Original aspects regarding the relationship between motor proficiency age and chronological age in primary school students

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Abstract

Background. Knowledge doubled by a clear understanding of the main factors involved in the psychomotor phenomenon (in this case strength and balance), as well as of the relationships established between those factors in relation to the subjects' chronological age.

Aims. Our experiment envisages an analysis of the relationship between motor proficiency age and chronological age of primary school students, based on the information provided by the Bruininks-Oseretsky Test - Second Edition (BOT-2) applied for the first time in Romania.

Methods. Forty subjects were selected to participate in this research experiment (20 boys and 20 girls), 1st up to 4th grade students, coming from urban and rural environments alike. The subjects' evaluation took place from March 20, 2010 until June 4, 2010 and consisted of 14 items of strength and balance subtests provided by the Bruininks-Oseretsky Test. In terms of computer software and specific tools for statistical analysis of the obtained data, the following instruments were used: BOT-2 ASSISTTM, Scoring and Reporting System (integrated software of the Bruininks-Oseretsky Test), MINITAB 15.1 of MINITAB Inc. and MICROSOFT EXCEL 2003.

Results. The tests revealed that with regard to balance, medium motor proficiency age (11 years and 5 months) was higher by 2 years and 2 months than the medium chronological age of the tested subjects (9 years and 3 months), the check of the statistical hypothesis performed by dependent t-test revealed a statistically significant difference of means (p=0,005 is smaller than 0,05). Regarding the strength subtest, the medium motor proficiency age (9 years and 10 months) is higher by 7 months than the chronological age (9 years and 3 months), and in this case the check of the statistical hypothesis performed through the same test, revealed a statistically insignificant difference of means (p=0,178 is higher than 0,05).

Conclusions. The analysis of the results obtained on the tested subjects allows us to confirm the research hypothesis regarding the balance subtest and to accept the null hypothesis for the strength factor. We can conclude as well that the use of the Bruininks-Oseretsky Test sed for the first time in Romania, within an experimental research, represents, besides an original approach, a major opportunity for obtaining valuable data regarding several psychomotor characteristics of primary school students.

Keywords: motor proficiency age, chronological age, evaluation, primary school, strength, balance.