Researchers from University of Manchester Provide Details of New Studies and Findings in the Area of Chronic Pain (Effects of neurofeedback in the management of chronic pain: A systematic review and meta-analysis of clinical trials).

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2020 JUN 27 (NewsRx) -- By a News Reporter-Staff News Editor at Obesity, Fitness & Wellness Week -- Investigators publish new report on Musculoskeletal Diseases and Conditions - Chronic Pain. According to news reporting originating from Manchester, United Kingdom, by NewsRx correspondents, research stated, "Neurofeedback provides real-time feedback about neurophysiological signals to patients, thereby encouraging modulation of pain-associated brain activity. This review aims to evaluate the effectiveness and safety of neurofeedback in alleviating pain and pain-associated symptoms in chronic pain patients."

Our news editors obtained a quote from the research from the University of Manchester, "MEDLINE, PUBMED, Web of Science and PsycINFO databases were searched using the strategy: ('Neurofeedback' OR 'EEG Biofeedback' OR 'fMRI Biofeedback') AND ('Pain' or 'Chronic Pain'). Clinical trials reporting changes in pain following electroencephalogram (EEG) or functional magnetic resonance imaging (fMRI) neurofeedback in chronic pain patients were included. Only Randomised-controlled trials (RCT), non-randomised controlled trials (NRCT) and case series were included. Effect size was pooled for all RCTs in a meta-analysis. Twenty-one studies were included. Reduction in pain following neurofeedback was reported by one high-quality RCT, five of six NRCT or low-quality RCT and thirteen of fourteen case-series. Pain reduction reported by studies ranged from 6% to 82%, with ten studies reporting a clinically significant reduction in pain of >30%. The overall effect size was -0.76 (95% Confidence Interval -1.31 to -0.20). Studies were highly heterogenous [Q(df=5)=18.46, p<0.002, I=73%]. Improvements in depression, anxiety, fatigue and sleep were also seen in some studies. Common side-effects included headache, nausea and drowsiness. These generally did not lead to withdrawal of therapy except in one study. Neurofeedback is a novel therapy with promising but largely low-quality evidence supporting its use in chronic pain."

According to the news editors, the research concluded: "Further high-quality trials comparing different protocols is warranted to determine the most efficacious way to deliver neurofeedback."

For more information on this research see: Effects of neurofeedback in the management of chronic pain: A systematic review and meta-analysis of clinical trials. European Journal of Pain, 2020;():. European Journal of Pain can be contacted at: W B Saunders Co LTD, 32 Jamestown Rd, London NW1 7BY, England. (Elsevier - www.elsevier.com; European Journal of Pain - www.journals.elsevier.com/european-journal-of-pain/)

The news editors report that additional information may be obtained by contacting H. Sutherland, Division of Neuroscience and Experimental Psychology, University of Manchester, Manchester, UK. Additional authors for this research include K. Patel, J. Henshaw, J.R. Taylor, C.A. Brown, A. Casson, N.J. Trujillo-Barreto, A.KP. Jones and M. Sivan.

Publisher contact information for the European Journal of Pain is: W B Saunders Co LTD, 32 Jamestown Rd, London NW1 7BY, England.

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