Effect of ankle Maitland mobilization in nonspecific chronic low back pain

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ABSTRACT

Introduction: Chronic non-specific low back pain (LBP) is discomfort felt below the costal region and above the gluteal fold, and is not related to specific pathologies like infection, tumour, osteoporosis, fracture, structural deformity, or inflammatory disorder. It can persist for over 3 months and cause gait alterations due to paravertebral muscle spasm and posture changes. Patients tend to prevent painful end-range positions during the weight-bearing phase by performing a greater transverse lumbar segment range of motion during walking. Thus, this contributes to adapting to faulty gait parameters. **Materials and Methods:** Pre-post Quasi Experimental Study. Participants will be recruited and provide with informed consent. Data will be collected on the first and eighth visits, recorded in POMR and extracted to a Google Spreadsheet. Sociodemographic data will be indexed separately to protect privacy. Initial assessments include the Oswestry Disability Index, pain score, gait cycle, and ankle dorsiflexion range of motion and recorded as Pre-tests, post-test will be conducted on the eighth session. Participant will be divided in 2 groups interventional group (IG) receive conventional physiotherapy and Ankle Maitland Mobilization and control group (CG) will receive conventional physiotherapy. Both groups will undergo session 8 session for 4 weeks. **Results:** The study involved 50 male and 74 female participants aged 18-50 years. Results showed significant associations between pain score, gait speed, and physical function. The study suggests that combining these variables when assessing functional outcomes can improve pain and gait performance. The results showed a significant reduction in pain score and physical function ODI, while gait showed improvement in average time taken. **Conclusion:** The study reveals that ankle Maitland mobilization may be beneficial in reducing low back pain and impairment, potentially enhancing physical performance in terms of speed. The intervention delivered to the IG may be beneficial in treating pain and impairment in people with low back pain, leading to better functional outcomes and quality of life in those with persistent non-specific low back pain. The study emphasizes the need for considering pain score, gait, and physical function when evaluating functional outcomes.