

Abstract

Title: Motor performance of pupils with attention deficit hyperactivity disorder (ADHD).

Objectives: The aim of the work was to determine the level of fine and gross motor skills of upper extremities of the pupils with diagnosis ADHD at schools specialized on these pupils and compare it with the fine and gross motor skills of upper extremities of children without this diagnosis at common elementary school. Further work objective was to determine the level of gross motor skills of lower limbs and laterality of paired organs (hand – foot) within above mentioned groups of pupils.

Methods: To determine the level of fine and gross motor skills of upper extremities, gross motor skills of lower limbs, laterality of the upper and lower extremities of the pupils with and without ADHD aged 9-11 years we used these types of tests: „Spiral“, „Dotting test“, „Beads“ (the level of fine motor skills of the upper extremities); „Pack“, „Small plate tapping“, „Big plate tapping“ (the level of gross motor skills of upper extremities); „Tapping the leg“ (the level of gross motor skills of the lower limbs); „Typing out the Rhythm“ (the laterality of the lower limbs); „Bell“ and „Matches“ (the laterality of the upper extremities).

Results: The fine motor level of dominant hand was in the case of ADHD diagnosed pupils lower compared to those without this disorder ($0.38 \leq d \leq 0.79$). Except of the „Spiral“ test the ADHD diagnosis negatively affected the fine motor skills of dominant hand more ($0.74 \leq d \leq 0.79$) than in case of non-dominant hand ($0.23 \leq d \leq 0.58$). The level of gross motor skills of dominant hand was lower in case of ADHD diagnosed pupils compared to those without this disorder ($0.33 \leq d \leq 0.38$). With the exception of „Big plate tapping“ test the ADHD disorder negatively affected the gross motor skills of dominant hand ($0.34 \leq d \leq 0.38$) more than in case of non-dominant hand ($0.21 \leq d \leq 0.37$). The level of gross motor skills of dominant leg was lower in case of ADHD diagnosed pupils compared to those without the disorder ($d = 0.38$). The effect of ADHD on gross motor skills of the lower limbs was invariant towards the lower limb preference ($0.37 \leq d \leq 0.38$). Cross-laterality was observed in 28.3 % of pupils with ADHD diagnosis (boys 30 %, girls 26.7 %), however, pupils without the disorder showed 10 % occurrence of cross laterality (boys 13.3 %, girls 6.7 %).

Keywords: Hyperactivity, impulsivity, fine motor skills, gross motor skills, laterality.