean age = 18.9 ± 0.70 years) reporting moderate levels of stress (PSS ≥ 14) were enrolled as part of a larger relaxation study. They completed measures of perceived stress (PSS), depression (CES-D), and difficulty in emotion regulation (DERS) at their first visit. HRV was measured (high frequency HRV, low frequency HRV, SDNN, and pNN50) as participants laid quietly for 10 minutes before a distinct relaxation intervention was delivered on each of three occasions, separated by one week. HRV data were averaged across all baseline intervals and log transformed as necessary to normalize distributions.

Participants reported moderate levels of stress (M PSS = 18.75 ± 4.40) and depression (M CES-D = 17.43 ± 9.57). Emotion regulation fell within the normal range (M DERS = 84.57 ± 22.89). Difficulty in regulating emotion was related to depression, controlling for PSS (β = 0.741, p = 0.006) as well as with perceived stress, controlling for depression (β = 0.733, p = 0.008). Difficulty in emotion regulation was associated with lower HRV with small to medium effects, though the relationships did not reach statistical significance (p values > .1)

This pilot study confirmed the relationship between the 6-factor model of emotion regulation with depression and perceived stress, which has important clinical applications. However, relationships between emotional regulation and HRV did not reach significance in this small sample.

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DOES EXPOSURE TO NATURAL DISASTER INCREASE RISK AND VULNERABILITY TO HEALTH PROBLEMS AND DEPRESSION IN AN AT RISK POPULATION?

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Firefighters represent an important sample of convenience to understand the health consequences of exposure to potentially traumatic stressors. Our research group was interested in the effects of disaster exposure pre-employment on firefighter recruits’ psychological and physical wellness during the first three years of fire service. In a baseline interview, 36 male firefighter recruits from seven US cities reported lifetime exposure to natural disaster. These disaster-exposed male firefighter recruits were matched on gender, age, city, and education, and repeated measures MANOVAs were conducted to determine if health symptoms as measured by the SF-12 and depression scores as measured by the BDI-PC differed by lifetime exposure to disaster. Although there were no differences between the disaster groups found on health symptoms, depression scores differed significantly over time (F=4.496, p<.05) such that disaster exposed individuals had continuously higher BDI scores than those without disaster exposure. The potential vulnerability to depression in high-risk professions will be discussed.
C052e

EMOTIONAL NON-ACCEPTANCE AS A PREDICTOR OF EMOTIONAL REACTIVITY

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Background. Emotional reactivity has been closely linked with one’s ability to self-regulate emotion (Williams et al., 2009). Emotional non-acceptance is a particular component of emotion regulation that has been strongly associated with emotionally reactive behaviors, including uncued panic attacks (Tull & Roemer, 2007). We investigated specific deficits in emotion regulation that contribute to differences in emotional reactivity using a writing task that induced unpleasant emotions. We hypothesized that difficulties in general emotion regulation, and specifically high non-acceptance of emotional experiences, would be associated with an increase in negative emotion and decrease in positive emotion.

Methods. 142 college students (aged 18-24) completed two self-report measures assessing emotion regulation skills and positive and negative emotion. They then completed a five-minute writing task about a current difficult problem in order to induce negative emotion and reduce positive emotion. Participants then repeated the emotion measure.

Results. A MANOVA analysis revealed that the upsetting writing task elicited significant increases in negative emotion from Time 1 to Time 2 (F(1,131) = 36.99, p < .01, eta p2 = .22) and decreases in positive emotion (F(1,131) = 9.83, p < .01, eta p2 = .07). Emotion regulation scores interacted significantly with changes in both negative and positive emotion from Time 1 to Time 2. Specifically, emotional nonacceptance (NONACCEPT; F(1, 131) = 12.154, p < .01, eta p 2 = .09), and additional emotion regulation subscales (limited access to emotion regulation strategies and emotional clarity), moderated the degree of positive and negative emotional reactions to the writing task. These findings were consistent with our hypotheses.

Conclusions. Findings suggest that deficits in emotion regulation skills, such as high non-acceptance of emotional experiences, are associated with greater emotional reactivity in response to an upsetting writing task. Emotional non-acceptance may not only impact ability to regulate emotions, but also influence the degree to which emotional responses are experienced. Further research suggestions include developing specific, effective strategies for improving emotional non-acceptance to reduce emotionally reactive behavior.

C052f

EXPLORING MEASUREMENT INVARiance BY GENDER IN THE PROFILE OF MOOD STATES DEPRESSION SUBSCALE AMONG CANCER SURVIVORS

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Background: The Profile of Mood States-Short Form (POMS) is a well-validated tool commonly used for measuring mood in medical/clinical research. Less attention has been paid to the measurement invariance of the POMS—the degree to which the structure and items in the POMS behave similarly for different groups (e.g., women and men).

Previous research shows gender differences on measures of depression, but does not explore the role of differential item functioning (DIF) may play. This study investigates the measurement invariance of the POMS Depression subscale across gender groups in a sample of cancer survivors.

Method: This study used data from American Cancer Society Studies of Cancer Survivors-II, a population-based survey of adult cancer survivors (n=9,115). The POMS Depression subscale has 8 items (Unhappy, Sad, Blue, Hopeless, Discouraged, Miserable, Helpless, Worthless). Invariance was measured using multi-group confirmatory factor analysis.

Results: First, we tested if the structure of Depression subscale varied by gender. We found factor structures were similar for gender groups when we allowed the residual for three items to be correlated (Unhappy, Sad, Blue)(x2= 279.78, RMSE=0.04, CFI=0.99, TLI=0.99). Under that condition, the factor loadings of Depression subscale items were equivalent for men and women (Δx2=6.91, p=0.33, ΔRMSEA=0.00, CFI=0.99, TLI=0.99). However, the functioning of five items differed by gender (Blue, Unhappy, Sad, Hopeless, and Discouraged) (Δx2=30.56, p=0.06, ΔRMSEA=0.00, CFI=0.99, TLI=0.99). Women were more likely than men to endorse these items at a given level of depression, which is referred to as DIF in item response theory. Differences in item functioning were mostly small, but moderate for the item ‘Blue’.

Conclusion: Our findings demonstrate that some depressive symptom items have DIF, which should be accounted for when measuring gender differences in depression. More specifically, the POMS Depression subscale is partially invariant by gender, suggesting that results should be interpreted with caution and special attention paid to gender as a potential predictor/confounder. Further, the subscale might benefit from revision (e.g., remove ‘Blue’).

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**C052g**  
**GENDER DIFFERENCES IN PREDICTORS OF BINGE EATING IN COLLEGE STUDENTS**  
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Binge Eating Disorder (BED) has been identified as the most common eating disorder (Hudson, Hiripi, Pope, & Kessler, 2007) and is becoming increasingly prevalent in college students. Nicoli and Junior (1999) reported that close to 13% of college students meet criteria for BED. Compared to men, women are at a slightly higher risk for suffering from BED (Hudson et al., 2007). A variety of risk factors have been identified for binge eating, including dietary restraint (Fairburn & Brownell, 2005), negative affect (Fairburn et al., 1998), and disinhibition (Schag et al., 2013). However, few studies have explored whether the previously listed predictors are gender-specific. The present study aimed to examine whether body mass index (BMI), depressive symptoms, dietary restraint, disinhibition, and hunger predict binge eating symptoms differently in men and women. Participants consisted of 202 undergraduate students (142 women, 60 men) who completed the Eating Behavior Questionnaire (TFEQ; Stunkard et al., 1985), which assesses dietary restraint of eating, disinhibition, and hunger. Linear regression analyses were conducted to determine whether BMI, depressive symptoms, cognitive restraint, disinhibition, and hunger predict binge eating in women and men. Results revealed the presence of gender differences in predictors of binge eating. Among women, all variables tested emerged as significant predictors of binge eating: BMI (Beta = .125, p < .05), depressive symptoms (Beta = .128, p < .05), cognitive restraint of eating (Beta = .197, p < .05), disinhibition (Beta = .450, p < .05), and hunger (Beta = .283, p < .05); these variables together accounted for 62% of the variance in binge eating. However, among men, only disinhibition (Beta = .518, p < .05) emerged as a significant predictor of binge eating. These results suggest that the presence of negative affect and cognitive restraint of eating may play a less significant role in the development of binge eating for men compared to women. Better understanding the unique predictors of binge eating for both genders will aid in more effective prevention efforts and identification of those who may be at risk for binge eating.

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**C052i**  
**QUALITY OF LIFE DURING CHEMOTHERAPY FOR BREAST CANCER. SYMPTOM EXPERIENCE AND DYSFUNCTIONAL BELIEFS**  
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Background: Although breast cancer chemotherapy increases disease-free survival and life expectancy, it is not without aversive consequences. Research indicates that breast cancer patients undergoing chemotherapy experience burdensome side effects that negatively impact their quality of life. Previous research has also indicated that cognitive variables, such as dysfunctional beliefs, may play a role in the experience of cancer treatment side effects. However, the relationship among chemotherapy side effects, dysfunctional beliefs and quality of life is unknown.

Aims: The aims of this study were to investigate the relationship among chemotherapy side effects, dysfunctional beliefs and quality of life of breast cancer patients undergoing chemotherapy.

Methods: 145 breast cancer patients undergoing chemotherapy were included in the study (Age=52.15, SD=10.51; 97.2% Romanian, 2.8% Hungarian; 33.8% at least some college educa-
Results: Psychological side effects, physical side effects, and dysfunctional beliefs accounted for 48% of the variance in quality of life scores ($F(3, 142) = 43.35$, $p < .001$). When entered in the regression equation, only physical symptoms ($\beta = -3.71$, $p = .04$, $d = .28$) and dysfunctional beliefs remained significant predictors of QoL ($\beta = -.39$, $p = .008$, $d = .40$). Using bootstrapping procedures to obtain estimates and confidence intervals for indirect effects, results showed that the relationship between physical side effects and quality of life was partially mediated by dysfunctional beliefs, [95% CI (-.09 to -.01)].

Conclusion: The results are consistent with a Rational Emotive Behavior Therapy conceptualization of quality of life in breast cancer chemotherapy patients, and suggest that interventions to reduce dysfunctional beliefs may improve quality of life.

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C052k

SOCIAL ANXIETY AND BODY SHAME LINK MINORITY STRESS AND BINGE EATING AMONG LESBIAN YOUNG ADULTS

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Analysis of the Growing Up Today study revealed that lesbian women engaged in more binge eating than heterosexual women (Austin et al., 2009). Several theoretical frameworks have suggested that societal discrimination and stigmatization and subsequent internalization of these attitudes are important etiological factors explaining maladaptive health behaviors among LGBT individuals including binge eating. From the eating disorder literature, we know that body shame and negative affect are robust predictors of binge eating. Furthermore, additional research has demonstrated strong relationships between minority stress and social anxiety and body shame and social anxiety. The purpose of the current study was to examine social anxiety and body shame as sequential mediators of the relationship between minority stressors, both discrimination and stigma-related stressors, and binge eating. We hypothesized that social anxiety would be key factor linking minority stressors to body shame and binge eating. Data was collected online from lesbian young adults. Participants completed measures of minority stress, social anxiety, body shame, and binge eating. Structural equation modeling revealed support for the hypothesized model. Experiencing discrimination and stigma-related stressors were significantly associated with increased social anxiety. In turn, social anxiety was associated with more body shame and body shame was ultimately related to binge eating. The impaired social environment created by the experience of minority stress may have adverse consequences for lesbian women’s’ body satisfaction possibly through self-objectification or low self-esteem. Next steps include examining these relationships longitudinally to determine causal pathways. Implications for clinical practice include addressing the impact of minority stress on the development and maintenance of binge eating and associated disorders among lesbian women.

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C052j

MULTIPLE SCLEROSIS INFUSESpapers on the relationships between depression, anxiety, pain, and healthcare utilization. Here, we test whether depression, anxiety, and pain are predictive of quality of life, medication challenges, and psychiatric symptom endorsement identified in previous research. We utilize secondary data from a cross-sectional study of 260 women with multiple sclerosis (MS) (Su, et al., 2018). Quality of life was measured using the Memorial Symptom Assessment Scale – Short Form (MSAS-SF). Depression, pain, and medication challenges were measured with the Depression Anxiety Stress Scales (DASS). Hierarchical regression analysis was used to predict quality of life and psychiatric symptom endorsement (PHQ-2 and GAD-2). The final model explained 30% of the variance in quality of life, with depression (Beta = -3.71, p = .03), anxiety (Beta = -2.35, p = .03), and pain (Beta = -.46, p = .01) significant predictors. Model coefficients were robust in cross-validation. Inclusion of psychiatric symptom measures (PHQ-2 and GAD-2) in the final model explained 46% of variance in psychiatric symptom endorsement (Beta = -1.15, p = .001). These results are novel and provide a deeper understanding of the relationships between depression, anxiety, pain, and quality of life in women with MS.
THE RELATIONSHIP BETWEEN FAMILIAL SUPPORT AND MENTAL HEALTH CARE SEEKING IN VETERANS

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Many veterans delay accessing necessary mental health care, citing logistical barriers and the stigma associated with mental health treatment (Hoge et al, 2004; Stecker, Fortney, Hamilton & Ajzen, 2007). Familial support might be a protective factor that encourages some veterans to seek help despite these barriers (Mueller et al 2006; Blais & Renshaw, 2013). This study was designed to examine the degree to which familial support relates to the amount of barriers veterans face when seeking mental health care. We predicted that veterans with higher family support would report fewer barriers that lead to a delay in seeking mental health care. This prediction was based on Leventhal’s Common-Sense Model of Self-Regulation (1992), which posits that individuals develop an understanding of their health condition using information from multiple sources (e.g., internet, friends, family, etc.), and this understanding guides treatment decisions (McAndrew et al., 2008).

We surveyed 73 veterans who had previously been seen at a tertiary VA post-deployment clinic. Veterans were asked about barriers to their health care utilization and perceived family support in this one-time assessment.

Our results indicate a trend towards significance for an inverse relationship between perceived family support and number of barriers to care experienced (r=-.220, p=.065). The more perceived family support, the fewer barriers veterans reported to accessing mental health care. In particular, more family support is inversely related to being concerned about the stigma associated with seeking mental health care (r=-.264, p<.05).

Based on this study, veterans with lower familial support may be more likely to experience a greater number of barriers to seeking mental health care. Addressing veterans’ familial support may be one method to improve mental health care seeking behaviors. Limitations include a small sample size, cross-sectional design, and surveying veterans who have already sought care. Further research with a larger sample should be conducted to better establish this relationship and identify specific aspects of family support that act as facilitators in seeking mental health care.

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WOMEN’S SOCIAL PERCEPTIONS AND HEALTH OUTCOMES DURING THE FIRST SEMESTER OF COLLEGE

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Perceptions of the social environment are known to influence mental and physical health outcomes. These effects are particularly strong among women, who show greater reliance on social resources to cope with stress than do men. Social perceptions may be especially important for women during the transition to college, though little research has examined longitudinal relations between social perceptions and health outcomes. To address this gap, the present study investigated relations between social perceptions (i.e., perceived social support and social comparison) and health over the first semester of college – a time when stress is high, and social perceptions may differentiate those at unique risk. First-semester college women (n=157, Mages=18, Mbody=22.5 kg/m2) completed an assessment battery at the start and end of the semester (9 weeks later). Assessment included demographic information and validated...
scales of perceived social support, social comparison, depressive symptoms, perceived stress, and health-related quality of life (HRQOL). Although average levels of stress, depression, and HRQOL did not show significant change over the semester, baseline social perceptions predicted change in these health outcomes. Specifically, although perceived social support was not related to outcomes (ps>0.10), stronger interest in comparing to “better off” others (i.e., upward comparison) predicted decreased HRQOL (F=3.52, p=0.065) and increased depression (F=5.06, p=0.03) over 9 weeks. Controlling for baseline depression status, upward comparison also differentiated those above and below the established threshold for clinically significant depressive symptoms at the end of the semester (Wald $\chi^2=5.94$, $p=0.01$, OR=1.19). These findings are consistent with work that identifies upward comparison as a risk factor for poor health behaviors (e.g., disordered eating) among college women. The relationships observed in the present study indicate that upward comparison also may be a risk factor for depression and health problems in this vulnerable population. Future work examining methods for early targeting of upward comparisons is needed, and may improve health and wellness programs aimed at college women.

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C052p
THE RELATIONSHIP BETWEEN TRAUMATIC EVENTS AND ENGAGEMENT IN PREVENTIVE HEALTHCARE: IMPLICATIONS FOR RESEARCH AND PRACTICE
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Introduction: Epidemiological data indicate that traumatic events (including childhood sexual abuse, domestic violence, elder abuse, and combat trauma) are extremely prevalent and are associated with long term physical and psychological health effects. A robust literature suggests that traumatic events adversely influence patients’ healthcare experiences and their engagement in preventative care. Although the term Trauma Informed Care (TIC) is widely used, it is unclear how to apply this concept in daily healthcare practice. Objective: The purpose of this review is to understand how TIC in medicine can be defined and to provide evidence-based suggestions to operationalize TIC in practice. The review will also provide future directions for research in primary medical care settings. Evidence Review: We examined literature from 1990 to the present using Google Scholar, PubMed, Medline, Science Direct, and PsychInfo databases. Keywords included “trauma informed care” as well as combinations of keywords: "medicine and traumatic events" “medicine and domestic violence” “medicine and sexual abuse,” and “trauma informed care in medicine,” “medicine and veterans” “PTSD medical patients,” and “trauma informed care and medical students.” No randomized control trials of trauma informed care were found in the literature. This review includes cohort and case controlled studies. Findings: TIC in medical settings can be operationalized as providers: 1) demonstrating strong behavioral and communication skills, 2) understanding the physical health effects of trauma, including behavioral coping strategies, 3) understanding how their own trauma history may influence clinical rapport, 4) engaging in inter-professional collaboration, and 5) understanding if and when routine trauma screening is appropriate in practice. Conclusions: The review identifies best-practices for treating patients who openly discuss their trauma histories with providers (trauma-specific care) and systematic techniques to engage patients who may not disclose their trauma history (universal trauma precautions). Based on these findings, we make detailed recommendations for how TIC can be applied in medicine and studied in an evidence-based, programmatic manner.

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C052p
ENGAGING UNDERSERVED POPULATIONS IN MEDICAL CARE: A QUALITATIVE STUDY OF PATIENT PERSPECTIVES
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Introduction: Patient-centered care has become an important goal in healthcare delivery. The Institutes of Medicine defines patient-centered care as “providing care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions.” Despite patient-centered care initiatives, there are widespread race/ethnic and socioeconomic disparities in preventive care utilization. Psychological theories emphasize that successful health behavior change requires patient education, patient self-efficacy, and social and environmental support. This qualitative study was focused on developing an in-depth understanding of what factors influence engagement in preventive healthcare in a large, urban medical center. Methods: In this pilot study, we conducted twenty in depth qualitative interviews with underserved, underinsured patients to better understand the needs of this population. Using content analysis, several robust themes emerged from the interview data. Results: Participants discussed the need to establish a trusting relationship with their providers, the need to be seen as individuals (as opposed to being viewed solely in terms of symptoms or disease condition), feelings of dehumanization in the healthcare system, and difficulty accessing care because of financial stress. The patient-provider relationship was the most important factor in engaging patients in preventive care, even for those who had experienced feelings of dehumanization in past encounters. Discussion: The larger categories of holistic, patient-centered care, and dehumanization are consistent with recent effort to establish patient-centered medical homes when treating underserved populations. In large, urban teaching hospitals, our findings suggest that trainings of residents and ongoing clinical education should focus on how dehumanization may hinder holistic, patient-centered care. Trainings can focus on ways to promote the humanization of patients and give providers skills to discern...
A continued focus on understanding patients' firsthand experiences is essential to achieve the nationally recognized triple aim of improving patient experiences of care, improving population health, and reducing costs.

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C058a
A SNAPSHOT OF HEALTH BEHAVIOR PATTERNS IN THE US IN THE LAST DECADE
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Over the last decade a tremendous amount of resources from federal and philanthropic entities have been dedicated to improving preventive health behaviors and reducing risk behaviors related to cancer and cardiovascular health. The primary objective of this study is to explore the extent to which health behavior patterns have shifted in the last decade using person-oriented methodology that allows for exploration of multiple health behavior patterns. The secondary objective of the study is to explore the extent to which behavior patterns are explained by demographic characteristics and chronic health conditions.

Method: Data was obtained from the Behavioral Risk Factor Surveillance System developed and administered by the CDC in 2003, 2005, 2007, and 2009. Random subsamples of ~30000 were drawn from each year listed. Latent class analyses (LCA), including categorical data for recommended fruits and vegetables consumption, recommended physical activity, cigarette smoking, and heavy and binge alcohol drinking, were computed for each year. Demographic and chronic health condition covariates were added to the LCA models.

Results: Three and four class models were the best fitting models across the years. Each year included a healthy group (~1/2 per sample; mostly met fruits and vegetables and physical activity requirements, non-smoking, non-heavy or binge drinking) and an apathetic group (~1/3 per sample; no preventive health behaviors, no health risk behaviors). Groups varied based on demographic and chronic health condition variables.

Discussion: The results of this study confirms that there is still a lot to be done to improve preventive health behaviors. Additionally, the reoccurrence of the same groups over the years suggest that some population-level interventions may not be reaching everyone equally. Therefore, some groups may require more targeted (but still universal) efforts. Of specific interest is the apathetic group, this group was more likely to have low education and low income, and may most likely benefit from population-level interventions that focus on the barriers they face as well as those that engage them on an individual level.

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C058b
DO EHEALTH METHODS FOR MEASURING EXERCISE LEAD TO CHANGES IN BEHAVIOR? RESULTS FROM AN EXPERIMENT USING FITBITS AND DAILY DIARIES
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Background: Electronic behavioral monitoring is considered the gold standard for measurement of behaviors many health behaviors due to being more objective than self-reported behavior. However, behavioral monitoring can influence behavior, potentially introducing a statistical confound to observational and intervention research. Determining which electronic measures influence behavior and to what degree is crucial for evaluating results of studies that use these methods.

Objective: We conducted a 2x2 randomized controlled experiment to test the influence of two electronic methods—an electronic daily diary (DD) and an accelerometer (a Fitbit; FB)—on participants’ physical activity.

Method: Participants (N=154, 74% female, 55% White, M=19.64 years) reported physical activity in a baseline session (International Physical Activity Questionnaire, IPAQ) and were randomly assigned to one of four groups: FB-only, DD-only, FB+DD, control (no FB, no DD). Those completing daily diaries were sent email reminders to report their physical activity each day for a week via Google docs—an electronic fillable form unique to each participant. Those using a FB wore the accelerometer daily for one week. The outcome was participants’ self-reported physical activity (IPAQ) one week post-baseline. ANCOVA tested differences in the outcome between the four conditions with baseline exercise, BMI, and gender as covariates.

Results: At baseline, there were no differences in reported physical activity by condition. At follow up, participants in the FB-only condition reported significantly more exercise than participants in any other condition (p’s <.01); there were no other significant differences between groups. This group difference was driven by changes in self-reported moderate exercise (p=.01) and mild exercise (p<.10).

Discussion: Since only the accelerometer influenced self-reported behavior, electronic daily diaries may provide a better objective measure of physical activity. This difference may have been due to the fact that the FB provides feedback to the participants such as number of steps per day. Accelerometers that do not provide feedback may not have an influence on behavior. This explanation does not account for the fact that the FB+DD condition did not show an increase in physical activity compared to control.

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EXAMINING FACTORIAL VALIDITY AND INварIANCE OF THEORETICAL CONSTRUCTS FOR IMB BASED ART ADHERENCE INTERVENTIONS

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Measurement of important theoretical mediator constructs in behavioral intervention research is hampered by the wide variety of similar constructs and scales. The Information-Motivation-Behavioral Skills (IMB) Model that is used widely in antiretroviral (ART) adherence research has three key constructs, however, there are numerous available measures for each construct. This study examined multiple scales to identify those that best assessed latent IMB mediator variables in an ART adherence intervention trial. Participants (N = 204) were HIV+, on average 40 years old, 76% male, and 57% African American. A total of 14 observed variables were measured at baseline, weeks 24, and 48. An exploratory factor analysis (EFA) was used to identify the latent variables and a confirmatory factor analysis (CFA) was conducted in Mplus 6.0 using maximum likelihood estimation to demonstrate that the psychometric properties of the observed variables were stable over time. Nested model comparisons were conducted using a combination of fit indices including the difference in the model χ2 and RMSEA, CFI, and SRMR. EFA revealed three latent IMB constructs at baseline, 24 and 48 weeks. A fourth construct including ART control beliefs was also revealed at baseline. However, CFA results suggested scales in this fourth construct were sources of missfit and should be excluded. After doing so, CFA revealed modification indices that suggested IMB constructs were stable at baseline, 24, and 48 weeks. The adherence information construct consisted of an ART knowledge measure. The adherence motivation construct included the Brief Motivation Scale, Adherence Self-efficacy, Necessity for Adherence, Autonomous Motivation, and Autonomy Support from Providers scales. The behavioral skills construct included measures of Patient, Medication, and Logistic Reasons for Nonadherence. The metric invariance model fit was comparable to the configural invariance model χ2(73) = 89.4, p > .05. Findings provided support for measurement and structural invariance suggesting that strategies including flexibility around make-up sessions and maintaining fidelity with families to ensure they receive the dose of the intervention. Only 63.2% of families received weekly dose without make-ups, whereas 71.5% of received dose when including make-ups, which met the a priori goal of ≥ 70%. This suggests future studies should include make-up sessions to increase dose. Additionally, results showed that behavioral skills were somewhat more challenging to consistently implement at the group level (m=3.16) as opposed to the facilitator level (m=3.34). While all overall fidelity scores met the acceptable a priori scores (≥ 3), consistently maintaining fidelity at the group level was more challenging. Finally, the cultural adaptation was developed as a ground up and top down approach to integrating the culturally tailored themes into the curriculum, which is a novel aspect of evaluation created a priori. Cultural tailoring principles guided the conceptualization of essential elements at facilitator and group levels and included the integration of a positive social climate (autonomy-support) and behavioral skills (self-monitoring, goal setting) based intervention. Interestingly, results indicate the importance of providing make-up sessions and maintaining flexibility with families to increase dose. Only 63.2% of families received weekly dose without make-ups, whereas 71.5% of received dose when including make-ups, which met the a priori goal of ≥ 70%. This suggests future studies should include make-up sessions to increase dose. Additionally, results showed that behavioral skills were somewhat more challenging to consistently implement at the group level (m=3.16) as opposed to the facilitator level (m=3.34). While all overall fidelity scores met the acceptable a priori scores (≥ 3), consistently maintaining fidelity at the group level was more challenging. Finally, the cultural adaptation was developed as a ground up and top down approach to integrating the culturally tailored themes into the curriculum, which is a novel aspect of evaluation created specifically for this study. Ultimately, this study has identified strategies including flexibility around make-up sessions and vigilance in implementing behavioral skills are critical and should be considered for future weight loss interventions that target African American families.

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A NURSE-LED HEALTHY HABITS PROGRAM TO STUDY PROJECT

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In urban African American (AA) communities, the health of school-age children is in jeopardy. The high prevalence of obesity (especially in girls), dental caries, and type 2 diabetes, preventable, can be traced to targeted advertisement and high
purchase of sugary drinks and salty and sugary snacks, a reliance on fast food dinners, and a high incidence of sedentary activities. The goal of a grant-funded store-based “Kids Can Cook” program was to teach 6-11 year old children how to select and prepare healthy breakfast, lunch and snack foods biweekly on Sundays while their mothers shopped. We conducted this program for 54 child participants ages 6-11. The Traffic Light Diet (TLD) symbol was used for teaching healthy food choice categories. Children learned how to prepare the following foods: fruit smoothies, veggie and turkey sandwich wraps, fruit kabobs, banana-oatmeal pancakes, yogurt-fruit parfaits, and pumpkin snowballs and were given written recipe cards to take home. Parents were enthusiastic about the opportunity for their children to learn while they shopped. This community program now transitions to an R21 grant proposal. The purpose of this pilot study is to test the feasibility and acceptability of a six-week weekly session-intervention to promote healthy habits in 7-9 year old daughters of single African American mother-daughter dyads. Specific Aims: Using Bronfenbrenner’s Ecological Model assess the feasibility and acceptability of a healthy habits intervention that targets 4 outcomes: knowledge and practice of healthy food choices, physical activity, sleep hygiene, and oral hygiene habits; and An exploratory aim will be to examine the use of strategies to showcase successful mother-daughter dyads. This feasibility study will use a pre-post experimental design with a 2-month follow up. The study sample will consist of 52 dyads comprising AA single parent mothers and 7-9 year old daughters randomly assigned to an intervention or control group. Primary analyses will involve separate data analyses for mothers and daughters; however secondary analysis will also be conducted featuring combined mother-daughter data when appropriate. Feasibility, fidelity, and participant satisfaction data will also be collected.

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C065b
CHARACTERIZING FOOD AND BEVERAGE PURCHASING BEHAVIOURS OF POST-SECONDARY STUDENTS THROUGH GROCERY RECEIPTS: A PILOT STUDY
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Background: The transition to post-secondary school is a time of independence, yet a risky period for declines in overall health. Post-secondary students are stereotyped as having increased alcohol consumption and unhealthy diets, which are concerning given diet-related chronic diseases are manifesting earlier in life. Most diet assessments in campus settings use self-report measures, subject to recall bias and social desirability. There is a need for a more objective measure such as food and beverage receipts to determine purchasing habits which may contribute to understanding diet intake and the development of chronic disease. Objectives: To characterize the purchasing behaviours of post-secondary students through the collection of food and beverage receipts, and to determine the feasibility of this method. Methods: Male and female students (N=18; mean age = 20.56 ± 1.17 years; 83% female; 78% upper year) completed a baseline survey on items related to money spent on food and beverages, eating habits and sociodemographics (e.g. age, year, living arrangement). Food and beverage receipts were submitted over two a week period. A follow up survey included items related to lost receipts, typical week purchases and food consumed. Data were coded by store type and cost of content, specifically alcohol, fruits and vegetables, and analyzed using descriptive statistics. Results: On average, participants spent $136.96 CAN ± $67.29 over a two week period, mostly at grocery stores ($33.29 ± $31.92) followed by the liquor store ($28.93 ± $18.64). The least amount was spent on fast food ($6.08 ± $5.86) and the campus cafeteria ($5.46 ± $3.37). Of the food purchased from grocery stores, $11.39 ± $9.36 was spent on fruits and $14.43 ± $12.17 on vegetables. Most participants reported submitting over 80% of their receipts which were representative of their typical purchases. All participants indicated collecting receipts for the study did not influence their purchasing behaviours, but most reported frequently sharing purchases with others. Conclusion: The results suggest students spent a similar amount on alcohol and groceries, however more money was spent on alcohol than healthier foods such as fruits and vegetables. This study also revealed collecting receipts to determine purchasing habits is feasible in this population and could be used in larger scale studies.

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C065c
EXPLORING THE INFLUENCES OF DIETARY ACCULTURATION AMONG INTERNATIONAL STUDENTS IN CANADA
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Background: Dietary acculturation refers to the process that occurs when members of a racial or ethnic group adopt the food choices/eating patterns of the host country. While past research reports the diets of international students are often adapted to the prominent diet of the host country, what is less understood are the factors that influence dietary acculturation. With the number of students from different racial/ethnic groups entering Canada for temporary study purposes, the health status of international students is an increasingly important campus health issue. Purpose: To explore the influences on dietary acculturation among international students. Methods: Focus groups were conducted with 17 international students (10 females, 7 males; mean age = 20.6 years) at a small northeastern Ontario university. The participants represented 44% of international students on campus. Focus group questions explored the changes students have experienced in their dietary habits upon coming to Canada, reasons for potential changes, barriers to healthy eating, and the availability of the foods they would normally eat in their home country. Discussions were audio recorded and transcribed verbatim. Data was analyzed using procedures consistent with content analysis. Results: The majority of participants experienced a negative change in their dietary habits. Many expressed the cost of food and a lack of availability of foods from their home country as the major factors for their change in diet. Barriers related to transportation to purchase food were also highlighted. Students also indicated an increased consumption of fast food, and that many disliked...
Healthy Eating Patterns Associated With Acculturation, Gender, and BMI Among Mexican-Americans

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Mexican-Americans living on the US Mexico border suffer higher obesity levels than Mexican-Americans nationally. More information specific to dietary consumption among this population is necessary for health promotion and prevention of obesity. This study used culturally tailored indices of healthy and unhealthy food choices to examine the relationship of food intake across acculturation levels, gender, and body mass index (BMI) among a cohort of 1250 Mexican-American adults (68% female, 50% over 49 yrs., 76% low acculturation, 65% over 8 yrs. of school, 24% with diabetes). Most of the sample was overweight or obese (86.5%). Some example healthy eating index foods included baked fish, whole grain breads, orange vegetables, salad, beans, and juices. Some unhealthy eating index foods included chorizo meat, fried meats, white breads, soft drinks, frozen desserts, and other candy. In both univariable and multivariable models we compared the dietary intake of specific foods and index scores for different levels of acculturation, gender, and BMI by constructing mixed effect Poisson regression models to account for intra-family correlation. Other demographic characteristics such as age, education, diabetes status were adjusted and possible effect modifications were also tested while developing a final multivariable model. In the multivariable model, participants with high acculturation were significantly more likely to consume unhealthy foods than bi-acculturated and low-acculturated participants (Rate Ratio (RR)=1.24; p<0.001, RR=1.17; p=0.01, respectively). Males were significantly more likely than females to consume unhealthy foods (RR=1.32; p<0.001). Low acculturation participants were significantly more likely to eat healthy foods compared to bi-acculturated and high-acculturated participants (RR=1.18; p<0.001, RR=1.16; p=0.004, respectively). Higher BMI was significantly associated with less sweet drink intake (RR=0.78; p=0.04). Results provide insight for future nutritional interventions for Mexican-Americans based on their acculturation, gender, and BMI.

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I KNOW I SHOULDN'T EAT THAT BUT I'M GOING TO ANYWAY: THE ROLE OF MOOD AND COGNITIVE DEPLETION IN FOOD CHOICE

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Previous research has examined the effect of negative mood on food choice, but has not examined this variable in conjuction with cognitive status. In particular, cognitive depletion, or fatigued mental resources, could be hypothesized to have a negative effect on decision making and dietary self-regulation. The present study examined the differences in eating behavior among college undergraduates (N = 84) who were first exposed to a mood induction (positive vs negative), and then completed a previously validated (Kostek & Ashrafioun, 2013) procedure for inducing cognitive depletion (high vs. low). Participants in all four groups were then given access to a variety of food types, and total amounts of healthy and unhealthy food consumed were measured in calories. Participants also completed measures of self-esteem and self-regulation (Rosenberg, 1965; Gratz & Roemer, 2004). While the pattern of differences between groups was in the directions hypothesized, analysis failed to find significant differences between groups or main effects for mood or cognitive depletion status, even after the inclusion of important covariates. However, analysis did reveal that both total calories (r = .240, p < .01) and total calories of unhealthy food (r = .263 , p < .01) that participants’ consumed were significantly correlated with measures of self-regulation. Additionally, expression of high anger levels among participants was positively correlated with the consumption of calorically dense, highly palatable food (r = .216, p < .01). Results suggest the need for future research that employs stronger mood and cognitive depletion manipulations, while also further investigating the link between anger, cognitive depletion, and eating behavior.

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SELF-DETERMINED MOTIVATION AND HEALTHY EATING: AN EXAMINATION OF THE ROLE OF ATTITUDES, NORMS, AND PERCEIVED CONTROL

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Decision-making regarding food choices is a complex process involving a range of personal and situational factors. The theory of planned behavior (TPB) has been useful in understanding some of the proximal variables associated with healthy food choice, and studies have found that the constructs of attitudes, social norms, and perceived behavioral control can explain a substantial proportion (i.e., ~25%) of the variance associated with intentions to eat healthy. Self-determination theory (SDT) has added to our understanding of food choice through its identification of factors that affect motivation and ensuing behavior. Research has found that autonomous motivations to eat health-
fully are indeed associated with consuming healthier foods. The processes by which motivation results in such behavior is less clear. A recent meta-analysis of research integrating SDT and TPB in health behavior (Hagger & Chatzisarantis, 2009) provided evidence to support the synthesis of these theories with regard to physical activity. To date, however, there are few studies that have examined the integration of these theories with regard to healthy eating. The present study, then, examined the integration of TPB and SDT in understanding healthy eating. Undergraduate students (n = 422) completed measures of self-determination and the TPB constructs of attitude, social norms, perceived behavioral control, and intentions to eat healthy. Mediation analyses indicated that autonomous motivation to eat healthy was associated with both positive attitudes and perceived behavioral control for healthy eating, but not subjective norms (which would be expected to relate to more controlled motivations). Consistent with previous research, attitudes, norms, and perceived behavioral control were all associated with intentions to eat/buy healthy foods. There was also a significant direct effect for autonomous motivation on intention, though this relationship was partially mediated by attitudes and perceived behavioral control (also confirmed with Sobel test, p < .001). These findings suggest that an integrated model enhances our understanding of the processes involved in healthy food choices. Future efforts to incorporate both theories into interventions would help to clarify the direction of causality between the constructs.

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C074
THE INFLUENCE OF DIET AND PHYSICAL ACTIVITY SOCIAL NETWORKS AMONG COLLEGE-AGED ADULTS
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Obesity is partially a social phenomenon, but little is known about diet and physical activity (PA) within the social networks of college-aged adults. Understanding this population is important given the potential for changes in both networks and behaviors. Social network data collected from 40 college students were examined for perceptions of influence and how nominees’ diet and PA behaviors compared to participants’ behaviors. Overall, 325 nominations were made: family (n=116), college friends (n=104), high school friends (n=87), and significant others (n=18). Significant others and family were perceived as most influential for both behaviors. More family were perceived as having “worse” (39%) or “better” (35%) eating habits compared to participants. More significant others were perceived as having eating habits that were the “same as” (20%) the participant or “worse” (18%). When influence was examined across comparison groups (better, worse, same as), family with “better” eating habits (M(SD)=6.4(2.6), p < .001) and significant others with the same eating habits (M(SD)=9.3(1.0), p < .001) were perceived as the most influential. For PA, family were again perceived as having mostly “worse” (42%) or “better” habits (40%), and those with “better” habits were perceived as more influential (M(SD)=4.9(2.7), p < .001). While more significant others were again perceived as having habits the “same as” participants, no association with influence was seen across comparison groups. College and high school friends, while less influential overall, were perceived as having “better” eating and PA habits compared to participants. For PA, college friends with “better” habits were perceived as more influential (M(SD)=3.8(1.9), p < .001) than other college friends. As adults transition into more autonomous lives, family remains influential as do significant others. Given data was based on participant perceptions of behaviors, next steps include objectively examining participant and nominee behaviors. There is also a need to further examine sources of influence, beliefs about influence, and the ability of social networks to impact behaviors in order to better inform intervention design.

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C078a
A PILOT STUDY TO DESIGN AN INDIVIDUALLY-TAILORED, ADAPTIVE INTERVENTION TO MANAGE PRENATAL WEIGHT GAIN
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Managing gestational weight gain (GWG) in overweight and obese pregnant women (OW/OBPW) is of utmost importance as conventional approaches have been generally ineffective. There is good enthusiasm for novel approaches, such as adaptive interventions relying on dynamical systems modeling to optimize intervention efficiency and effectiveness. However, little to no past research has used this strategy for managing GWG. We have been funded by NHLBI to develop and test an individually-tailored “just in time” intervention that will adapt intervention dosages to the unique needs of OW/OBPW to manage GWG. To optimize this intervention, control systems engineering will be used to understand how changes in GWG for each woman responds to changes in energy intake, physical activity (PA), and planned/self-regulatory behaviors. Purpose. This pilot study (N=28 OW/OBPW) is to establish feasibility and user acceptability of the methods and dosages of intervention components (education, self-regulation, goal-setting, PA/healthy eating (HE) active learning) necessary to manage GWG. Methods. OW/OBPW were recruited from clinic sites and community advertisements and randomized to one of seven intervention dosages for a 6-week period. Data were collected daily (weight, PA) and weekly (dietary intake, HE/self-regulatory behaviors, motivational determinants) over the study period. Results: Several findings will be discussed including: (a) active recruitment at clinic sites has emerged as the most useful recruitment strategy; (b) M-health tools (Aria Wifi weight scale, Jawbone, Actigraph, MyFitnessPal) have yielded good user acceptability in comparison to other devices; (c) developing systematic strategies for intensive data collection to generate real time feedback to participants has presented several challenges; (d) intervention dosages appear viable; and (e) simulations of outcome data for participants across the dosages (i.e., GWG, PA/HE/
self-regulatory behaviors, and motivational determinants of PA/HE). **Conclusion:** Initial development of an individually-tailored behavioral intervention to manage GWG in OW/OBPW appears to be feasible and has good user acceptability. Developing the next phase of the intervention to be fully operational and delivered over the entire pregnancy will benefit from capitalizing on the lessons learned from this pilot study.

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**C078b**

**AN OBESITY PREVENTION PROGRAM FOR YOUTH: HEALTH BEHAVIOR INTENTION, IMPLEMENTATION AND GENDER**

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Prevalence of overweight and obesity in youth is significant. While there have been modest successes in obesity prevention efforts, strategies for making health education programs more accessible, age and gender appropriate, and engaging are warranted. This project examined health behavior change in 227 (52% boys) elementary students following a brief, interactive, school-based obesity prevention presentation. Presentations were delivered during classes by college health ambassadors at schools with a predominantly low socioeconomic status and high minority population. Because research shows that intention is a strong predictor of behavior, students completed an evaluation assessing their plans to be healthy. One month later, students completed a follow-up survey. Overall, 91% reported remembering specific information from the presentation. The majority reported telling their families about what they learned from the presentation and 50% stated that parents assisted them in making a change. While 90% planned to make a change, 92% reported making a health behavior change at follow-up. Chi-square tests of independence were performed to determine whether types of behavior change differed by gender. Among girls, 83% intended to eat healthier ($X^2 (1,N = 223) = 8.56, p = .004$) compared to only 66% of boys. At follow-up, 70% of girls and 65% of boys reported improved nutrition ($X^2 (1,N = 220) = .68, p = .41$). Additionally, 54% of girls and 48% of boys intended to become more physically active ($X^2 (1,N = 223) = .78, p = .38$). Significantly more girls (44%) than boys (29%) reported becoming physically active 1 month later ($X^2 (1,N = 220) = 4.69, p = .03$).

The findings show that a single school-based obesity prevention lesson has a positive effect on low income minority youth. The presentation generated healthy behavior intentions followed by self-reported behavior change. The brief lesson initiated discussion with students’ families and increased social support. However, initiation is the first step in building a lasting behavior. Future work will need to evaluate the lasting effect on health behaviors. Gender differences in intention and initiation support the view that obesity prevention should be gender sensitive. The results suggest that health behaviors can be successfully modified in a classroom setting by non-health professionals.

Thus, schools remain a profitable environment to foster future obesity prevention programs.

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**C078c**

**ASSESING DIFFERENCES IN PARENTAL PERCEPTIONS BASED ON CHILD BODY COMPOSITION AND ASTHMATIC FREQUENCY**

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Childhood obesity and asthma can lead to significant health concerns in adulthood. Parents can be gatekeepers in prevention through proper diet, appropriate activity, and general health needs for their children. While we know that obese and asthmatic children tend to have a lower general health status, we do not know if their parents recognize differences in their health based on these factors. The present study used an independent-samples Kruskal-Wallis test to compare parental perceptions of children’s general health and specific health indices (CHQ) based on the children’s asthma and obesity risk (BMI%). 178 parents of children (7-12 years; 56.55 male) participated in the study. 41.2% of the child sample was asthmatic; 44.1% of children were considered obese. An asthma x obesity interaction effect found for parental perceptions of their children’s mental health ($p = .049$) with parents’ concerns being greatest for non-asthmatic, obese children followed by asthmatic, obese children (101.8 vs. 96.3). Childhood asthma and obesity risk also impacted parents’ views ($p = .000$) and personal time ($p = .049$) to which their children’s health had recently changed. These risks also impacted parents’ views of social-emotional ($p = .030$) and physical ($p = .034$) limitations of children’s health. Other pairwise comparisons for child asthma and obesity risks were also noted and will be presented. Our findings support known limitations that obesity and asthma might have on children’s general health while also expanding our understanding of this association by identifying differences in parental perceptions.

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**C078d**

**EMPLOYING MINDFULNESS & NATUROPATHIC-BASED DIETARY CHANGES TO PROMOTE BEHAVIORAL & ATTITUDINAL CHANGE: A PILOT INTERVENTION**

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The challenges of losing weight already gained are sufficient that cultivating interventions to prevent weight gain among healthy individuals is prudent. Long-term prevention is only possible through promotion of life style and attitudinal changes, and of recent approaches tested, mindfulness appears to be among the most promising. In addition, long-term adaptation may be enhanced by a tailored approach to dietary recommendations, where individuals avoid foods that may promote inflammation. In this uncontrolled trial, 8 normal weight females took
part in an 8-week intervention based on mindfulness principles, and also employing a naturopathic, individualized approach to dietary changes. Through weekly group meetings and a 5-hour mindfulness workshop, participants were encouraged to apply principles of mindfulness to eating, food choice, and emotional regulation. Participants were encouraged to adopt a high-vegetable, moderate protein, low refined-carbohydrate diet. They initially avoided refined sugar and common allergens such as dairy, wheat, egg and soy, then tested them individually to detect intolerance. Average weight loss over 8-weeks was 3.35 lbs (range -12.4 to +3.3 lbs), and this level was sustained over a 1-year follow-up period (M = 5.1 lbs lost, SD = 2.1 lbs). While small sample size precludes traditional statistical analysis, qualitative analysis reveals important changes in stages of change, and measures of mindfulness and eating self-efficacy. In addition, participants highlight the importance of testing for food intolerances to help them identify foods that appear to undermine weight maintenance/loss efforts and interfere with well-being. Results imply that a larger, controlled trial of these intervention efforts is warranted.

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C078e

PSYCHOLOGICAL DISTRESS AND EATING BEHAVIORS IN WEIGHT LOSS PARTICIPANTS WHO REPORT STRESS EATING
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The sample was primarily married (80%) college-educated women (90%), 75% white and 10% Hispanic who ranged in age from 29 to 63 (M= 46 +/- 10.04). BMI ranged from 25.1 to 35 (M = 31).

Results: Binge eating: Scores on the Binge Eating Scale indicated that 47% showed mild to moderate binge eating symptoms and another 39% had severe binge eating symptoms. Only 13% had no evidence of problematic binge eating.

Mindfulness: Participants’ summary scores on the Mindful Eating Questionnaire were significantly lower than in the published validation sample (d = 1.66). However, general mindfulness scores (measured by the Five-Factor Mindfulness Questionnaire) did not differ from published norms.

Anxiety & Depression: The GAD-7 is a commonly used measure of generalized anxiety disorder (GAD) and a score of 8 or higher indicates a positive screen for GAD. The mean for this sample was 9.78 +/- 6.56 and more than 50% of the sample screened positive for GAD. With regard to depression, 23% of the sample scored above the cut off of 3 on the PHQ-2 (a 2-item screener).

Perceived Stress: This sample was also highly stressed with an average of 8 +/- 3.01 on the Perceived Stress Scale-4 which is higher (d = .667) than the average in a recent normative sample (M = 6 +/- 3.14).

Conclusions: Obese and overweight adults enrolling in an employer-sponsored weight loss program who reported high levels of stress and emotional eating were also high in anxiety and stress and showed higher than expected levels of maladaptive eating patterns such as binge eating. While levels of mindfulness were average, the sample showed low levels of mindful eating. This provides further evidence that novel and tailored weight loss programs for adults who report stress and emotional eating are needed.

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C078f

PSYCHOLOGICAL EATING FACTORS AND ECOLOGICAL MOMENTARY ASSESSED EATING BEHAVIORS
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Obesity is a significant public health concern in the United States. Given that unhealthy eating is a key contributor, it is important to examine decision-making regarding food consumption. This decision-making process involves many factors, which may change throughout the day. Further, psychological eating factors (e.g., restraint, disinhibition, and hunger) are associated with obesity and maladaptive eating behaviors. However, less is known about how such eating factors are associated with eating behaviors in daily life. In order to examine associations among self-reported psychological eating factors and daily eating behaviors, young adults (N = 30) completed a baseline questionnaire which included measures of dietary restraint, disinhibition, hunger, emotion and stress-related eating, and unhealthy and healthy eating frequencies. Next, ecological momentary assessment via cell phone was used to capture daily food consumption. Participants received text messages six times a day for six days in which they reported on foods consumed approximately every 2.5 hours. The contents of food consumption reported by participants at each time point were coded as including sugary beverages, sugary foods, fruits, and/or vegetables. Hierarchical linear modeling was used to examine relations between BMI, dietary restraint, disinhibition, hunger, emotion and stress-related eating, baseline unhealthy and healthy eating, as well as momentary consumption of sugary beverages, sugary foods, fruits, and vegetables. Results showed that higher BMI (OR = 2.69) and lower hunger (OR = .41) were associated with a greater likelihood of sugary beverage consumption over the six-day study duration. Increased hunger (OR = 1.80), disinhibition (OR = 1.82), emotion and stress-related eating (OR = 1.59), and baseline unhealthy eating (OR = 1.49) were associated with a greater likelihood of consuming sugary foods. Finally, lower disinhibition was associated with a greater likelihood of consuming fruits (OR = .68) and lower hunger was associated with a greater likelihood of consuming vegetables (OR = .76). Results provide
evidence that self-reported psychological eating factors are predictive of eating behaviors in daily life and may be important to consider in obesity prevention and intervention.

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C078g
QUALITATIVE EXAMINATION OF WHAT WAS HELPFUL FOR AFRICAN AMERICAN FAMILIES RECEIVING EVIDENCE-BASED OBESITY INTERVENTIONS

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Background: Obesity in African American youth is a prevalent and persistent condition with mental and physical consequences. However, behavioral interventions can be challenging for youth and families to implement. Feedback from youth and their caregivers may guide the development of more acceptable and successful weight loss programs.

Methods: Exit interviews from 136 obese African American youth (12 – 16 years, mean age: 13 years, 11 months; mean BMI: 38.2 kg/m² ± 7.5 kg/m²; 67% female) and their primary caregivers (CG) (87% biological mother; 88% obese) following completion of a 6-month family-based behavioral weight loss program were qualitatively analyzed by a doctoral-level team consisting of a pediatric obesity researcher/dietitian, medical anthropologist, and a child clinical psychologist. Youths and CGs were interviewed separately and asked to describe aspects of the program that were most helpful. The transcribed interview data were further coded for themes and patterns describing the helpful intervention content using NVivo 9 with a 15% coding overlap.

Results: The 3 session topics endorsed by the youth as “most helpful” were learning about portion size (43%), managing hunger and food cravings (31%), and physical activity education (29%) while CGs endorsed portion size (49%), nutrition education (43%) and healthy cooking (32%). Four themes of how sessions helped were identified: “Learned New Techniques”, “Increased My Awareness”, Increased My Confidence”, and “Good Teaching Style”. Finally, embedded within responses were four patterns of youth-CG interaction: CG influencing youth, youth working alone, the pair working together, and the pair working against each other.

Conclusion: African American youth and their caregivers had mixed agreement on helpful evidence-based content and variation was present in description of benefits. Interesting language indicating responsibility and social support when making health behavior changes emerged and merit further study.

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C078h
SELF-ESTEEM, MOTIVATION, AND HEALTHY LIFESTYLES IN COLLEGE STUDENTS

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The college years are a critical developmental period for young adults. Decisions students make about their diet and physical activity habits may lead to weight gain and have a lifelong health impact. Understanding why some students navigate the obesogenic environment of the college campus more successfully than others may lead to more effective health promotion programs. This study examined the relationships between self-esteem, motivation, and healthy lifestyle choices in college students using a self-determination theory framework. Specifically, we explored whether importance of appearance and need for approval were associated with healthy lifestyle choices.

College students (N=200; Mean Age = 18.9±1.0 years; 74% female; Mean BMI=22.8±4.3 kg/m²) at a large northeast university completed surveys online regarding their health status, health behaviors, self-esteem (importance of appearance, need for approval), and motivation.

A 2 (High and Low Importance of Appearance) by 2 (High and Low Need for Approval) between-subjects factorial ANOVA was conducted on type of motivation that college students possess for leading a healthy lifestyle. Only main effects for importance of appearance for introjected motivation, F(1, 196) = 14.83, p < .001, η² = .07, and extrinsic motivation, F(1, 196) = 17.71, p < .001, η² = .08 emerged. Positive relationships were observed between autonomous motivation and exercise frequency, healthy diet, and the importance of leading a healthy lifestyle (all p <.001). Higher levels of autonomous motivation were also associated with lower BMIs (p=.05). Controlled motivation was also associated with the importance (p=.001) and a healthy diet (p=.01) but not with exercise frequency or BMI.

College students whose appearance is important to their self-esteem were more likely to possess controlled motivation (introjected or extrinsic) than autonomous motivation. Students with higher autonomous motivation reported more frequent exercise, a healthier diet, greater importance of leading a healthy lifestyle, and lower BMIs. Controlled motivation was also associated with a healthy diet but not exercise frequency or BMI. These findings suggest that students whose self-esteem is not contingent on their appearance are more likely to have autonomous motivation for leading a healthy lifestyle and successfully navigate the obesogenic environment of the college campus.

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Objective: It is estimated that over 30% of youth in the United States have a body mass index that classifies them as overweight or obese. Previous research has indicated that for youth there is an association between being overweight or obese and a high level of body dissatisfaction, depression, anxiety, and a decreased quality of life. However, very little research has examined these relationships among racially/ethnically diverse youth who live in rural communities. The aim of the current study was to examine body size (BMI), body shape satisfaction, depression, anxiety and quality of life among racially/ethnically diverse youth between rural and urban communities in California.

Design: African American (17%), Asian-American (13%), Latino (35%), and White (28%) participants ranging from 8 to 17 years old (M = 11.95 years, SD = 2.81) were recruited from Merced County, a rural Central California, and Riverside, a Southern Californian urban community (N = 79, 58% female). Measures included age, gender, race/ethnicity, pubertal status, family income (SES), body mass index (BMI, assessed as a percentile), the Body Shape Questionnaire (BSQ), Self-Report for Childhood Anxiety Related Disorders (SCARED), Center for Epidemiologic Studies Depression Scale (CES-D), and the Kidscreen scale to assess overall quality of life.

Results: Regression analyses were performed, controlling for age, gender, race/ethnicity, pubertal status, and family SES. An increased BMI was significantly associated with higher body shape dissatisfaction (p < .01), but not associated with depression, anxiety or self-reported quality of life (p's all > .05). In addition, a lower body satisfaction was significantly associated with increased anxiety (p = .001), but not associated with depression or quality of life (p's all < 0.5).

Conclusion: The findings of the present study did not replicate previous research indicating that increased body size and decreased body satisfaction are associated with increased levels of depression and anxiety and a decreased overall quality of life. The results may have clinical implications for the treatment of obesity and related body image issues. Further research is needed to clarify these relationships among diverse youth in rural and urban areas.

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C089a
A SYSTEMATIC REVIEW: THE ROLE OF PSYCHOLOGISTS IN COLLABORATIVE PRIMARY CARE SETTINGS TREATING CHRONICALLY ILL PATIENTS.
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Purpose. Integrated care is now considered to be the gold standard in health care. This care is especially valuable for chronically ill patients who are predominantly followed in primary care. Psychologists can play an important role in such clinics by promoting health, educating patients and conducting and supervising mental health interventions. However, it is unclear how psychologists have been involved in the management of chronic illness in primary care. The aim of this study was to inform health care providers on how psychologists are involved in multidisciplinary primary care teams.

Methods. A systematic review was conducted to identify intervention studies involving a psychologist working in primary care with chronically ill patients. Studies were identified via PubMed, PsychINFO, Web of Science, Scopus and CINAHL from 2000 to 2014. A total of 7398 articles were screened for relevancy by title and abstract review. Of these, 202 were kept after two reviewers independently read the full article. A total of 13 articles were retained for data extraction. The quality of the interventions was evaluated using the empirically validated Quality Index developed by Downs and Black (1998). Data was extracted using a standardized data collection spreadsheet.

Results. Throughout the interventions, the psychologists adopted multiple roles categorized as supervision, patient follow up, treatment and program development. The selected interventions targeted 5 different chronic illnesses and involved socio-demographically diverse populations. All the multidisciplinary interventions demonstrated effectiveness in physical and psychological outcomes.

Implications. This comprehensive review depicts the value of psychologists in primary care settings and promotes the development of effective collaborative care interventions. This will also encourage the training of health care professionals in collaborative care settings. However, more research is needed as limited primary care interventions for chronic illness management were found to implicate a psychologist.

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illness perceptions (i.e., perceived consequences, timeline, personal control, treatment control, symptoms, concern, understanding, and emotional impact, as measured by the Brief Illness Perceptions Questionnaire) as predictors of healthcare utilization (measured by item adapted from NHANES), and how this relationship may differ for adults and parents.

**Methods:** Participants (n=154) included adults and parents of children enrolled in a study to receive diagnostic whole exome sequencing; all had conditions or symptoms with a possible genetic etiology. Sequencing was conducted in the hope of learning information relevant to treatment, prognosis, and/or family risks. All participants completed a baseline questionnaire, a baseline telephone survey two weeks after joining the study, and a follow-up telephone survey two weeks after receiving sequencing results. Measures included the Brief Illness Perceptions Questionnaire at baseline and healthcare utilization measured at baseline and follow-up. We explored differences for adult patients, who reported perceptions of their own illness, versus parents of pediatric patients, who reported perceptions of their child’s illness.

**Results:** Linear regression analyses revealed that, in the full sample (with both adults and parents), treatment control (β=0.17, p=0.04) and symptoms (β=0.25, p=0.01) positively predicted healthcare utilization. However, in analyses separating adults and parents, only symptoms predicted healthcare use for adults (β=0.30, p=0.03), meanwhile only treatment control predicted healthcare use for parents (β=0.35, p=0.02).

**Conclusion:** Illness perceptions may be useful for predicting healthcare utilization among symptomatic populations with difficult-to-diagnose conditions, but effects differ for adults and parents. Although some reasons for healthcare use are clear (e.g. greater need for medical care), these findings suggest that other cognitive factors may also be important, particularly for parents.

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C089c

**PERCEPTIONS OF EXACERBATION TRIGGER CONTROL IN COPD: IMPACT ON PATIENT QUALITY OF LIFE**

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Chronic Obstructive Pulmonary Disease (COPD) is a progressive respiratory disease characterized by chronic airflow limitation and is one of the leading causes of mortality worldwide. Both objective and subjective factors may contribute to the impact of COPD on a patient’s quality of life. Use of the COPD Assessment Test (CAT) (Jones et al., 2009) is recommended by medical treatment protocol to easily assess a patient’s overall symptoms and impact of their disease. Additionally, we have recently developed a comprehensive assessment of exacerbation triggers (CETI) in this population, including perceptions of controllability of such triggers. The present study sought to examine the perceived controllability of exacerbation triggers in patients with COPD and how such perceptions, along with other clinical factors, might relate to overall quality of life. Participants (n=192) were recruited through local clinics and online to complete surveys of the CETI, demographic information, disease specific information including medications and comorbidities, and the CAT. The CETI included a free response section on patients’ individual top triggers, combined with ratings of their controllability. Participants found triggers related to dust, air pollution, smoking, and physical activity to be the most easily controlled, whereas those related to psychological factors, climate, infection, respiratory symptoms and sleep to be more difficult to control. Additionally, hierarchical regression analyses that included demographic characteristics, COPD duration, oxygen use and comorbidity status, indicated that perceived controllability of exacerbation triggers accounted for a significant amount of variance in health status (CAT scores), beyond that accounted for by other variables. Greater perceived controllability of triggers was associated with lower CAT scores, indicating higher overall quality of life and less impact of the disease on functioning. Future research should continue to explore the impact of patient perceptions of controllability on disease progression and quality of life.

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C089d

**POSITIVE HEALTHY PERSON DEPICTIONS, HEALTHY PERSON SELF-IDENTITY, AND HAND-SANITIZER USE: AN EXPERIMENTAL INTERVENTION**

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Use of alcohol-based hand-sanitizer reduces the spread of germs and disease. An experimental intervention was conducted to test the effects of exposure to positive depictions of healthy people on hand-sanitizer use. Previous research suggests that a positive depiction of people who engage in a behavior increases the likelihood of the behavior in part because it facilitates development of a self-identity specific to the behavior. It was hypothesized that exposure to a positive depiction of healthy people increases hand-sanitizer use in part because it results in the development of a healthy person self-identity. Participants (n = 63, age M = 19.8, 75.8% female, 47.2% White) were given alcohol-based hand-sanitizer and then completed a week-long intervention and a week-long follow-up. On every day of the intervention week, experimental participants (EXP) saw a poster containing a picture of healthy people, a list of positive characteristics of healthy people (e.g., confident), and instructions for hand-sanitizer use, whereas control participants (CTL) saw a poster containing only instructions for hand-sanitizer use. Experimental participants also wrote a positive description of healthy people on one day during the intervention week. Among those with high self-esteem (SE), experimental participants reported significantly more (~2x more) daily hand-sanitizer use at the end of the intervention ([F(1, 42) = 4.81, p = .03, η² = .06] [low SE EXP M = 2.71 v CTL M = 2.86, ns; high SE EXP M = 3.96 v CTL M = 1.70, F(1, 18) = 10.82, p = .004, η² = .19] and a significantly stronger implicit healthy person self-identity [F(1, 43) = 7.78, p = .008, η² = .13] [[low SE EXP M = .71 v CTL M = .49, ns; high SE EXP M = 1.04 v CTL M = .43, F(1, 18) = 7.96, p = .01, η² = .22]. Hand-sanitizer use during the intervention follow-up was related to neither experimental condition nor implicit healthy person self-identity. Exposure to positive depictions of healthy people results in more hand-sanitizer use. This outcome may more
readily occur among those with high self-esteem because of consistency with self-perceptions. Whether positive depictions need to be continually promoted for continual use, how positive depictions can be effective in promoting use for those with low self-esteem, and whether self-identity contributes to use needs further investigation.

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C089e
PREDICTING INTENTIONS TO REDUCE FALLS: USING THE HEALTH ACTION PLANNING APPROACH

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Falls are the leading cause of injuries among older adults with one in three older adults falling at least once each year (CDC, 2011). Fall risk reduction programs that include multiple behaviors as well as behavior-change strategies have been shown to be effective in reducing fall risk (Rand Report, 2003). However, behavior change can be a challenging undertaking and not all individuals follow through with it. According to the Health Action Planning Approach (HAPA; Schwarzer & Luszczynska, 2008), one key phase of behavior change is the motivational phase where individuals form intentions to perform specific behaviors such as those required for fall risk reduction. Several factors are thought to predict the formation of intentions including self-efficacy, outcome expectations, perceptions of risk, and the possible threat to one’s health. The purpose of this study is to explore whether the constructs from the HAPA model predict older adults’ intentions to engage in fall risk reduction activities. Participants (N=29) who expressed interest in a fall risk reduction program called ‘Stay Well at Home’ completed a survey at baseline that assessed their intentions, risk perceptions, outcome expectations, and perceived physical functioning ability (used to reflect self-efficacy). Participants were mostly females (67.7%) with an average age of 79.7 years (SD= 7.7). A multiple regression was performed with perceived risk, threat to one’s health of a fall, outcome expectations and perceived physical functioning were entered as predictors of intentions. The alpha level was set at 0.1 given the small sample size (N=29). The overall regression was significant (F(4,24)=3.22, p=.03, R2 = 0.35). Only perceived outcome expectations was a significant predictor (b=1.2, p=.004) with those perceiving more positive outcomes from performing fall risk reduction behaviors reporting greater intentions to engage in those behaviors. Overall, these findings provide support for the role of outcome expectations in the HAPA model.

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C089f
PSYCHOLOGICAL VARIABLES ASSOCIATED WITH RESPONSE TO A SIMULATED DIGITAL BLOOD DRAW

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Phobic responses to blood and needles represent central barriers to blood donation and blood draws in healthcare settings. Considerable evidence suggests that in-vivo exposure to feared stimuli (e.g., blood and needles) represents an effective intervention for those with specific phobias. The current study examined the association between individual psychological factors and attitudes (e.g., state anxiety, orientation to blood donation) with subjective responses to a highly realistic video-based (digital) blood draw simulation. Healthy college students (n = 101) completed measures of blood donation attitudes (Blood Donation Attitudes Scale; BDAS), fear of blood donation (Blood Donation Fears Inventory; BDFI), state anxiety (State/Trait Anxiety Inventory; STAI), and fear of medical stimuli (Medical Fears Survey; MFS), as well as a measure of anticipated stress (0-10 Numerical Rating Scale). Participants then underwent a digital blood draw simulation which paired footage of a human arm undergoing a blood draw with simultaneous tactile stimuli to the participant’s own arm, thus successfully generating a sense of digital arm “ownership”. Measures experienced stress and presyncopal symptoms (Blood Donation Reaction Inventory; BDRI) were collected following the simulation. Bivariate analyses indicated that participants’ state anxiety, BDAS, BDFI, and MFS scores were associated with greater self-reported stress both in anticipation of and in response to the digital arm paradigm, as well as greater self-reported presyncopal symptoms (BDRI) following the simulation (r’s = .30 -.55; all p’s < .05). Further analyses examined specific subscales within the BDFI and MFS. Results indicated that, within each respective measure, the subscale specific to fear of blood and needles showed the strongest associations with anticipated/experienced stress and presyncopal symptoms in response to the digital arm paradigm (r’ s = .50 -.70; p < .000). Findings support the potential specificity of the digital arm paradigm in evoking anticipatory and experienced stress as well as pre-syncopal symptoms among individuals with elevated fear regarding blood and needles.

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C089g
STRESS AND DEPRESSION AND THEIR ASSOCIATION WITH SLEEP PROBLEMS AMONG TWO-YEAR COLLEGE STUDENTS IN THE CHOICES STUDY
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Background: Two-year college students are a unique population at higher risk for sleep problems as well as for associated health issues such as depression and chronic stress.
Purpose: This study examined the association of stress and depression with sleep quality and quantity in a two-year longitudinal study of two-year college students.
Methods: Multilevel models predicting sleep hours of sleep per night and sleep problems, and controlling for a number of key covariates, were employed. This approach both accounts for the non-independence of the repeated measures data as well as parses within-person (i.e., time-varying or episodic) effects from between-person (i.e., non-time varying or chronic) effects.
Results: Participants were most typically female (68%), White (73%), young adults (M age = 22.8, SD = 5.0), and garnering adequate hours of sleep per night (M hours per night = 8.4, SD ≈ 1.2). Neither stress nor depression were predictive of hours of sleep per night; however, younger age and greater numbers of working hours per week were significantly predictive of less sleep. Notably, sleep quality outcomes (i.e., sleep deprivation, sleep onset insomnia, and hypersomnia) were all significantly associated with both with both chronic and episodic depressive symptoms. Comparatively, stress was also an important, albeit a less robust, indicator of sleep problems.
Conclusions: Our results show that although college students are often counseled to “get enough sleep,” sleep quality may be the greater health concern for this group, particularly for those experiencing high levels of stress and depression. Given the strong relation between depressive symptoms, stress, and sleep problems, intervention programs targeting sleep behaviors for two-year college students should ideally include strategies targeting issues associated with depressive symptoms, stress, and work/life balance.
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C089h
THE PHYSICAL ACTIVITY AND SLEEP ASSOCIATION IN A NATIONAL SAMPLE BY GENDER, RACE/ETHNICITY, EDUCATION, AND VETERAN STATUS
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Introduction. Higher levels of physical activity (PA) are associated with better sleep. However, exploration has been limited at the national level and by socio-demographic subgroups.
Methods. Using year 2013 Behavioral Risk Factor Surveillance System data, we analyzed the association between PA and sleep for the overall sample and stratified by gender, race/ethnicity, education, and Veteran status.
Results. The prevalence of meeting PA guidelines (≥150 minutes/week aerobic) was 50.0%, meeting sleep recommendations (7-8 hours/24 hours) was 56.4%, and 29.7% met both. In logistic regression analyses accounting for complex sample design, those who met PA guidelines had greater odds of meeting sleep recommendations (OR = 1.25; 95% CI 1.22, 1.28), compared to those who did not. The association persisted after adjusting for demographics, self-rated health, BMI, and other health-related behavior (fruit and vegetable consumption, cigarette smoking, and heavy alcohol use; adjusted OR = 1.07; 95% CI 1.04, 1.10). Stratified across demographic subgroups, the odds of meeting sleep recommendations based on meeting PA guidelines by gender was 1.03 (95% CI 0.99,1.08) for males and 1.10 for females (95% CI 1.06,1.14); non-Hispanic White = 1.08 (95% CI 1.05, 1.11), Hispanic = 1.03 (95% CI .94, 1.14), Black = 1.08 (95% CI .99, 1.19), Asian = 1.07 (95% CI .88, 1.30), and American Indian/Alaskan Native = .98 (95% CI .78, 1.23); education
Conclusion. A positive association was found between meeting PA guidelines and meeting sleep recommendations for the national sample overall, with variation by demographic subgroup. Specifically, the PA-sleep association was significant among females, non-Hispanic Whites, higher education levels, and both Veterans and non-Veterans, but not among males, racial/ethnic minority groups, and those with education <12 years. These findings support the public health importance of the association between physical activity and sleep. Further research is warranted to examine differences by demographic subgroup along with possible explanations for those differences.
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to determine the factors associated with donation willingness among undergraduates, graduate students, and staff and faculty.

**Results:** While knowledge about HCT, religious affiliation, age, and Black race were associated with willingness to donate hematopoietic cells across the three groups, other predictors varied by university status. In particular, undergraduates who were on the registry or had some interest in donating hematopoietic cells registry were more likely to be Asian (OR=1.84, 95% CI, 1.05-3.22) and less likely to express concern about donor confidentiality (OR=0.89, 95% CI, 0.81-0.98). In contrast, staff/faculty registry participants were less likely to endorse donor autonomy in determining the recipients of their donated hematopoietic cells (OR=0.71, 95% CI, 0.60-0.85).

**Conclusions:** To improve registry participation, campaigns must target factors most relevant for a specific segment of the college population. For example, among undergraduates, donor confidentiality is likely to be a critical area of focus for effective registry expansion.

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**C096a**

**DOES PERCEIVED SOCIAL SUPPORT MEDIATE THE RELATIONSHIP BETWEEN CATASTROPHIZING AND PAIN RESPONSE?**

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**Objective:** The objective of the current investigation was to contribute to the limited body of literature regarding the role and importance of social context, in particular social support, to the experience of pain. Specifically, the current study proposed that some of the previously observed effects of pain catastrophizing on pain experience variables (such as perceptions of pain, etc.) operate through a social mechanism of action by reducing available social resources to help people cope with the stress of pain. Thus, it was hypothesized that perceived social support would at least partially mediate the relationship between pain catastrophizing and pain experience or response variables (perceptions of pain intensity and unpleasantness and tolerance time).

**Method:** A sample of 285 college students enrolled in introductory psychology courses answered baseline questionnaires about dispositional variables before completing a fixed-time cold pressor task (60s) followed by an open-ended cold pressor task (to test pain tolerance). Questionnaires assessed perceived general social support (the Social Provisions Scale), dispositional and situational pain catastrophizing (Pain Catastrophizing Scale), and perceptions of pain intensity and unpleasantness (using visual analog scales).

**Results:** The final sample consisted of 285 college students ($M_{age} = 19.62, SD = 1.73$), was primarily White (77.9%) and female (58.2%), and the majority denied having either chronic or recurrent pain ($n = 160, 56.1%$). Regression and SEM analyses demonstrated that the study mediation hypothesis was not supported.

**Conclusion:** Results of the current study suggest important revisions and considerations for future replications and similar studies.

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**C096b**

**EXAMINING THE RELATIONSHIP BETWEEN PERCEIVED INJUSTICE AND ATTENTIONAL BIAS IN CHRONIC BACK PAIN**

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A growing body of research suggests that perceptions of injustice contribute to detrimental physical and psychological outcomes among individuals with recent injury as well as those with chronic pain conditions. Recent reviews have suggested that attentional bias might comprise a mechanism by which perceptions of injustice systematically impact on pain-related outcomes. Accordingly, the current preliminary study examined the relationship between perceived injustice and attentional bias toward pain in a sample of individuals ($n = 60, 29$ female, mean age 38.9 years, mean pain duration 9.2 years) with chronic low back pain (CLBP). The Injustice Experiences Questionnaire (IEQ; Sullivan et al., 2008) was used to assess perceptions of injustice related to CLBP experience. Participants’ selective attention toward personally-relevant pain stimuli (i.e., faces cueing pain) was assessed via a pictorial dot-probe methodology (e.g., Vervoort et al., 2013). Subsequently, participants were asked to rate the pain, anger and sadness of each picture presented during the dot probe task. Findings showed significant selective attention to pain faces [$M_{AB}= 13.22; F(1,52) = 9.32, p < .01$] among participants who reported high levels of perceived injustice. No such effect was observed for participants who reported low levels of perceived injustice [$M_{AB} = .83; F(1,58) = .04, ns$]. Surprisingly, participants’ level of perceived injustice was significantly positively associated with both anger and sadness ratings of the pictorial stimuli, in that individuals with higher IEQ scores tended to attribute more anger and sadness to the faces viewed, [$F(1,51)=6.32, p<.05$] and [$F(1,51)=13.04, p<.0001$], respectively. No such association was observed between perceived injustice and picture pain ratings. The current results are the first to highlight a positive relationship between perceived injustice and attention to pain stimuli, as well as perceived injustice and increased perception of anger and sadness in faces expressing pain. Clinical and theoretical implications are discussed, with specific focus on interpersonal dynamics relevant to perceived injustice and chronic pain.

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THE PHODA-YOUTH ENGLISH: AN ELECTRONIC MEASURE OF ANTICIPATED PAIN AND HARM FROM FEARED ACTIVITIES

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Introduction: The Photograph Series of Daily Activities –Youth (PHODA-Y) English is an electronic measure that gauges pain-related fear and anticipated pain in youth with chronic pain to identify treatment targets. The original PHODA-Y English had 79 items. This study aimed to decrease length of the measure and examine factor structure, internal reliability, and construct validity of the PHODA-Y English.

Methods: Participants were 194 children and adolescents, ages 8-20 years, who presented to an outpatient pain clinic for evaluation (n=98) or enrolled in an intensive pediatric pain rehabilitation program (n=96). Patients completed the PHODA-Y along with measures of functional disability, pain-related fear, and avoidance. Item reduction was conducted by removing items that were frequently rated as not applicable (by >20% of patients), not considered worrisome (mean <2.0), or items that loaded poorly in the factor analysis. Construct validity was measured by relations between PHODA-Y worry and anticipated pain scores with levels of pain-related fear, avoidance, and functional disability.

Results: Following initial item reduction, the remaining 56 items were entered into a maximum likelihood factor analysis with oblique rotation and criteria of eigen values > 1 producing an unstable seven factor solution. Number of factors was reduced until a stable structure (≥4 on each factor) emerged. Items loading below 0.4 were then removed, resulting in a 46-item measure with four factors: active physical, social/school, activities of daily living, and upper extremity. Internal reliability for the subscales ranged from .93-.96. Regarding construct validity, across subscales, fear and avoidance were more strongly linked to total worry scores (r=.53, p<.01; r=.42, p<.01), while disability was strongly linked to both worry (r=.63, p<.01) and total anticipated pain (r=.63, p<.01). Within subscales, total PHODA pain and worry scores were strongly correlated (r=.78, p<.01).

Conclusions: A 4-factor structure emerged from the shortened version of the PHODA-Y. Across domains, disability, avoidance, and fear were significantly associated with worry and anticipated pain scores, reflecting the robust nature of the measure. Results from the PHODA-Y can directly inform clinical care via in vivo exposure to help clinicians provide targeted treatment of chronic pain conditions.

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ASSOCIATIONS WITH AFFECTIVE RESPONSE DURING EXERCISE: COMPARING IMPLICIT AND AFFECTIVE ATTITUDES AND BEHAVIORAL INTENTIONS

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Background: Theory suggests that implicit and affective attitudes are influenced by affect during an experience; whereas behavioral intentions are influenced by deliberative processes, such as planning (Evans, 2008; Strack & Deutsch, 2004). Therefore, we hypothesized that implicit and affective attitudes toward exercise would be more strongly associated with affective responses during exercise than exercise intentions. We tested the hypothesis by examining the extent to which people’s affective responses to exercise are associated with (a) different measures of implicit and affective attitudes towards exercise and (b) exercise intentions.

Methods: Healthy young adults (N=50; mean age=20.2 years) completed a physical activity Implicit Association Test (Conroy et al. 2010) to measure implicit attitudes toward exercise, followed by a baseline questionnaire that included measures of affective attitudes (e.g., describing exercising regularly as pleasant/unpleasant), affective associations (e.g., feeling joy when thinking about exercising), and exercise intentions (e.g., intention to exercise in the next month). Afterwards, participants exercised for 20 minutes on a treadmill at a moderate intensity. During the exercise, participants rated their core affect using the Feeling Scale (FS) (i.e., “How do you feel right now?” on an 11-point scale ranging from very bad to very good) at baseline, post-warm up, during their exercise (at 5-minute intervals), post-cool down, and 5 and 10 minutes after the exercise.

Results: Consistent with our hypothesis, affective attitudes (r=0.46), affective associations (r=0.48), and implicit attitudes (r=0.20) were more strongly associated with the average of FS responses during exercise than exercise intentions (r=0.11). None of the measures were related to FS scores post-exercise.

Implications: Affect experienced during exercise is more strongly associated with intuitive decision making factors than deliberative factors. In addition, attitudes measured with self-reported scales were more strongly associated with in-exercise affect than implicit attitudes, perhaps due to the shared method variance in how affect during exercise and affective attitudes were assessed. Measurement and clinical implications will be discussed.

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CHANGES IN SEDENTARY BEHAVIOR AMONG HIGH-SCHOOL ADOLESCENTS

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Introduction: Previous studies indicate that sedentary behavior increases as adolescents age. High levels of sedentary behavior may increase risk for insulin resistance, hypertension, and the
metabolic syndrome in youth. Little is known, however, about the impact of health interventions on the trajectory of seden-
tary behavior. This study examined changes in sedentary behav-
ior in adolescents who took part in a health education study on cardiovascular health and physical activity (PA).

Methods: Participants (N = 549; ages 15-17 at baseline; 45.7% boys) reported their sedentary time (mean hours/day watching TV, playing video/computer games, and using a computer for tasks unrelated to schoolwork) at baseline, at 7-weeks, and at 2-year follow-up. Latent growth models were used to determine how sedentary behavior changed over time and whether the rate at which it changed differed by gender. Models controlled for baseline body mass index [BMI; mean = 23.1 (SD = 4.3)] and PA [days/week active for ≥ 60 minutes; mean = 3.5 (2.3)].

Results: Overall mean sedentary hours/day were 3.8 (SD = 2.2), 3.5 (2.2), and 3.2 (2.0) at baseline, 7-weeks, and follow-up, respectively; for girls, 3.8 (2.2), 3.4 (2.1), and 3.1 (2.1); and for boys, 3.9 (2.2), 3.6 (2.2), and 3.4 (2.0). Fit indices indicated a good fitting model [χ²(6) = 8.123, p = .229; RMSEA = .026 (90% CI: .00 -.07); CFI = .995; SRMR = .016]. Mean change in sedentary time was -18 (p < .001). Gender was unrelated to baseline levels of sedentary time (β = .071, p = .272), but predicted change in sedentary time (β = -.195, p = .035). In particular, girls had greater rates of linear decrease in sedentary behavior than boys. PA was related to baseline sedentary time (β = -.228, p < .001), but not change in sedentary time (β = .068, p = .519). BMI was unrelated to both baseline (β = .067, p = .166) and change in sedentary time (β = .043, p = .718).

Conclusion: These results indicate that health education inter-
ventions may decrease sedentary behavior in adolescents. Gen-
der differences in the rates of decrease in sedentary time and studies showing that boys are more sedentary than girls suggest that gender specific health interventions may be warranted. More studies are needed to determine if targeting sedentary behav-
ior may lead to more substantial decreases in this outcome over time and to examine how changes in sedentary behavior may impact cardiometabolic risk.

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C114d
CHARACTERIZING SEDENTARY AND PHYSICAL ACTIVITY BEHAVIORS AND THEIR RELATIONSHIPS TO SYMPTOMS IN DEPRESSED FEMALES

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Current evidence suggests that both physical activity and seden-
tary behaviors are related to symptoms of depression. How-
ever, there is a paucity of data examining these relationships in patients meeting clinical diagnostic criteria for major depressive disorder. Furthermore, previous studies have included surro-
gate self-report measures of sedentary behavior (e.g. tv-viewing time). The purpose of this study was to characterize sedentary behavior patterns in patients with major depressive disorder by employing both self-report and objective measures. Rela-
tionships between physical activity and sedentary behaviors and symptoms of depression were also explored. Depressed females (n = 24; 38.6 ± 14.0 yo), wore Actigraph accelerometers for 5-7 days and completed the International Physical Activity Questionnaire (IPAQ) and the Beck Depression Inventory (BDI). Accelerometers were used to measure time spent engaging in sedentary behaviors and in different intensities of physical activity (light, moderate, vigorous). Accelerometer data showed that patients averaged 11.5 hours (693 ± 94 min) of sedentary time/day which accounted for 77% of their waking hours. Of this time, more than 6 hours (377 ± 116 mins) were accumulated in sedentary bouts of ≥ 30 mins and more than 3.5 hours (215 ± 98 mins) were accumulated in bouts lasting ≥ 60 mins. On average, participants spent 136 ± 94 mins in light activity, 57 ± 26 mins in moderate activity and 15 ± 8 mins in vigorous activity each day. Self-reported and objectively measured moderate or vigorous physical activity were not significantly predictive of BDI scores (r = 0.05 - 0.39). Similarly, sedentary time (both IPAQ and acti-
graph) was not significantly related to depressive symptoms (r = 0.08 - 0.19). Even in these relatively active depressed patients, more than 75% of the day was spent participating in sedentary behaviors compared to recent reports of 57% in healthy adults (Healy, 2008). Large portions of this sedentary time were ac-
cumulated in sustained bouts suggesting that interventions tar-
geted at breaking sedentary time into shorter bouts or reducing total sedentary time could be beneficial.

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C114e
ENGAGING IN PHYSICAL EDUCATION (PE): IMPACT AND MEDIATION ANALYSIS OF A LEGISLATIVE DOWNGRADE TOWARDS PE

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In Portugal, grades are the key factor to access the best universi-

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Better Health Through Behavior Change
PSYCHOSOCIAL PREDICTORS OF MODERATE AND VIGOROUS PHYSICAL ACTIVITY AMONG COLLEGE STUDENTS BY GENDER

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Moderate and vigorous physical activity (MVPA) among college-age students is lower than national recommendations, particularly among female college students. M-health technology (e.g., tracking devices, social media) may be one strategy to promote MVPA; however, little is known about the combined influences of M-health tools, cognitive-behavioral strategies, and psychological well-being in this population.

Purpose. To examine the moderating influence of gender on the associations between PA tracking device usage, social media engagement, positive PA affect, goal-setting, self-monitoring, and MVPA in college students.

Methods. College students (N = 634; 47% female) at a large University in the northeast completed self-reported measures using an online data capture system. Multi-variable regression analyses were used to predict influences on MVPA. Results. Among men, 23% of the variance in VPA was explained by PA device usage (β = 0.18), self-efficacy (β = 0.15), and self-monitoring (β = 0.13), F = 16.44, p < .01. The model for MPA among men was not-significant. For women, 18% of the variance in VPA was explained by goal-setting (β = 0.18) and self-monitoring (β = 0.13), F = 10.96, p < .01. For MPA, 8% of the variance was explained by goal-setting (β = 0.23) and self-monitoring (β = 0.14), F = 3.98, p < 0.05.

Conclusions. These preliminary findings suggest that VPA among college students is moderated by gender. Self-monitoring emerged as a strong predictor for both men and women whereas PA device usage was stronger for men and goal-setting was stronger for women. These findings may be useful for tailoring PA interventions in college populations.

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C114h
THE DEVELOPMENT OF A SCALE TO ASSESS NEGATIVE COGNITIONS IN RESPONSE TO EXERCISE-RELATED DISCOMFORT
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The role of cognition has been widely examined in the field of athletics and physical performance, but has received little empirical attention in understanding the exercise behavior of non-athletes (i.e., individuals who exercise for health purposes, recreation, etc.). A questionnaire was developed to assess negative cognitions that individuals may experience in the face of exercise-related discomfort or unpleasantness. Items for this measure were based on an extensive literature review and findings from the primary author’s dissertation. The sample is comprised of 281 undergraduate students at The University of Alabama with a mean age of 19.3 years. Sixty percent of the sample is female and 80% is Caucasian. Participants completed a randomized set of questionnaires, including the new measure (Scale of Negative Thoughts About Exercise-Related Pain or STEP) and several validated measures assessing related variables such as exercise-specific self-efficacy, social support for exercise, depressive symptoms, and exercise rates and behavior. STEP, the new measure, demonstrated excellent reliability with a Cronbach alpha coefficient of .910. Principal components analysis yielded two factors for STEP: one characterized by negative expectations held about exercise-related discomfort (Negative Expectations subscale) and the second characterized by ruminative thinking occurring during exercise engagement (Ruminations During Activity subscale). As hypothesized, STEP had a moderate positive correlation with depression symptoms (r = .23, p < .001). STEP scores were negatively correlated with overall health (r = -.19, p < .05) and exercise self-efficacy (r = -.37, p < .001). Also as anticipated, STEP was negatively correlated with engagement in vigorous exercise but was not significantly related to either walking or moderate intensity exercise. A structural equation modeling approach will be utilized to discern the nature of association between STEP and other key factors (i.e., self-efficacy; exercise dependent variables). The implications for engagement in this type of negative, exercise-related cognitive patterns will be discussed. These results as a whole offer preliminary support for the psychometric properties of this new measure.

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C114j
THE RELATIONSHIP BETWEEN EFFICACY AND SOCIAL CONTROL IN YOUTH WITH AND WITHOUT PRADER WILLI SYNDROME
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Parental social control (SC) has been associated with greater levels of physical activity (PA) in youth (Wilson & Spink, 2011) as well as in youth with Prader Willi Syndrome (PWS), a genetic disorder characterized by obesity, physical and psychological challenges (Wilson et al., 2014). One factor that has been associated with parents’ use of SC is parents’ confidence to promote PA in their children (Wilson et al., 2013). Not only might parent’s own capabilities (parent efficacy) influence SC use but also the capabilities of their child (child self-efficacy; Lent & Lopez, 2002). The purpose of this study was to examine whether parental efficacy and child self-efficacy predict parents’ use of social control in youth with PWS and obese youth. Families of
youth with PWS (N=36) and families of youth who were obese (N=49) completed a questionnaire at the baseline assessment of an ongoing physical activity intervention (Rubin et al., 2014). Parents reported their confident to promote PA in their child (Kraft et al., 2012) and their reported use of SC (Wilson & Spink, 2010). Youth reported their self-efficacy to perform physical activity (Mott et al., 2000). For each type of SC (i.e., positive, collaborative, and negative), a separate multiple regression was performed with parent and child efficacy predicting the use of that SC type. Separate analysis was performed for both families with PWS syndrome and families with youth who were obese. In parents of youth with PWS, both parent efficacy (β=.47, p=.001) and child efficacy (β=.38, p=.008) predicted positive SC (R²=.41) while only parent efficacy (β=.40, p=.004) predicted positive SC in obese youth (R²=.18). Collaborative SC was predicted by parent SE (β=.39, p=.017) in parents of youth with PWS (R²=.24) and by both parent SC (β=.50, p<.001) and child self-efficacy (β=.27, p=.032) in parents of obese youth (R²=.33). The regressions for negative SC were not significant in both parents of youth with PWS (R²=.003, p=.95) and parents of obese youth (R²=.07, p=.18). With both parent and child efficacy related to SC, these findings suggest that both the parents’ own capability and the capability of their child influence their use of social control in both youth with and without PWS.

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C114k
USE OF ACCELEROMETERS FOR PHYSICAL ACTIVITY ASSESSMENT: DO CALIBRATION ESTIMATES CHANGE OVER TIME?

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Accelerometers are widely used to obtain an objective measure of physical activity (PA). Accelerometers do not directly measure exertion, which is often desired for outcome measures such as minutes of moderate activity. Accelerometer activity counts can be converted to such data by calibrating accelerometers to a measure of exertion, but most prior calibration studies have limitations, including (1) estimates are often based on young and healthy participants and do not apply well to older sedentary populations; (2) variability between individuals is not examined; and (3) variability over time within individuals is not taken into account. The longitudinal design of the current study allows examination of change over time in accelerometer calibration in a population of sedentary veterans with diabetes. In a trial of an automated PA intervention, sedentary participants with diabetes underwent treadmill-based cardiopulmonary stress tests at study intake, and subsequently at 3, 6, and 12 months. Actigraph GT3M accelerometers were worn at the waist and oxygen consumption (VO2) was assessed as a measure of exertion. We fit a 3-level nonlinear mixed-effect regression of activity counts on VO2, measurements, with assessments nested within participants and with the relationship between exertion and activity counts as a 3-parameter logistic curve, yielding estimates of: (1) a group-level calibration curve; (2) per-participant and between-participant variability; and (3) per-participant and per-assessment calibration curves.

We found high variability over time: the difference between the minimum and maximum estimated lower cutpoint for moderate activity for a participant ranged from 28 to 2332 (mean 491, SD 447). Between-participant variability was high; participant-level cutpoints ranged from 106 to 4101 (mean 866, SD 747). We found substantial differences from prior work; we estimate a group-level cutpoint of 692, versus 1952 in a widely-used reference (Freedson et al. 1998).

These results have significant implications for the use of accelerometry in research, particularly with medically compromised populations and when assessments span long time periods. We recommend individualized calibration when feasible, and periodic re-calibration may be necessary for accurate PA assessments.

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C114l
VALIDATION OF PIN 3 PHYSICAL ACTIVITY SURVEY IN LOW-INCOME OVERWEIGHT AND OBSESE YOUNG MOTHERS

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Background. Existing physical activity surveys have not been validated for use with low-income overweight and obese young mothers. This study aimed to validate the Pregnancy Infection and Nutrition 3 (PIN3) physical activity survey and to determine whether its validity varied by race/ethnicity and body mass index (BMI) category when including or excluding child and adult care activities in the target population.

Methods. Participants were recruited from the Special Supplemental Nutrition Program for Women, Infants, and children (WIC) and were asked to fill out the PIN3 survey and then wore an Actigraph accelerometer. Validity was assessed (N = 42) using Spearman correlation coefficient.

Results. Regardless of inclusion or exclusion of child and adult care activity, the PIN3 survey showed evidence of validity for moderate (correlation coefficients 0.33-0.40) but not vigorous (no significant correlations) physical activity. Correlations varied substantially by race/ethnicity and BMI category, e.g., 0.57 for obese women versus non significant for overweight women; 0.66 for whites versus non significant for African Americans.

Conclusions. The PIN3 survey is adequate for many applications where quick and practical indications are needed for moderate physical activity data in low-income overweight and obese young mothers.

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Profiles of Motivational Strategies Used by Professionals in Exercise and Health Contexts

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When motivating clients and patients, health professionals tend to use both need-supportive (NS) and controlling (CONT) behavior change strategies. However, Self-Determination (SD) Theory posits that CONT, rather than adding, may be detrimental for behavior change and for the well-being of both clients and professionals. This study sought to characterize different profiles of motivational strategies in exercise professionals.

Four profiles were created based on the use of NS (autonomy-support, structure, involvement) vs. CONT (negative conditional regard, intimidation, excessive personal control, judging and devaluing, excessive use of rewards) motivational strategies, in 365 exercise professionals (172 female, experience=7.7±6.3 y): high quality (HQL, high NS, low CONT, n=85); low quality (LQL, low NS, high CONT, n=93); high quantity (HQT, high NS, high CONT, n=98); low quantity (LQT, Low NS, low CONT, n=90). Differences among profiles in their motivational antecedents (general and work-related SD, job pressures, clients’ perceived SD, work-related need satisfaction vs. frustration) and work-related emotional consequences (burnout and engagement) were assessed using ANOVA with Bonferroni post-hoc comparisons.

Compared to the LQL, the HQL profile presented higher general, work-related, and client perceived SD, and higher need satisfaction at work (ps< 0.001), as well as elevated work engagement and personal accomplishment (ps< 0.01). Conversely, the LQL showed higher perceived job pressures, work-related need frustration and emotional exhaustion (ps< 0.01). The same pattern of differences was found between HQL and HQT profiles (favoring HQT, ps< 0.05). Comparison between LQL and LQT highlighted differences regarding perceived job pressures, need frustration at work and emotional exhaustion (higher in LQL, ps< 0.05) and work-related SD (higher in LQT, ps< 0.001).

Professionals relying mostly on NS displayed the best motivational and emotional profiles. Also, combining both NS and CONT may be detractive rather than contributive for work motivation, engagement, and prevention of burnout. Indeed relying on CONT seems so detrimental that even LQT exhibits a more positive profile. Although much emphasis has been given to promoting NS, diminishing CONT seems comparably important.

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Giving Up on Risky Sun Exposure: How Learning Can Lead to Behavior Change

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The high incidence of adolescent indoor and outdoor tanning in the U.S. necessitates efforts to decrease risky sun exposure in this population. Little is known about how family practices, messages, and modeling impact sun-related practices among teens, and therefore their risk of developing skin cancer. Thus, we examined 22 mother/daughter pairs utilizing a qualitative approach to elicit information about family socialization as it pertains to tanning behavior. This was part of a larger investigation of family discussions regarding indoor tanning. Family dyads were mostly non-Hispanic White (77%), with daughters ranging in age from 15 to 17 years. This age range was chosen for its documented susceptibility to risky tanning behavior. Each family pair was interviewed using a semi-structured format. Interviews were videotaped, transcribed, checked for accuracy, and coded using Thematic Analysis. Findings revealed that the majority of families (96%) had previously discussed indoor tanning, with most mothers (91%) and daughters (91%) reporting no current indoor tanning use, and most dyads indicating a lack of interest (63%) in indoor tanning. This dearth of interest in and use of indoor tanning was further demonstrated by discussions minimizing the importance of indoor tanning compared to other risky behaviors (e.g., smoking, drugs/alcohol). Mothers and daughters alike reported changing their tanning behaviors as a result of negative life experiences, including experiencing painful sunburns (18% of mothers, 10% of daughters) and witnessing skin cancer in family and friends (59% of mothers, 27% of daughters). Changes included increased use of sun protective strategies, as well as reduction of indoor tanning use (36% of mothers reported previously engaged in indoor tanning with no current use). In addition, 60% of daughters identified school-related curricula as an important venue for learning about skin cancer risk. Interestingly, daughters often relayed new information to mothers, which solidified mutual disinterest in tanning. Taken together, these themes signify that experiential and factual information may be similarly impactful in shaping opinions about and interest in tanning behavior, indicating that school health education may be a useful tool for limiting risky sun exposure and tanning behavior.

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C121b
PARENTAL AND PEER INFLUENCES ON SEX INITIATION AMONG LATINO YOUTH: EVIDENCE OF THE HISPANIC PARADOX
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Sexual risk behaviors are a particular concern among Latino youth due to high rates and associated negative health outcomes. One avenue for understanding sexual risk behaviors is through social and cultural processes. A particular intriguing finding is the epidemiological paradox in which Latinos have health outcomes equal to, or better, than Non-Hispanic groups despite a lower socioeconomic status that is usually associated with poorer health. This seems especially salient among less acculturated generations (i.e., first-generation migrant). Yet, the role of generational migration status (e.g., first-, second-, third-generation) in most adolescent risky behaviors has not been well examined. Rather, much of the work examining sexual risk among Latinos has been among adults or has used language as a proxy for acculturation. Also, studies examining social influences often cited as mechanisms that impact adolescent sexual risk, such as parents and peers, have not accounted for the epidemiological paradox among Latinos. Data were obtained from three waves of the Healthy Passages™ longitudinal study. Analysis were conducted using Latino participants (N = 1801) from the three recruitment sites (Birmingham, Los Angeles, and Houston). We examined the influence of parents (i.e., monitoring, nurturance, and involvement) and peers (i.e., friendship quality and social interaction) on early intercourse initiation as an indicator of sexual risk among first- (19%), second- (57%), and third-generation (24%) Latino youth. We examined these relationships across 3 waves from pre- to mid-adolescence. The findings demonstrated differences in parent and peer influences across time on intercourse initiation, with parent variables most consistently predicting sex initiation. Therefore, preventative efforts of early intercourse may need to differ across generations among Latino youth.

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C121c
THE LINK OF EARLY DATING BEHAVIORS TO LATER SEXUAL RISK ACTS AMONG BLACK, LATINO, AND WHITE YOUTH
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Studies have begun to examine sexual risk through dating behaviors which precede actual intercourse (e.g., holding hands, kissing) in an effort to identify targets for prevention efforts. Yet, most studies have lacked clear distinction between racial/ethnic groups within their samples, falling to capture possible differences across these group, which could inform better targeted prevention. Using data from Healthy Passages™, a prospective longitudinal community cohort study, we examined the relationship of early adolescent dating behaviors to later sexual risk behaviors (i.e., early sex initiation and multiple sexual partners) in mid-adolescence in Black, Latino, and White youth. We aimed to answer two questions: (1) What is the relationship between dating pre-sexual behaviors and later sexual acts; and (2) Does this relationship differ across Black, Latino, and White youth. Participants from the Los Angeles and Houston sites (N = 3295) were included in analyses. Child participants were asked if they had engaged in various dating behaviors that typically precede intercourse initiation at age 10-11. Dating behaviors included: (1) having had a boyfriend/girlfriend, (2) held hands, (3) kissed, (4) said “I love you”, (5) been left alone with their boyfriend/girlfriend, and (6) had their hands or their boyfriend/girlfriend’s hands under clothes. Responses were coded as dichotomous predictors. They were later asked at age 15-16 if they had initiated intercourse and, subsequently, the number of sexual partners. Dating behaviors at age 10-11 significantly predicted sexual risk acts 5 years later and quite similarly across all racial/ethnic groups. Specifically, having a boyfriend/girlfriend (OR = 2.159, p < .001, 95% CI [1.690, 2.759]) and having kissed (OR = 1.691, p < .001, 95% CI [1.312, 2.178]) significantly predicted intercourse initiation within 5 years. Additionally, across all racial/ethnic groups dating behaviors at age 10-11 significantly predicted number of sexual partners by age 15-16, F(6, 3286) = 30.39, R²change = .051, p < .001. There were only slight differences on the specific dating behaviors that predicted sexual risk acts 5 years later across groups. Findings have important implications for parents’ approach to early dating behaviors and sexual risk prevention efforts more generally.

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C127a
A QUANTITATIVE ANALYSIS OF E-CIGARETTE PRINT ADVERTISEMENTS FEATURED IN U.S. CONSUMER PUBLICATIONS
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After decades of steady success in reducing smoking rates among adolescents and young adults, public health experts now face the tobacco industry’s newest challenge: the e-cigarette. While the Food and Drug Administration (FDA) has proposed e-cigarette regulation related to product content and safety, regulation of advertising and promotional activities remains absent. Tobacco industry advertising and promotion has been shown to be an effective tool for the initiation of adolescent and young adult use of tobacco products. In an effort to understand how e-cigarettes are being advertised and which audiences are being targeted, we are conducting a large content analysis of all U.S. consumer print publications. Here we report data on the frequency of advertisements by e-cigarette brand, publication, and market research demographics, over time.
We used Competitrack, a full service advertising tracking firm, to identify and collect data on all print ads featured in U.S. consumer publications from the date of the first identified e-cigarette print ad in July 2010, through December 31, 2014. One hundred thirty-six unique ads were identified, appearing a total of 834 times across 93 U.S. consumer publications (e.g. *Cosmopolitan, Popular Science*). Twenty unique e-cigarette brands were represented by these ads. Over half of the total number of ad placements (n = 441) were featured in publications which have previously been identified by market research as having a large youth readership (e.g. *Sports Illustrated, Rolling Stone, Star*). Two brands, Blu (owned by *Lorillard*) and MarkTen (*Philip Morris*) were responsible for almost 50% of unique ads (n=45 and n=14, respectively), and accounted for over 75% of the total frequency (n=834) of ads (n=426 and n=182). Ad placement steadily increased from 2010 to 2012 (n=23, 47, and 79, respectively), and drastically increased in 2013 (n=297) and 2014 (n=388).

The majority of e-cigarette print ads are featured in publications with high youth readership. Further, increases in ad frequency are concomitant with national reports of increased use of e-cigarettes, especially among youth and young adults. Considering the public health interest in protecting youth from the harmful effects of nicotine, and the tobacco industry’s history of using advertising and promotions to target young audiences, these results have clear implications for FDA regulation of e-cigarette advertising.

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**C127b**

**ARE E-CIGARETTES THE NEW GATEWAY DRUG AMONG COLLEGE STUDENTS?**

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**INTRODUCTION:** There has been speculation regarding whether e-cigarettes are becoming the new “gateway” drug. Marketed as safer than their tobacco alternatives, e-cigarettes are rising in popularity, especially among young adults. While there are data to support the rise of dual use, few studies have examined the temporality of cigarette and e-cigarette use. This question was of primary interest in the current study.

**METHODS:** A total of 397 students (59.2% female; 19.02 (SD = 1.23) years old; 53.7% White) were recruited from a medium, private southeastern university located in the United States. Students anonymously completed a self-administered, computer-based survey. The survey included questions about demographics, smoking behavior, and e-cigarette knowledge and behaviors.

**RESULTS:** Over one-third (37%) of college students reported they had ever used an e-cigarette (i.e., lifetime use). Among e-cigarette lifetime users (n=145), 40% (n=58) had never smoked a traditional cigarette the first time they used an e-cigarette. Of the remaining individuals, 21% had tried cigarette smoking once; 21% had smoked more than once; 12% considered themselves a social smoker; and 6% considered themselves smokers. Among lifetime users who had never smoked a cigarette prior to using an e-cigarette (n=58), 43% reported they still had never smoked a cigarette at the time of the survey; 15% had smoked a cigarette once; 26% had smoked more than once; 12% considered themselves a social smoker; and 3% considered themselves smokers.

**DISCUSSION:** In the current sample, a large proportion of college students used an e-cigarette before ever smoking a cigarette. Many of those continue to abstain from smoking cigarettes even after trying e-cigarettes. However, more than half of never-smokers initiated cigarette use following the use of e-cigarettes. Because a significant minority of never-smokers prior to e-cigarette use now considered themselves “smokers” or “social smokers,” this suggests that e-cigarette use may be associated with cigarette smoking initiation.

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**C127c**

**CHARACTERIZING CLIENTS’ RESPONSES IN BEHAVIORAL SUPPORT INTERVENTIONS: DEVELOPING A RELIABLE METHOD**

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Face-to-face behavioral support interventions usually involve the delivery of behavior change techniques (BCTs) within a conversation between a practitioner and a client. Taxonomies of BCTs with agreed, standardised definitions have been used to characterize BCTs evident in the practitioner’s speech but not, to date, in the client’s responses. The latter is essential to capture the full interaction and has potential to add explanatory value to the outcome of interventions. Purpose: To develop and apply a method for reliably characterizing clients’ responses in audio-recordings of NHS Stop Smoking Services (SSSs) behavioral support consultations. Methods: Using inductive and deductive methods, an established taxonomy for identifying practitioner-delivered BCTs in transcripts of audio-recorded smoking cessation behavioral support consultations was adapted to develop a framework for classifying corresponding client responses. 1429 client responses within 15 transcripts of audio-recorded consultations were independently coded by two raters using the coding framework. Inter-rater reliability and potential adaptations to the coding framework to improve coding were discussed following three coding waves. Results: Of the 58 BCTs in the practitioner taxonomy, 53 corresponding BCT client response categories were identified and five non-BCT related categories were added (e.g. agree, social smoothers). Of these, 40 BCT responses and four non-BCT responses were reliably identified at least once across sessions and coding waves (75.1% agreement; PABAK = 0.77). Conclusions: It is possible to adapt an existing BCT taxonomy to develop a coding framework for reliably categorizing clients’ verbal responses in smoking cessation behavioral support interventions. This coding framework is an essential step in characterizing the dyadic interaction during behavioral support interventions for research and training purposes.
C127d
DENTAL STUDENTS’ PERCEPTIONS OF TOBACCO CESSATION WITHIN THE DENTAL SETTING
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Background: Dental professionals may be in a valuable position to provide brief tobacco cessation to patients. The American Dental Association provides recommendations and guidelines for dental-based tobacco cessation. However, it is often not part of routine dental practice. Barriers are insufficient knowledge or lack of training. A way to address the barriers is to integrate tobacco cessation education into dental schools. This study aimed to understand dental students’ perceptions of tobacco cessation, their intentions to provide tobacco cessation, and perceived barriers.

Methods: Third-year dental students (N= 86) completed a self-report survey assessing their perceptions of tobacco cessation within the dental setting. The survey assessed attitudes with regard to dental responsibility, scope of dental practice, value of tobacco cessation, and perceived barriers. The items were derived from a prior published study examining incoming dental students’ attitudes toward tobacco cessation. Students completed two additional items about whether they have provided tobacco cessation in the course of their clinical training and whether they plan to in their professional career. Descriptive analyses were conducted.

Results: All students (100%) agreed that dental professionals should educate patients about risks of tobacco use. The majority agreed it was within the scope of dental practice to ask about tobacco use (99%), advise patients to quit (99%), and refer patients to a cessation clinic (78%). Fewer students agreed it was within the scope to prescribe nicotine gum (39.5%) or nicotine patches (35%). While 70% agreed that tobacco cessation in the dental setting can have an impact, only 16% reported ever helping a patient with tobacco cessation. Many students rated patient resistance (57%) and time (32%) as “strong barriers” and lack of referral knowledge (58%) and confidence (47%) as “somewhat barriers” to providing tobacco cessation within the dental setting.

Conclusions: Dental students reported favorable perceptions of tobacco cessation. Dental school may be an optimal time to focus on skills to address patient ambivalence, manage time, and increase student confidence in providing tobacco cessation. Education on referral options for tobacco cessation is also important.

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C127e
DENTAL VISITS LIMIT THE NEGATIVE IMPACT OF SMOKING ON ORAL HEALTH STATUS: A MEDIATION ANALYSIS OF A QUASI-EXPERIMENTAL DESIGN
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Background: Oral health is crucial to a person’s general health and well-being. Oral health conditions have been linked to chronic general health diseases, including diabetes, cardiovascular disease, and respiratory disease. Several cross-sectional studies have shown that smokers have worse oral health than non-smokers. In this study, we examined how smoking could affect oral health across time in a quasi-experimental design. We also examined whether dental visits mediated the relationship between smoking and oral health.

Methods: We randomly selected and followed a cohort of 2605 rural residents in north Florida. Telephone surveys were conducted in 2010 (year 1), 2011 (year 2), and 2012 (year 3). We measured self-rated oral health status at year 2 (baseline) and year 3 (follow-up). We also asked the participants whether they had dental visits between year 2 and 3. We tested the mediation effect of dental visits on the relationship between smoking and year 3 oral health status. Change in oral health across time was analyzed by including year 2 oral health as a covariate in the mediation model. In the mediation analysis, we controlled for participants’ characteristics and psychosocial factors, including age, gender, race, education, financial security, chronic conditions, depression, and social support.

Results: The self-rated oral health status did not change from year 2 to year 3 for the non-smokers (p = 0.951). However, there was a decline in self-rated oral health among the smokers (p = 0.038). Having had dental visits between year 2 and 3 was associated with better oral health at year 3. In addition, non-smokers were more likely than smokers to have had dental visits between year 2 and 3, which partially explained the observed difference in oral health at year 3 between smokers and non-smokers.

Conclusion: Smoking is associated with deteriorating oral health across time. However, dental visits alleviate the negative impact of smoking on oral health. In addition to promoting smoking cessation, it is also important to increase rate of dental visits among smokers to improve their oral health.

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C127f
DOES SOCIAL SUPPORT MODERATE THE IMPACT OF LOW SOCIOECONOMIC STATUS ON SMOKING?
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Background: Low SeS individuals do not engage in unhealthy behaviors, and well-being. Oral health conditions have been linked to chronic general health diseases, including diabetes, cardiovascular disease, and respiratory disease. Several cross-sectional studies have shown that smokers have worse oral health than non-smokers. In this study, we examined how smoking could affect oral health across time in a quasi-experimental design. We also examined whether dental visits mediated the relationship between smoking and oral health.

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a shift has begun to identify protective factors that can improve health (Chen et al., 2012). For example, in low SES communities, neighborhood social cohesion relates to better physical health (Rios et al., 2012). We examined the role of one protective factor—social support—on smoking. We hypothesized social support would moderate the relations between (a) SES & stress, (b) stress & smoking, and (c) SES & smoking. Participants were from a public clinic (N = 508, 54% male, 68% Black, M_age = 28); 80% reported incomes under $30,000. In a structural equation model, indicators of SES were income, education, & employment. Social support was assessed with the Medical Outcomes Study Scale, stress with the Perceived Stress Scale, and smoking as cigarette use past month. Moderation was tested with latent interaction terms in Mplus. Results. Our model controlled for demographics, fit well, and showed that lower SeS, β = -.29 (.10), p < .01, and lower social support, β = -.67 (.10), p < .001, were associated with higher stress. Also, social support moderated the impact of SES on stress, β = .16 (.08), p < .05. SES was negatively associated with stress for those with low social support, but not for those with high social support. Extending prior research, our results suggest that strong social support mitigates the impact of SES on stress. Results showed that decreases in SES, β = -.66 (.19), p < .01, and increases in stress, β = .48 (.22), p < .05, were associated with increases in smoking. There was no effect of social support on smoking (p > .05). Social support moderated the impact of stress on smoking, β = .28 (.22), p < .05, but not of SES on smoking (p > .05). Contrary to hypotheses, social support was associated with more smoking for those with high stress (but not for low stress). This may be due to the social nature of smoking; further research is needed. Conclusions. Health interventions may target strengths (i.e., social support) already present in low SES samples to protect from stress. Although social support did not mitigate impact of SES or stress on smoking, reductions in stress may impact other health behaviors.

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C127h
ALCOHOL USE IN COLLEGE: DIFFERENCES IN DRINKING ACROSS CLASS COHORT
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We explored alcohol consumption and drinking correlates across class standing at a liberal arts university (N= 391; 39% male; 80% white). Most of the sample (72%) reported drinking > 1x/week (mean = 9.82 standard drinks/week). The majority (62%) reported > 1 binge drinking episodes within the past 2 weeks (mean = 1.7 episodes). Men consumed much more alcohol than women (17 drinks/week vs 5 drinks/week, p<.001) Women were overrepresented in the first year subsample (90%). First year students (n = 58) drank fewer drinks per week than juniors (n=103), p<.001 and seniors (n = 90), p=0.038. First year women drank fewer drinks than senior women, p= 0.28. However, binge drinking rates did not significantly differ across class standing. As such, first year students who used alcohol were likely to drink in a hazardous manner. Differences in alcohol expectancies emerged across class cohorts for self-perception (p=.037) and cognitive and behavioral impairment (p=.017). Cohort comparisons revealed first year students’ held significantly stronger beliefs that alcohol would lead to negative self-perception and cognitive and behavioral impairment than did each other class. Regression analyses predicting average weekly drinking revealed main effects for four expectancies after controlling for sex and class: sociability (Beta = .14; p<.01); cognitive and behavioral impairment (Beta=-.13, p=.01), risks and aggression (Beta=.21, p<.01), and self-perception (Beta=-.17, p<.01). No significant interactions emerged between expectancies and class standing. Finally, given the linkage between coping style and alcohol use patterns, three coping styles were investigated: cognitive self-control, ineffective escapism and solace seeking.
Coping style did not vary across class standing. However, after controlling for sex and class, ineffective escapism (Beta=.14, p=.005) predicted number of binge episodes and solace seeking (Beta=.11, p=.04) predicted weekly drinking rate, suggesting that maladaptive coping is associated with riskier styles of drinking. Our findings suggest that as students progress through college, they may become socialized to increase their overall alcohol consumption but the propensity to binge drink remains stable. Interventions for first year students may be wise to focus on binge drinking.

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C127i

MEDIATION OF MARIJUANA USE IN THE RELATIONSHIP BETWEEN DEMOGRAPHIC CHARACTERISTICS AND IMPLICIT ATTITUDE TOWARD MARIJUANA
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The prevalence of marijuana use differs amongst different socio-demographic groups such as adolescents vs. adults. Also, some researchers have suggested that there are more positive public opinions of marijuana use along with the state-level legalization of recreational marijuana use may increase the use of the substance. Research studies investigating implicit attitudes toward marijuana use have been very limited. Considering the research findings that have reported the neutral or less negative implicit attitudes toward a substance in substance users than non-users, it is expected that implicit attitudes toward marijuana would be different according to socio-demographic characteristics.

The present study aims to investigate the differences in implicit attitudes among socio-demographic groups and determine if the relationship between socio-demographic characteristics and implicit attitudes is mediated by marijuana use. For achieving this goal, undergraduate students (N=97, mean age = 24.64, 78 females) were asked to complete IAT (Implicit Association Test) as well as a survey regarding demographic background information. In result, the only socio-demographic variable significantly related to IAT scores was age: the IAT scores are more positive or neutral in the old (over 26 years of age) than the young (18 – 25 years of age) (F (1,93) = 4.690, p < .05). Also, it suggested that the old used marijuana more than the young (c2 [2, N = 96] = 13.897, p < .01). A Sobel test showed that the relationship between age and implicit attitudes was mediated by the frequency of use of marijuana (95% CI [-1.898, -0.272], p < .05). These results indicate that the young showed more negative implicit attitude towards marijuana due to limited use. This is the first study to directly compare the implicit attitudes of different age groups toward marijuana. The results are counter-intuitive to the common idea that the young are more often using marijuana and views it more favorably. More studies are needed to determine if these results accurately represent the general population.

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C127j

USING A DEPARTMENTAL PARTICIPANT POOL – DOES TIMING MATTER?
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Previous work has raised concerns about the use of college students in research and if the results they produce are generalizable. Within this larger question resides another concern: are students who volunteer early in the semester to complete a course requirement the same as those who volunteer later? Most faculty are familiar with the phenomenon of students who are academically stronger being more likely to complete outside requirements early and not procrastinate. This led us to wonder if another factor associated with poorer academic performance—substance use—might vary systematically with when a student completes a research requirement. If yes, care should be given to when data is collected, particularly by substance abuse researchers.

We set out to answer this question using a relatively large (N=422; 39% male; 80% white; mean age 20 yrs) data set that was collected over a 12 week period at a private, liberal arts university. The data was broken into three collection periods: early, mid and late semester; next, we tested if rates of alcohol, tobacco cigarette, e-cigarette, and drug use differed across the time periods. Across all data collection periods, 73% of participants regularly used alcohol (mean = 9.8 standard drinks/week); 15% reported low-level, but routine, tobacco cigarette use, 11% reported low-level, but routine, e-cigarette use and 20% reported recreational drug use. Results showed significant differences across collection periods. Students who completed the surveys during the early collection period drank less (p = .01), were less likely to use tobacco cigarettes (p = .01), less likely to use e-cigarettes (p = .008) and less likely to use recreational drugs (p = .007) when compared to the late collection period. Drug and tobacco use increased across all three collection periods; alcohol and e-cig use stabilized at the mid-collection period. These results indicate that students who complete a research requirement late in the semester are more likely to use substances. This should be taken into consideration when planning data collection using a general participant pool; researchers who use a participant pool are encouraged to report more details about recruitment, including when in the semester data was collected.

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C127k

WHO CALLS THEMSELVES A DRINKER? AN EXPLORATION OF DRINKER IDENTITY WITHIN A COLLEGE SAMPLE.
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Levinson (2006) found that 56% of college students who smoke cigarettes did not identify as smokers. However, to our knowledge, no one has explored if a similar phenomenon exists for alcohol use – college students who drink but do not identify as drinkers. We explored this question in a sample of 422 (38% male; 80% white; mean age = 20 yrs) undergraduates at a small liberal arts university. Alcohol use was the norm. In the full sample, 72% used alcohol. Average consumption was 9.8 standard...
drinks/week; 50% of the sample drank > 6 standard drinks/week. However, 49% percent of the sample rejected the drinker label when asked “do you consider yourself a drinker?” Among rejecters, 48% routinely consumed alcohol, with the average amount being 3 standard drinks/week. Significantly more women (59%) than men (34%) rejected the label of drinker. As expected, overall consumption was significantly greater among acceptors (average = 16 standard drinks/week) than deniers (average = 3 standard drinks/week). Hazardous drinking was significantly more common among accepters of the label than rejecters: 85% of accepters reported binge drinking in the prior two weeks (average = 2.8 episodes); in comparison, 66% of rejecters reported no binge episodes. Significant differences emerged in social preferences. Rejecters expressed more interest in dating a non-drinker (p<.001), in socializing at alcohol-free events (p<.001) and were more bothered by friends getting drunk (p<.001) than accepters. However, accepters and rejecters reported experiencing equal social pressure to drink more alcohol than they wished; when asked to rate “I sometimes feel social pressure to drink more than I want to” using a 7-point scale (7=completely true) acceptors (mean = 3.4) and rejecters (mean = 3.2) both reported moderate levels of pressure. Results suggest that college students’ schema of being a drinker involves hazardous consumption patterns. Self-labeling as a drinker appears more acceptable for men than for women and may serve to reinforce and increase high-risk drinking; as such, it may be fruitful for campus alcohol interventions to seek to redefine “drinker” as someone who uses alcohol responsibly. Additionally, both those who consider themselves drinkers and those who do not experience moderate levels of pressure to drink beyond their intended limits.

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Rapid Communications
Poster Session D
Saturday, April 25, 2015
10:15 AM-11:15 AM
PATIENTS FUNCTION AMONG POST-SURGICAL BREAST CANCER

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Objective: Distressed breast cancer (BCa) patients exhibit compromised immune function, which has been linked to disease progression. Although group-based psychosocial interventions (3-12 months) have been shown to reduce distress and modulate immune function among BCa patients, the length of these interventions may not always be feasible. We previously showed that brief 5-week stress management interventions can reduce psychological distress in post-surgical BCa patients. Here we report the impact of these brief 5-week interventions on cell-mediated immune function among post-surgical BCa patients who report the highest levels of cancer-specific distress defined by median split of the Impact of Events Scale Intrusion sub-scores (IES-I).

Methods: Distressed women (N = 98) with stage 0-II BCa who were 2-10 weeks post-surgery (Mean age = 52.57, SD = 9.23) who had been randomized to either a 5-week group-based Cognitive Behavioral (CB), Relaxation Training (RT), or Health education (HE) condition were compared. Repeated-measures ANOVA tested whether active interventions (CB or RT) vs control (HE) improved Th1/Th2 profiles (increased gamma-interferon [γ-IFN] and decreased interleukin-4 [IL-4] cytokine production from stimulated peripheral blood cells) from baseline to 6-month follow-up, controlling for relevant medical and sociodemographic variables, including disease stage, time since surgery, and income.

Results: Although there were no intervention effects on γ-IFN production, a significant 3x2 group by time interaction was found for IL-4 (p = .010). Follow-up revealed a significant 2x2 interaction between RT vs HE (p = .001), such that RT showed a trend of decreased IL-4 levels while HE showed a significant increase in IL-4 levels over time (p = .011). There were no differences between CB and HE on changes in IL-4 level. Conclusions: Among distressed breast cancer patients, a brief 5-week RT intervention may buffer against compromised immune function during primary treatment. Future clinical applications could include the use of a brief relaxation training intervention to target highly distressed women in clinical oncology settings.

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D025a

ATTITUDES TOWARD PARENTHOOD AFTER CANCER

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Introduction: Parenthood after cancer has emerged as an important research topic. We have developed an attitude scale to measure beliefs and concerns about parenthood in women treated for cancer during their reproductive years. The aim of this study was to report the factor structure our attitude scale and assess the association of each resulting factor with emotional distress.

Methods: Two hundred forty women diagnosed at age 40 or younger with invasive cervical cancer, breast cancer, Hodgkin disease, or non-Hodgkin disease completed a semi-structured telephone interview an average of 10 years later. Included in the interview were 27 attitude questions about parenthood after cancer and the BSI-18.

Results: A factor analysis using the maximum likelihood extraction method and Direct Oblimin (Delta = .05) with Kaiser normalization for rotation of correlated factors was performed with the participants’ responses to the attitude questions about parenthood after cancer. After dropping 6 items, a 3-factor solution was revealed that explained 43.5% of the variance in women’s responses. The factors appeared to measure cancer enhancing the value of parenthood (8 items, α = .81), health anxieties related to cancer (10 items, α = .75), and investment in biologic parenthood after cancer (3 items, α = .67). Regression analyses, after controlling for demographic and medical variables, demonstrated that cancer-related health anxieties were associated with higher levels of general distress (R² change = .16, F(1, 66) = 14.74, p < .001).

Discussion: This study yielded a 21-item, 3-factor measure of attitudes toward parenthood for women diagnosed and treated for cancer during their reproductive years. Two factors (increased value of parenthood following cancer and concerns about health issues related to cancer) demonstrated adequate reliability and a third (openness to nonbiologic alternatives for parenthood) had questionable reliability. Cancer-related health anxieties were predictive of global distress in this sample. Future research is needed to improve the measurement of investment in biologic parenthood after cancer and to assess the validity of our full measure.

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ND05b

BRIEF PSYCHOSOCIAL INTERVENTION EFFECTS ON IMMUNE FUNCTION AMONG POST-SURGICAL BREAST CANCER PATIENTS

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Objective: Distressed breast cancer (BCa) patients exhibit compromised immune function, which has been linked to disease process. Although group-based psychosocial interventions (3-12 months) have been shown to reduce distress and modulate immune function among BCa patients, the length of these interventions may not always be feasible. We previously showed that brief 5-week stress management interventions can reduce psychological distress in post-surgical BCa patients. Here we report the impact of these brief 5-week interventions on cell-mediated immune function among post-surgical BCa patients who report the highest levels of cancer-specific distress defined by median split of the Impact of Events Scale Intrusion sub-scores (IES-I).

Methods: Distressed women (N = 98) with stage 0-II BCa who were 2-10 weeks post-surgery (Mean age = 52.57, SD = 9.23) who had been randomized to either a 5-week group-based Cognitive Behavioral (CB), Relaxation Training (RT), or Health education (HE) condition were compared. Repeated-measures ANOVA tested whether active interventions (CB or RT) vs control (HE) improved Th1/Th2 profiles (increased gamma-interferon [γ-IFN] and decreased interleukin-4 [IL-4] cytokine production from stimulated peripheral blood cells) from baseline to 6-month follow-up, controlling for relevant medical and sociodemographic variables, including disease stage, time since surgery, and income.

Results: Although there were no intervention effects on γ-IFN production, a significant 3x2 group by time interaction was found for IL-4 (p = .010). Follow-up revealed a significant 2x2 interaction between RT vs HE (p = .001), such that RT showed a trend of decreased IL-4 levels while HE showed a significant increase in IL-4 levels over time (p = .011). There were no differences between CB and HE on changes in IL-4 level. Conclusions: Among distressed breast cancer patients, a brief 5-week RT intervention may buffer against compromised immune function during primary treatment. Future clinical applications could include the use of a brief relaxation training intervention to target highly distressed women in clinical oncology settings.

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D025c

DOES FAMILY RESILIENCE BUFFER THE EFFECT OF STRESS ON QUALITY OF LIFE FOR LATINA CANCER SURVIVORS?

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There exist persistent disparities in health related quality of life (HRQOL) outcomes for Latino cancer survivors. There is an urgent need for identifying factors that relieve distress and promote well-being. Resilience and specifically family resilience is a potential factor that may protect against cancer’s psychosocial sequelae and even enhance HRQOL. Resilience is defined as a set of traits or process promoting adaptation or growth in the face of adversity, and can be understood at the individual or family level. The importance of examining resilience within cancer survivorship was brought to the forefront by a joint effort of the American Cancer Society and National Cancer Institute that culminated in a 2005 supplement to Cancer, entitled Cancer Survivorship: Resilience across the Lifespan. The current study contributes to work understanding the relevance of resilience for promoting positive well-being and HRQOL in Latina breast cancer survivors (BCS), specifically focusing on the role of family resilience, given the centrality of family for Latinas. 232 Latina...
BCS, 95 English preferred and 137 Spanish preferred, recruited from hospitals and registries completed a self-report questionnaire. We conducted a set of hierarchical multiple regression analyses, controlling for age, to test the main effect of stress (life, neighborhood, family, functional) and family resilience, and the interaction effect of each of the stressors with family resilience, on physical, social/family, emotional, and functional outcomes. Most of the main effects were significant across both language groups, in the expected direction, thus the stressors significantly predicted worse HRQOL outcomes, while family resilience significantly predicted more favorable outcomes. Furthermore, family resilience significantly moderated the effect of three independent stressors (life stress X family resilience: $B = -5.11$ (SE=2.16), $p = .02$; family stress X family resilience: $B = -4.26$ (SE=1.56), $p = .01$; functional stress X family resilience: $B = -4.98$ (SE = 1.56), $p = .00$) on the social/family HRQOL outcome, but only for English preferred Latinas. Our findings suggest that linguistic, acculturative and family network contexts may be critical for understanding the buffering role of family resilience for Latinas.

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D025d

HEALTH-RELATED QUALITY OF LIFE IN PARENTS OF PEDIATRIC BRAIN TUMOR SURVIVORS AT THE END OF TUMOR-DIRECTED THERAPY

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Objective: The transition to off-treatment for the families of pediatric brain tumor survivors (PBTS) may continue to be stressful due to late effects of tumor-directed treatment1. Caregivers of PBTS often experience raised levels of illness-related uncertainty and caregiving burden2-3. This study examines survivor, parental and family predictors of health-related quality of life (HRQOL) of parents of PBTS within 4 months of the conclusion of tumor-directed therapy.

Methods: Participants included 45 PBTS (25 females; mean age = 10.47, SD = 2.74; mean time since diagnosis = 1.41 years, SD = 1.73) and their parents (43 mothers; mean age = 41.18, SD = 6.25). Survivors completed the WISC-IV15. Parents completed the Family Assessment Device (FAD)6, the Family Management Measure (FaMM)7, the PedsQL Family Impact Module (FIM)8, and the PedsQL 4.09. The PedsQL FIM HRQL summary score served as the measure of parental HRQL and the FaMM measured caregiver competence.

Results: Overall, parental HRQOL was low (mean = 65.86, SD = 22.51). In Pearson bivariate correlations, higher parental HRQOL was associated with higher parental perceived ability (caregiver competence) to manage the challenges associated with pediatric brain tumor survivorship (FaMM) ($r = .53$, $p < .01$) and higher family functioning (FAD) ($r = -.36$, $p < .05$). Survivor age, age at diagnosis, neurocognitive functioning (IQ, working memory, and processing speed) and parent-rated survivor HRQOL were not associated with parent HRQOL. In a regression analysis, family functioning and caregiver competence significantly predicted parental HRQOL ($F(2, 38) = 8.89$, $p < .01$) and had a large effect (Cohen’s $f^2 = .49$). Within the model, only caregiver competence was a significant predictor of parental HRQOL ($t(40) = 3.33$, $p < .01$).

Conclusions: Parents are at risk for poor HRQOL as their PBTS transition off tumor-directed treatment. Evaluating parental HRQOL is important due to parents’ primary role in managing the late effects of PTBS. Interestingly, parents’ perceptions of their caregiver competence, rather than survivor functioning, appear most associated with parental HRQOL. Interventions that target caregiver competence might improve parental HRQOL outcomes.

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D025e

PERCEIVED SUPPORT AND SOCIAL NETWORK SIZE AS PREDICTORS OF UNMET CANCER NEEDS FOR PATIENTS WITH CHOROIDAL MELANOMA

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Background: Although it is rare, choroidal melanoma (CM) is the most common intraocular cancer in adults, affecting 4-7 per million in the U.S. The supportive care needs of people diagnosed with CM are unknown. Perceived social support has consistently been linked to favorable psychological and physical adjustment to cancer. The relationship between social network size and adjustment is less clear, however. At the point of cancer diagnosis, adults with larger social networks may feel burdened as they navigate the initial diagnostic and treatment phase. The current study explored whether perceived support and social network size prospectively predicted changes in needs of adults diagnosed with CM. Method: Adults (N = 114; 45.6% female) undergoing an initial evaluation at an ophthalmic oncology clinic from 2008 to 2012 were recruited and assessed immediately before diagnostic evaluation (baseline), 1 week after diagnosis (1wk), and 3 months after diagnosis (3mo). Participants completed questionnaires about social support at baseline and about supportive care needs at 1wk and 3mo. Results: Controlling for medical comorbidities, hierarchical regression analyses indicated that higher perceived tangible support prior to CM diagnosis (but not structural support) significantly predicted reductions in unmet total, psychological, and patient care needs (p’s < .05). In contrast, larger social network sizes significantly predicted increases in unmet total, psychological, and patient care needs from the point of diagnosis to 3 months (p’s < .05). Social factors did not significantly predict unmet health information, interpersonal communication, or physical daily living needs (p’s > .10). Discussion: Findings from this prospective study suggest that CM survivors with larger social networks evidenced increases in unmet needs, whereas perceived tangible support predicted a decline in cancer needs over time. Research should focus on harnessing the benefits of tangible support to promote reductions in unmet needs perhaps at the point of cancer diagnosis, particularly for those with larger social networks.
D025f

PREVALENCE AND PREDICTORS OF OCCUPATIONAL SUNSCREEN USE AMONG U.S. HISPANIC OUTDOOR WORKERS

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Despite increasing skin cancer incidence among U.S. Hispanics, little research has focused on skin cancer prevention among this segment of the U.S. population. Occupational exposure to ultraviolet radiation (UVR) is a risk factor for skin cancer and Hispanic individuals are over-represented in a number of outdoor occupations (e.g., farming, landscaping). Thus, it is important to consider predictors of sun-protective behavior among this group. In this study, we examined predictors of occupational sunscreen use in a population-based sample of 149 U.S. Hispanic adults who work outdoors (85% male, M_{age} = 38.4 years). The participants were recruited from a representative online panel (47% acceptance rate) and completed survey measures regarding their sunscreen use and potentially relevant predictor variables. Engagement in occupational sunscreen use was low: 42.9% of the sample reported never using sunscreen while working outside in the sun, 26.1% reported doing so rarely, and only 31.0% reported using sunscreen at least sometimes. Logistic regression analyses were conducted to examine factors associated with using sunscreen at least sometimes when working outdoors. Factors significantly associated with sunscreen use included being female (p = .018), having a higher level of education (p = .009), residing at a higher latitude (p = .035), and having lower perceived barriers to using sunscreen (p < .001). Factors that were not associated with using sunscreen included age, linguistic acculturation, objective skin cancer risk, perceived skin cancer risk, skin cancer knowledge, perceived sunscreen benefits, and the number of hours/week worked outside (all ps > .08). The present sample engaged in low levels of occupational sunscreen use, which may increase their risk of developing skin cancers. This study highlights potential intervention targets for Hispanic outdoor workers, including perceived barriers of sunscreen use and education on the importance of occupational sun protection among Hispanics. Hispanic workers who are male or reside in U.S. regions at lower latitudes (i.e., closer to the equator) may especially be in need of interventions to promote sunscreen use during outdoor occupational activities. There is a need to develop and test sun protection interventions that target Hispanic outdoor workers.

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D025g

PSYCHOLOGICAL DISTRESS AND UNCERTAINTY IN HEMATOLOGICAL CANCER PATIENTS: WHAT’S GENDER GOT TO DO WITH IT?

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Background: Young adults spend considerable time developing identities, balancing relationships and careers, and building families. A cancer diagnosis interrupts these developmental tasks, creating increased uncertainty about self and life. Mischel (1981) defined uncertainty as a cognitive representation in which the meaning of illness-specific events is ambiguous and the future difficult to predict; we broaden this to include uncertainty about life goals. In the current study, we: 1) identify uncertainties experienced by adults with hematological cancers (HC); 2) examine the relationship between uncertainty and psychological distress; and, 3) explore whether gender affects perceptions of uncertainty or moderates the uncertainty-distress relationship.

Methods: Data were collected from 60 HC survivors, aged 20-49, who participated in semi-structured interviews about the age-related challenges of their illness and completed self-report measures of distress. Interview transcripts were coded for nine types of uncertainty, subsumed under two broad domains: uncertainty about the illness and uncertainty about achieving life goals. Psychological distress was assessed as depressive symptoms (CES-D; Radloff, 1977) and cancer-related distress (IES-R; Weiss, 2007).

Results: Almost all participants (95%) described at least one type of uncertainty when talking about their illness. Many reported comorbid uncertainties: approximately ¼ of the sample described three or more uncertainties within each domain. On average, women were significantly more likely to mention uncertainties about life goals than men (t = -2.02, p = .05), primarily, around fertility (t = 5.05, p = .03). Men were more likely to talk about uncertainty related to treatment (χ² = 3.34, p = .07). Neither gender nor uncertainty was related to distress, nor was any gender x uncertainty interaction significant.

Conclusions: Adult HC patients experience multiple types of uncertainty related not only to their illness and possibility mortality, but also to achieving life goals such as having a family or pursuing a career. Women focused primarily on life goals, particularly uncertainty about fertility. The fact that many of the participants had completed their illness treatment may explain why it was unrelated to psychological distress. It is also possible that anxiety may be a more relevant outcome for future-oriented worries.

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THE USE OF SURVIVORSHIP CARE PLANS IN RACIAL AND ETHNIC POPULATIONS: AN INTEGRATIVE REVIEW
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Objective: Currently, there are approximately 14.5 million Americans living with cancer, and those numbers are expected to reach 19 million by the year 2024. Survivorship care plans (SCPs) may be one way to bridge the gap between active cancer care and survivorship care especially in racial/ethnic populations. The purpose of this review was to explore the existing evidence in utilization of SCPs in racial/ethnic populations.

Methods: An integrative review was conducted following PRISMA guidelines using databases PubMed, CINAHL, and PsycINFO and keywords: cancer survivor, SCPs, and terms describing race/ethnic minorities, and disparities. Papers were evaluated discussing SCPs and racial/ethnic minority populations found in the title and abstract. Data were abstracted and content analyses were used to synthesize the findings.

Results: From a total of 535 identified papers, 8 studies met eligibility criteria and were included in the analysis. Focus groups were used in 3 studies, 1 randomized control trial, 2 community-based evaluations, and 2 studies using surveys. Of the 8 studies, 7 were focused on breast cancer survivors (BCS), 3 studies on African American BCS, 2 studies on Latina BCS and 3 studies included a more diverse racial/ethnic sample. Studies reviewed noted gaps in assessing and addressing psychosocial needs (e.g. mental health), barriers in access to care (e.g. literacy, language, cultural beliefs), and provider communication. Studies reported survivors’ preferred personally focused care to increase understanding of disease status, risk of recurrence, screening and preventative care (e.g. exercise, nutrition). This review conveyed a dominance of research in BCS, which reflects a need for future research in other cancers and men.

Conclusion: Attention to medical aspects of care is increasing, but extensive deficits still exist in addressing provider communication, physical, psychosocial, and access to care needs of survivors. Cancer survivorship is challenging, especially when considering the complexity of racial/ethnic populations with diverse sociocultural backgrounds. Based on our findings, we feel there is a critical need to include a broader range of racial/ethnic populations, disease types, and genders in future SCP research.

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ETHNIC/RACIAL DIFFERENCES IN SOCIAL SUPPORT AND LEVELS OF C-REACTIVE PROTEINS IN THE NORTH TEXAS HEART STUDY
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Perceived social support has been reliably related to lower rates of morbidity and mortality. However, studies modeling C-reactive protein (CRP) as an important biological pathway linking social support to health have produced inconsistent results. The present study tested if ethnicity/race moderated the link between perceived support and CRP in a diverse community sample of 300 participants (150 men, 150 women) enrolled in the longitudinal North Texas Heart Study. The sample is stratified by age within gender and ethnicity/race with an overall mean age at enrollment of 42.44 years (SD = 12.76). The sample includes 60% non-Hispanic Whites, 15% Black/African Americans, and 25% Hispanic/Latinos of which 75% self-identified as being of Mexican descent. A fasting blood draw was used to assess levels of high sensitivity C-reactive protein (hs-CRP).

Serum samples were assayed in duplicate using a Human CRP (hs) ELISA assay kit with accuracy determined by the linearity of dilution which yielded a correlation coefficient of 0.99. Participants completed the 12-item version of the Interpersonal Support Evaluation List (ISEL: Cohen et al., 1985) as part of a larger psychosocial survey. Consistent with prior work, hs-CRP was natural log transformed to normalize the distribution prior to analyses. To examine the moderating role of ethnicity/race, the ethnic/racial categories (i.e., non-Hispanic White, Hispanic, Black/African American, Other) were contrast coded with non-Hispanic Whites as the reference category. Consistent with prior research, there was no overall link between social support and CRP levels. Moderated regression analyses showed that the link between social support and CRP did not differ by ethnicity/race for Hispanic/Latinos compared to non-Hispanic Whites. However, the association between social support and hs-CRP levels was moderated by ethnicity/race for African Americans as perceived support predicted lower hs-CRP in African Americans only, b=-.61, 95% CI [-1.10, -.11], β=-.32, p=.02. These data suggest that social support may be relevant to CRP levels in African Americans but not Non-Hispanic White and Hispanic/Latinos.

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ADAPTING A CULTURALLY-TAILORED DIABETES SELF-MANAGEMENT INTERVENTION FOR HISPANICS IN THE WORKPLACE: PHASE I, FOCUS GROUPS

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Purpose: The study purpose was to conduct focus group interviews with Hispanic employees who either were diagnosed with type 2 diabetes or who, due to their ethnic heritage, were at high-risk for developing diabetes in the future. The intent of the interviews was to obtain employee input into the redesign of a previously successful, culturally tailored community-based diabetes intervention so that it would be an appropriate program to offer in workplace settings.

Methods: From a list of Hispanic employees who attended a local health fair (n=68), we recruited 36 to participate in focus groups held at work during supper mealtime breaks. An experienced bilingual moderator directed the sessions, using interview guidelines developed by members of the research team. Each focus group session involved a discussion of the purpose of the meeting, justification for the initial focus on Hispanic employees, a discussion about the importance of diabetes self-management for diabetes prevention and treatment, perceived barriers to recommended lifestyle behaviors, and the groups’ recommendations for a workplace diabetes prevention and self-management program.

Results: Participants’ ages ranged from 22 to 65 years (mean=50.4, n=36, SD=10.7); 7 males and 29 females attended; and 53% had T2DM. Consistent with previous experiences of the research team, only 1 of the 36 Hispanic participants preferred that the discussion be offered in English; all others preferred Spanish. Employees expressed a keen interest in diabetes classes and recommended a focus primarily on food preparation, nutrition principles, portion sizes, and diabetes home remedies. The primary barrier to promoting healthier lifestyles was work schedules; many employees worked two part-time or full-time jobs. Administrators and direct supervisors of the employees were highly supportive of a workplace diabetes prevention program, in some cases providing transportation for their employees to attend the focus group sessions.

Conclusion: Hispanic employees were consistent in their message that a workplace program would be an ideal solution and a more accessible option for Hispanic employees to learn about diabetes and healthy lifestyle behaviors, given their busy schedules, family responsibilities, and limited resources. If found to be effective, such a workplace program would be generalizable to other service employees who have disproportionate diabetes rates.

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DIABETES CONTROL IS ASSOCIATED WITH PATIENT HEALTH SELF-EFFICACY AND PERCEIVED HEALTH COMPETENCE

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Background: Diabetes control requires a complex interaction between patient and health system, with a significant emphasis on the patient’s capacity for engagement and self-management. Purpose: We evaluated patient health self-efficacy (HSE) and perceived health competence (HC) for association with diabetes control in order to determine if patient beliefs correspond to measureable diabetes outcomes, in this case hemoglobin A1c (HgbA1c) levels.

Design, Methods, and Materials: Community-dwelling persons with existing diabetes for greater than one year and receiving continuous primary care management of diabetes were surveyed with a validated 24-question Likert-scaled instrument assessing general PSE and HC. Participants were randomly recruited from achieved HgbA1c level strata (<=7, 7.1-8, 8.1-10, >10) via square sampling (n=25 per strata), and survey results were linked to HgbA1c level within past 3 months. Basic descriptive analyses, analysis of variance, and multivariable non-parametric analyses were conducted to assess the association of interest.

Results: Seven of 24 questions were independently discriminatory for association with HgbA1c level directly or inversely, three at p<0.05. Conclusions: Patient PSE and HC associate significantly with achieved diabetic control. We believe this information relevant to individualization of chronic disease and coordination of care management strategies to optimize effectiveness of diabetes self-management and to target interventions to enhance patient engagement. We are further evaluating this model with diabetics incident to medical attention and variations in interventions by chronic disease managers.

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WHAT REALLY WORKED? PREDICTORS OF TREATMENT SUCCESS IN BLACK WOMEN WITH UNCONTROLLED DIABETES IN A SMALL CHANGES INTERVENTION

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Rural African American women with obesity and associated Type 2 diabetes experience poorer health outcomes and earlier mortality, compared to Whites. However, to date, the majority of trials have focused on whites and utilized traditional behavioral therapy techniques such as pre-set calorie and exercise goals. Small Changes has been proposed as a treatment alternative to work with patients collaboratively to set goals in nutrition and physical activity relative to their current patterns in small and incremental stages. Physical activity goals are set by participants based on pedometer step counts; nutrition goals
are based on a modified stoplight food categorization system. The purpose of the present study was to examine predictors of treatment success (reduction in BMI and/or HbA1c) across 12 months in a randomized trial of a small changes lifestyle intervention, delivered via phone by community-health workers, (n=100) versus mail-based diabetes education alone (n=100). Two-hundred African American women (mean age: 52.09±10.89) from impoverished rural communities participated in this trial. All participants were diagnosed with uncontrolled diabetes (mean HbA1c = 9.11± 1.82) and the majority of participants were obese (mean BMI=37.69 ±8.20). Across 12 months, women in the intervention group who reported that their physical activity goals did not prevent them from doing other important activities showed significant reductions in both BMI (-1.1) p = .048 and HbA1c (-.29) p = .038. Nutrition monitoring and goal setting did not predict treatment success across time. Results from the present study suggest that utilizing the pedometer to make small changes in daily activity was beneficial and resulted in improved outcomes across time. However, nutrition monitoring and goal setting did not predict treatment success. Given the high burden necessary to complete daily food records, regardless of structure, comprehensive food monitoring may not be feasible in this population. Given that self-monitoring is a major predictor of behavior change, future studies need to examine alternative targeted food monitoring systems to aid in nutrition behavior change – particularly among rural African American women.

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D040b
AGE-RELATED REPORTED PROBLEM FREQUENCY IN HIV-POSITIVE AFRICAN AMERICANS IN A CLINICAL SETTING
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HIV continues to be a pervasive problem among African Americans, particularly among younger individuals. Furthermore, African American youth are less likely to seek mental health assistance than their older counterparts (Barksdale & Molock, 2008), which may be exacerbated if they are experiencing stigma associated with a chronic illness, such as HIV (Radcliffe, et al., 2010). A complete understanding of issues that contribute to these age-related disparities is imperative for providing adequate mental health services to these individuals. As part of integrated psychological care within an Infectious Disease clinic, our patients complete a problem checklist in order to identify patients who are appropriate for psychological consultation and may be in need of additional triage. The purpose of our study was to compare reported issues on the checklist among younger and older African American patients in an attempt to identify health disparities for an already at-risk population. Our sample consisted of 267 African American patients in an Infectious Disease clinic in the Southeastern United States. Independent samples T-tests were used to compare frequency of reported problems between younger (youngest 33% in sample; < 38 years old) and older African Americans (oldest 33% in sample; > 49 years). In comparison to older African Americans, younger African Americans endorsed significantly more adjustment issues; (t(183)=2.93, p = .004), pain; (t(225)=1.97, p = .05), family concerns; (t(141)=2.70, p = .008, and total number of problems on the checklist endorsed; (t(211)=2.33, p = .021. In fact, younger individuals reported significantly more psychological problems overall, such as depression and anxiety; (t(147)=2.77, p = .006.

These results suggest that younger African Americans living with HIV report more problems than their older counterparts, which can serve as barriers to care. This may provide a framework for culturally competent psychological services to young African Americans within integrated care clinics. Future research may wish to investigate potential barriers to help-seeking within these populations as well as facilitators to effective healthcare.

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D040c
DIFFERENCES IN HIV CARE ENGAGEMENT OUTCOMES BY RELATIONSHIP STATUS AND PARTNER SEROSTATUS AMONG YOUNG BLACK HIV+ MSM
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Background: There is a dearth of research that examines engagement in the HIV care continuum (CC) among couples, and even less among couples of young black men who have sex with men (YBMSM), a population with some of the worst outcomes along the CC relative to other racial/ethnic MSM groups in the US. Despite the potential of antiretroviral therapy (ART) to lower transmission rates, the efficacy of treatment-for-prevention approaches for HIV-positive (HIV+) YBMSM with serodiscordant partners may be limited due to poor engagement in the CC, and developing efficacious interventions for improving their care engagement is paramount. The present study aimed to examine differences in engagement in care outcomes among HIV+ YBMSM with and without primary partners (i.e., boyfriends), and HIV+ YBMSM in HIV seroconcordant versus serodiscordant relationships.

Methods: A sample of young (ages 18-29) HIV+ BMSM in Dallas and Houston, TX. Participants completed measures regarding Linkage to care (have a primary health care provider), any care in past 6 months, adherence to ART (any skipped doses in past 30 days), and demographic information.

Results: Data across single and partnered men (N=290) were compared on engagement in the CC variables. Chi-square difference tests showed that men with a primary partner reported being more engaged in HIV care than single men in terms of receiving HIV treatment in past 6 months, X^2(1) = 6.68, p = .01, and in having a primary healthcare provider, X^2(1) = 7.01, p = .01. No
HEALTH LITERACY IS DIFFERENTIALLY ASSOCIATED WITH CD4 CELL COUNT IN A MULTI-ETHNIC SAMPLE OF PERSONS LIVING WITH HIV INFECTION

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Hispanic and Black adults commonly experience poorer HIV-related health outcomes relative to non-Hispanic White adults (e.g., Oramasionwu et al., 2009) living with HIV infection. The current study adopted Sorenson’s (2012) Integrated Model to examine the hypothesis that lower functional and critical health literacy competencies may contribute to poorer HIV-related health outcomes differently across racial/ethnic groups.

Participants were 81 adults living with HIV infection and recruited from local clinics and community organizations. Study exclusion criteria were severe mental illness (e.g., psychosis), current substance use disorders, and neuromedical disorders that might affect cognitive functions (e.g., seizures, stroke). The sample of 18 Hispanic (22%), 18 Black (22%) and 45 White (56%) adults was comparable in age (M=45±10yrs), education (M=14.2yrs), premorbid verbal IQ, mood and substance use disorders, and hepatitis C co-infection (all ps>.10). The study samples differed in the representation of women (p<.05) with the Hispanic sample being exclusively male. Upon consent, participants completed a full neuroAIDS research evaluation that included a comprehensive battery of self-report and performance-based health literacy measures that yielded composite scores for functional (i.e., knowledge, competence, and motivation) and critical (i.e., access, understanding, appraisal, and application) competencies consistent with the Sorenson Integrated Model.

The proportion of participants with current immunosuppression (i.e., CD4 cell counts < 200 cells m/l) was significantly higher in the Hispanic (18%) and Black (12%) samples as compared to the White sample (0%) (p<.05). The study groups did not differ in AIDS status, viral load, or antiretroviral therapy (ps>.10). ANOVAs and planned post-hoc analyses showed that Black participants demonstrated significantly lower scores than the White sample on health literacy measures of knowledge and appraisal (ps<.05). In turn, lower scores on health literacy measures of knowledge and appraisal were significantly associated with lower CD4 cell counts in the Black and Hispanic samples (ps<.05), but not the White group (ps>.10).

Interventions that target both the appraisal and knowledge aspects of health literacy may improve HIV-related health outcomes for Hispanic and Black persons living with HIV.

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RELATIONSHIPS BETWEEN TRAUMA SYMPTOMS, STIGMA AND SEXUAL RISK AMONG HIV+ MSM SEEKING SEX PARTNERS ONLINE

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Men who have sex with men (MSM) remain the highest risk group for HIV infection, with particularly high-risk for men who seek sex partners on the Internet. However, few studies have investigated psychosocial predictors of sexual risk behavior among men seeking sex partners online. The purpose of the current study was to investigate the relationships between trauma symptoms, internalized HIV stigma, and social support on sexual risk behavior among HIV positive MSM who seek sex partners online. A sample of 170 HIV positive MSM who reported meeting a sex partner online in their lifetime was recruited on- and offline and completed an assessment battery. About 70% of the sample reported they had met a sex partner online in the past six months, with an average of about three sex partners met online (SD=4.9) in that time period. A total of 5 (SD=6.3) anal intercourse partners was reported within the past six months. These men reported that they engaged in unprotected anal intercourse (UAI) with non-HIV positive sex partners about 29% of the time, and that they engaged in UAI with HIV positive partners about 52% of the time. Internalized HIV stigma mediated the relationship between trauma-related symptoms and sexual risk behavior with non-HIV positive partners but not with HIV positive partners. These findings suggest that men who are in greater distress over their HIV diagnosis and who are more sensitive to HIV stigma engage in greater HIV transmission risk behavior. As sexual risk environments expand with the increasing use of the Internet to connect with sex partners, it is important to understand these predictors of sexual risk behavior so that tailored interventions can promote sexual health for men seeking their sex partners online.

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D040f

SPIRITUAL PRACTICES ARE ASSOCIATED WITH LONGER SURVIVAL IN HIV-INFECTED INDIVIDUALS FOLLOWED FOR UP TO 17 YEARS

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Spiritual practices have long been identified as important resources in people coping with life stressors such as chronic illnesses. Yet, little is known about its impact on survival in medical patients. This study examined the prospective effect of spiritual practices on long-term survival in people living with HIV. A total of 177 individuals in the mid-range of HIV disease (150-500 CD4-cells/mm³) completed a series of questionnaires, provided blood samples, and were administered in-depth interviews every 6 months for several years. A qualitative analysis of the interviews was conducted to code for the absence or presence of spiritual practices, defined as any organized or personal activity that people engage in to support their spirituality (e.g., prayer, reading the Bible, meditation). Demographics (i.e., age, gender, ethnicity, and education) and baseline biological markers (CD4 cell count and viral load) were controlled for in the present analysis. Cumulative measures of medication adherence (ACTG adherence questionnaire), social support (ENRICHED Social Support Instrument), and substance use relapse (SCID) were computed and used as covariates. Information on participants’ survival up to 17 years post baseline was obtained using the Social Security Administration Death Master File. A cox proportional hazards regression analysis revealed that the use of spiritual practices was significantly associated with lower mortality (HR 0.26 (95% CI 0.14-0.50), p < .001), even after controlling for substance use, social support, and adherence (all ps < .01). Our results suggest that the use of spiritual practices is associated with longer survival in people living with HIV beyond what can be accounted for by traditional predictors such as medication adherence or social support. As such, patients could benefit from being offered resources that support their spiritual practices as they cope with the many challenges associated with the disease.

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D053b

EFFECTS OF MIRROR EXPOSURE AND BRIEF MINDFULNESS INTERVENTIONS IN UNDERGRADUATE FEMALES

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Risk of disordered eating is high amongst college women in the U.S., often resulting in negative outcomes with regard to health, social functioning, and psychological well-being. Disordered eating can be addressed through mindfulness, which involves present moment awareness with an attitude of acceptance and non-judgment. Interventions using mindfulness to treat disordered eating and body image, particularly those utilizing mirror exposure, show promise in terms of improving outcomes. However, it is presently unclear what role mindfulness plays in the success of mirror exposure treatment.

In the present study, it was expected that the addition of a brief mindfulness meditation exercise, prior to mirror exposure, would improve body image above and beyond improvements seen in groups receiving only mirror exposure without mindfulness-based instruction or no treatment. College women (N = 52; Age M = 19.76; BMI M = 25.6) endorsing moderate body concerns (as assessed by the Eating Disorder Examination Questionnaire [EDE-Q]), completed two in-person meetings. In the first meeting, participants completed questionnaires, including a demographics form, the EDE-Q and the Body Shape Questionnaire (BSQ). Participants were then randomly assigned to one of three groups: mirror exposure alone, a combined mindfulness meditation and mirror exposure group, or a no treatment control, and completed brief interventions. Participants returned after one week to complete the same questionnaires.

Groups did not differ at baseline on measures of age, BMI, or trait mindfulness. Mixed model analyses of variance (ANOVAs) revealed a significant main effect for Time on measures of disordered eating (EDE-Q: F[1, 49] = 66.55, p < .001), and body shape concern (BSQ: F[1, 49] = 7.91, p = .007). This finding indicates that over the one week follow up period, participants’ scores of body shape concern, and symptoms of disordered eating decreased. There was no significant time by condition interaction on the examined variables, suggesting that the type of intervention was not a significant predictor of change, although the interaction between time and condition with regard to disordered eating approached significance (EDE-Q: F[2, 49] = 2.65, p = .08). While eating and body image ratings improved over time, the active component of treatment remains unclear. Clinical implications will be discussed.

D053a

BUILDING LATINO ADOLESCENT RESILIENCE THROUGH A SUCCESSFUL COMMUNITY-ACADEMIC PARTNERSHIP

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Developing successful relationships between academia and community can be difficult. Investigators who want to work with community organizations often don’t know where to start, or how to carry them out well. However, successful collaborations can speed up the transition from research to practice, and bring interventions to communities more effectively. We present the development of a successful partnership and the consequent intervention program, Your Life, Your Story, a yearlong resiliency-building intervention for Latino youth at risk for depression. We present the exploratory study where our relationship began, as well as the preliminary findings that led to the design of our intervention. We then present the detailed components of the resiliency-building, emotional expression, coping and social support intervention. We also present qualitative and quantitative results and show the yearlong intervention plan. Throughout, we show how the partnership guaranteed that the study and intervention would succeed.

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**D053c**

**FAMILY FACTORS RELATE TO DIFFERENT PSYCHIATRIC DISORDERS BETWEEN LATINAS AND LATINOS NATIONWIDE**

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**Introduction:** Latino Americans are expected to count for an estimated 30% of the national population in 2050 (US Census Bureau, 2010). Few studies have investigated modifiable psychosocial factors that could protect Latina/os against major psychiatric disorders. As predominantly Catholics, the Latina/o population is characterized by the influence of collectivism in which family values play a central role in their ethnic identity and mental health. This gender-specific study explored apyschosocial risk factor (Negative Interaction) for major depressive disorder(MDD), general anxiety disorder(GAD), and suicidal ideation(SI) among Latinas and Latinos nationwide. **Method:** The National Latino and Asian American Study (NLAA S) is first population-based national mental health epidemiological survey of Latina/os. We conducted three sets of logistic regressions, predicting three diagnoses based outcomes for 1,427 Latinas and 1,127 Latinos, respectively, followed two preplanned steps.

**Results:** For each outcome examined, psychosocial risk and protective factors produced a significantly better model fit in Model 1 than socio-demographic and acculturation variables known to predict mental health outcomes in Model 1. The Latina model showed that Negative Interactions was associated with increased likelihood of GAD and SI, whereas Family Cohesion appeared to be protective against GAD. The Latino model, however, showed that Negative Interactions with family members significantly predicted the likelihood of MDD. **Conclusions:** Because traditional culture dictates the distinct gender role value in family, conflicts therein could predict different psychiatric disorders between Latinas and Latinos. Differential protective and risk factors in the two subgroups suggest that behavioral intervention should address certain gender-specific components to improve care and prevention mental illness in Latina/os.

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**D053d**

**IDENTIFYING MEASUREMENT BASED CARE PRACTICES OF VA INTEGRATED BEHAVIORAL HEALTH PROVIDERS**

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**Background:** Primary care medical providers commonly use measurement-based care (MBC) principles to guide treatment. With the expansion of Patient Aligned Care Teams in the Veterans Health Administration (VHA), embedded behavioral health providers (BHPs) within Primary Care Mental Health Integration (PC-MHI) programs are also increasingly encouraged to implement MBC into treatment of common mental health conditions. The potential benefits of MBC within PC-MHI are substantial, and include improved mental health screening and referral rates, greater team collaboration, enhanced patient-centered care, and ultimately, higher quality health care. However, the use of MBC practices among BHPs within PC-MHI has yet to be systematically examined. The current study reports the preliminary results of a retrospective chart review aimed at describing and quantifying the MBC practices of BHPs working throughout PC-MHI clinics in upstate NY.

**Method:** Using a retrospective review of electronic medical records, charts of 75 veterans representing 448 PC-MHI encounters, were randomly selected and subjected to a detailed qualitative review to explore documented elements of MBC. Specifically, we coded use of mental health screening tools (e.g., PHQ-2), brief symptom assessments (e.g., PHQ-9, BAI), and functional assessments (e.g., GAF, SUDs), as well as linkage of measurement data to treatment initiation, modification, and termination. Descriptive analyses were performed on all outcomes.

**Results:** Slightly over half of charts audited indicated that use of measurement occurred in the form of a screen or brief assessment at least once across a patient’s trajectory of care. On average, documentation of use of a screen or assessment occurred less than once per visit. Overall, use of standard mental health screening and brief assessment tools in particular was uncommon, documented in only 9.8% and 9.2% of encounters, respectively. Further, only 8.5% of relevant chart notes specifically linked measurement data to treatment decisions.

**Discussion:** Results suggest that PC-MHI providers may not routinely implement MBC principles. Findings will be discussed in relation to potential barriers and facilitators to promoting the wider use of MBC among PC-MHI providers.

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Patient Factors and Perceived Workplace Blame Predict Burnout Among VHA Psychiatrists

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Patient Factors and Perceived Workplace Blame Predict Burnout Among VHA Psychiatrists

Psychiatrists represent a large portion of the providers in the Veterans Health Administration (VHA). The mental health provider population is at a higher risk for burnout and it is of benefit to identify job-related factors that may contribute to its development. The purpose of this study was to examine the relationship between patient characteristics, perceived workplace blame and burnout among psychiatrists working for the VHA.

A total number of 122 participants were recruited for this cross-sectional study, and the sample was equally male to female (50.8% and 49.2%, respectively), mostly Caucasian (71.3%), and married (76.2%) with a mean age of 51.4 years (SD = 10.4). Participants completed an anonymous survey that assed demographics, patient characteristics (i.e., diagnoses being treated), perceived workplace blame (i.e., fear of blame by employer if a patient completes suicide), as well as burnout using the Maslach Burnout Inventory-General Survey (MBI-GS; Maslach, Jackson, & Leiter, 1996; subscales include Cynicism, Exhaustion and Professional Efficacy).

A hierarchical linear regression for each MBI subscale was used to determine the relationship between psychological disorders, perceived workplace blame, and burnout. There was no multicollinearity or significant skewness observed in the criterion or outcome variables used. The model significantly predicted Cynicism (F = 4.28, p = .001), where angry patients, bipolar patients and suicide blame were significant individual predictors (p < .04). After controlling for years in practice, the model significantly predicted Exhaustion (F = 4.63, p < .001), where angry patients, bipolar patients and suicide blame were also significant individual predictors (p < .02). Based on our findings, some patient characteristics and fear of blame by employing institution may contribute to burnout among psychiatrists in the VHA system.

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RESULTS OF AN INNOVATIVE APPROACH TO RESILIENCE BUILDING FOR LATINO ADOLESCENTS: YOUR LIFE. YOUR STORY. LATINO YOUTH SUMMIT

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Your Life.Your Story (YLYS) is a community-based participatory research project that developed and tested a multicomponent intervention for Latino youth. The intervention consisting of an initial weeklong summer camp, followed by monthly booster sessions aimed at increasing resilience as a protective factor against depression. Resilience, or the ability to bounce back and even thrive when faced with adversity, is a result of certain qualities of individuals and support systems that predict social and personal success and are identified in the Positive Youth Development Framework, which guided our work. We developed this intervention to provide adolescent Latinos the opportunity to increase resilience by increasing competence, confidence, connection, character, caring, community, and citizenship with the aim of decreasing the rates of suicide and depression identified by our community partner and supported by YBRS data for our city. The program is evidence-based, interdisciplinary, and community-based and is tailored to meet the needs of underserved Latino youth. Teens participate in a resilience-building curriculum led by trained facilitators, followed by physical activity and their selection of (3 out of 5 offered) art-based activities that include, art, storytelling, dance, music, and technology. These help them develop goals for their future and identify barriers and opportunities to these goals. A total of 30 Latino adolescents (65.5% male, 44.8% immigrant) ages 12 to 17 were recruited through community resources and participated in the program. A matched (age and gender) group of Latino teens participating in a different camp served as comparison group. Preliminary data (camp data only) on within group analyses showed improvements in resilience and depressive symptoms in camp participants. Between group analyses showed differences in these two main variables, with comparison group participants showing no change in these variables. Six-month follow-up data is currently being collected and will be presented in the poster. YLYS shows preliminary promise as an innovative, community-based, low cost prevention program depression and enhancement program for positive youth development.

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SOCIAL COMPARISON AND PSYCHOSOCIAL FUNCTIONING IN SEVERE TRAUMATIC BRAIN INJURY OVER ONE YEAR

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Patient-centered outcomes for traumatic brain injury (TBI) often focus on psychological functioning, such as cognitive coping styles and the severity of depressive symptoms. As much of this work focuses on mild TBI, there is need for attention to more severe injuries, which are associated with greater cognitive and psychosocial deficits. For example, self-evaluations relative to others (i.e., social comparisons) are known to affect physical and mental health outcomes in various patient populations. The extent and type of comparison has been associated with mental health outcomes in mild TBI, and may be useful for understanding psychosocial experiences in severe TBI. In addition, understanding social comparisons may help inform treatment decisions such as designative long-term living environments or ideal treatment modalities (e.g., individual vs. group). The present pilot study examined relationships among social comparison responses and psychosocial functioning over one year. Patients with severe TBI at a long-term rehabilitation facility (n=29, Mage=44, 84% Caucasian) completed measures of social comparison, cognitive coping, and depression at two time points, separated by one year. At both time points, participants also responded to brief social comparison vignettes to assess the valence of their responses. Scores for overall tendency to make social comparisons were comparable to previous estimates in both healthy adults and patients with mild TBI. Greater interest in comparisons to “better off” others (i.e., upward comparisons) at baseline predicted greater depression at one year follow-up (p=0.001, R^2=0.33). Bootstrap estimates from 100 resamples showed that cognitive coping using denial significantly mediated this relationship (p=0.02). These findings indicate that social comparisons are common among patients with severe TBI, despite significant cognitive deficits, and specifically, deficits in abstract reasoning. The pattern of relations with depression also suggests that certain comparisons (or specific responses to comparisons) may be harmful for psychosocial functioning in patients with severe TBI. Further investigation could be helpful for clarifying the role of comparisons and identifying those that could be beneficial for rehabilitation in this vulnerable population.

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SOCIAL SUPPORT, DEPRESSED MOOD, AND FUNCTIONAL IMPAIRMENT IN PATIENTS WITH CHRONIC FATIGUE SYNDROME

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Objectives: Depression and functional impairment are highly common in patients diagnosed with Chronic Fatigue Syndrome (CFS). To date, little is known about psychosocial factors that affect these sequelae. In other medical populations, greater self-reported social support is related to less depressive symptomatology and illness impact; however, these associations remain unknown among patients with CFS. This study sought to examine these relationships in patients with CFS with the aim of identifying potential future targets for psychosocial intervention.

Methods: This study includes 219 men and women diagnosed with CFS (Fukuda et al., 1994) who completed measures of social support (Social Provisions Scale), depressed mood (Center for Epidemiologic Survey for Depression – depressed mood sub-
scale), and functional impairment (Sickness Impact Profile total score and social interaction subscale). Multivariate regressions, controlling for gender, age, ethnicity, education, employment, and income, were conducted.

**Results:** The majority of participants were females (86%), non-Hispanic White (71%), and college educated (60%). Patients with CFS who reported higher levels of social support had significantly lower depressed mood (Standardized Beta ($\beta$)=-.41, p<.001), less overall functional impairment ($\beta$=-.33, p<.001), and less functional impairment specifically in social interactions ($\beta$=-.35, p<.001). These effects persisted after controlling for demographic covariates.

**Conclusions:** Results of this study indicate that, among patients with CFS, higher levels of social support are related to less depressed mood and functional impairment. While cross-sectional, these findings implicate social support as a key target for psychosocial interventions with patients with CFS. Future research can investigate the longitudinal relationships among social support, depression, and functional impairment, as well as whether specific sources of social support differentially benefit subgroups of patients with CFS.

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**D053k**

**TESTING GRATITUDE AS A MODERATOR OF HEALTH ANXIETY OUTCOMES IN A LONGITUDINAL DESIGN**

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Previous research has indicated that health anxiety (HA) predicts increased rates of somatic symptoms as well as lower levels of health-related quality of life, but few moderators of these relationships have been explored. Researchers have also demonstrated that gratitude can have positive effects on physical health. In the present study, we examined the influence of gratitude on the relationship between HA and related outcomes (somatic symptoms and health-related quality of life [HRQOL]). Over the course of eight weeks, undergraduate students completed online questionnaires on a weekly basis. At baseline, we collected trait measurements of gratitude, HA, HRQOL, and somatic symptoms. Additionally, we collected state measurements of grateful emotions, HRQOL, and somatic symptoms over the course of the seven following weeks. Participants were 136 (73.5% female) undergraduate students recruited from introductory psychology courses at Seattle Pacific University. The majority of participants were Caucasian (68.4%) freshmen (46.3%) with a mean age of 19.3 ($SD = 1.7$). We used hierarchical linear modeling to test the moderating effect of gratitude on the relationship between HA and somatic symptoms, as well as HRQOL. Our results indicated that baseline levels of HA prospectively predicted both somatic symptoms ($\beta_{01} = 0.21$, $p < 0.001$) and HRQOL ($\beta_{02} = 0.02$, $p < 0.001$). Baseline levels of gratitude also prospectively predicted somatic symptoms ($\beta_{01} = -0.11$, $p < 0.001$) and HRQOL ($\beta_{01} = -0.01$, $p = 0.055$). A significant interaction of baseline HA and baseline gratitude on HRQOL also emerged ($\beta_{02} = -0.07$, $p = 0.044$). No cross-level interaction effects were observed. Based on these results we can conclude that gratitude is related to somatic symptoms and HRQOL. Additionally, trait-level gratitude may moderate the relationship between baseline HA and weekly somatic symptoms.

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**D053l**

**THE IMPACT OF INDIVIDUAL DIFFERENCES ON DEPRESSION TREATMENT PREFERENCE**

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Research suggests stigma may impede depression treatment engagement overall and/or influence patients’ choices about types of care (Campbell et al., 2014; Halter, 2003; Sirey et al., 2001a, 2001b). While most research has examined stigma globally, less work has tested whether stigma differs with treatment seekers’ personality characteristics or whether personality relates to patients’ tendencies to view different depression treatments as more or less stigmatizing. We examined the relation between college students’ personalities, stigma related to depression care, and different depression treatment options. Using a between subjects design, participants (n=121) read vignettes describing persons with depression who took medication or engaged in psychotherapy. Participants then completed a measure of the Five Factor Model of personality (Costa & McCrae, 1992) and a multifaceted measure of stigma (Corrigan, 2000). In bivariate analyses, extraversion correlated positively with beliefs that the vignette character was responsible for causing his/her depression ($r = .25$, $p = .01$) and with anger directed toward the character ($r = .25$, $p < .01$). Conscientiousness evinced a negative relationship with responsibility beliefs ($r = -.28$, $p < .01$). Openness to experience was positively related to pity felt for the depressed character ($r = .36$, $p < .05$) and inversely related to participants’ willingness to help the character ($r = -.26$, $p < .01$). Finally, agreeableness correlated positively with pity ($r = .23$, $p < .01$) and negatively with willingness to help ($r = -.28$, $r < .01$). In multiple regression analyses an interaction between conscientiousness and the character’s treatment (therapy v. medication) emerged as a significant predictor of responsibility beliefs ($F(1, 99) = 5.21$, $p < .01$; $R^2=.14$; $\beta = .03$, $SE = 1.5$, $p < .05$). This effect suggested that highly conscientious participants ascribed higher depression responsibility to characters who took medications. In conclusion, stigma appears to vary with personality, depression care seekers’ personality characteristics may make some treatment options less acceptable than others. These findings have implications for health care providers working in treatment settings, like university-based health centers, which may serve high conscientiousness patient populations.

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**D061a**

**DEVELOPMENT AND APPLICATION OF THE VERMONT PRIMARY CARE BEHAVIORAL HEALTH INTEGRATION PROFILE**

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There is a great deal of clinical and policy activity directed at the co-location of psychologists and other behavioral health
professionals to provide clinical services in primary care settings. Such efforts are apparent in professional societies such as hte AAFP and in literature supporting such actions. A major development has been Peek’s Lexicon of Collaborative Care (AHRQ 2014) which for the first time establishes common dimensions and definitions for a paradigm case of collaborative care.

This leaves us with three concerns: 1. The evidence base of Behavioral Medicine rarely is part of these integration efforts. 2. Integration efforts and practice have little if any evidence support, and 3. While Peek’s Lexicon is a great advance in theory, we still have no standardized measure with which to evaluate integration processes and efforts.

For the last three years, the author and a group of national clinical and research colleagues have taken the key clauses of Peek’s Lexicon, and generated a measure of Integration processes that result in scores on each of eight dimensions and a composite score. It has gone through 4 distinct versions and recently version 4 has been released for use in the field, and over one hundred responses have been generated.

This poster will summarize the development, iterations, and validation of the Vermont Integration Profile (VIP) and review the findings from the first cohort of 100+ practice responses. It will highlight the clinical, operational and financial implications of such a measure and identify outcomes research in process testing VIP level with clinical, operational, and financial outcomes.

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D061b
EVALUATING THE ECOLOGICAL VALIDITY OF A BODY IMAGE QUALITY OF LIFE MEASURE USING ECOLOGICAL MOMENTARY ASSESSMENT (EMA) METHODS
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Perceptions of one’s physical appearance, or body image, can affect many aspects of psychosocial functioning and engagement in health behaviors. Measuring body image quality of life (QOL) is one way to assess the effect body image has on various life domains, including emotional well-being, social functioning, and daily activities. Body image QOL has been studied in a range of physical health conditions (e.g., cancer, HIV, obesity), and is also relevant for understanding disordered or unhealthy eating behaviors. The present study aimed to evaluate the ecological validity of a widely used measure of body image QOL (Body Image Quality of Life Inventory [BIQLI]) using Ecological Momentary Assessment (EMA) methods. College women reporting subclinical disordered eating behaviors (n=127, Mage=19.6)first completed the BIQLI on a computer. Then for the next week they completed 5 daily EMA surveys of mood, social interactions, stress, and eating behaviors on palmtop computers. Multi-level models were used to test associations between body image QOL and experiences reported via EMA. Results showed lower body image QOL (i.e., worse QOL) was associated with more negative affect (p<.05), more overwhelming negative emotions (p<.05), less positive affect (p<.05), less pleasant social interactions (p<.01), and lower self-efficacy for handling stress (p<.01) in these women’s everyday lives. Lower body QOL was marginally related to more overeating (p=.06) and greater loss of control over eating (p=.08) in daily life, but was unrelated to stress severity (p=.05). Overall, findings suggest lower body image QOL is associated with worse social and emotional functioning in women’s everyday lives and may be associated with more unhealthy eating behaviors. To our knowledge, this is the first study to support the ecological validity of a measure of body image QOL by identifying real-world social, affective, and behavioral correlates using an EMA approach. These findings suggest body image QOL may be an important target for intervention and prevention efforts for disordered or unhealthy eating behaviors.

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D061c
THE RELATIONSHIP BETWEEN FUNCTIONAL STATUS MEASURES AND PATIENT-REPORTED OUTCOMES IN CANCER PATIENTS: A SYSTEMATIC REVIEW
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Introduction: The process of assessing patient symptoms, quality of life (QoL), and functionality using patient-reported outcome (PROs) measures and functional performance status (FPS) is central to ensuring patient-centered oncology research and care. However, while there has been a broader movement toward patient-centered care (Basch et al., 2014), with the FDA (2009) encouraging the integration of PROs into clinical research and practice, PROs and FPS are often employed separately or inconsistently combined. Thus, the purpose of this study was to conduct a systematic review on the relationship between FPS and PROs as an important step to determine their differential or combined utility.

Methods: A systematic search for articles published in peer-reviewed medical journals was conducted using PubMed, PsycINFO, OVID, and EMBASE databases (1966-February 2014). Four broad categories of terms were searched: cancer, patient-reported outcomes, quality of life, and daily living. After duplicates were removed, a total of 1,259 articles were retrieved. Studies were excluded if they were non-cancer specific, did not include adults aged 18 or older, did not capture the relationship between FPS and PROs or QoL, or were review articles. Publications were selected for review by consensus among two authors, with a third author arbitrating as needed.

Results: A total of 18 studies met inclusion criteria. Across all studies, FPS was primarily assessed using the ECOG Performance Status and Karnofsky Performance Status measures. PRO/QoL was captured using a variety of measures, with numerous domains assessed (e.g., pain, fatigue, general health status). Concordance between FPS and patient-reported outcomes measures was widely variable, falling in the low to moderate range (0.09-0.72) across studies.

Conclusions: Despite relative consistency in the method of capture of FPS, PRO or QoL, domain capture varied considerably across reviewed studies. Irrespective of the method of captur-
FAST FOOD CONSUMPTION: EXAMINING THE IMPACT OF LANGUAGE PROFICIENCY ON D067a

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EXAMINING THE IMPACT OF LANGUAGE PROFICIENCY ON FAST FOOD CONSUMPTION

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Language proficiency is closely associated with acculturation - the process in which immigrants adopt customs and behaviors of a host country. For immigrants in the US, increased acculturation has been shown to be associated with greater risk for obesity, cardiovascular disease, diabetes, and strokes. Our goal was to examine how fast food consumption, a behavior linked with poor health outcomes, varies by language proficiency. Additionally, we examined how neighborhood cohesion might help explain fast food consumption behavior across language proficiency groups. Data were from the 2011-2012 California Health Interview Survey (n = 42,935). Survey regression analyses were used to examine the impact of language proficiency and neighborhood cohesion on fast food consumption, adjusting for sociodemographics among Hispanics and Asians. Participants who reported low English proficiency (LEP) were more likely to be married, have lower education, income, employment, lower health insurance coverage, and were more likely to be foreign born. Having LEP was associated with a significantly negative association with fast food consumption. Hispanics with LEP had a negative linear association with fast food consumption compared to Hispanics who only spoke English (β coefficient: -0.55, p-value < 0.0001), and similarly, Hispanics with high English proficiency (HEP) had a significantly negative association with fast food consumption compared to Hispanics who only spoke English (β coefficient: -0.34, p-value < 0.001). LEP Asians and HEP Asians also exhibited a negative linear association with fast food consumption compared with Asians who only spoke English (respectively: β coefficient = -0.97, p-value < 0.001; β coefficient = -0.70, p-value < 0.001). Additionally, increased neighborhood cohesion had a significantly negative association with fast food consumption. Interaction between language proficiency and neighborhood cohesion was observed (p-value = 0.01), with LEP and increased neighborhood cohesion having a significantly negative association with fast food consumption. Since neighborhood cohesion may be protective against fast food consumption among groups with lower acculturation, interventions that foster cohesion may prevent adoption of negative health behaviors in such communities.

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HEALTHY BEHAVIORS AMONG STROKE SURVIVORS

A MIXED METHODS STUDY OF ENGAGEMENT IN MULTIPLE HEALTHY BEHAVIORS AMONG STROKE SURVIVORS

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Background Stroke survivors are at a significant risk to experience a secondary stroke. Reducing such risk requires engagement in multiple healthy behaviors. Thus, several studies of stroke survivors have evaluated multiple healthy behavior change interventions. However, these interventions have largely been ineffective in changing behaviors, reducing risks, and promoting quality life. Clearly, fundamental questions remain regarding how to promote engagement in multiple healthy behaviors.

Objectives The primary purpose of this study was to employ qualitative methodology to explore stroke survivors’ perceptions about their engagement in physical activity, nutrition, and sleep and to develop a conceptual model of factors influencing engagement in multiple healthy behaviors. The secondary purpose was to examine the correlations between healthy behaviors, body mass index (BMI), and health-related quality of life (HRQL).

Methods Focus groups and 1-to-1 interviews were conducted with 25 stroke survivors. Several steps were taken to ensure the trustworthiness of the qualitative analysis (e.g., triangulation). Validated questionnaires on healthy behaviors and HRQL were administered.

Results Five themes were identified: (1) Impairments: reduced autonomy in activities and social roles, (2) Environmental forces: caregivers and information, (3) Re-evaluation: priorities and attributions, (4) Resiliency: finding motivation and solutions, and (5) Negative affect: stress and self-cautiousness. Moderate correlations were found between sleep disturbances and physical activity (r=-0.48), sleep disturbances and HRQL (r=0.55), hand function and healthy eating habits (r=-0.45), physical activity and healthy eating habits (r=0.33), and physical activity and HRQL (r=0.41). BMI was moderately correlated with physical activity (r=-0.45), sleep disturbances (r=0.48), and HRQL (r=0.49).

Conclusions This is the first mixed methods study of stroke survivors to examine multiple healthy behaviors and document associations between healthy behaviors, BMI, and their relationship with HRQL. The conceptual model illustrates addressing sleep disturbances, physical impairments, self-concept, self-efficacy, and chronic stress in order to promote engagement in multiple healthy behaviors.

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ASSESSING QUALITY OF LIFE IN YOUTH WITH PRADER WILLI SYNDROME: PARENT AND CHILD REPORTS

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Prader Willi Syndrome (PWS) is a genetic disorder characterized by physical and psychological challenges that can result in morbid obesity. Adults and youth with PWS have been
reported to have a lower level of quality of life (QoL) than a healthy population according to a parent-report measure. With other studies reporting differences in parent and child reports of quality of life (Eiser & Varni, 2013), this study examined the measurement of quality of life in youth with PWS (age 8-16) using self and parent reports. A second purpose was to compare the quality of life of youth with PWS with youth without PWS but with obesity. Youth with PWS (N = 46) participating in an ongoing physical activity intervention and their parents completed measures of QoL. Both parents (n = 46) and youth (n = 44) completed their respective versions of the PedsQL 4.0 (Varni et al., 2001). Both the youth and parent reports showed acceptable Cronbach alpha levels (α > 0.7) except for two parent report subscales (emotional and school functioning). Consistency between parent and child reports of QoL were quite low with ICC ranging from 0.08 to 0.26. In all cases, the average parent report of QoL was lower than the child report. A sub sample of youth (n = 13) completed the survey a second time after one week for a test-retest evaluation. All subscales and the total scale score showed acceptable test-retest reliabilities (ICCs: 0.71-0.87). To address the second purpose, a comparison group of 66 youth who were obese and their parents were used to identify any differences between perceptions of QoL. Based on both the parent and youth reports, youth with PWS had lower QoL in overall psychosocial health, social functioning, school functioning and physical health than youth who were obese (ps < .05); there was no difference in emotional functioning (ps > .4). These findings provide support for the use of the PedsQL scale to assess QoL using both parent and child reports in youth with PWS; however, the reports from parents and youth do not appear to be interchangeable. The difference between parent and child reports of QoL might be due to cognitive challenges of the youth and/or parents awareness of the scope of their disability. Further, youth with PWS have lower levels of QoL than youth without PWS except for emotional functioning.

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D080d  
COMPARING RESEARCHER AND COMMUNITY-DELIVERED SUPPORT CALLS FOR CHILDHOOD OBESITY TREATMENT  
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This project compared the delivery of health literacy-based parent support calls by research versus community partners as part of a childhood obesity program with low SES and low health literacy. This community-based participatory research project includes a three-wave development process that progressively shifted program delivery responsibilities from research to community partners. In each of the two program delivery waves that have been completed, families (n=26 and 33) with overweight or obese children aged 8-12 years old were enrolled in a program that included 6 bi-weekly parent support calls integrating teach-back and teach-to-goal methods into a 5 A’s approach. Research partners (n=2) delivered all support calls in Wave 1 of the program. During Wave 2, staff from community partners (Parks and Recreation and Department of Health) participated in 6 training sessions that focused on instruction related to call content, role playing, case review, self-evaluation, and feedback on call delivery. The community partners (n=5) then delivered support calls to 20 out of 33 parents in Wave 2. The research personnel that delivered the calls in Wave 1 completed the calls for 13 of the parents in Wave 2. The fidelity to the program call attempt and call content protocols were tracked across both Waves 1 and 2. Parent perceptions of calls were recorded in interview-administered summative evaluations. Support call times did not differ between research (26±11 minutes) or community partners (24±7 minutes). While community partners were slightly lower in the degree to which they followed the call attempt protocol (94% compared to 99% for research partners), they were significantly more likely complete the calls with participants (70% completion rate compared to 58%; p<.10). Both research and community partners adhered to the guided call scripts with 98% fidelity. Parents agreed that calls helped them learn the class material better and improve their eating and physical activity habits. Ratings did not differ by research or community partner delivery of the calls. Parents also indicated that the calls helped to clarify key concepts and kept them accountable. Community partners can deliver health literacy-based parent support calls as part of a childhood obesity program with high fidelity and competence.

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D080e  
GENDER-SPECIFIC ANALYSES ON LATINO-AMERICANS’ OBESITY: DIFFERENT EFFECTS OF ACCULTURATION FACTORS  
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Introduction: One-third of Latina and over 40% of Latino Americans are overweight, while nearly 30% of both groups meet the criteria of obesity. Obesity, a prominent public-health problem, is associated with health care cost, social stigma, mental health disorders and substance abuse, and physical complications, especially cardiovascular diseases, certain forms of cancer, and type-2 diabetes. Few studies have explored the acculturation predictors for obesity Latina/os, respectively, which may enhance the preventive intervention for this population, rapidly increasing through immigration. Method: Using the National Latino and Asian American Study (NLAAAS), we conducted three sets of logistic regressions to detect the predictive value of acculturation factors, above and beyond that of socio-demographics, for all Latina/os, 1,427 Latinas, and 1,127 Latinos, respectively. Results: Latina/os reported same level of acculturation stress but Latinos experienced more discrimination. On average, Latinas were older, less educated with fewer employed, and poorer English proficiency. For all Latina/os, obese was predicted by discrimination, alongside US-born and either 5-10 years or 21+ years stay in the US, For Latinas, significant positive predictors were perceived discrimination and older age. In all and female groups, Cubans and other Latina/os appeared to have less likelihood for being obese than Mexicans and Puerto Ricans. For Latinos, however, predictors involved US-born and
stay patterns, while Cubans and Puerto Ricans were less likely to be obese. **Conclusions:** Distinctive predictive patterns for obese in the two gender-subgroups suggest varied influence of acculturation process for Latinas and Latinos, which may inform effective behavioral intervention in Latina/os.

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**D080f**

**OBESITY-RELATED HYPERTENSION AND IDENTITY AMONGST AFRICAN AMERICANS: A LATENT PROFILE ANALYSIS**

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Obesity-related hypertension is an epidemic in the US that disproportionately affects African Americans (Cossrow & Falkner, 2004; Go, et al, 2013). The complex pathogenesis of obesity-related hypertension suggest that more than biological processes are risk factors for the onset of this disease (Davy & Hall, 2004; Landsberg, et al., 2013). Numerous studies highlight identity, the conceptualization of self, as a critical component in understanding the experience unique to African Americans as it relates to health outcomes (Kreuter, et al., 2003). However, identity is typically defined in studies as a single construct, eliminating the nuances essential to the multifaceted conception of identity. This study had two aims: to elucidate the profiles of various constructs of identity (group closeness, cultural stereotypes, self-esteem, and coping strategy) endorsed by a national sample of African Americans and determine the profile most predictive of obesity-related hypertension. A secondary analysis of the National Survey of American Life included a sample of 875 African Americans qualified as being diagnosed with obesity-related hypertension. The latent profile analysis concluded three statistically significant latent classes, or profiles of identity, fit the data: Class 1 (highly negative cultural stereotype), Class 2 (low self-esteem), and Class 3 (high group closeness). The highly negative cultural stereotype group (b = .69, SE = .012, p < .001) was the most predictive of obesity-related hypertension. The results suggest that the internalization of negative cultural stereotypes plays a significant role in the physical health of African Americans, and therefore requires further exploration.

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**D080g**

**THE IMPACT OF THREE DOSES OF BEHAVIORAL WEIGHT-LOSS COUNSELING ON HEALTH-RELATED QUALITY OF LIFE**

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Research suggests that obesity adversely affects Health-Related Quality of Life (HRQOL) and that weight loss is associated with improved HRQOL. However, it is unclear if these improvements are influenced by dose of treatment. The present study evaluated this for 463 obese adults enrolled in a behavioral weight loss program (M+SD: baseline weight = 100.3 + 15.5 kg, age = 54.2 + 10.8 years). Participants were randomized to receive 8, 16, or 24 treatment sessions (LOW, MOD, or HIGH) or nutrition education (CTRL) that met for 8 weeks but did not include instruction in behavior modification strategies (e.g., self-monitoring). At Month 0 and 6, participants completed the SF-36, a self-report questionnaire assessing eight domains of functioning scored from 0-100 (0 = maximum impairment and 100 = no impairment). Treatment-induced weight loss was -4.8 + 4.5 kg, -8.6 + 6.6 kg, -10.6 + 7.2 kg, and -12.3 +6.9 kg for the CTRL, LOW-, MOD-, and HIGH-dose conditions. Correlation analyses showed that weight loss was significantly associated with physical (r = -.27, p = .001) and mental (r = -.13, p = .01) health summary scores for all conditions. A repeated-measures MANOVA indicated a significant interaction effect for Condition x Time, F(24,1362) = 2.4, p = .001, ηp² = .04, and a significant main effect for Time, F(8,452) = 22.8, p = .001, ηp² = .29. Significant improvements from Month 0 to 6 were observed for seven subscales, including role limitation due to physical problems (5.0 + 36 points), bodily pain (3.6 + 21.2 points), social functioning (2.7 + 23.3 points), mental health (1.6 + 15.2 points), physical functioning (5.5 + 16.7 points), general health (6.4 + 15.3 points), and vitality (10.1 + 19.2 points; ps < .05). Univariate ANOVAs with Bonferroni-adjusted post hocs revealed a significantly greater increase in physical functioning scores for HIGH (8.5 + 16.3 points), MOD (8.7 + 18 points), and LOW (6 + 14.7 points) compared to CTRL (-.91 + 16.1 points) and in general health and vitality scores for HIGH (8.7 + 14.6 and 15 + 18.1 points) and MOD (9 + 15.1 and 13.1 + 19.5 points) compared to CTRL (2.7 + 15.7 and 3.2 + 18.9 points; ps < .02). Results indicate that the inclusion of behavior modification strategies produces larger improvements in HRQOL than nutrition education alone, regardless of the dose of treatment. It is likely that these strategies contribute to increased weight loss, which influences the magnitude of improvements observed in HRQOL.

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**D090a**

**AN INITIAL CONCEPTUALIZATION OF SCARCITY**

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Socioeconomic status (SES) has long been considered an important factor in health inequalities. However, most research has relied on three proxy measures of income, education and occupation that fail to capture the true multidimensional nature of SES, as well as the subjective or experiential aspect of social and economic status. The current research proposes that the concept of scarcity, the feeling of not having enough to meet one’s needs, may prove a more valuable conceptualization for understanding the psychological effects of limited social and economic resources. Although extant research has examined the influence of scarcity on decision-making processes, the concept of scarcity has not yet been fully conceptualized. Based on qualitative interviews, our purpose is to develop a conceptualization of the scarcity construct that includes the identification of salient contributors to the experience of scarcity. A sample of 22 participants from a large southeastern university completed...
in-person interviews assessing their views on scarcity. Phenom-
enological data analysis reveals that participants experience
three forms of scarcity: material, time, and psychological scar-
city. Participants agree with the general definition of scarcity
provided in previous research, adding that it may also include the “feeling that you can’t provide for what you [and your family] need.” Material scarcity was endorsed most by respondents,
with participants discussing feelings of scarcity associated
with a lack of money, shelter, food, clothing, electronics, and
transportation. When discussing material scarcity, respondents
did acknowledge that there was a difference between objective
and subjective forms of scarcity, however, as one respondent
recognized, “to the person experiencing it, subjective forms of
scarcity may feel just as serious [as objective ones].” The majority
of respondents stated that they experienced some form of time
scarcity, feeling that they did not have enough time to spend
with family and friends, to eat healthy, to exercise, and to get
enough sleep. A lack of social support was brought up most
often when discussing psychological forms of scarcity. These
results suggest that material, time, and psychological scarcity
contribute to overall feelings of scarcity. Future research will
employ quantitative methods to develop standardized measures
of these three dimensions.

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D090b
DENTISTS’ PERSPECTIVES ON PROVIDING ORAL HEALTH CARE TO THE ECONOMICALLY DISADVANTAGED
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Background: Unmet oral health needs are part of an overall pattern of unmet general health needs among the medically
underserved population. The barriers for the economically dis-
avantaged (ED) to access oral health care may vary from those
to access general medical care. This study sought to explore
some of those barriers from the dentists’ perspective.

Methods: Kansas dentists were sent a survey, in either electron-
ic or paper form, requesting demographics and their percep-
tions and attitudes regarding oral health care for the uninsured
and publicly-insured.

Results: The 159 (16% response rate) Kansas dentists who
completed the survey were predominately White, non-Hispanic
(99.4%), male (78%), and 55 years or older (52%). Most dentists
reported accepting uninsured patients (89%), but just 18%
reported accepting Medicaid patients. Dentists were more likely
to report offering discounted services (44%) for those ED and
much less likely to offer sliding fee scales (13%). Additionally,
51% of respondents agreed that dentists should provide oral
health care to the ED. In fact, 60% indicated a personal respon-
sibility to provide that care, yet only 21% agreed that all have a
right to oral health care. Female dentists were more likely than
male dentists to feel responsible for personally providing care
to the ED (80% vs 55%, p = 0.03) and to serve at least some Med-
icaid patients in their practices (74% vs 52%, p = 0.01). Female
dentists were also more likely than male dentists to agree that
dentists should provide oral health care to the ED (69% vs 46%,
p = 0.047) and that access to oral health care is a right (44% vs
15%, p < 0.001). Dentists from urban areas were significantly less
likely to accept Medicaid patients than their rural counterparts
(49% vs 33%, p = 0.005)

Discussion: This study suggests that most Kansas dentists (who
are predominately older, White, and male) accept uninsured
patients and voluntarily provide services to the ED, yet dentists
are less likely to accept Medicaid patients or agree that access
to oral health care is a right. Female dentists had consistently
different responses than male dentists, offering stronger sup-
port for providing oral health care to the ED and accepting
Medicaid. This suggests that the demographic composition of
dentists in and of itself is an important factor for the ED to ac-
cess oral health care.

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D090c
IDENTIFICATION OF FACTORS INFLUENCING ORAL HEALTH PRACTICES IN FAMILIES OF UNINSURED CHILDREN AND
RECOMMENDATIONS FOR CHANGE
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Background: Poor oral health is largely preventable, yet many
uninsured families have unmet needs for dental care. The
purpose of this study was to identify factors that influence oral
health in families of uninsured children and to obtain parent
recommendations for improvement.

Methods: Recruitment from a convenience sample of parents
with uninsured children resulted in two focus groups conducted
in English w/non-Hispanic white parents (n=9) and two in Span-
ish w/Hispanic parents (n=11). The Social Ecological Model
(SEM) was used as a framework for analysis.

Results: Results indicated that factors at each level of the SEM
(individual, interpersonal, organizational, community, and soci-
etal levels) influenced oral health practices. Factors identified
at the individual level included income, definition of good oral
health, past negative dental experiences. At the interpersonal level, the dentist-patient relationship was a major factor, including poor communication and condescending
attitude of dental professionals and poor quality of oral health
information. Family eating habits were also a barrier. Infant
oral health care was practiced, but methods of care differed by
ethnicity. Sources of urgent care differed by ethnicity.

The primary organizational factor was the high cost of dental
services. Other factors identified included lack of evening
and weekend care, lack of discounts for the uninsured, prepayment
requirements, and lack of cost estimates before work is done. At
the community level, parents discussed the limited number of
clinics that provided affordable dental care and payment plans.
Limited access to affordable, healthy foods and beverages was a
factor among others.
Parents provided recommendations for improving oral health. At the societal level they discussed the need for stronger governmental regulations of dental fees, combining dental with medical insurance in one policy, student loan forgiveness programs for dentists who provide uninsured care, and changes in public insurance to increase eligibility and expand coverage.

Discussion: Findings indicated multiple factors influenced oral health in uninsured families. Using the SEM as a framework can help identify strategies for solutions. The findings have implications for practice, policy and further research.

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D090d
THE RELATIONSHIP BETWEEN SELF-DETERMINATION AND HEALTH BEHAVIORS AMONG UNDERGRADUATES
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The undergraduate student (UGS) experience is marked by transitions associated with newfound autonomy. While schedules were previously structured, the daily routines of UGS are flexible and varied. UGS must prioritize health behaviors, such as maintaining a healthy diet and exercising, among areas of social and academic functioning. The sense of independence experienced by UGS allows for development of self-awareness (SA) and perceived choice (PC). These aspects collectively encompass the construct of self-determination, which has not been examined in association with health behaviors in UGS. Our aim was to determine if SA and PC impact decisions regarding eating and leisure-time exercise.

UGS engage in unhealthy eating, weight control, and exercise behaviors, which have significantly increased in the past several years. Due to high rates of comorbidity between these behaviors and psychological and medical health issues, it is important to explore factors associated with their development.

Participants were 126 UGS (79.9% female, 66.4% White, BMI 23.7±3.63, age 21±6 years). We examined the effect of SA and PC (Self-Determination Scale) on cognitive restraint in eating, emotional eating, uncontrolled eating (Three-Factor Eating Questionnaire), and leisure-time exercise (Godin Leisure-Time Questionnaire). Health behaviors were not significantly associated with race/ethnicity, BMI, age or gender.

Linear regression analysis revealed that SA was a significant predictor of health behaviors, specific to cognitive restraint in eating (b = .271, t(112) = 2.98, p < .01), accounting for 6.8% of the sample’s variance after controlling for race/ethnicity (ΔR² =.068, F (2,111) =4.44, p < .05). In contrast, SA was not a significant predictor of uncontrolled or emotional eating or leisure-time exercise. PC was not associated with outcome variables.

These findings suggest that while SA may play an important role in the behaviors of UGS, there are likely many contributing factors unique to this population. Given the transitional nature of this period and newfound autonomy, PC may not be sufficient for healthy behavior choices. Further discussion of clinical and systemic implications of preventing and intervening on unhealthy eating and physical inactivity in UGS is critical.

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D090e
ANGER MEDIATES THE IMPACT OF PERCEIVED INJUSTICE ON PAIN AND FUNCTION IN CHRONIC LOW BACK PAIN
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Emerging evidence suggests that perceived injustice, the belief that one’s pain experience is unfair and attributable to others, is a significant risk factor in the development and maintenance of pain-related disability following injury. However, mechanisms by which perceived injustice impacts pain and physical function are not currently well understood. Previous findings suggest that anger may mediate the relationship between injustice perception and pain outcomes as attributions of blame may increase anger reactions, which can in turn promote more intense pain experience. However, this relationship has not been empirically tested in patients with chronic low back pain (CLBP). In the present study, injustice perception was assessed in 137 patients with CLBP using the Injustice Experiences Questionnaire (IEQ); anger was assessed using the State/Trait Anger Expression Inventory (STAXI), and measures of pain and function were collected using the McGill Pain Questionnaire-Short Form (MPQ-SF) and Pain Disability Inventory (PDI), respectively. Bivariate analyses indicated that higher injustice perception was associated with greater reported state and trait anger scores (r’s=.41 -.50; all p’s <.000) as well as higher scores across multiple dimensions of pain and function (r’s =.52 -.76; all p’s <.05). Both state and trait anger were correlated with greater pain and reduced function (r’s =.34 -.54; all p’s <.05). Analyses (tests of indirect effect as described by Preacher and Hayes [2008]) indicated that state anger partially mediated the relationship between injustice perception and measures of pain and function (p <.05). Results suggest that increased anger accounts for a portion of the association between perceived injustice and relevant pain and functional outcomes, while also indicating that injustice perception may tap constructs unique to anger.

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D090f

CHRONIC PAIN ACCEPTANCE INCREMENTALLY PREDICTS DISABILITY IN POLYTRAUMA-EXPOSED VETERANS
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War veterans are at increased risk for chronic pain and co-occurring neurobehavioral problems, including posttraumatic stress disorder (PTSD), depression, alcohol-related problems, and mild traumatic brain injury (mTBI). Each condition is associated with disability, particularly when co-occurring. Pain acceptance is a strong predictor of lower levels of disability in chronic pain. This study examined whether acceptance of pain predicted current and future disability beyond the effects of these co-occurring conditions in war veterans. Eighty trauma-exposed veterans with chronic pain completed a PTSD diagnostic interview, clinician-administered mTBI screening, and self-report measures of disability, pain acceptance, depression, and alcohol use. Hierarchical regression models showed pain acceptance to be incrementally associated with disability after accounting for PTSD, depression, alcohol-related problems, and mTBI (total adjusted $R^2=.57$, $p<.001$). Pain acceptance remained significantly associated with 1-year disability when pain severity was included in the model. Future research should evaluate treatments that address chronic pain acceptance to promote functional recovery in the context of polytrauma in war veterans.

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D090h

OBSERVATION OF PAIN IN OTHERS IMPACTS SUBJECTIVE APPRAISAL AND PERFORMANCE OF PHYSICAL ACTIVITY
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Research suggests that observing others experiencing pain may provide important input for personally-relevant pain experience. Studies examining this hypothesis have demonstrated that observational learning can affect healthy individuals’ subjective fear of experimental pain stimuli. However, research has yet to examine whether observational learning impacts appraisals of physical activity/exertion. In the present study, healthy participants (n=108) completed a measure of pain-related fear (Tampa Scale of Kinesiophobia; TSK) and were then randomly assigned to one of two conditions. One group (n=53) viewed a video prime depicting chronic back pain patients performing standardized daily tasks while displaying high-pain behavior (high-pain video prime). The other group (n=55) viewed chronic back pain patients performing identical tasks while displaying low-pain behavior (low-pain video prime). Following the prime, participants performed two standardized tasks (a back-stressing lift and a test of self-selected physical exertion) and provided pain intensity ratings using a visual analog scale (VAS). Between-group analyses indicated that participants did not differ in pain-related fear at baseline. However, participants assigned to the high-pain video prime reported higher pain intensity following performance of both standardized physical tasks than those in the low-pain prime condition ($F(1,107)=6.1$ and $6.0; p's<.05$). In addition, participants assigned to the high-pain video prime selected a lower amount of weight during the self-selected physical exertion task ($F(1,107)=4.6; p<.05$). Results suggest that observing others experiencing pain impacts healthy individuals’ perceptions of activity-related pain as well as willingness to engage in physical activity. Findings likewise support the role of
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D090i
RACIAL/ETHNIC DIFFERENCES IN PAIN EXPERIENCE AMONG ECONOMICALLY DISADVANTAGED PRIMARY CARE PATIENTS

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Little is known about the epidemiology of chronic pain in diverse, low-income populations. We evaluated racial/ethnic variation in the baseline data from a study testing a new decision support tool for pain management. In total, 519 English or Spanish-speaking patients with chronic severe pain (pain > 3 months with worst pain > 4/10 or T-score > 50 on the PROMIS pain interference tool) were surveyed from 6 Federally Qualified Health Centers in New York. Patients were assessed on demographics, acculturation, psychological symptoms, pain outcomes, and quality of life. The sample included 124 (23.9%) non-Hispanic Blacks, 107 (20.6%) non-Hispanic Whites, 210 (40.5%) Hispanics, and 78 (15.0%) identified as “other.” Mean age was 53.6 years (SD=12.8) and women comprised 70.7%; 75.3% had a H.S. education or less; 52.6% earned < $10,000/year and 22.5% were Spanish-speaking with low acculturation. Mean worst pain severity in the past week was 8.6/10 (SD=1.5); 89.8% rated worst pain > 7/10 and 43.3% used opioids, 44.8% non-steroidal anti-inflammatory drugs (NSAIDs), and 26.4% non-drug strategies (e.g., behavioral and integrative). Mean global satisfaction with pain care was 3.4/5.0; 34.0% had emergency room (ER) visits and 16.1% were hospitalized due to pain in the past 6 months. Anxiety and depressive symptoms (T=58.5; SD=12.5; T=55.6; SD=11.8) and quality of life (physical, T=34.9; SD=6.1; mental, T=37.5; SD=7.7) were worse than the general population. In univariate analyses, Hispanics significantly differed from other groups in income (lowest), depressive symptoms (second highest), opioid use (least likely), and NSAID use (most likely) (all ps < .05). Further, Hispanics had a trend towards more ER visits and hospitalizations and lower satisfaction with pain care. Pain severity did not vary by race/ethnicity, but pain interference was highest among non-Hispanic Whites and lowest among Hispanics (p < .02). These data suggest the need for additional studies of racial/ethnic differences in pain among urban, low-income populations. Studies should clarify how race/ethnicity modify associations between pain and outcomes such as hospitalization and quality of life. Future research may reveal the social mechanisms that underlie these differences and create tailored interventions for pain.

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D090j
IDENTIFYING AS RELIGIOUS AND STRENGTH OF RELIGIOUS COMMITMENT PREDICT SUBSTANCE USE RATES, BUT TYPE OF RELIGION DOES NOT

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Previous studies have shown religiosity to predict health outcomes, and some studies have found religious beliefs and religious service attendance to predict substance use. In the current study, one multiple-choice item asking for religious affiliation, if any, three Likert-type items measuring Religious Commitment (two measuring Surrender to God and one measuring religious service attendance) and five dichotomous questions asking about substance use (illicit drug use ever, any alcohol consumption, moderate alcohol consumption, heavy alcohol consumption, and whether the respondent currently smokes) were administered to 949 college students (68% male, 85% White, representing 21 countries) via an online participant pool. Religious Commitment questions were dichotomized into high/low, then respondents divided into two groups: 1) those who were high on all three items (High RC; 17.4%) and 2) those who were not (Low RC; 82.6%). Logistic regression was used to determine the degree to which Religious Commitment predicted probability of use of various substances. No covariates were used because no demographic variables were significantly related to any of the substance use variables. Individuals who were high on all Religious Commitment variables were far less likely to have ever used illicit drugs (OR 0.29, 95% CI 0.20-0.44, p < .001), to have used any alcohol (OR 0.29, 95% CI 0.20-0.42, p < .001), to have used alcohol moderately (OR 0.37, 95% CI 0.24-0.59, p < .001), to have used alcohol heavily (OR 0.26, 95% CI 0.16-0.44, p < .001), or to currently smoke (OR 0.13, 95% CI 0.04-0.43, p < .001). No particular religion (Protestant, Catholic, Jewish, Muslim, Other) was predictive of any substance use variable; however, reporting religious affiliation as No Religion was predictive of the use of illicit drugs (OR 2.75, 95% CI 1.85-4.10, p < .001) and smoking (OR 2.43, 95% CI 1.46-4.05, p = .001), but not of alcohol use. Lacking any religious affiliation appears to predict risk of drug use and smoking and being high in Religious Commitment appears predict much lower risk of all types of substance use measured in this study. Individuals presenting with low levels of Religious Commitment or who identify as non-religious may be at greater risk for substance use and abuse, and therefore may be candidates for screening and intervention by behavioral health practitioners.

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D090k
DIFFERENT IMPACTS OF RELIGIOUS INVOLVEMENT ON SUBGROUP ASIAN-AMERICANS’ MENTAL HEALTH IN THE UNITED STATES
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Background: Asian Americans (AA) constitute the fastest growing ethnic minority group in the United States (US). Religion is a fundamental element of cultural identity with evidenced protection for non-AA minorities. Little research has yet addressed the role of religious involvement in the mental health of AA subgroups nationwide. Given their culturally heterogeneous, we expected varied roles of such activities in the self-reported mental health (SRMH) among Chinese, Vietnamese, and Filipinos.

Method: Using the first national epidemiological household survey of AAs (N=1628), we conducted three sets of two-step multiple regression analyses for each subgroup to evaluate the independent effect of religious involvement, controlling for known predictors. Social Support was added to in the second step to test its mediation between religious involvement and SRMH.

Results: Unexpectedly, religious involvement was associated with higher levels of SRMH only among Chinese, the least religious subgroup. However, younger Chinese generations were engaged in religious activities more than older ones. In contrast, the younger generations, of Filipinos, the most religious subgroup, showed the opposite pattern. Social support predicted SRMH for the Chinese and Vietnamese but did not mediate the role of religious involvement among Chinese. Regarding SRMH, the Step-2 model explained 28.2% of the variance for Chinese [F(12, 433)=11.67, p<0.001], 19.4% for Vietnamese [F(12, 353)=5.84, p<0.001], and 12.6% for Filipinos [F(12, 443)=3.70, p<0.001], respectively.

Conclusion: The findings indicated that religious involvement, as a culture-relevant factor, may have differential influences on mental health among AA subgroups. Such effect should be considered in the context of different AA-subgroups’ cultural and immigration experiences.

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D090n
SPIRITUALITY IN FAMILY CAREGIVING OF SCHIZOPHRENIA: THE ROLE OF ATTACHMENT TO DIVINITY
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Background: Taking care of a schizophrenic family member involves lots of uncertainties and loneliness which create huge burden to the caregivers. Spirituality is often viewed as an internal coping resource to buffer the effects of uncertainty on psychological well-being, but how the caregivers of people with schizophrenia make use of this resource is rarely studied. This exploratory qualitative study aimed to explore how family caregivers of schizophrenia utilized their spiritual resources to cope with the burden of caregiving.

Method: 11 family members of patients with early-stage schizophrenia, who identified themselves as the main caregivers, were recruited from an outpatient clinic of a hospital in Hong Kong. Semi-structured interviews were conducted to investigate their spiritual and caregiving experiences. Data were collected and analyzed according to the principles of grounded theory.

Results: The caregiving experience was described as exhausting and lonely. The indefinite cause of the illness induced a sense of losing control over their lives, and created lots of wonders and worries. The uncertainty towards future and the stigma attached to the illness made the sharing of their experiences become uneasy, thus giving rise to a feeling of loneliness. Participants laid emphasis on the attachment to divinity when coping with the burden of caregiving. The unconditional faith in
divinity acted as a consolation which provided a psychological shelter for participants to rely on. This created a perception of being loved, cared, accompanied and protected, giving them confidence and courage to confront the adversities without further questioning.

Participants also indicated that the attachment to divinity to certain extent became a guidance which informed them what roles they should play during patients' recovery.

**Conclusion:** Attaching to divinity helped moderate the negative impacts of caring for a schizophrenic family member. The findings not merely indicated the importance of spirituality in family caregiving of schizophrenia, but also demonstrated a necessity of taking care of caregivers' spiritual needs because it may indirectly benefit the patients as the caregiver is the primary source of care.

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D090p

**ETHNICITY, STRESS AND MINDFULNESS SKILLS AS PREDICTORS OF HEALTH BEHAVIORS**

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Health disparities among racial and socioeconomic disparate groups are well documented in the US. For example, non-Hispanic blacks have the highest rates of obesity (47.8%) followed by Hispanics (42.5%), non-Hispanic whites (32.6%), and non-Hispanic Asians (10.8%). Few studies have examined ethnic or cultural differences in the use of mindfulness skills and health behaviors. The purpose of this study was to examine the relationship between mindfulness skills and health behaviors in a diverse sample of young adults.

Participants (n=95, 80% women) were asked to complete self-report measures including the Kentucky Inventory of Mindfulness skills, the Perceived Stress Scale and a Lifestyle Behavior Questionnaire. Participants self-identified as European American (40%), Latino/a (36%), African American (7%), Asian/Asian American (4%), mixed or biracial (12%), with an average age of 20.8 (SD=4.97). Sixty-six percent of the sample endorsed an annual income of $10,000 or less, with 33%-48% noting that their parent’s highest level of education was a high school diploma or equivalent. The sample had a self-reported average BMI of 23.8 (SD=4.92; range 14.87-42.43). To develop a composite of health behaviors (fruit/vegetable consumption, exercise, sleep, caffeine and alcohol consumption, and smoking cigarettes), a sum score was created (M=2.83, SD=1.22, possible range 0-7).

Level of mother’s education was positively correlated with health behaviors (r=.24, p<.05). Differences in health behaviors between non-Latino (M=3.0, SD=1.21) and Latino (M=2.47, SD=1.16) participants (t=-2.20, p<.05), as well as BMI (non-Latino M=22.55, SD=4.36 and Latino M=26.03, SD=5.13; t=-3.49, p<.01) were present. Regression analysis revealed that the mindfulness skills of observe and describe predicted healthier behaviors (Adj. R²= .96%, F (5,89) = 3.00, p < .05). When controlling for ethnic, gender, and perceived stress, only the mindfulness skill of observe predicted healthier behaviors, and Latino/a ethnicity was associated with less healthy behaviors (Adj. R²=14%, F (9,85)=2.73, p<.01). Results suggest that mindfulness skills could serve as a viable method for improving health behaviors in the Latino community, but more research is needed.

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D090q

**PATTERNS OF COPING AND PERCEIVED STRESS AMONG DENTAL STUDENTS**

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**Background:** Dental students experience significant stress, often related to rigorous academic and clinical demands of dental
education. Little can be done to alter academic and clinical requirements of dental training. Efforts may be better focused on promoting effective coping skills. Coping research distinguishes between problem-focused coping, aimed at altering the stressor, and emotion-focused coping, aimed at altering the emotional response. Emotion-focused coping is differentiated into adaptive and avoidant emotion coping. Despite high stress among dental students, few studies have examined students’ coping patterns. The current study aimed to examine dental student coping and the relationship between problem-focused, adaptive emotion, and avoidant emotion coping and perceived stress.

Methods: Dental students (N = 91) completed an anonymous, online self-report survey. Measures included the Perceived Stress Scale and Brief COPE. Brief COPE subscales were divided into problem, adaptive emotion, and avoidant emotion coping, consistent with prior student coping research. Students rated stress on a 5-point Likert scale in four specific areas: academic, clinical, faculty, and personal. Descriptive and correlational analyses were conducted on the stress and coping variables. Partial correlation analyses were conducted to examine the relationship between coping and stress controlling for demographic correlates.

Results: Stress levels were high (M = 19.13, SD = 6.67) with the majority (73%) in the higher than average range. Highest stress was reported in academic (M = 3.65, SD = 1.02) and clinical (M = 3.47, SD = 1.07) domains. Dental students utilized adaptive emotion coping most frequently (M = 2.66, SD = 0.46), followed by problem-focused (M = 2.45, SD = 0.55) and avoidant emotion (M = 1.89, SD = 0.41). After controlling for demographic correlates, more avoidant coping was related to higher stress (r = .48, p < .001). Problem-focused and adaptive emotion coping were not significantly related to overall stress. However, less problem-focused coping was significantly related to greater clinical (r = -.29, p = .029) and faculty (r = -.28, p = .027) stress.

Conclusions: Findings provide initial insight into dental student coping patterns. Dental students may benefit from problem-focused coping skills aimed at specific clinical or faculty related stressors. Decreasing avoidant coping may impact overall levels of stress.

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D108b
A QUALITATIVE ANALYSIS OF INVICTUS GAMES TELEVISION COVERAGE
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The use of sport in the rehabilitation of injured service members and veterans has increased due to recognition of the physical and psychosocial benefits of sport participation. In an aim to promote the benefits of sport participation, the Invictus Games, an international sport competition for wounded, injured, and sick service members and veterans, were developed in 2014. The goals of the event were to (a) inspire and support recovery; and (b) celebrate service members and veterans. The four days of competition were aired on the United Kingdom’s BBC, with a total of 12 hours of television coverage. The messages conveyed during television coverage can potentially impact health policy, stigma towards people with physical disabilities, views of disability sport, and sport participation. Therefore, the purpose of this study was to conduct a qualitative analysis of Invictus Games television coverage to examine how the impact of high-performance sport participation on ill and injured service members and veterans was conveyed. The BBC television coverage was recorded and transcribed verbatim. A content analysis was conducted to explore emerging themes related to messages about the impact of Invictus Games participation. Seven key themes emerged: (1) physical health benefits; (2) psychological benefits; (3) independence and the promotion of ability over disability; (4) the return of valued social relationships and recognizing social support; (5) environmental opportunities; (6) inspiration both for service members and other individuals with illness or disability; and (7) reintegration and resilience. These findings demonstrate that, according to television coverage, a number of important psychosocial benefits were experienced as...
a result of participation in the Games. While further research is required, the positive messages conveyed may serve to change perceptions of disability, and motivate sport participation among individuals with physical disabilities.

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D108d
EXERCISE-RELATED COGNITIVE ERRORS: RELATION TO ADHERENCE COGNITIONS AND EXERCISE PATTERN
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Background: Janis (1984) has argued that social cognitive models of health behaviour fail to capture all factors that further understanding of health behaviour because they assume that health information is rationally processed and acted upon. One such factor is cognitive errors – a distorted evaluation of information that leads to maladaptive thoughts and behaviour. Exercise-related cognitive errors (ECEs) might affect the interpretation of exercise-relevant information and have utility in addition to social cognitions (i.e., self-regulatory efficacy: SRE) in predicting exercise. Might individuals with ECEs also be more likely to be inactive or inconsistent in their exercise patterns?

Purpose and hypotheses: To determine whether ECEs will have utility in predicting exercise. Based upon social cognitive theory and clinical evidence about cognitive errors, it is hypothesized that ECEs will contribute additional variance to the prediction of exercise unique from other social cognitions. As well, compared to consistent exercisers, the inconsistent will be more likely to make ECEs and express weaker adherence-related social cognitions.

Method: Participants(N = 316, Mage = 29.3, 80% Female) completed an online questionnaire and responded to measures of exercise volume and pattern, ECEs, SRE, persistence to exercise, and decisional struggle for future exercise.

Results: A hierarchical multiple regression model (R2 adj = .143, p < .001) revealed ECEs contributed unique variance to the prediction of exercise volume (R2 change = .044, p < .001, SRE = .130, ECE = -.282). Compared to consistent pattern exercisers, the inconsistent had significantly higher ECEs (d = .76, p < .001), lower SRE (d = −1.19, p < .001), lower persistence (d = −.97, p < .001), and more decisional struggle (d = .67, p < .001).

Conclusion: This first investigation of ECEs demonstrates their independent relation to exercise cognitions, behavior, and to inconsistent/consistent exercise patterns. Reframing strategies have successfully diminished the effect of cognitive errors in maladaptive situations. Future study in exercise should test if ECEs lead to biased information processing and if reframing would aid exercise decision-making.

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D108c
A SNAPSHOT OF IN-SCHOOL PHYSICAL ACTIVITY AMONG 4TH GRADERS: ARE CHILDREN MEETING RECOMMENDATIONS?
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Background: Daily physical activity (PA) and decreased sedentary time are important for health benefits in youth. Disparities in PA across race/ethnicity, gender, and BMI exist in US children. The school day can provide opportunities for all children to meet PA guidelines. However, it is unclear if subgroup differences in PA level are present within this setting. Therefore, the purpose of this study is to describe differences in amount and intensity of in-school PA by race, gender, and BMI for a large sample of fourth-grade children.

Method: Participants are 699 fourth-grade children from 9 central Texas schools (n age = 9.6; n BMI = 18.53; 50.4% female; 47.1% white). Percent of time spent in various PA intensities (e.g. light, moderate, vigorous) and in sedentary was assessed over a school week via accelerometer. Gender, race/ethnicity, and BMI were taken from Fitnessgram data provided by each school. BMI was dichotomized to represent whether the child’s BMI was in the healthy (65.4%) or unhealthy (35.6%) fitness zone. Independent samples t-tests and a one-way ANOVA were used to examine differences between groups.

Results: On average, boys spent more time in MVPA each day (79.16 minutes), compared to girls (73.06 minutes; p < .001), with 81.3% of all children exceeding 300 minutes of MVPA per week. Girls spent less percent time in moderate, vigorous, and very vigorous PA (p < .001) and more time in sedentary (p < .001) than boys over the week. Percent time spent in sedentary, light, moderate, vigorous, and very vigorous PA categories were similar across all racial groups (p > .1). Across all children, those with a BMI in the healthy fitness zone spent more time in very vigorous (p < .001) PA and less time in moderate PA (p < .007) than those with BMIs in the unhealthy zone.

Conclusion: It appears that schools provide adequate opportunity to engage in PA for all groups. Because Texas schools require 135 minutes of physical education class each week and schools in this sample provided at least 20 minutes of recess per day, it is not surprising that a large percentage of children in this sample met or exceeded daily PA recommendations. Despite these high activity levels, one-third of the participants did not have BMIs in the healthy fitness zone. Therefore, it may be necessary to target health behaviors outside of the school setting.

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D108e
FEASIBILITY OF A BEHAVIORAL SELF-MANAGEMENT INTERVENTION FOR ADULTS WITH SYMPTOMATIC OSTEOARTHRITIS
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Cognitive behavioral therapy (CBT) is a well-established psychosocial intervention with long term benefits on pain and physical function in individuals with osteoarthritis. However,
CBT is not typically offered to these individuals. Knee osteoarthritis (KOA) is a leading cause of disability affecting 27 million US adults and while current exercise interventions improve pain and physical function, benefits tend to wane over time with poor long-term adherence. Our pilot study tested the feasibility of a new KOA rehabilitation intervention - ENGAGE, which combines CBT elements with occupational therapy, aiming to improve physical functioning, physical activity, and pain.

We conducted a pilot randomized-controlled trial of community-living adults aged ≥50 years with mild to moderate painful KOA (pain≥3 months), ambulatory, and had access to a computer. Participants were randomized 2:1 into ENGAGE and control groups. Each ENGAGE participant met with an occupational therapist (OT) for 8 weekly individual sessions, where each session was tailored to review and complete the homework as directed by 8 standardized behavioral self-management modules on the ENGAGE website. Outcomes were assessed at baseline and at 6 months follow up.

There were 47 participants (Mean age = 63 years; 71% female). Session attendance was high for the ENGAGE participants (74% attended all 8 sessions, and 23% completed 6 or more). At 6 months, comparing ENGAGE vs. Control participants: 45% vs. 11% reported very much or much improved on the Patient Global Impression of Change scale; 90% vs. 50% showed a ≥10% improvement in WOMAC physical function; 36% vs. 25% demonstrated a ≥20 meter improvement in 6 minute walk; and 41% vs. 25% reported ≥30% improvement in BPI pain interference.

Participants who reported being very much or much improved on the BPI showed a ≥36% improvement in WOMAC physical function; 36% vs. 25% demonstrated a ≥20 meter improvement in 6 minute walk; and 41% vs. 25% reported ≥30% improvement in BPI pain interference.

Global Impression of Change scale; 90% vs. 50% showed a ≥10% improvement in WOMAC physical function; 36% vs. 25% demonstrated a ≥20 meter improvement in 6 minute walk; and 41% vs. 25% reported ≥30% improvement in BPI pain interference.

At 6 months, comparing eNGAGe vs. Control participants: 45% vs. 25% reported a ≥36% improvement in WOMAC physical function; 36% vs. 25% demonstrated a ≥20 meter improvement in 6 minute walk; and 41% vs. 25% reported ≥30% improvement in BPI pain interference.

Participants who reported being very much or much improved on the BPI showed a ≥36% improvement in WOMAC physical function; 36% vs. 25% demonstrated a ≥20 meter improvement in 6 minute walk; and 41% vs. 25% reported ≥30% improvement in BPI pain interference.

Adults with symptomatic KOA had a high acceptability of the ENGAGE self-management program. Compared to usual care, ENGAGE participants had greater improvements in physical function, pain, and pain interference at 6 months. This study demonstrates the value of offering CBT-like interventions in the context of an OT setting. Further evaluation of these promising findings is needed in a larger clinical trial.

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D108f
IMPLEMENTATION OF BEHAVIOR CHANGE TECHNIQUES IN MOBILE APPS FOR PHYSICAL ACTIVITY
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Physical activity applications (apps) for mobile devices are among the top-grossing of all application markets and have attracted interest as a tool for promoting physical activity and reducing risk of chronic diseases. At present, little is known about the efficacy of these apps for increasing physical activity. Absent data from comparative efficacy trials, apps can be evaluated and compared based on the behavior change techniques (BCTs) in each. Our team previously coded the BCTs described in online descriptions of these apps in online marketplaces but those materials may be selective representations of app features.

This study extended prior work by using systematic user-inspections to determine the implementation prevalence of BCTs in the most popular physical activity apps.

Top-ranking physical activity apps (50 free, 50 paid) were downloaded from the “health and fitness” category of the Android and iTunes online marketplaces in November 2013. Each app was independently coded by two trained coders based on the 93-item BCT Taxonomy (v1).

Coders observed 39BCTs present across the apps (M = 6.6 BCTs/app). The most commonly observed BCTs included providing social support, information about others' approval, instructions on how to perform a behavior, demonstrations of the behavior, and feedback on the behavior. A latent class analysis of app BCT content indicated two types of apps, with one type focusing on providing support and feedback and the other focusing on providing support and education.

User inspection identified more BCTs in apps than did a review of the marketing materials albeit with a more detailed coding system. Overall, BCT implementation is relatively limited in contemporary physical activity apps. Contrary to prior work, social support was the most pervasive BCT implemented in physical activity apps. Surprisingly, BCTs with strong empirical support – such as self-monitoring – were observed less frequently than previous online descriptions suggested. This user inspection study provides valuable information for both practitioners and app developers working together to develop and disseminate interventions in the mHealth domain.

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D108g
IS PHYSICAL ACTIVITY TYPE RELATED TO IMMEDIATE PERCEPTIONS OF SELF-WORTH IN MIDDLE-AGED WOMEN?
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A strong body of evidence supports the role of regular physical activity (PA) for enhancing self-worth in middle-aged women. Less research has examined the influence of PA type (e.g., walking, strength training) on self-worth. Using ecological momentary assessment, the purpose of this exploratory study was to examine acute relationships between PA type and self-worth in middle-aged women (35-64 years-old).

Participants (N=59 women, M age=49.2±8.2 years) received three daily text message prompts for 28 days. Each prompt included a link to a mobile survey assessing momentary activity (“What were you doing right before you received the text message?” and self-worth (general, physical [body attractiveness, physical condition]). Linear mixed models were used to examine relationships between PA type (walking, running/jogging, strength training, aerobic exercise using equipment, mind/body practice [e.g. yoga], and other) and self-worth.
Women reported participating in PA at 173 of 3,546 assessments. The majority of reported PA was walking (72.8%), followed by other (15.0%), mind/body (3.5%), running (3.5%), strength training (3.0%), and aerobic exercise (2.3%). Significant differences were observed in general self-worth by PA type ($p = .01$). Specifically, perceptions of general self-worth were higher when women reported strength training and mind/body practices compared with walking, running/jogging, or aerobic exercise. Marginally significant differences between PA types were observed in perceived body attractiveness ($p = .06$) and physical condition ($p = .07$). In particular, body attractiveness and physical condition were lower when women reported strength training compared with other forms of exercise. Women reported highest levels of body attractiveness and physical condition after participating in mind/body practices, but these levels were only significantly greater than strength training ($p = .02$ [body attractiveness], $p = .05$ [physical condition]).

Results suggest non-aerobic forms of exercise, specifically mind/body, are related to higher self-worth immediately following participation in PA. This study concerns imbalanced group sizes as the vast majority of women reported walking as their current PA. Research with a larger sample size is needed to further examine acute relationships between PA type and self-worth in middle-aged women.

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D108h
PRACTICAL ISSUES OF MODELING EXPERIENTIAL ACCEPTANCE IN AN ACT INTERVENTION FOR IMPROVING FITNESS.
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A previous pilot study developed a 10-week intervention using Acceptance and Commitment Therapy (ACT) with the targeted outcome of increasing cardiorespiratory fitness in a sample of 19 adults. Results of this pilot study showed that from baseline to post-interventions participants showed significant increases in estimated VO2max and an increase in experiential acceptance of internal experiences related to physical activity as measured by the Physical Activity-Acceptance and Action Questionnaire (PA-AAQ). This study reports secondary analyses of this pilot study and examines the longitudinal trajectory of the PA-AAQ. All participants completed baseline, weekly, and post-intervention measures of the PA-AAQ; 12 total measurements. Data from these 12 PA-AAQ assessments were plotted and showed substantial nonlinear change with most of the change occurring during the first three weeks of the intervention. To account for this nonlinearity, a latent basis growth curve model was used to model change overtime and standard errors for parameters were estimated via bootstrapping. Results from this analysis showed there was significant mean change overtime (mean slope factor = 8.5, 95%CI [2.6, 13.8]) but that there was also significant variability in this change (variance of slope factor = 34.5, 95%CI [6.5, 87.8]). This suggests that changes in experiential acceptance of PA were between- and within-person, indicating change in this variable was different for different people.

Future studies should examine brief ACT interventions or should account for the nonlinear change in the PA-AAQ by using nonparametric tests or modeling the nonlinear change via latent basis models. Additionally, future studies could use growth mixture modeling to identify subgroups of individuals who show unique PA-AAQ trajectories and try to predict these subgroups in order to identify individuals who will be more responsive to an ACT intervention.

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D120b
IMPACT OF COMMUNICATING GENETIC AND LIFESTYLE RISKS FOR OBESITY: A RANDOMIZED TRIAL
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Genetic testing for obesity is available directly to consumers, yet little is understood about its impact on weight management motives and behaviors. In addition, few studies have examined the impact of genetic information when presented in the context of other non-genetic risk. We conducted a randomized trial to examine the short-term impact of providing personalized risk feedback for obesity, using a 2x2 factorial design. Study participants were recruited from the Coriell Personalized Medicine Collaborative (CPMC) and randomized to receive 1) no risk (control), 2) genetic risk (FTO gene), 3) lifestyle risk (hours sitting while watching TV), or 4) combined genetic/lifestyle risks. Participants completed surveys at baseline and 3 month follow-up. Linear regression models examined the impact of risk information on intentions to lose weight and change in self-reported weight. A total of 696 participants completed the study. Mean age was 50 years, 68% were female, 93% were Caucasian, and 60% had a BMI > 25. A significant interaction effect was observed for genetic and lifestyle feedback on intent to lose weight ($p < .05$). Those who received genetic risk feedback had higher intentions at follow-up, compared to those who received no risk feedback ($p < .005$). Notably, receiving “high” genetic risk had a significant impact on intent when presented alone or in combination with “high” (but not “low”) lifestyle risk ($p < .05$). Conversely, receiving “high” lifestyle risk had a significant impact on intent only when presented in combination with “high” genetic risk ($p < .05$). Weight change did not differ across groups. The impact of communicating genetic risk for obesity varies as a function of the context in which risk is presented. Researchers should be mindful of the differential impact of genetic risk information for obesity when it is presented alongside other risks.

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D120c
RELIGIOSITY AND HEALTH DECISION MAKING IN THE AFRICAN AMERICAN FAITH COMMUNITY
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African Americans (AAs) community are disproportionately affected by HIV, with the rate of new infections eight times that of Non-Hispanic Whites. The Black church is a keystone of the AA community and religion impacts the lifestyle and healthcare choices of many AAs. However, there is a lack of research on how religiosity influences health decision making behaviors in the AA community, particularly for HIV. The current study examined the effect of religious behaviors on HIV testing decision making among adult AA church members (N = 542) in the Kansas City metropolitan area. Most participants (n = 347, 64%) were female and self-identified as primarily AA (n = 490, 91%). Participants’ ages ranged from 18 to 65 (M = 42.32 years, SD = 13.47 years). Results indicated that participants were less likely to plan on obtaining an HIV test, (M = 7.07, SD = 3.7), and less likely to weigh the pros and cons of obtaining an HIV test (M = 7.20, SD = 3.5). However, participants more likely to make an intellectual decision than an emotional decision to obtain screening (M = 4.86, SD = 3.6). Participants reported high religiosity (e.g., thought of God, prayed, mediated; M = 34.6, SD = 8.23). Linear regression analyses indicated that religious behaviors did not significantly predict overall decision making, β = 35.4, p = .132, SE = .038. However, when the four decision making scales were considered separately, there was a small but significant negative prediction of spontaneously getting an HIV test by religious behaviors, β = -.363, p = .047, SE = .182, indicating higher religiosity is associated with thinking through obtaining an HIV test. Findings suggest that religious behaviors are an important aspect of health decision making among AAs; more research is needed into other predictors of health decision making in this community. Increased understanding of decision making in AA faith-based settings could increase HIV screening rates in this high-risk community.

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D120d
THE SEXUAL DOUBLE STANDARD: DOES CARRYING A CONDOM STIGMATIZE MEN, TOO?
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Negotiating safer sex is often framed in terms of carrying, offering and using condoms. The sexual double standard (SDS) would support men who carry condoms while women would be stigmatized. Studies examining implicit attitudes toward women who carry or offer condoms support the SDS but some evolution has occurred in that men and women have similar attitudes. While the literature supports the double standard toward women, no studies were found that examined attitudes toward men who carry condoms. In this study, we asked 226 college students (70.4% female) to examine a college male’s book bag or gym bag that contained either 0, 1 or 3 condoms. Students rated the owner of the bag regarding his perceived sexual, drug use, and health behaviors, his friendliness, and academic performance. Factor analysis revealed 3 factors: Drug/Sex; Friendliness; and Health Behaviors. T-test revealed no mean differences across the factors by gender or whether the student “ever” carried a condom. A 2 (bag) by 3 (condom #) MANOVA revealed significant between subjects interaction effects for the Drug/Sex (F (2) = 3.22, p = .04) and Health factors (F (2) = 3.39, p = .04). Main effects for Condom Number were significant for Sex/Drugs (F (2) = 14.63, p = .000, with the owner of the bags containing 1 or 3 condoms rated as significantly more likely to get drunk or high, have one night stands, and more sexually active. Overall Friendliness approached significance (p = .06) and the owners of bags with no condoms were rated as significantly more friendly than the owners of bags with one condom. Significant main effects for Bag Type were found the Health factor (F (1) = 7.56, p = .006). The owner of the gym bag was rated as significantly more health conscious than the own owner of the book bag. Overall the results support the double standard, but indicate a shift in that similar to women, men who carry condoms are viewed more negatively than those who do not. The implications for promoting safer sex among college students are discussed.

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D126a
ADVERTISING EFFECTIVENESS FOR RECRUITMENT & RETENTION IN A TRIAL OF YOGA FOR SMOKING CESSATION
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Objective: BreathEasy is a randomized controlled trial of yoga as a complementary treatment for smoking cessation. This study evaluated recruitment methods including radio, online, referral, flyer and newspaper and their relationship to enrollment, participant characteristics and retention at 8 weeks.

Methods: 621 adults were screened: 251 (40%) via radio, 138 (22%) online, 81 (13%) referral, 57 (9%) flyer, 12 (2%) newspaper, and 12 (2%) did not recall, 69 (11%) endorsed > 1 reason or none at all. 324 (52%) were eligible and 201 (62%) attended orientation; 158 (79%) were randomized and 19 (9%) were ruled ineligible post randomization. Baseline characteristics and psychosocial variables were compared across recruitment methods using Analysis of Variance. Chi-squared tests were used to compare study flow across recruitment method.

Results: Randomization rates differed depending on recruitment method, p<.05; highest rates were via radio (89%) and lowest via paper (63%). There were no differences in retention (89%). Of participants randomized, those recruited online were younger than those recruited via flyer or referral (p<.001). Participants recruited via flyer or referral had higher mean anxiety (STAI) compared to those recruited via newspaper, (p=0.01). Those recruited online or via radio were more educat-
ed, (p=0.03). Those recruited online, via paper or by radio were more likely to be employed full time (<60% vs. 31%; p=0.02).

Those recruited via flyer showed significant decreases in positive affect (PANAS) between baseline and week 8 compared to those recruited online (p=0.01) and radio (p=0.08). There were greater decreases in positive affect among those referred to the study compared to online recruits (p=0.04). Finally, there was a trend toward greater reductions in FTND over 8 weeks amongst those recruited via flyer compared to radio (p=0.09).

**Conclusion:** *Breatheasy*, a large-scale smoking cessation and yoga RCT, successfully recruited and retained participants at 8 weeks regardless of advertising strategies highlighting the need to combine proactive and reactive recruitment methods in order to attract a diverse population of smokers. Different sources recruited participants with different characteristics. Outcomes may facilitate cost-effective targeting for future programs.

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**D126b**

**BUTT WHY? CIGARETTE SCAVENGING & FACTORS ASSOCIATED WITH SMOKING PREVIOUSLY USED CIGARETTES**

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**Objective:** There is limited research regarding the prevalence of, and characteristics associated with smoking behaviors involving previously smoked or used cigarettes, for which we use the term “Cigarette Scavenging”. The only studies that have addressed these behaviors have focused on homeless or incarcerated smokers. This study reports on the baseline prevalence and factors associated with scavenging behaviors among adult smokers recruited from the general population for a smoking cessation intervention.

**Methods:** Data were obtained from adult smokers (N=158) participating in an on-going randomized controlled trial examining the efficacy of yoga as a complementary adjunct to cognitive behavior therapy for smoking cessation. Cigarette scavenging was assessed at baseline with three questions focusing on: sharing of cigarettes with strangers, smoking “found” cigarettes, and smoking cigarettes “butts” that had been smoked incompletely by someone else. Factors associated with cigarette scavenging were delineated by comparing smokers who endorsed all versus none of these behaviors.

**Results:** Approximately one-third of all participants (32.3%) in our study endorsed engaging in at least one of the three cigarette scavenging behaviors at some point in the past. Those who engaged in scavenging were more likely to be younger (F[1,157] = 8.00; p < .01), male (X^2[1] = 3.70; p < .05), report an annual household income of under $35,000 (X^2[1] = 5.52; p < .05) and be unemployed (X^2[1] = 4.16; p < .05). Those who engaged in scavenging also scored higher on measures of impulsiveness (F[1,132] = 5.36; p < .05), however no differences were found in nicotine dependence.

**Conclusions:** This study adds to the limited literature on the behaviors of smokers who scavenge previously smoked cigarettes. While prior research had found that nicotine dependence was related to cigarette scavenging in a prison population, our study involving a general population did not find such a relationship. Future research should examine the short- and long-term health consequences and risks these behaviors may have on a variety of health outcomes, and assess these behaviors to determine if they are predictive of smoking cessation and/or more difficulty with quit attempt preparations.

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**D126c**

**COMPUTER-FACILITATED 5A’S FOR SMOKING CELATION: USING TECHNOLOGY TO PROMOTE IMPLEMENTATION AND FIDELITY**

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**Background:** The 5As for smoking cessation (Ask, Advise, Assess, Assist, Arrange) is an evidence-based practice that facilitates primary care counseling of patients with tobacco use disorders. Although most patients receive the “ask” and “advise” steps, fidelity to the full model is low with time, knowledge, and counseling skills cited as obstacles. Alternative service delivery models are needed to improve fidelity.

**Objective:** This project develops and tests a computer tablet-facilitated 5As delivery model (CF-5As) that counsels patients then prompts providers to reinforce next steps; to develop a service delivery model for the that can be disseminated widely. Baseline patient and clinic data collected prior to the introduction of the CF-5As tablet are summarized to validate need and shape development.

**Methods:** English and Spanish-speaking adult patients were interviewed at three primary care clinics in San Francisco following a visit with a provider for either primary or urgent care. Clinic staff and providers completed web-based surveys and interviews to assess attitudes about smoking cessation, technology in medical settings, and preferences for behavior change tools.

**Results:** N= 462 patients were interviewed (31% women, 45% African-American, 18% Latino, 50% high school education or less). On average, only 50% of smokers reported being asked about smoking, 47% were advised to quit, 40% were assessed for readiness, and less than 25% received any form of assistance. 5As fidelity varied by race, ethnicity, and gender for particular clinics. We completed n=35 interviews and n=186 surveys with providers and staff. The primary challenges cited included time and personnel costs, work flow issues, competing demands, and lack of coordinated or longitudinal care. Attitudes were very favorable toward smoking cessation counseling and the use of
tablet technology for patient health behavior education and counseling.

Conclusions: Baseline 5A's adherence rates were low. Clinicians and staff were receptive to tablet technology for behavioral counseling. Results suggest that technology might serve a critical role as a "clinician extender" and to empower patients and staff to actively engage in smoking cessation. Results will be used to develop and test a CF-5A's model and targeted implementation strategies.

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D126d

EFFECTS OF ANTISOCIAL BEHAVIOR ON THE RELATIONSHIP BETWEEN ADHD AND SMOKING PROGRESSION

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This study examined whether antisocial behavior and gender moderate the longitudinal relationship between ADHD symptoms and smoking among a sample of young adults (N=939; mean age: 21.4; 60.3% female; 58.2% white). We hypothesized that antisocial behavior would exacerbate the ADHD-smoking association, but more for males than females. Participants, oversampled for ever smoking, were in 9th or 10th grade at baseline. Data come from the 2-, 5-, and 6-year follow-ups. 55.4% of participants at 5-years and 52.5% at 6-years smoked during the past 30 days. Mean number of past-30 days smoked was 9.9 at 5-years and 9.7 at 6-years with an average daily smoking rate of 2.61 and 2.47, respectively. Logistic regression analyses predicting any past-month smoking found significant main effects: greater antisocial behavior (OR [95% CI] = 1.06 [1.04-1.08], Wald = 0.06, p<.05), ADHD symptoms (OR [95% CI] = 1.11 [1.03-1.21], Wald = 0.11, p<.05), and male gender (OR [95% CI] = 0.66 [0.50-0.87], Wald = -0.41, p<.05) were associated with increased odds of any past-month smoking in the whole sample. No significant interactions were found in predicting any past-month smoking in the whole sample. Among smokers, though, there was a significant interaction between ADHD symptoms and gender for number of days smoked, β = -0.04, z = -2.89, p<.05, with a significant negative association between ADHD symptoms and days smoked for females. Also, a significant interaction between ADHD symptoms and antisocial behavior (β = 0.004, z = 4.43, p<.05) indicated that antisocial behavior exacerbated the link between ADHD and smoking. Finally, we observed a significant gender by antisocial behavior interaction (β = 0.011, z = 3.69, p<.05) such that antisocial behavior was more strongly related to smoking for females than males. Results suggest that the link between ADHD and smoking varies by gender and by antisocial symptoms, and that these symptoms may increase smoking more for girls than boys.

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D126f
TOBACCO USE AMONG LATINO ADOLESCENTS: EXPLORING THE “LATINO PARADOX”
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Over 43% of high school aged Latino adolescents reported having tried cigarette smoking in 2013. Previous health research has suggested that a “Latino paradox” exists where individuals who were not born in the United States (1st generation) have significantly better health compared those who were born in the U.S. (2nd generation or more) and that for Latinos this may be strongest for adolescent risk behaviors. To date, although very few studies have examined the existence of a Latino immigrant health paradox for tobacco use among adolescents, results suggest the existence of a health advantage for those who are 1st generation immigrants compared to those of subsequent generations. The aim of this study was to examine whether the Latino paradox exists for tobacco use among youth by specifically examining the relationship between tobacco use and immigrant generational status. Data were from three waves of the Healthy Passages™ longitudinal cohort study. Participants (N = 1,511) were first (17%), second (58%), and third (25%) generation Latino youth who attended public schools in urban areas of AL, TX, and CA. They were assessed on three occasions, at ages 10-11, 12-13, and 15-16. Relevant measures were immigrant generational status, questions about tobacco use, including cigarette smoking and chewing tobacco, family socioeconomic status, gender, and age. Initial descriptive analyses indicated that by age 15-16 more Latino youth who had attempted to smoke a cigarette (32%) compared to younger ages (12-13: 11%; 10-11: 6%) grade. Regression analyses indicated that after controlling for age, gender and SES, the odds of ever having tried cigarette smoking were significantly higher among first generation compared to third generation adolescents, but only when participants were ages 10-11 (first wave of data collection, p < .05). No significant differences by immigrant generational status were found at any age in use of chewing tobacco and whether participants would smoke if a friend offered tobacco. These results suggest that the Latino immigrant health paradox may not generally apply for tobacco use among adolescents, and the reverse rather may be present among the very early initiators. Future research will need to further clarify the Latino paradox for tobacco use, as well as extend it to other adolescent health risk behaviors.

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D126g
TRANSLATING INPATIENT TOBACCO INTERVENTION RESEARCH INTO PRACTICE: MAKING THE CASE FOR USING RANDOMIZED TRIAL BENCHMARKS
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Background: Hospitalization has long been called a window of opportunity tobacco cessation. However, there is a paucity of research that demonstrates the effectiveness of cessation interventions in practice that were previously found efficacious in randomized clinical trials (RCTs).

Objectives: This single group effectiveness study was designed to determine whether an inpatient nurse case-managed cessation program found efficacious in two previous RCTs would replicate when translated into practice.

Methods: The RCT protocols and measures were used. At central hospital admitting, all patients were asked about tobacco use, which was added to the daily census. A smoking cessation RN used the census to identify smokers, screened smokers for eligibility (18+ yr, medically and cognitively stable), approached them at the bedside, explained the study and obtained informed consent, collected baseline measures, and provided 60 minutes of bedside education/counseling based on relapse prevention and enhancing self-efficacy. The RN called patients post-discharge for continued counseling at 2, 7, 14, 21, 30, 45, and 60 days, and at 3, 6, and 12 months for tobacco use.

Results: From May 2013-Jan 2015, 25% of smokers refused the program, 68% were ineligible, and 7% enrolled (N=153) among whom 35% were abstinent at 1-yr post-discharge. Refusal and abstinence rates were identical to the RCTs (the two RCT outcomes were identical to each other). Enrollment was lower than the RCTs due to higher ineligibility. Higher ineligibility was due to more patients being medically unstable and more missed than the RCTs due to hospital grid-lock. Grid-lock resulted in shorter patient stays for less acutely ill patients (so they were missed by the cessation RN); patients with longer stays had higher acuity and many were medically unstable rendering them ineligible. Patients were also missed due to a heavy workload for the cessation nurse and no backfill for vacation and sick days.

Conclusion: Using an evidence-based intervention provided a roadmap for implementation and benchmarks for interpretation. Comparisons to the RCTs allowed more conclusive interpretation of intervention effectiveness in practice. Benchmarks highlighted that lower enrollment was due to higher ineligibility, not higher refusal, and the reasons could be identified by comparing to the RCT ineligibility outcomes. Abstinence identical to the RCTs helped establish effectiveness.

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D136a
COMMON CORE STRATEGIES OF EVIDENCE-BASED TREATMENTS FOR ADULTS IN SUBSTANCE ABUSE TREATMENT
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The purpose of this project was to identify a list of practice elements across five psychosocial evidence based treatments (EBTs) for adults with substance use disorders. A practice element (PE) is a discrete clinical technique that is a core strategy of an EBT. This research was inspired by the identification of the core practice elements for EBTs for children’s mental
health treatment by Chorpita (2009). A literature review of EBT materials was conducted to identify a preliminary list of Pes. This list was cross-checked independently and then reviewed by five counselors for clarity and redundancy. A final list of 34 practice elements were identified across five EBTs. This review was important because although counselor interest in EBTs has increased, their widespread implementation is limited by the incompatibility of short treatment duration with long term manualized treatments, as well as counselor dependence on a specific approach (e.g., Twelve Step Facilitation). Familiarity with this list of Pes may help to increase counselor use of evidence-based practices.

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D136b
DOES DRINKING REFUSAL SELF-EFFICACY MEDIATE THE IMPULSIVITY-PROBLEMATIC ALCOHOL USE RELATION?
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Evidence suggests a strong relation between impulsivity (i.e., facets of the UPPS-P Impulsive Behavior Scale: negative urgency, positive urgency, sensation seeking, lack of planning, and lack of perseverance) and problematic alcohol use. Literature has focused on drinking motives and expectancies with regard to potential mediators of the relations among impulsivity facets and alcohol use. Self-efficacy is an important construct related to alcohol use and may be associated with impulsivity facets that reflect impulsive decision making (i.e., urgency, deficits in conscientiousness). The current study examined the extent to which opportunistic drink refusal self-efficacy accounts for the relations between specific impulsivity facets and alcohol use. As a part of a larger study, 550 participants (70.0% female, 72.7% White; M age = 20.9 years, SD = 3.0) completed a battery of measures, including the UPPS-P, Drinking Refusal Self-Efficacy (DRSE) Questionnaire, and assessments of alcohol use (e.g., the Alcohol Use Disorders Identification Test [AUDIT]). Structural equation modeling was conducted and three-item parcels were used as indicators for each facet of impulsivity; two higher-order factors reflecting urgency and deficits in conscientiousness were modeled. To test the extent to which opportunistic drink refusal self-efficacy accounts for the relations between impulsivity constructs and alcohol use, scores for DRSE were regressed on sensation seeking, urgency, and deficits. AUDIT scores were also regressed on DRSE and the impulsivity factors. All constructs were adjusted for age and sex. The model fit the data well: \( \chi^2(133) = 316.19, p < .01; \) CFI = .96; RMSEA= .05. Mediated (i.e., indirect [IE]) effects with 95% asymmetric confidence intervals were calculated. The IE of urgency on alcohol use via DRSE was significant (IE = .07, CI = .02, .12). The IE of deficits on alcohol use via DRSE was also significant (IE = .04, CI = .01, .08). DRSE did not significantly mediate the relation between sensation seeking and alcohol use (IE = .01, CI = -.03, .04), though the direct effect of sensation seeking on alcohol use was significant (\( \beta = .17, p < .01 \)). Findings indicate that different mechanisms account for relations between impulsivity and problematic alcohol use. DRSE may be a helpful skill to target with individuals high in urgency and conscientiousness deficits.

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D136c
DRINKING TO COPE WITH ANXIETY MEDIATES POSITIVE ALCOHOL EXPECTANCIES TO ALCOHOL USE AND PROBLEMS: A LONGITUDINAL STUDY
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Excessive alcohol use and alcohol use disorders (AUDs) among college students often result in high risk behaviors with serious negative consequences. Social anxiety disorder (SAD) is highly prevalent and onset commonly precedes AUD onset, suggesting that SAD may be a marker for AUDs. Incoming freshmen are at higher risk for developing symptoms consistent with SAD, particularly during their first semester. They may cope with their anxiety by drinking alcohol. Previous research has not examined the mechanisms involved in the development of AUDs sufficiently, and longitudinal research is lacking. This longitudinal study examined mechanisms (i.e., social anxiety, alcohol expectancies, drinking to cope with anxiety) related to the development of AUDs in the first semester among 179 incoming college freshman students at two large universities in the United States. Baseline data collection occurred online between registration for the fall semester and the first weeks of the fall semester. Follow-up online data collection occurred late in the fall semester. Measures included a Social Anxiety Composite Scale, the Comprehensive Effects of Alcohol Questionnaire, the Modified Drinking Motives Questionnaire-Revised, an Alcohol Use Composite Scale, and the Rutgers Alcohol Problems Index. Hypothesized multivariate multiple regression moderated mediation models were tested with AMOS. Although SAD did not predict alcohol use and problems, model testing found that drinking to cope with anxiety at follow-up mediated the relationship of positive alcohol expectancies at baseline to alcohol use and problems at follow-up. The main effect of positive alcohol expectancies and drinking to cope with anxiety generated a medium effect. The other relationships generated small to medium effects. Thus freshmen who at baseline hold higher expectations of positive consequences when drinking alcohol predicted higher motivation to drink to cope with anxiety at follow-up, which, in turn, was related to higher frequency of drinking large quantities of alcohol and of intoxication at follow-up. Additionally, higher motivation to drink to cope with anxiety was related to more alcohol problems at follow-up. Implications for on-campus health promotion and disease prevention will be discussed.

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D136d
IMPULSIVITY PROFILES OF ALCOHOL- AND SUBSTANCE- USING COLLEGE STUDENTS
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Extant literature indicates positive associations between self-report measures of impulsivity and problematic alcohol use, as well as illicit substance use. However, studies often...
compare disparate measures of impulsivity (e.g., self-report, delay discounting, response inhibition, etc.) across groups that use various types of drugs, making differences in impulsivity between users and non-users of a specific substance difficult to characterize. A widely-accepted measure of impulsivity facets, the UPPS-P, assesses negative urgency (NU), positive urgency (PU), sensation seeking (SS), lack of planning (LP), and lack of perseverance (LPer). The aim of the current study was to examine facet-level impulsivity differences between users and non-users of specific substances. Participants consisted of 550 undergraduates (70% female, 72.7% White), with a mean age of 20.80 (SD = 2.97). Participants completed demographic questions, the UPPS-P, and measures of alcohol and substance use (e.g., the AUDIT and AUDADIS-IV). Results from hierarchical linear modeling analyses indicated that scores on the five impulsivity facets differentiated participants on a number of separate indices of substance use (i.e., problematic alcohol use, sedative use, tranquilizer use, painkiller use, stimulant use, cannabis use, cocaine use, and hallucinogen use). Further, there were several significant interactions, suggesting that the magnitude of differentiation differed as a function of specific impulsivity facets (e.g., only NU and SS scores were higher among cannabis users, but LP, LPer, and PU were significantly higher among stimulant users). Overall, findings suggest specific impulsivity profiles as a function of drug use type. Future studies examining impulsivity for research and clinical purposes should not classify illicit substance users as one group. Assessment of impulsivity using the UPPS-P provides unique information and may complement other measures used when assessing substance use problems. Further, substance use treatment may be more effective if tailored toward select impulsivity facets based on specific substance types.

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D136e
MINDFULNESS AND ATTACHMENT STYLE AS PREDICTORS OF SOCIAL MOTIVES FOR ALCOHOL USE
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Young adults ages 18-24 have the highest rates of binge-drinking, with 28.2% prevalence and 9.3 drinks per occasion on average in the United States. Insecure attachment styles and low mindfulness tendencies could contribute to unhealthy alcohol use, as research has demonstrated their links with alcohol use. Mindfulness can be construed as entailing five facets: non-reactivity, non-judgment, awareness, observing feelings, and describing feelings. Anxious attachment is associated with higher concerns about acceptance and positive regard within social relationships. We hypothesized that both attachment anxiety and mindfulness tendencies would predict social and conformity motives for alcohol use. Further, we hypothesized that they would interact such that greater mindfulness tendencies reduce social and conformity motives particularly for individuals high in anxious attachment.

Young adults ages 18-24 were recruited through Mechanical Turk to complete online surveys at Time 1 (N=330) and Time 2 (N=269, 82% retention) 30 days later. Surveys included measures of attachment style, mindfulness, and alcohol drinking motives (e.g. social and conformity motives). Overall, the sample was 65.3% White and 36% female.

Regression analyses demonstrated that lower levels of anxiety attachment (β = -.16, p = .03) and mindful awareness (β = -.13, p = .05) predicted greater social motives. Moreover, an interaction between anxious attachment and the describing facet (β = -.18, p = .02) revealed that social motives were lowest for high-anxious participants with higher describing mindfulness tendencies. Higher describing tendencies also predicted lower conformity motives (β = -.16, p = .04), and an anxious attachment by mindful observing interaction (β = -.18, p = .02) revealed that conformity motives were highest for high-anxious individuals with lower mindful observing.

The findings contribute to understanding of the interactive roles of mindfulness and attachment styles in alcohol use, and they support further research on interventions for improving mindful awareness, observing, and describing tendencies, particularly for anxiously attached individuals, as a means of reducing social and conformity motives for alcohol use.

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D138a
PSYCHOSOCIAL CHANGES OVER ONE YEAR FOLLOWING FACIAL TRANSPLANTATION.
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Allograft facial transplantation allows for the aesthetic and functional restoration of severe facial disfigurement in one, complex operation (Pomahac et al., 2011). Since 2005, thirty transplantations have been completed worldwide, however systematic evaluations of patient’s subsequent psychosocial quality of life is extremely limited. This prospective study is one of the first to assess changes from pre- to post-transplant on measures assessing perceptions of physical and mental health among face transplant recipients (N=4; 50% female). Self-report measures were completed as part of an extensive pre-transplant psychiatric evaluation and at three-month intervals thereafter. We present a case series descriptive analysis of trajectory of changes up to 1 year post-transplant. Patients experienced an improvement in physical quality of life one year post-transplant as determined by the MOS-SF-12, EQ5D and EQVAS. Two patients were above US norms on the EQ-VAS (0.827) and the MOS-SF-12 (50) at one year post-transplant. Overall mental state functioning (SF-12) remained stable and around the US norm, showing slight improvement from baseline to 1 year post-transplant. Depressive symptom severity (measured by the CES-D) decreased slightly (Pre-transplant Median = 4.5 and 1 year Median = 4.0), with 2 patients meeting the clinical cut-off for depression (-16) at one time point only. Self-esteem remained stable and in the normal range. Consistent with the solid organ transplant literature, at 3 months after transplantation, patients experienced a decline in physical quality of life and increase in depression symptoms. Overall, these 4 patients endorsed normative mental health and self-esteem at time of seeking facial transplantation.
and improved in overall quality of life pre- to 1 year post-surgery. Given patients scored in the high range for social desirability at pre-transplant (mean $> 20$), their responses may be influenced and biased by concern for social approval creating potential ceiling/floor effects. Graphical presentations of changes at 3 month intervals up to 18 months will be included.

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