

(795) Association of self-efficacy with pain, functioning, and coping among patients with temporomandibular disorder pain

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Self-efficacy for managing pain has been found to play an important role in arthritis pain problems, but has received little attention in studies of chronic temporomandibular disorder (TMD) pain patients. The objective of this study was to examine the relationship of self-efficacy to pain, disability, distress, and coping among TMD patients. We hypothesized that (1) self-efficacy would be associated negatively with pain, disability, and distress; (2) even after controlling for pain intensity, the associations of self-efficacy with disability and distress would remain significant; and (3) self-efficacy would be associated positively with use of an active, adaptive chronic pain coping strategy (task persistence) and negatively with use of a passive, maladaptive pain coping strategy (rest). TMD clinic patients ($N = 156$, 87% female, mean age = 37 years) completed measures of self-efficacy, pain, disability, distress, and coping. The 8-item Arthritis Self-Efficacy Scale, modified by replacing 'arthritis' with 'facial pain,' demonstrated good psychometric characteristics (Cronbach's $\alpha = .91$, minimal floor and ceiling effects, and validity). Controlling for age, gender, and pain duration, higher self-efficacy was associated with lower pain intensity ($P < .001$), disability (Graded Chronic Pain Scale pain-related disability, $P < .001$; SF-36 Physical Function, $P < .01$; SF-36 Role-Physical, $P < .05$), and psychological distress (SF-36 Mental Health, $P < .001$; Beck Depression Inventory, $P < .001$), and remained significantly associated with the disability and distress measures even after also controlling for pain intensity ($P_s < .05$). Patients with higher self-efficacy reported greater use of task persistence ($P < .01$) and less use of rest ($P < .05$) to cope with pain. Self-efficacy for managing pain appears to be important in TMD patient adjustment; research is needed to determine whether treatments designed to increase self-efficacy improve TMD patient outcomes.

(796) Psychosocial predictors of psychological distress and pain-related disability in persons with spinal cord injury

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Previous research suggests that pain-related beliefs and coping responses (e.g., catastrophizing, guarding) are associated with psychological distress and pain-related disability in persons with Spinal Cord Injury (SCI). The aim of the current study was to examine further the relationship between the aforementioned independent variables and social support on adjustment to pain in individuals with SCI. A total of 157 participants completed surveys assessing physical and psychological functioning, as well as psychosocial, demographic, and injury-related variables. Multiple regression analyses were used to examine the associations between a number of psychosocial variables (i.e., social support, coping with chronic pain, solicitous responses of significant others in response to pain, and perceptions of control over pain) and psychological and physical functioning. Demographic variables, severity of pain, level and completion of spinal cord injury, and severity of secondary symptoms (e.g., weakness) were controlled in these analyses. Greater levels of both self-reported social support and wellness-focused coping (e.g., task persistence) were associated with better psychological functioning ($b = 0.36$ and $.17$, $ps < .001$ and $< .05$, respectively). Illness-focused coping responses, including resting and asking for assistance, were associated with greater pain-related interference in daily activities ($b = .33$ and $.20$, $ps < .01$ and $< .05$, respectively). Alternatively, wellness-focused coping styles, including task persistence and seeking social support, were each associated with lower pain-related interference of activities ($b = -.19$ and $-.22$, $ps < .01$ and $< .05$, respectively). Perceived control over pain was not related with either functioning domain. The current study replicates previous research implicating a link between coping responses and both psychological distress and pain-related activity interference in persons with SCI, as well as the potential impact of social support on functioning in this population. The findings have implications for the design of interventions targeting coping behaviors and social support variables.

F03 - Hypnosis/Distraction

(797) Virtual reality in outpatient phlebotomy: Evaluating pediatric pain distraction during blood draw

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Pharmaceutical analgesics have made tremendous gains in recent decades, including the development of topical analgesics appropriate for venipuncture, however, some children continue to report fairly high pain. Distraction is one empirically supported form of nonpharmacological pain management for helping children who must have their blood drawn. Recent technological developments in the area of virtual reality (VR) provide new and potentially more effective means for distracting children from the pain associated with venipuncture. Initial studies of VR pain distraction are promising. However, few have adequately studied children and none have examined the frequently required, yet child-distressing procedure of blood draw. The present study recruited 57 children ages 8-12 ($M = 10.0$, $SD = 1.32$) and their caregivers who arrived at the outpatient phlebotomy laboratory for venipuncture. Children and their parents were randomly assigned to one of 4 treatment conditions: 1) according to the existing hospital protocol for the procedure; 2) distraction by an age-appropriate cartoon; 3) distraction by flat-screen involvement with a virtual environment, and 4) distraction via interaction with VR, which is presented in a computer helmet with screens for each eye (HMD). Pre-post measures included a visual analogue scale for pain intensity, the Wong-Baker Faces measure to assess affective pain, the State Scale of the State-Trait Anxiety Inventory for Children, and the State Scale of the State-Trait Anxiety Inventory to measure parent anxiety. Preliminary results of 57 participants found that children assigned to VR distraction reported significantly less pain intensity from the needle than children in the other three groups ($F(3,53) = 2.74$, $p < .05$). Similarly, children in the VR group reported less affective needle pain than children in the cartoon and flat-screen VE distraction groups. These initial results suggest that pain is a variable that is well matched to the current strengths and limitations that exist with presently available VR technology.

(798) Hypnotic analgesia for chronic pain in persons with disabilities

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Chronic pain is a significant problem in many individuals with disabilities, but is often refractory to traditional biomedical treatment. Case studies suggest that hypnosis has the potential to benefit at least some of these individuals. In the current study, 33 adults with chronic pain and a disability (spinal cord injury, multiple sclerosis, acquired amputation, neuromuscular disease, and cerebral palsy) were treated with up to 10 sessions of hypnotic analgesia. Across the treatment sessions, the patients reported an average of 52% decrease in pain intensity, which lasted (on average) for over nine hours after each treatment session. Analyses showed statistically significant pre-to posttreatment decreases in characteristic pain (composite score of 0 - 10 ratings of average current pain, and worst, least, and average pain over the past 24 hours, assessed four times in a 7-day period) that were maintained at three-month follow-up. Significant improvements were also observed in pain unpleasantness and perceived control over pain, but not in pain interference or depressive symptoms. Hypnotizability, concentration of treatment (e.g., daily vs. up to weekly), and initial response to treatment were not significantly associated with treatment outcome. However, treatment outcome expectancy assessed after the first session showed a moderate association with treatment outcome. Most of the study participants rated the treatment as very or extremely beneficial, and also noted a large number of benefits in addition to decreases in perceived pain (e.g., improved sleep, decreased tension). The findings support the use of hypnotic analgesia for the treatment of chronic pain in persons with disabilities for some patients, but not the use of pretreatment measures of hypnotizability or treatment outcome expectancy for screening patients out of hypnotic treatment. A controlled trial of hypnotic analgesia for chronic pain problems in persons with disabilities is warranted.