



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Research supported in this USASP Abstract was supported by National Institutes of Health Heal Initiative Grant UG3/UH3 AR076387-01 and UL1TR002537.

Complementary and Integrative Pain Management

128

The Efficacy of Remotely Supervised Transcranial Direct Current Stimulation on Conditioned Pain Modulation in Older Adults with Knee Osteoarthritis Pain

Hyochol Ahn, and Geraldine Martorella; Florida State University

Osteoarthritis is a leading cause of pain, impaired daily function, and disability in older adults. Pharmacological and surgical interventions can increase the risk of side effects among older adults, and therefore, nonpharmacological interventions are promoted by the National Pain Strategy. Specifically, transcranial direct current stimulation (tDCS) targeting central nervous system pain processing has received growing attention for the treatment of chronic pain. Remotely supervised tDCS extended the analgesic properties of tDCS from the clinical setting to benefit participants in the comfort of their homes. Thus, we sought to assess the preliminary efficacy of tDCS on conditioned pain modulation in adults with knee OA pain. We conducted a single-group, open-label study in 20 community-dwelling older adults (ages 50–85 years) with knee osteoarthritis. tDCS with anode over the primary motor cortex and cathode with contralateral supraorbital region was applied with a constant current intensity of 2mA for 20 minutes every weekday for two weeks (Monday to Friday) for a total of 10 sessions. All tDCS sessions were remotely supervised by the trained research staff using secure videoconferencing software. Conditioned pain modulation (CPM) was measured by determining the change in pressure pain threshold on the trapezius immediately following immersion of the contralateral hand up to the wrist in a cold-water bath for up to one minute. The mean age of participants was 61 years (SD=7 years), and 75% were female. CPM was significantly increased from 0.9 (SD=0.7) to 1.3 (SD=0.6) at the end of treatment (effect size = 0.4). Our preliminary results show that tDCS increased CPM in adults with knee OA. Randomized controlled trials with larger samples and longer-term follow-ups are needed to corroborate these promising findings regarding the effects of remotely supervised tDCS. This study was supported in part by the Theodore J. and Mary E. Trumble Endowment from The University of Texas Health Science Center at Houston and National Institute of Nursing Research (R15NR018050, R01NR019051).

129

Role of Non-pharmacological Intervention for Pain Management in Nursing Home Residents During COVID-19: A Systematic Review

Alaa Abdelsamad, Khalafallah Ahmed Hassan Mohammed, Osama Ahmed, Abdelhadi Elsayed, Samah Ahmed, Hiba Abualama, Kholood Ahmed, Avinash Bakhtiaripuri, Magedah Areqi, and Nadir Abdelrahman; Michigan State University

Pain experienced by nursing home residents (NHRs) is a significant concern, especially in patients with cognitive impairment. In this group, pain can be revealed through agitation, facial expressions, and altered movements. Palliative care, warm blankets, and peer-led pain management are some of the non-pharmacological management options. Our aim is to explore non-pharmacological interventions used for pain control during the COVID-19 pandemic. Google Scholar and PubMed were utilized to retrieve comprehensive non-pharmacologic pain management studies published between 2020 and 2021. Some targeted studies included randomized controlled, clustered, and clinical trials. The study targeted the general global NHR population. Keywords used: "Pain Management Program", "nursing home", "Pain management post-COVID-19". Seven independent analysts reviewed the study. Eleven studies investigated non-pharmacological interventions in pain management. Five met the inclusion criteria. Two studies assessed peer-led pain management programs (PAPs). The first study found that PAPs

improved pain knowledge and skills of peer volunteers in nursing homes. The second study revealed that PAP significantly improved pain self-efficacy, pain inference, and quality of life. Another study showed that visually appealing digital elements such as family photographs and natural sceneries relaxed older adults with chronic pain. Using warm blankets reduced pain and agitation in one study. An improvement in pain and severity complaints, and analgesic use requests was noted. One study revealed the insignificance of palliative care residents' comfort in the last week of life comparing intervention and control groups. Pain is a symptom often underreported in nursing homes. Current evidence indicates the potential role of non-pharmacological interventions, mainly utilizing appealing digital devices, warm blankets, and PAP programs. This review found that non-pharmacological interventions increase awareness about pain and increase NHRs' quality of life during COVID-19 pandemic. Further studies are needed to assess effectiveness of non-pharmacological interventions as pain management tools.

130

Single-session, Preoperative Mindfulness-based Interventions for Total Joint Arthroplasty Patients: Pre- and Postoperative Outcomes from Three Randomized Clinical Trials

Adam Hanley, and Eric L. Garland; Center on Mindfulness and Integrative Health Intervention Development

These three studies examined whether a brief, preoperative mindfulness-based intervention (MBI) could improve pre- and postoperative TJA outcomes. We conducted three, single-site, three-arm, parallel-group randomized clinical trials at an orthopedic clinic among patients undergoing TJA of the hip or knee. Study 1 (N=285) compared the effects of preoperative mindfulness meditation, hypnotic suggestion, and cognitive-behavioral pain psychoeducation interventions – each delivered in a single, 15-minute group session – on preoperative pain and postoperative physical function. Study 2 (N=118) compared the effects of two different styles of preoperative mindfulness meditation – mindfulness of breath and mindfulness of pain – and cognitive-behavioral pain psychoeducation delivered in a single, 20-minute group session on preoperative pain and postoperative pain and opioid use in the month following surgery. Study 3 (N=127) compared the effects of ultra-brief (i.e., 3-minute), nurse-led, mindfulness of breath and mindfulness of pain interventions on preoperative pain and postoperative physical function relative to a standard nurse consultation. In study 1, the preoperative MBI significantly decreased preoperative pain intensity (p=.006), pain unpleasantness (p=.008), pain medication desire (p=.028) and anxiety (p<.001) while increasing postoperative physical function at 6-week follow-up (p=.010). In study 2, mindfulness of breath was found to most effectively decrease preoperative pain (p=.007), while mindfulness of pain resulted in the least amount of postoperative pain intensity (p=.003) and interference (p=.016). Both mindfulness of breath and mindfulness of pain decreased postoperative opioid use (p<.001). In study 3, mindfulness of breath and mindfulness of pain decreased preoperative pain intensity (p=.022) and unpleasantness (p<.001), and mindfulness of pain also decreased preoperative pain medication desire (p<.001). MBI related changes in preoperative pain unpleasantness predicted better postoperative physical function (p<.001). Embedding brief MBIs in surgical care pathways may be a scalable method of improving patient outcomes.

Diversity, Inclusion, and Anti-Racism in Pain

131

Spanish Translation of the Widespread Pain Index and Symptom Severity Scale for the Diagnosis of Juvenile Fibromyalgia

Francesca A. Lausen, Gabriela Suarez-Cano, María Suñol Rodrigo, Marina Lopez Sola, and Susmita Kashikar-Zuck; University of Cincinnati

Juvenile fibromyalgia (JFM) is a chronic musculoskeletal pain condition affecting 2%-6% of school-aged children. Despite its