

Abstract

Title: Comparison of Changes in Motor and Cognitive Functions of Preschool Children

Objective: The aim of this thesis is to compare changes in motor and cognitive functions of preschool children.

Methods: The research was conducted as a longitudinal study that followed 61 children aged 4-6 years over a two-year period. Various tests were used to assess gross motor skills, physical fitness, and cognitive functions, including the Test of Gross Motor Development (TGMD-2) and the Intelligence and Development Scales for Preschool Children (IDS-P). Data were analyzed using comparative, correlational, and regression analysis.

Results: The findings showed improvements in gross motor skills, physical fitness, and cognitive levels over a two-year period. Girls achieved better results in locomotor skills, while boys demonstrated greater improvements in dynamic disciplines. The correlational analysis revealed several weak correlations between cognitive and physical abilities. The regression analysis showed very weak linear relationships between cognitive and physical abilities.

Conclusion: Overall, the results support the importance of regular physical activities and structured motor games for the development of motor and cognitive abilities in preschool children. No significant relationship was found between the improvement of gross motor skills, physical fitness, and cognitive levels.

Keywords: TGMD-2, IDS-P, longitudinal study, physical fitness, gross motor skills, gender differences