

no differences between pregnant women and pain patients in fear of medical/dental pain, however, pregnant women were less fearful ($M=7.03$, $SD=2.8$) than undergraduate women ($M=8.72$, $SD=2.8$). Age and life/health experience differences among the samples must be considered in future studies that consider lifespan developmental issues in both naturalistic and pathological acute pain, as well as chronic pain. Funding: NIDCR/NIH R01-DE014899, T32-GM081741.

(311) Relationships between Objective Physical Performance with Pain Anxiety and Self-Efficacy during Intensive Pediatric Pain Rehabilitation

K. Weiss, E. Law, S. Havkins, M. Giles, S. Tham, G. Walco, and T. Palermo; Seattle Children's Research Institute, Seattle, WA

Intensive interdisciplinary pain rehabilitation programs (IIPRP) are typically recommended for youth with chronic pain conditions who do not respond to outpatient pain clinic treatment. A growing body of literature has shown that IIPRP are associated with improvements in functioning, pain, and distress. However, little is known about treatment mechanisms for IIPRP. A few studies have documented improvements in physical functioning within IIPRP, but how these improvements contribute to other areas of functioning remains unexplored. Existing conceptual models (fear-avoidance model of chronic pain, self-efficacy model) suggest that pain-related anxiety and self-efficacy may be important treatment mechanisms for youth undergoing IIPRP. For this study, we hypothesized that improvements in physical functioning (measured via objective measures of gait speed and core and upper strength) would be associated with changes in self-report measures of pain-related anxiety and self-efficacy. For this preliminary analysis, 10 participants, ages 10-16, completed measures prior to and upon completion of an IIPRP where they received physical and occupational therapy, pain psychology, and medical services for 1-3 weeks. Measures included the Fear of Pain Questionnaire, Self-Efficacy Scale, 100-Foot Walk, and the Sit-Up and Push-Up subtests of the Bruininks-Oseretsky Test of Motor Proficiency, 2nd Edition. Regression analyses produced standardized residuals for change scores. Preliminary results indicate improvements in gait speed and core strength were related to improvements in fear of pain ($r_s > 0.60$, $p < 0.05$). Similar associations were not found for improvements upper body strength or self-efficacy. This study provides preliminary data to suggest improvements in objective measures of physical functioning are related to improvements in self-reported pain-anxiety but not self-efficacy within a pediatric IIPRP. Recruitment for this study is ongoing. Our long-term goal is to investigate mechanisms of change within IIPRP in order to assist in tailoring treatment to maximize efficacy.

(312) The Effects of Mindfulness-Based Stress Reduction on Pain Catastrophizing in Episodic Migraine

A. Kearson, L. Samawi, S. Burrowes, M. Keaser, J. Zhang, C. Campbell, N. Gould, L. White, B. Peterlin, J. Haythornthwaite, and D. Seminowicz; Johns Hopkins University School of Medicine, Baltimore, MD

Pain catastrophizing plays a key role in shaping the experience of acute and chronic pain, adverse pain-related outcomes and amplified pain perception. Mindfulness-based stress reduction (MBSR) is an evidence-based program designed to focus attention on the present moment in order to decrease stress, and enhance overall wellbeing. MBSR is believed to benefit patients with chronic pain by increasing pain acceptance and potentially interrupting the link between cognitive and emotional experiences, such as catastrophizing, and the experience of pain. Recent findings in chronic low back pain indicate that the beneficial effects of both MBSR and cognitive-behavioral treatment may result from changes in common mechanisms, including pain catastrophizing. In a secondary analysis from a randomized controlled trial, 89 subjects with episodic migraine were randomized to MBSR ($n=46$) or Stress Management for Headaches control group (SMH, $n=43$). The effects of MBSR and SMH were measured at 8 weeks following a typical MBSR training class (mid-treatment) and again at 16 weeks following bi-weekly continuation of each intervention (end of treatment). Participants completed the Pain Catastrophizing Scale (PCS) at baseline ($M=11.9$, $SD=9.6$), mid-intervention ($M=10.5$, $SD=8.2$), and post-intervention ($M=8.6$, $SD=7.2$) as well as measures of headache impact and disability (HIT-6). Catastrophizing level was associated with headache impact/disability, as well as pain ratings,

primarily at concurrent phases ($r_s=0.10-0.44$). No treatment effect was observed at mid-treatment, but both MBSR and SMH were similarly effective in decreasing pain catastrophizing at the end of treatment compared to baseline ($p=0.004$). These findings suggest that, while MBSR appears to be effective in reducing pain catastrophizing, it may not be more effective than providing disease and stress management education (provided by an experienced nurse). Additional research is warranted to further explore the specific versus general effects of psychological treatment on pain catastrophizing, and to elucidate potential personalized factors that may enhance MBSR potency.

(313) Association between Measures of Function and Pain Perception in Older Adults with Chronic Low Back Pain

F. Solis, D. Maddox, and R. Cantu; Brenau University, Gainesville, GA

This investigation examined the association between measures of function and pain perception in older individuals with chronic low back pain (CLPB). Data from eight subjects older than 65 were analyzed. Measures of function included the 2-minute walk test (2-MWT) and the Oswestry Disability Index (ODI). Pain perception was examined by pressure pain threshold (PPT). Clinical pain was obtained with the visual analogue scale (VAS). PPT was assessed bilaterally at T12, L5, and S2. Values obtained during PPT were averaged together to quantify local PPT. Descriptive statistics were collected and Pearson correlation moment was performed to identify correlations. A stepwise regression model was used to identify the stronger predictor of PPT, (PPT was used as the dependent variable and ODI and 2-MWT were entered as the independent variables). Results showed that local PPT was significantly correlated with both objective and subjective measures of function (2-MWT $r^2=0.800$, $p=0.017$, ODI $r^2=-0.866$, $p=0.005$). Correlation analysis showed that clinical pain measured with the VAS scale was not associated with measures of disability used in this study ($p>0.05$). Stepwise regression model revealed that ODI alone was responsible for 70% of the variability in PPT ($r^2=0.708$, $\beta=-0.866$, $p=0.005$). 2-MWT explained an additional 22% of the variability in PPT ($r^2=0.923$, $\beta=0.502$, $p=0.008$). Results from this modest sample of participants with CLPB suggest that perception of disability and level of activity as evaluated by the 2-MWT have a strong influence in experimental pain perception. Surprisingly, clinical pain was not associated with measures of disability which indicates that the use of the VAS alone may not be enough to assess pain in older individuals with CLPB. Moreover, the 2-MWT could be a simple and easy way to assess changes in physical activity in older individuals.

(314) Doctor-Patient Racial/Ethnic Concordance Predicts Pain: Evidence from Simulated Clinical Interactions

S. Anderson, M. Gianola, J. Perry, and E. Losin; University of Miami, Miami, FL

Racial/ethnic minorities in the US and other countries have been found to report higher levels of both clinical and experimental pain, yet are frequently undertreated for their pain. Although racial/ethnic group differences in pain report are well-documented, the underlying causes of these pain report disparities remain largely unknown. Following a prior study we conducted on the effect of clinician-patient group concordance on pain report using lab-created groups, in the present study we investigated the role of doctor-patient racial/ethnic concordance in predicting patient pain. We report a preliminary analysis of a sample of 70 patient participants and 11 doctor participants drawn from a larger study. Participants were assigned to either a racial/ethnic concordant or discordant simulated clinical interaction. During each interaction, the doctor assessed the medical history and vital signs of the patient and then administered a series of painful heat stimulations to the patient's forearm as an analogue of a painful medical procedure. As hypothesized, we found a direct effect of racial/ethnic concordance on patient pain report. Contrary to our prediction, we found that patients reported greater pain when paired with a racially/ethnically concordant—rather than discordant—doctor. We also found that patients rated racially/ethnically discordant doctors as greater in trust and self-similarity than concordant doctors. Our results demonstrate that the effects of racial/ethnic concordance may go deeper than patient satisfaction to influence the more direct health outcome of pain. The results of our study provide evidence that interventions aimed at improving patient feelings of trust and self-similarity toward their doctor may help reduce