

Original Research Article

EFFECT OF FUNCTIONAL STABILIZATION TRAINING ON PAIN AND MUSCLE ACTIVATION RATIO OF VASTUS MEDIALIS OBLIQUUS AND VASTUS LATERALIS IN INDIVIDUALS WITH PATELLOFEMORAL PAIN: A RANDOMIZED CONTROL TRIAL

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ABSTRACT

Background: Patients with patellofemoral pain(PFP) demonstrate impaired lower-limb and trunk movement control along with hip and trunk muscle weakness. Functional stabilization training (FST) is a treatment focused on hip muscle strengthening and lower-limb and trunk movement control. The objective of the study is to examine the effectiveness of functional stabilization training on pain and electromyographic muscle activation ratio for VMO and VL in individuals with PFP.

Methodology: Study has been conducted on 60 patients diagnosed with PFP. Written informed consent was obtained from the patients. All the patients were randomly allocated into two groups for 8 weeks of intervention. Outcome measurements were numeric pain rating scale (NPRS) and electromyographic muscle activation ratio for VMO and VL.

Results: The results showed that there is statistically high significant difference($p < 0.05$) showing improvement in means of NPRS and electromyographic muscle activation ratio for VMO and VL before and after intervention in both the groups but FST group shows more significant improvement in NPRS($p = 0.000$) and in VMO:VL($p = 0.000$) compared to CT group.

Conclusion: FST group showed more benefits than CT group in individuals with PFP in relieving pain and improving balance in the activity of VMO and VL.

KEY WORDS: Core stability, Electromyography, Hip muscles, Functional stabilization training, Patellofemoral pain, Vastus medialis obliquus, Vastus lateralis.