



Hip and knee muscle strength in male and female with CLBP compared to healthy individuals

Zahra Mohammadi, physiotherapy MSc, Isfahan University of Medical Sciences, Iran
 Atefeh Rahimi, physiotherapy PhD, University of Social Welfare and Rehabilitation Sciences, Iran
 Amir Arab, physiotherapy PhD, University of Social Welfare and Rehabilitation Sciences, Iran
 Mohammad Javad Tarrahi, Epidemiology and Statistics PhD, Isfahan University of Medical Sciences, Iran

Abstract : Chronic Low back pain (CLBP) is one of the most common musculoskeletal disorders that affecting more than 80% of people in their lives. Previous studies found a link between LBP and hip muscle strength. Lumbopelvic-hip-knee complex is an important biomechanical chain which its muscle strength may vary by LBP. Therefore, the aim of this study is to examine the associations of lower Extremity strength and CLBP and whether this association is modified by sex. Participants included 20 patients with CLBP (10 men, 10 women, age (38.25 ± 8.7) years) and 20 healthy (10 men, 10 women, age (36.35 ± 4.5)). Hip and knee muscle strength were measured using a handheld dynamometer. Data analysis was conducted by multivariate analysis of variance (MANOVA) to compare the muscle strength of hip flexor, extensor, abductor, and knee flexor and extensor between CLBP and healthy subjects. In the most of subjects with CLBP, muscle strength of lower extremity was less than healthy subject. But only in female subjects weakness was significant statistically. In female group right hip extensor ($P=0.005$), right hip flexor ($P=0.001$), left hip extensor ($P=0.021$) and right knee extensor ($P=0.008$) muscle strength of LBP were less in comparison with healthy females.

Conclusion:

Females with CLBP showed more weakness of hip and knee muscle strength than healthy females, while there are not any significant differences between muscle strength in male with and without LBP. Therefore, gender specific design of strengthening exercises interventions for hip and knee to improve CLBP should be explored.

Biography : Zahra Mohammadi born in 1994 is studying the master course of physiotherapy at the Department of Rehabilitation, Isfahan University of Medical Sciences, Iran. She has her expertise in physiotherapy and is interested in improving the health and wellbeing of the people. She has worked on various topics, such as "The cervical range of motion measurement methods", "The relationship between kyphosis and falling in elderly people" and "Cervicogenic headache and its treatment". The latest subject she has worked on is "Hip and knee muscle strength in male and female with CLBP compared to healthy individuals".



Publications : Strength of hip muscle groups in sedentary women with patellofemoral pain syndrome.

The empowerment of elderly patients with chronic obstructive pulmonary disease: managing life with the disease.
 Effects of Integrated Neuromuscular Inhibition Technique on pain threshold and pain intensity in patients with upper trapezius trigger points.

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