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(112) Estimates for Minimally Important Differences (MIDs) for two patient-reported outcome measurement information system computer-adaptive-tests in chronic pain outpatients

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We combined anchor- and distribution-based methods to evaluate responsiveness and establish minimally important differences (MIDs) for 2 Patient-Reported Outcomes Measurement Information System (PROMIS) measures in a chronic pain population. These included the computer-adaptive-test (CAT) versions of 2 PROMIS measures: Depressive Symptoms and Anxiety-Related Symptoms (PROMIS; Cella et al., 2007). Depressive and anxiety-related symptoms are the most common psychological symptoms experienced by individuals with chronic/persistent pain (Gatchel, 2004). By identifying a usable MID range, reliable references of treatment response will be established for these four PROMIS measures for this population. Study Participants undergoing a Behavioral Medicine Evaluation in an Interdisciplinary Pain Management clinic completed 4 PROMIS computer-adaptive-tests and multiple clinical anchor measures/questions. Modeled after similar analyses (Yost et al., 2011), three a priori criteria were used to select usable cross-sectional anchor-based MID estimates; these included a minimum Spearman correlation of 0.3 between the PROMIS measure and anchor item/categories, minimum comparison group sample size of 10 within each anchor, and an effect size between 0.2 – 0.8 for each anchor-based estimate. For each PROMIS measure, the mean standard error of measurement was calculated and incorporated into MID analyses. A number of the cross-sectional T-score anchor-based MID estimates (61%) were not included due to failure to meet a priori criteria. Based on analyses, the following T-score MID ranges are recommended: Depression CAT (3.0 – 5.5) and Anxiety CAT (3.0 – 5.0). The average effect sizes for MID estimates ranged from 0.31 – 0.75. This study is among the first to address MIDs for PROMIS measures; it represents the first study to establish usable MIDs for psychological symptoms with outpatients with chronic/persistent pain. Results may be used to gauge minimally important clinical differences and/or treatment response for individuals within this patient population.

(113) Patient's perception of change following an interdisciplinary pain management program

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We assessed 118 chronic pain patients' perceptions of change at the competition of a functional restoration program using a new questionnaire consisting of patient-centered outcomes. The patients participated in either an intensive (5 days per week, up to 4 weeks) or a modified (1-2 half days per week, up to 5 weeks) outpatient program depending upon initial assessment needs. Treatment programs included individual and group sessions with pain psychology, physical and occupational therapy, biofeedback/relaxation training, and medical management. Patients also participated in nursing lectures, vocational lectures, and movement-based classes including Feldenkrais. Outcome measures included the Center for Epidemiological Studies Depression Scale short form (CESD-10), Pain Anxiety Symptom Scale short version (PASS-20), Chronic Pain Acceptance Questionnaire (CPAQ), Coping Strategies Questionnaire-Revised (CSQ-R), and an adaptation to the Patient's Global Impression of Change (domains included: overall… status, pain, sleep, mood, physical functioning, ability to cope with pain, ability to manage pain flare-ups, and the overall efficacy of medication). Patient's impressions of change were rated on a scale from 1 (Very Much Improved) to 7 (Very Much Worse). Mean ratings showed that patients considered the program effective. Domains perceived to be most improved were "overall status", "overall mood," and "overall ability to cope with pain" (M=1.94, SD=0.74; M=1.98, SD=0.80; M=1.91, SD=0.75, respectively). Furthermore, the patient's impressions of change on all domains correlated significantly with change scores on the CESD-10 (r's 0.21 – 0.38, P's < .05) and all but one domain (overall efficacy of medication) significantly correlated with change scores on the PASS-20, CPAQ, and CSQ-R (r's 0.20 – 0.45, P's < .05). Thus, there was support to show that the patient's perceptions of change adequately represented changes on a number of program outcomes.

(114) Perception versus ability: physical function in pediatric sickle cell disease

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The relationship between pain and physical function among pediatric chronic pain populations has been established in the literature. However, measures of physical function in pain patients have only been developed for use in outpatient settings. There are currently no measures of functional ability developed for use in the acute inpatient setting. A measure of physical function in the acute hospital setting would be useful for youth with sickle cell disease hospitalized with vasoocclusive pain. The purpose of this study was to inform the development of a physical function measure for the inpatient setting by understanding the differences between perception of ability and actual functional ability for youth with SCD hospitalized for acute pain. We asked patients to rank their perception (i.e., how difficult would this activity be) and actual functional ability (i.e., how difficult was this activity for you today). We hypothesized that participants would endorse higher levels of difficulty in perception than actual ability due to their current acute pain experience. 148 unique patients with SCD (54.7% female), ages 8-21 (M=15.83, SD=3.90), were recruited from 4 centers during their hospital admission for acute pain. Participants completed a newly developed functional ability measured called the Inpatient Pediatric Physical Activity Questionnaire (IPPAQ) within 24 hours of admission. The IPPAQ consists of two 40-item questionnaires. One questionnaire assessed perception of difficulty completing 40 daily activities and the second questionnaire assessed the difficulty of actually completing each of the activities. There was a significant difference between the scores of perception and actual ability using a paired-samples t test ($t(145) = 11.40$, $p<.001$), indicating that participants endorsed more difficult ratings on perception of tasks than actual difficulty completing activities. This finding suggests that children and adolescents with SCD may perceive that physical activities to be more difficult than the actual performance of these activities.

(115) The pain-related impairment, the skeletal muscle index, and the functional performance inventory of individuals with chronic low back pain: a correlation study

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Objectives were to: 1) quantify the pain-related impairments (PRI) of individuals with chronic low back pain (CLBP) using the Pain Disability Questionnaire (PDQ); spinal flexion (SFS) and extensor strength (SES) by 1-Repetition-Maximum Method (1RM); and, skeletal muscle index (SMI) using the Bioelectric Impedance Analysis (BIA); and, 2) investigate the correlation between PRI, SMI, & SFS/SES and Functional Performance Tests (FPT) scores. A retrospective study was undertaken in an outpatient rehabilitation clinic. Thirty-eight subjects with CLBP (24 women) completed the PDQ. The PDQ measured PRI stratified as: mild, moderate, severe, and extreme. The BIA measured the SMI, calculated using a BIA prediction equation. The 1RM measured the SFS and SES. FPT included: Sit-to-Stand (STS), Loaded-Reach (LR), and 50-feet-Walk-Fastest (FWF) tests. The Shapiro-Wilk test suggested that FPT scores were non-normal (all $p<0.05$); therefore, nonparametric tests were used. Several variables differed among PRI categories; data were separated by mild/moderate (m/m) and severe/extreme (s/e) for correlation analysis. For m/m, PRI correlated with LR ($r=-.544$, $p=.036$). For s/e, PRI correlated strongly with: SES ($r=-.650$, $p=.009$), STS ($r=.461$, $p=.047$), and FWF ($r=.583$, $p=.009$). Also for s/e, the FWF correlated with SFS ($r=-.642$, $p=.007$) and SES ($r=-.784$, $p=.001$). There were no statistical differences between genders. In both PRI groups, SMM and SMI also did not differ. Individuals with CLBP and mild/moderate PRI had low functional performance with loaded-reach activities, while those with severe/extreme PRI had poor performance due to decreased SES, poor sit/stand changing positions, and longer walking duration. In s/e, walking performance is influenced by PRI and spinal strength. These findings possibly describe the clinical pain characteristics as the long-term CLBP effects progress. The PDQ can be a valuable clinical tool in assessing PRI of individuals with CLBP. Further research on the PDQ & FPT scores, amongst other disorders such as neuropathic pain, would be beneficial.