

# ***The effect of six weeks of core stability exercise on pain and trunk muscle endurance in girl students with chronic non-specific low back pain***

***Saeed Ilbeigi<sup>1\*</sup>, Leila Nikbin<sup>2</sup>, Mohamad Esmaeil Afzalpour<sup>3</sup>***

*<sup>1</sup>Assistant Professor of Sport Biomechanics, Faculty of Physical Education, University of Birjand*

*<sup>2</sup>Msc of Sport Sciences, Faculty of Physical Education, University of Birjand*

*Professor of Sport Physiology, Faculty of Physical Education, University of Birjand*

*Corresponding Author: [Saeed Ilbeigi](mailto:Saeed Ilbeigi), Faculty of Physical Education, University of Birjand*

*Tell: +98 561 2502124*

*Email: [silbeigi@birjand.ac.ir](mailto:silbeigi@birjand.ac.ir)*

## **Abstract:**

**Background and Aims:** There is general consensus about the exercise therapy, as a prevention and treatment of low back pain. But because of different methods of treatment, there is no sufficient evidence about the superiority of one method to another. In this study, the effect of 6 weeks of core stability exercise on pain, and trunk endurance muscles were investigated in girl's students with chronic low back pain.

**Materials and Methods:** A total of 18 patients with a mean age, (24/11±0/31 years), height,(155/42 ±0/003 cm) and weight, (67/59±4/50 kg), were selected among all recalling student that volunteered for this study in Birjand University, and then randomly divided in two groups, as training (10 subjects), and control (8 subjects) groups . The pain levels and trunk muscles endurance were measured by Quebec back pain questionnaire, Sit- up and Sorensen, test respectively. The core stabilization exercises were exerted on a regular basis within six weeks of each 3 sessions a week, each session was conducted for about 45 minutes. For statistical analysis, the Kolmogorov - smirnov normality test, Pearson correlation and T test were used.

**Results:** the results showed, a significant reduction in pain levels, significant increase in trunk muscle endurance (P<0/05), however, no significant difference was found between two groups.

**Conclusion:** it can be stated that the core stabilization exercises, can be used for reduction of the pain, and it can be considered as a suitable exercise for treatment of low back pain.

**Keywords :**core stability exercise, trunk muscle endurance, pain score, chronic low back pain