

Development of laterality in kindergarteners; the effect of movement on laterality

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Abstract

The aim of our present study is to observe the development of laterality in nursery-school-aged children, to analyse the kind of dominance displayed by kindergarteners mature enough to start school and by those children who perform averagely weaker in DIFER school-maturity test (Diagnostic Development Analyser System) (Nagy, 2000) and Basic Therapy motor test measuring nervous system maturity (Marton-Dévényi et al. 1999), and based on their dominance how the children carry out gross- and fine- motor tasks, tasks demanding spatial-orientation and how well-developed their body-scheme is. A further aim of our research is to confirm the theory that motion developer programs can generate changes in the evolution of laterality. Additionally, we were interested in finding out whether dominance affects readiness to begin school. We started our longitudinal research at Meséskert nursery school in Budapest, in September 2005. Based on the parental statements, we examined the movement development and school-readiness of 105 children altogether with the average age of 5 years and 6 months. We divided the children into 2 groups according to their motion- and school-maturity average indexes. The children whose average index of both areas was under 70%, got into our *selected group* (n=65). In our *control group* (n=40), we found no problems either in the motion area or concerning intellectual development. In the selected group there were children (*investigational group*, n=30) who took part in a one-year movement development program (Basic Therapy). The other grouping variable was laterality (one-sided, not evolved and crossed laterality). On basis of statistical counting methods, we found that one-sided laterality can be shown in 50% of the 5-6 year old nursery-school children, fact that alludes to later consolidation of dominance. Not-evolved-laterality can less be observed in kindergarteners who were mature enough to start school. None of the investigational group members showed not-evolved laterality any longer, due to the one-year-long movement development program.

Keywords

laterality, motion-maturity, readiness to start school, body scheme, spatial-orientation