Evaluating the effect of exercise program DNS FIT KID in sportive older school-age children

Abstract

The diploma thesis evaluates of the effect of an exercise program called DNS FIT KID based on children older school-age who play sports.

The theoretical part of the diploma thesis contains general knowledge about Dynamic neuromuscular stabilization. It describes the basic, such as developmental kinesiology, postural function and the stabilization system of the spine. Furthermore, the study also characterizes the DNS FIT KID exercise program, its key principles and exercise position. In the last section of the theoretical part of the diploma thesis, it approaches the specifics of the period of a child older school-age in sports.

Methods: The research involved 15 sports participants (athletes and kayakers) aged 13 to 15 years. All participants attended 12 lessons of the DNS FIT KID exercise program. Once a week, the lessons took place under the guidance of a trained physiotherapist by the DNS method. Before and after the exercise program, the participants were examined using DNS FIT KID tests, gross motor tests and balance tests from the MABC-2 battery.

Results: In DNS FIT KID tests, the results improved by an average of 11.2 points ($p < 0,001$), in tests from MABC-2 battery, the percentile of gross motor skills improved by an average of 16.7 ($p = 0,004$) and the balance tests became better by an average of 17.3 ($p < 0,001$). Therefore, the results confirm that the correlation of DNS FIT KID tests and the balance tests from MABC-2 battery improved ($r = 0,524$; $p = 0,044$). However, the thesis found that the improvement of the MABC-2 battery gross motor tests does not correlate with the improvement of the DNS FIT KID tests ($r = -0.0378$; $p = 0.894$), nor in the MABC-2 battery balance tests ($r = 0.0146$; $p = 0.959$).

Conclusion: The DNS FIT KID exercise program has a positive effect on posture in postural positions from developmental kineziology, which correlates with a positive outcome on balance skills.

Keywords: Dynamic neuromuscular stabiliaztion, DNS FIT KID, children, sport, older school-age