

Abstract:

Title of the thesis: Affecting posture in people with visual impairment.

Aim of the thesis: The aim of the thesis was to evaluate the effect of exercise on selected variables of locomotor system function.

Methodology: The project was conceived as a case study and it so the participation of 18 girls with visual impairment (mean age 17.5 years). The group was examined using a basic investigation method for evaluating posture, balance and muscular imbalances. The study lasted 6 months and the measurements took place before the beginning, 3 months after the beginning (during which time the girls did not exercise) and following the end of a special three-month exercise program based on remedial physical education methods.

Conclusion: The results showed that after the first three months the girls performed worse in most of the parameters under examination, and after a further three-month motor program they performed better in most tests as compared to the second measurement. Between the first and the second measurement, important changes became manifested in the muscle shortening parameter, namely in the flexion of the hip joint (20 % decreased), in the paravertebral muscles (decrease of 17.5 %). As far as balance is concerned, between the first and the second measurement, the improvement percentage recorded in the standing position on the right lower limb was 15.38 %. As an important improvement between the second and the third measurement (i.e. following the implementation of the exercise program) we can regard the following values as significant in the muscle shortening parameter: the flexion of the hip joint and the greater pectoral muscle reported an improvement of 16.67 %, whereas the paravertebral muscles reported an improvement of 15 %. As far as balance is concerned, a significant improvement percentage in posture with legs apart was reported, namely of a 22.22 %. The improvement in the other values cannot be regarded as significant.

Key words: visual impairment, balance, muscles shortening parameter, posture, exercise.