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Relationship between hip abduction quality of movement and its strength in knee osteoarthritis

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RELATIONSHIP BETWEEN HIP ABDUCTION QUALITY OF MOVEMENT AND ITS STRENGTH IN KNEE OSTEOARTHRITIS

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Abstract

Study design: A Cross-sectional study

Background: Hip abductor and knee extensor weakness is evident in individuals with knee osteoarthritis (OA). While earlier studies have shown muscle strength impairments and reduced physical function. The purpose of this study is to determine the relationship between hip abduction quality of movement and its strength in knee OA.

Methods: This study included forty-two individuals with knee OA. Hip abductor and knee extensor strength were measured using a handheld dynamometer. Quality of movement of hip abduction and knee, quadriceps and hamstring muscle length test and knee were evaluated. The relationship between strength and quality of movement were assessed using ANOVA and Kendall's Tau b correlation test. Statistical significance was inferred from $p < 0.05$.

Results: ANOVA and Kendall tau's correlation test revealed no significant relationship between hip abduction quality of movement with its strength; quadriceps, hamstring lengths and knee pain ($p>0.05$). Similarly, no significant relationship between knee extensor strength and its quality of movement was observed

Conclusion: No relationship was found between hip abductor strength and hip abduction quality of movement.

Keywords: Knee osteoarthritis, Knee pain, Hip abductor strength, Knee extensor strength, Quality of movement