

ABSTRACT

Title: The influence of a movement intervention based on developmental kinesiology principles on female athletes in the 18+ category of sports aerobics.

Objective: Determining the effectiveness of a 10week movement intervention based on core stabilization for correcting faulty posture and alleviating back pain in four elite sport aerobics competitors in the age category of 18 and above.

Methods: Evaluation of body posture aspects in a static standing position, examination of trunk stabilization, Young Spine Questionnaire survey, and a 10week movement intervention utilizing exercises to strengthen trunk stabilization based on the Dynamic Neuromuscular Stabilization concept enriched with a mobilizing exercise for the Sacroiliac joint. Qualitative research is chosen as the research strategy.

Results: The 10week movement program based on strengthening trunk stabilization according to the DNS concept with an element of releasing the SI joint had a positive impact on reducing the frequency of back pain in the cervical, thoracic, and lumbar regions of the spine by one degree in 3 out of 4 girls. Reduction in pain intensity in the cervical spine occurred in 3 out of 4 girls by one degree, in the thoracic spine, all girls experienced a reduction in pain intensity by one degree, and in the lumbar spine, 3 out of 4 girls felt a reduction in pain intensity by 2 degrees. None of the girls experienced a worsening of back pain, but we also did not achieve complete elimination of pain. Evaluation of body posture in a static standing position after completing the movement program showed only slight improvement in girl #1 in the chest and pelvic area, girl #2 demonstrated observable improvement in head and shoulder alignment, girl #3 experienced improvement in head, shoulder, and pelvic alignment, and in girl #4 we observe a change in weight distribution throughout the feet; the weight is no longer solely on the front part of the foot, and there has been an improvement in the positioning of the head. Trunk stabilization strength slightly improved in all girls.

Keywords: Dynamic neuromuscular stabilization, body posture, back pain, deep stabilization system of the spine, case study, gymnastic sports, movement program.