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(160) Chronic non-cancer pain and six-month follow-up outcomes among community-based opiate addiction treatment clients on methadone

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Individuals who seek medication-assisted treatment for opiate addiction are generally prescribed methadone along with behavioral counseling at a licensed opiate treatment program (OTP). For OTP clients who also have chronic non-cancer pain (CNCP), the disease of addiction is treated, but the disease of CNCP may not be addressed. Though connecting opioid dependence and CNCP may seem obvious since opioids produce both analgesia and euphoria, limited data is available on their co-occurrence and the impact on treatment outcomes. This study hypothesized the presence of CNCP would be related to poor 6-month follow-up outcomes among a sample of individuals taking methadone as part of medication assisted treatment at an OTP. Analyses were compared 115 individuals with CNCP to 470 cases without CNCP, all of whom completed a structured baseline interview for the Kentucky Opiate Replacement Treatment Outcome Study between March 2007 and December 2010 and a matching follow-up interview. ANOVA results found no differences between the groups on number of arrests at follow-up. The only substance use difference was that CNCP cases reported a greater average number of past 30 day use of non-prescribed methadone at follow-up (.92) compared to non-CNCP cases [.17; F (1)=10.005, p<.01]. Crosstab analyses found a lower percentage of CNCP clients were employed at follow-up compared to non-CNCP clients (58.2% vs. 71.5%, p<.01). Differences were also found in mental health for the two groups with more CNCP cases than non-CNCP cases reporting depression (22.0% vs. 13.3%; p<.05) or anxiety (39.6% vs. 23.6%; p<.01) at follow-up. For patients with CNCP, co-occurring disorders would certainly counter the recovery efforts of MAT. Addressing co-occurring issues like pain and/or mental health problems will be important for MAT programs to successfully help patients learn to manage their health conditions and maintain sobriety.

(161) Effects of experiencing or witnessing an abuse on reports of pain catastrophization while following an chronic pain scenario

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Adversity in the form of physical, emotional and sexual abuse as well as catastrophization have proven to be important predictors of negative outcome after chronic injuries. The main goal of this study was to determine the role of abuse on reports of catastrophization in an imaginary chronic injury situation. Participants were 221 undergraduate students from a large Southwestern University. The mean age for the full sample was 18.8 years. The sample was composed mostly of first year college (76.1%) female (67.0%) Caucasian students (73%). Participants completed the Pain Catastrophizing Scale (PCS) under two conditions: no scenario (normal) and chronic injury scenario (CI) as well as a prescreening questionnaire that asked questions about witnessing or self experienced physical, psychology and sexual abuse. Less than half (39.8%) of the participants reported witnessing or experienced physical, emotional or sexual abuse at some point in their life. A 2x2 Analysis of Variance (ANOVA) was conducted to determine PCS score differences between test conditions by those reported abuse and not abuse. There were significant main effects for condition and abuse. There was also a significant interaction between condition and abuse. On the normal condition participants that reported abuse scored significantly higher on PCS than those that did not report abuse. However, on the CI condition those that reported abuse and those that did not report abuse did not score significantly different. The results of this study support the idea that the experience of abuse plays an important role in the report of pain catastrophization. However, this effect might not subsist when subjects are in chronic injury situations. The results of this study are important for understanding the factors that influence cognitive-emotional aspects of pain related outcome.

(162) Self-reported physical activity predicts pain inhibitory and facilitatory function

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Data from observational studies, randomized control trials, and laboratory studies suggest a relationship between levels of physical activity and chronic pain. Dysfunction of endogenous facilitatory and inhibitory systems has been implicated in multiple chronic pain conditions. However, no studies have investigated the relationship between levels of physical activity and descending pain modulatory function. The purpose of this study was to determine whether self-reported levels of physical activity in healthy adults predicted 1) pain sensitivity to heat and cold stimuli, 2) pain facilitatory function as tested by temporal summation of pain (TS), and 3) pain inhibitory function as tested by conditioned pain modulation (CPM) and offset analgesia. Forty-eight healthy adults (age range 18-76) completed the International Physical Activity Questionnaire (IPAQ) and the following pain tests: heat pain thresholds (HPT), heat pain suprathresholds, cold pressor pain (CPP), temporal summation of heat pain, conditioned pain modulation, and offset analgesia. The IPAQ measured levels of walking, moderate, vigorous and total physical activity over the past seven days. Hierarchical linear regressions were conducted to determine the relationship between each pain test and self-reported levels of physical activity, while controlling for age and sex. Self-reported vigorous physical activity predicted TS and CPM (p's <.05), accounting for 18% and 10% of the variance, respectively. Additionally, total physical activity predicted TS and CPM, accounting for 12% and 11.5% of the variance, respectively. Individuals who self-reported more vigorous and total physical activity exhibited reduced temporal summation of pain and greater CPM. The IPAQ measures did not predict any of the other pain measures. Thus, these results suggest that healthy older and younger adults who self-report greater levels of vigorous and total physical activity exhibit enhanced descending pain modulatory function. Improved descending pain modulation may be a mechanism through which exercise reduces or prevents chronic pain symptoms.

(163) Prediction and clinical outcome implications of sustained STarT back screening tool high-risk status following 4-weeks of physical therapy for low back pain

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The STarT Back Screening Tool (SBT) is a 9-item measure that categorizes patients into low, medium, or high-risk subgroups. The purpose of this study was to: 1) test which psychological variables were predictive of SBT high-risk status after 4-weeks of physical therapy (PT) for low back pain and 2) test for differences in 6-month clinical outcomes based on SBT risk status. Patients (n = 128) were administered the SBT and full-length psychological measures [Fear-Avoidance Beliefs Questionnaire (FABQ-PA; FABQ-W); Pain Catastrophizing Scale; Tampa Scale of Kinesiophobia; Patient Health Questionnaire; and State-Trait Anxiety Inventory] at initial PT evaluation and 4-weeks later. Logistic regression analysis was used to evaluate the contribution of demographic and psychological measures in prediction of SBT status at 4-weeks. Six-month pain intensity (NPRS) and Oswestry Disability Index (ODI) scores based on intake and 4-week SBT risk status (low/medium or high) were tested with repeated measures ANOVA. Participants were categorized at initial evaluation (n=35; 27.3%) and 4-weeks later (n=8; 6.3%) as SBT high-risk. The final logistic regression model explained 44% of the variance (Nagelkerkes R^2) in SBT status at 4-weeks with only initial FABQ-PA scores providing unique contributions (OR=1.33, p=.03). Four-week SBT risk status by time interactions were observed for 6-month NPRS [SBT high-risk with higher change scores (m=1.9; sd=2.1 vs. m=0.1; sd=2.3)] and ODI [SBT high-risk with 6 month outcome scores (m=35.3; sd=15.3 vs. m=19.7; sd=16.5)] scores. Sustained SBT high-risk status following 4-weeks of PT can be predicted by FABQ-PA scores and is an indication of higher 6 month self-reported disability outcomes. Future studies are required to further delineate the significance of being categorized as SBT high-risk at 4-weeks as these data indicate this subgroup may be in need of more intensive management if better disability outcomes are to be observed.