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Table of Contents

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Original Reports

499 **Seeing One's Own Painful Hand Positioned in the Contralateral Space Reduces Subjective Reports of Pain and Modulates Laser Evoked Potentials**

Elia Valentini, Katharina Koch, and Salvatore Maria Aglioti

Studies report that viewing the body or keeping one's arms crossed while receiving painful stimuli may have an analgesic effect. Interestingly, changes in ratings of pain are accompanied by a reduction of brain metabolism or of laser evoked potentials amplitude. What remains unknown is the link between visual analgesia and crossed-arms related analgesia. The authors report that nociceptive stimuli delivered to the hand in a crossed-arms position evoked less pain than in a canonical anatomic position, yet they report no significant analgesic effect of vision or crossing the arms on their own. These findings foster the integration of visuospatial and proprioceptive information in rehabilitation protocols.

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ON THE COVER

Studies report that viewing the body or keeping one's arms crossed while receiving painful stimuli may have an analgesic effect. Changes in ratings of pain are accompanied by a reduction of brain metabolism or of laser evoked potentials (LEPs) amplitude. This image demonstrates comparisons of LEP waveforms. The authors of this study report that nociceptive stimuli delivered to the hand in a crossed-arms position evoked less pain than in a canonical anatomic position, yet they report no significant analgesic effect of vision or crossing the arms on their own. See Valentini et al, page 499.

508

The Revised Formal Social Support for Autonomy and Dependence in Pain Inventory (FSSADI_PAIN): Confirmatory Factor Analysis and ValidityMarta Matos, Sónia F. Bernardes, Liesbet Goubert,
and Helena Carvalho

Chronic pain affects 50 to 80% of older adults in community and institutional settings, which represents an obstacle to active aging by hindering elders' functional autonomy. Perceived social support has been identified as a key factor in overcoming pain-related disability but has also shown deleterious effects on disability, mobility, and daily activities. This paper presents a revised version of the Formal Social Support for Autonomy and Dependence in Pain Inventory tool, which assesses perceived promotion of functional autonomy/dependence as 2 independent functions of perceived social support. This measure may contribute to future research on the role of close interpersonal contexts on the promotion of active aging among elders with chronic pain.

518

Patients' Impression of Change Following Treatment for Chronic Pain: Global, Specific, a Single Dimension, or Many?

Whitney Scott and Lance M. McCracken

Patients' Global Impression of Change (PGIC) measure has frequently been used as an indicator of meaningful change in treatments for chronic pain. However, limited research has examined the validity of PGIC items despite their wide adoption in clinical trials. Additionally, research has not yet examined predictors of PGIC ratings following psychologically based treatment for chronic pain. This study sought to examine the validity, factor structure, and predictors of PGIC ratings following an interdisciplinary psychologically based treatment for chronic pain. The findings suggest that, in addition to a single overall PGIC rating, domain-specific items may be relevant for some treatment trials.

527

Development and Initial Validation of a Brief Self-Report Measure of Cognitive Dysfunction in FibromyalgiaAnna L. Kratz, Stephen G. Schilling, Jenna Goesling,
and David A. Williams

Pain is often the focus of research and clinical care in fibromyalgia (FM); however, cognitive dysfunction is also a common, distressing, and disabling symptom in FM. Current efforts to address this problem are limited by the lack of a comprehensive, valid measure of subjective cognitive dysfunction in FM that is easily interpretable, accessible, and brief. This paper presents the Multidimensional Inventory of Subjective Cognitive Impairment (MISCI), a 10-item measure of cognitive dysfunction in FM, developed through classical test theory and item response theory. This measure shows evidence of excellent construct validity through large correlations with a lengthy legacy measure of cognitive functioning.

537

Experimental Comparison of Parametric Versus Nonparametric Analyses of Data From the Cold Pressor Test

Roi Treister, Christopher S. Nielsen, Audun Stubhaug,
John T. Farrar, Dorit Pud, Shlomo Sawilowsky,
and Anne Louise Oaklander

Parametric statistical methods are common in human pain research. They require normally distributed data, but this assumption is rarely tested. This study analyzed the appropriateness of parametric testing for outcomes from the cold pressor test (CPT), a common human experimental pain test. Published CPT studies were reviewed to quantify how often researchers test for normality and how often they use parametric vs nonparametric tests. These results demonstrate that parametric analyses of CPT data are routine but incorrect and that they likely increase chances of failing to detect significant between-group differences. They suggest that nonparametric analyses become standard for CPT studies and that assumptions of normality be routinely tested for other types of pain outcomes as well.

549

Partner Behavioral Responses to Pain Mediate the Relationship Between Partner Pain Cognitions and Pain Outcomes in Women With Provoked Vestibulodynia

Seth N. Davis, Sophie Bergeron, Gentiana Sadikaj,
Serena Corsini-Munt, and Marc Steben

Provoked vestibulodynia (PVD) is a chronic pain condition in which pain is elicited via pressure to the vulvar vestibule and is most often experienced during sexual intercourse. Significant others' behavioral responses to pain may have a particularly important impact on patients' subsequent pain and depressive symptoms. This research presents a cognitive-behavioral model to partially explain how significant others' thoughts about pain have an effect on patient pain and depressive symptoms. Findings highlight the importance of assessing partner cognitions, both in research and as a target for intervention, and may inform cognitive-behavioral therapy for couples coping with PVD.

558

The Interaction of Patient Race, Provider Bias, and Clinical Ambiguity on Pain Management Decisions

Adam T. Hirsh, Nicole A. Hollingshead, Leslie Ashburn-Nardo,
and Kurt Kroenke

Although racial disparities in pain care are widely reported, much remains to be known about the role of provider and contextual factors. This research used computer-simulated patients to examine the influence of patient race, provider racial bias, and clinical ambiguity. Medical residents and fellows made assessment and treatment decisions for 12 virtual patients with acute pain. Race and clinical ambiguity were manipulated across vignettes. Analyses indicated that race and ambiguity had an interactive effect on providers' decisions, such that decisions varied as a function of ambiguity for white but not for black patients. The results suggest that interventions to reduce disparities should differentially target patient, provider, and contextual factors.

569

A Retrospective Cohort Study of Long-Term Immediate-Release Hydrocodone/Acetaminophen Use and Acetaminophen Dosing Above the Food and Drug Administration Recommended Maximum Daily Limit Among Commercially Insured Individuals in the United States (2008–2013)

Angela DeVeough-Geiss, Aditi Kadakia, Howard Chilcoat, Louis Alexander, and Paul Coplan

Immediate-release (IR) hydrocodone/acetaminophen is the most prescribed opioid in the U.S., commonly used for acute pain conditions and often administered every 4 to 6 hours. However, patterns of use are not well described. In this report, duration of use, including the percent of patients on long-term treatment, was assessed for patients newly prescribed IR hydrocodone/acetaminophen compared to other opioid analgesics. The number of patients who were prescribed long-term therapy exceeds the number of patients prescribed extended release (ER) opioids (prescribed for pain severe enough to require daily, around-the-clock treatment), findings report. It is important to consider the benefits and risks inherent with long-term opioid therapy, whether with IR or ER opioids, to ensure safe use.

580

Brain Alterations and Neurocognitive Dysfunction in Patients With Complex Regional Pain Syndrome

Do-Hyeong Lee, Kyung-Jun Lee, Kang Ik K. Cho, Eun Chung Noh, Joon Hwan Jang, Yong Chul Kim, and Do-Hyung Kang

Few studies have examined the involvement of specific subregions of the prefrontal cortex in complex regional pain syndrome (CRPS). This research analyzed cortical thickness to identify morphologic differences in local brain structures between patients with CRPS and healthy control subjects. The correlation between cortical thickness and neurocognitive function was also evaluated. Results reveal decreased cortical thickness in the prefrontal cortex and neurocognitive dysfunctions in patients with CRPS. These findings may contribute to the understanding of pain-related impairments in cognitive function and could help explain the symptoms or progression of CRPS.

587

The Effect of Sleep Continuity on Pain in Adults With Sickle Cell Disease

Gyasi Moscou-Jackson, Patrick H. Finan, Claudia M. Campbell, Joshua M. Smyth, and Jennifer A. Haythornthwaite

The influence of quantifiable parameters of daily sleep continuity—primarily sleep duration and sleep fragmentation—on adults with sickle cell disease (SCD) was examined in this report. Results revealed that nights of shorter sleep duration and time in bed, increased fragmentation, and less efficient sleep were followed by days of greater pain severity. Subjective parameters of sleep continuity predict clinical pain in individuals with SCD. Sleep duration should not be considered in isolation, and its association with pain may be qualified by sleep fragmentation. Research and practice should include assessments of both when addressing pain severity, the authors conclude.

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