

Synergistic Effects of Culturally Adapted Mindful Movement on Pain Catastrophizing and Physical Function in Chronic Low Back Pain: A Randomized Controlled Trial

Suleiman Ibrahim Mohammad^{1*}, Majd M. Masadeh²,
Asokan Vasudevan³, Anvar Pardayev⁴, Markhabo
Rakhmatova⁵, Anvar Turgunboyev⁶, Nasiba Satibaldiyeva⁷

¹ Department of Business Administration, Business School, Al al-Bayt University, Mafraq 25113, Jordan. Research Fellow, INTI International University, Negeri Sembilan 71800, Malaysia. Email:

kiomars.khanii@gmail.com ORCID:

<https://orcid.org/0000-0001-6156-9063>

² Department of General Education, City University Ajman, Ajman, United Arab Emirates. ORCID: <https://orcid.org/0009-0004-9669-4736>

³ Faculty of Business and Communications, INTI International University, Negeri Sembilan 71800, Malaysia. Email: Sun.vandre@gmail.com ORCID: <https://orcid.org/0000-0002-9866-4045>

⁴ Department of Dentistry, Termez University of Economics and Service, Termez, Uzbekistan. Email: anvar_pardayev@tues.uz ORCID:

<https://orcid.org/0009-0005-5101-8758>

⁵ Department of Clinical Pharmacology, Bukhara State Medical Institute named after Abu Ali Ibn Sino, Bukhara, Uzbekistan. Email:

raxmatova.marhabo@bsmi.uz

ORCID: <https://orcid.org/0000-0003-1350-8885>

⁶ Department of Psychiatry, Samarkand State Medical University, Samarkand, Uzbekistan. Email: anvar.turgunboyev1@gmail.com

ORCID: <https://orcid.org/0009-0008-6363-0700>

⁷ Department of Children's Diseases, Tashkent State Medical University, Tashkent, Uzbekistan. Email: nasibasotiboldiyeva1970@gmail.com

ORCID: <https://orcid.org/0000-0001-5968-445X>

The current research aimed to identify the joint effect of a mindful movement program, adapted to the culture and translated into Uzbek, on pain catastrophization and physical function in patients with chronic non-

Author info: Correspondence should be sent to: Dr. Suleiman Ibrahim Mohammad, Department of Business Administration, Business School, Al al-Bayt University, Mafraq 25113, Jordan. Research follower, INTI International University, 71800 Negeri Sembilan, Malaysia. mmjam.counsel@gmail.com

North American Journal of Psychology, 2026, Vol. 28, No. 4, 2247-2256
© NAJP <https://doi.org/10.65696/001c.172147>

specific LBP. The design of this study was randomized controlled trial with parallel groups. 96 patients from clinics in the cities of Tashkent and Samarkand aged 25 to 60 years who suffered from chronic low back pain for more than 12 weeks with a score of pain intensity more than 4 out of 10 were recruited to the study between March and April 2025 and allocated randomly to two intervention groups ($n = 48$) and control groups ($n = 48$). The intervention group underwent a 2-month course of mindful movement (16 sessions of 60 minutes duration including movement, breathing, and relaxation training) and the control group underwent standard physiotherapy. The catastrophizing was evaluated by the PCS scale, physical functioning by Roland-Morris questionnaire, pain intensity by a numeric scale pre-intervention, at week 8 and 3 months post intervention. The interaction effect of group $\times$ time was found to be significant for the overall catastrophizing score (partial $\eta^2 = 0.16$, $p > 0.001$), disability (partial $\eta^2 = 0.12$), and pain intensity (partial $\eta^2 = 0.09$). The PCS score in the intervention group dropped from 2.30 to 1.22 at week 8, while the control group did not experience any significant changes. The Roland-Morris score dropped from 4.12 to 1.8. According to mediation analysis, 56% of the change in physical functioning could be explained by the change in catastrophizing. On average, participants attended 14.2 of 16 classes and drop-out was 10.4%. The culturally adapted mindful movement intervention resulted in improvements in both the psychological and physiological aspects of CLBP due to decreased levels of catastrophizing. This integration increases the efficacy of the intervention program by making it more than just a physiotherapy program.

Access to Full Text

The full text of this article is available through institutional subscriptions via major academic databases and aggregators, including **EBSCO**, **ProQuest**, and **Cengage**. The *North American Journal of Psychology* is indexed in **Scopus** and **APA PsycINFO**, and access to full articles is typically available through university and research library systems.