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MOTOR FITNESS OF HEARING-IMPAIRED PRIMARY SCHOOL CHILDREN

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Introduction The acoustic sensory system is a major source of information in sports movements. For hearing-impaired children, verbal information (e.g. for movement descriptions and corrections), but also sensory feedback during movement execution is significantly reduced in the teaching-learning process. There is some evidence of reduced performance of hearing impaired children in coordinative motor skills like balancing (Engel-Yeger and Weissman, 2009). In the present study the effects of different degrees of hearing impairment in primary school children should be examined not only for coordination but also for further motor fitness aspects like flexibility, strength, and endurance. **Methods** 85 hearing impaired primary school children (age: M = 9.1, SD = 1.5, 32 female) and 97 hearing children (age: M = 8.3, SD = 0.9, 44 female) performed the 8 tasks of the German Motor Test 6-18 (Bös, 2009). The raw data of each task were transformed into a Z-score according to gender and age specific normalized data. According to their audiogram the children were classified into impairment categories: severely deaf, completely deaf, auditory processing and perception disorder. **Results** Hearing impaired children performed significantly worse in balancing backwards (T = 5.61; df = 177, p < .001), in bidirectional jumping (T = 5.61; df = 177, p < .001), in the 20 m sprint (T = 2.48; df = 166, p = .014), and in the 6-min endurance run (T = 7.41; df = 140, p < .001). In the strength endurance tasks push-ups (T = 1.19; df = 167, p = .232) and sit-ups (T = 0.98; df = 178, p = .327) as well as in the stand-and-reach test (T = 0.94; df = 175, p = .386) and the standing long jump (T = 0.993; df = 175, p = .152) they had no significant deficits. Regarding the category of the hearing impairment significant differences only occurred in bidirectional jumping, where completely deaf children fell behind their mates (T = 3.01, df = 38, p = .005). **Discussion** The findings on speed and coordination are quite in line with previous research (Engel-Yeger and Weissman, 2009). The poorer performance in the aerobic endurance, however, is not documented so clearly. As there is little evidence for purely physiologically reasons, performance improvements through specific programmes in this area seem very likely. New aspects could be contributed for the areas of flexibility, strength endurance, and springiness, where hearing impaired children are on par with hearing children. **References** Bös, K. (2009). Deutscher Motorik Test 6-18 (DMT 6-18). Hamburg: Czwalina.

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