

Publication

Construct validity and covariates of basic motor competencies in primary school

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A central aim of physical education is the promotion of basic motor competencies (in German: Motorische Basiskompetenzen; MOBAK), which are prerequisites for children's active participation in sports culture. This article introduces the MOBAK-1 test instrument for 6- to 8-year-old children and determines the construct validity of this test instrument. In addition, the relationship between MOBAK and motor ability (i.e., strength) as well as body mass index (BMI), sex, and age is investigated. We analyzed data of 923 first and second graders (422 girls, 501 boys, age = 6.80 \pm 0.44 years). The children's basic motor competencies were assessed by the MOBAK-1 test instrument. Besides analyses of frequency, correlation, and variance, 3 confirmatory factor analyses with covariates were performed. We found 2 MOBAK factors consisting of 4 items each. The first factor, locomotion, included the items balancing, rolling, jumping, and side stepping; the second factor, object control, included the items throwing, catching, bouncing, and dribbling. The motor ability strength had a significant influence on the factors locomotion ($\beta = 0.60$) and object control ($\beta = 0.50$). Older pupils achieved better results than younger pupils on object control ($\beta = 0.29$). Boys performed better on object control ($\beta = -0.44$), whereas girls achieved better results in locomotion ($\beta = 0.07$). Pupils with a high BMI achieved lower performance only on the factor locomotion ($\beta = -0.28$). The MOBAK-1 test instrument developed for this study meets psychometric validity demands and is suitable to evaluate effects of sports and physical education.

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