The Effectiveness of Scapular Stabilization Exercise in Construction Workers with Sub-acromial Impingement Syndrome –A Pilot Study

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Abstract

Introduction: Subacromial impingement syndrome (SIS) is a common musculoskeletal disorder among construction workers, often resulting from repetitive overhead activities and heavy lifting. SIS can lead to significant pain, reduced shoulder function, and decreased quality of life. Scapular stabilization exercises are proposed as a targeted intervention to address these issues by enhancing scapular muscle strength and coordination.

Methods: 20 construction workers with clinically diagnosed SIS participated in this pilot study. Participants were randomly assigned to either the intervention group, which undertook a scapular stabilization exercise program, or the control group, which received standard physical therapy. The intervention group performed specific scapular stabilization exercises thrice weekly for 4 weeks. Outcome measures included the Visual Analog Scale (VAS) for pain, the Shoulder Pain and Disability Index (SPADI) for function, and the Western Ontario Rotator Cuff (WORC) index for shoulder-related quality of life, assessed at baseline and the end of the 4 weeks.

Results: The intervention group demonstrated significantly improved VAS, SPADI, and WORC scores compared to the control group. Pain levels in the intervention group decreased by an average of 2.5 points on the VAS ($p < 0.05$). Functional improvements were observed with a 25% reduction in SPADI scores ($p < 0.05$). The average WORC score improved by 25% in the intervention group ($p < 0.05$), indicating a notable enhancement in shoulder-related quality of life.

Conclusion: This pilot study demonstrates that scapular stabilization exercises may effectively reduce pain and improve function and quality of life in construction workers with SIS.