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Impact of specific training on fear avoidance beliefs and postural stability in non-specific chronic low back pain

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Background: Fear-avoidance beliefs (FAB) are related to disability and chronicity of low back pain. The aim of this study is to investigate the association between FAB and postural stability and also the influence of specific training for FAB on postural stability and FAB in patients with non-specific chronic low back pain (NCLBP).

Methods: In this quasi experimental study, 51 subjects (27 females and 24 males) with NCLBP were evaluated. Pain intensity, FAB, and disability were measured using questionnaires and Postural stability was measured using force plate. Abdominal and back muscle endurance was measured respectively by sit up and Sorensen tests. All the tests were repeated one week and one month after a short-term specific training for FAB. Mixed model repeated measure test was used to evaluate trend of changes in variables before and after the intervention and the association of the changes in FAB and pain intensity with the changes in parameters of postural control.

Results: After the intervention, pain intensity, FAB and disability score decreased significantly ($p < 0.001$). Postural stability and the time of sit up, Sorensen and single leg stance tests increased significantly ($p < 0.001$). FAB (physical activity) was related to the center of pressure excursion and velocity in unilateral standing in sagittal and frontal plan. Trend of changes in pain intensity and FAB (physical activity) were re-

lated to trend of the changes in postural stability in unilateral standing significantly ($p < 0.05$).

Conclusion: Pain intensity and FAB were related to postural stability in unilateral standing significantly. Specific training for FAB resulted in decreasing pain intensity, FAB and disability scores and improved postural stability as well as increasing the time of sit up, Sorensen and single leg stance tests in patients with CLBP.

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Biography

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