

## SUMMARY

**Problem:** A specific developmental disorder of motor function affects up to one in 12 people. Neither the prevalence of DCD nor its diagnosis is completely uniform. According to some authors, even given the difficulty of existing tests and test batteries, a "gold standard" for diagnosing DCD is still being sought that would most effectively diagnose its prevalence. In Canada, a standardized screening method, the Developmental Coordination Disorder Questionnaire (DCDQ), has been developed as an auxiliary diagnostic tool to help detect DCD in children. It is an exploratory method that uses a questionnaire technique designed primarily for parents and teachers of children to diagnose the prevalence of this disorder. We believe that by using the DCDQ questionnaire, which according to Schoemaker is a "coarse screen" in identifying children with DCD, we will single out children with DCD and suspected DCD. Studies emphasize the importance of early identification of children with developmental coordination disorder (DCD), not only as a prevention of secondary academic, emotional, and social manifestations of the disorder. The questionnaire allows screening of children with motor difficulties. The DCDQ has not been validated in the Czech Republic and this is the aim of this study so that it can be used for the Czech setting. The age range of 6-10 years was chosen for the study, which includes the critical period of the child's entry into school and younger school age.

**Objective:** The aim of the study was to cross-culturally translate the Canadian Developmental Coordination Disorder Questionnaire for children aged 6-10 years into a newly developed Czech version of the instrument and to establish its validity.

**Methods:** 25 bilingual parents and experts participated in the pilot study. The main sample consisted of 850 parents of children aged 6-10 years (mean age = 7.8, SD = 0.8) participated in the study. The age range 6-10 years was purposively chosen because it includes the critical period of the child's school entry and younger school age. The Canadian DCDQ questionnaire, written in English, which is the best-rated parent questionnaire to identify DCD in children aged 5 to 15 years, was used for cross-cultural translation to the Czech setting using the back-translation method. Construct validity and goodness of fit of the proposed DCDQ structure were established by confirmatory factor analysis and the use of selected fit model indices (CFI, TLI, RMSEA). Generic reliability of the DCDQ was approximated using

McDonald's omega coefficient. Data were processed in M-plus software, which is directly designed for analyses of latent variable structures.

**Results:** A content validity index was calculated for each questionnaire item. The individual questionnaire items ranged from 0.6 to 1.0. Critical values were recorded for items 14, 15, which are formulated in double negatives and therefore are harder to understand for a Slavic-speaking respondent. After modifications, another group of 15 bilingual parents and professionals completed the original and modified questionnaire. The results of the CVR<sub>2</sub> show that the modified version achieves better results and shows content and semantic stability. These factors are "Fine motor skills", "Movement coordination" and "General coordination". The generic reliability of each factor ranged from McDonald's  $\omega = 0.83$  to 0.88. Factor loadings for each indicator ranged from 0.62 - 0.85 for the original questionnaire and 0.61 - 0.80 for the Czech version of the questionnaire. item 6 proved to be problematic in the structure of the questionnaire, and its dominance for any of the factors was not confirmed. We therefore consider that this item, although not dominant in any of the factors, is conditional for all three factors. From a psychometric point of view, the DCDQ has proven to be a valid tool for detecting the possible presence of DCD, and thus, according to the results of our study, appears to be more economically and time acceptable than complex motor tests.

**Conclusion:** This diagnostic tool could be used in the future as a screening tool to exclude children aged 6-10 years for whom further motor testing is not needed and thus may greatly facilitate the whole motor testing process. However, the study did not include children aged 11 - 15 years as in the original version of the Canadian questionnaire.

**Keywords:** developmental coordination disorder, developmental motor impairment, dyspraxia, questionnaire, DCD, non-motor child, validity, trans-cultural translation, cross-cultural translation of questionnaire, DCDQ.