

Abstract

Title: The relationships between motor coordination, fundamental movement skills, physical fitness and body composition of primary school children

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Objectives: The aim of this work is to determine the degree of relationships between fundamental movement skills, motor coordination, physical composition and physical fitness in children of younger school age.

Methods: The tested group consists of pupils 3-5. primary school classes ($n = 109$). The TGMD-2 test battery was used to determine the level of motor skills, the KTK test battery was used to determine motor coordination, and the Unifittest test battery (6-60) was used to determine the level of physical fitness and body composition. The Shapiro-Wilk test, Kendall's tau (τ), Kruskal-Wallis test, followed by Bonferroni correction, Man-Whitney U test, was used for data analysis.

Results: This study found that the group of children with better results from the KTK test was also significantly better in the TGMD-2 and Unifittest tests (6-60) compared to the group with the lowest results from the KTK test ($p < 0.01$). The relationship between the motor quotient of the KTK test and TGMD-2 ($\tau = 0.46$), TGMD-2 and Unifittest (6-60) ($\tau = 0.54$) was found. The strongest relationship was found between the overall results of Unifittest (6-60) and KTK tests ($\tau = 0.61$). In the TGMD-2 rough motor skills test, we recorded the highest number of below-average results according to standards. When comparing performance by gender, we did not find a significant relationship ($p > 0.05$).

Conclusion: The level of physical fitness, movement skills and physical composition of the children we tested is alarming. Almost half of the children are overweight or obese. The recommendation is a greater focus on the development of motor coordination and basic movement skills of children at preschool and especially younger school age, which can significantly support the level of physical activity and physical fitness in relation to good health.

Keywords: physical fitness, basic movement skills, motor coordination, body composition, testing, younger school age