

The Assessment of Motor Coordination and Dexterity (AMCD): examining the motor skills of Brazilian schoolage children

Ana Amelia Cardoso, Livia de Castro Magalhães, Marcia Bastos Rezende, Issame Monteiro Takenaka, Aline Costa Amaral Fonseca, Beatriz Arruda Pereira Galvão
Federal University of Minas Gerais, Minas Gerais, Brazil

Introduction: Children with Developmental Coordination Disorder (DCD) present motor coordination difficulties that interfere with activities of daily living and/or academic performance. There is no valid and reliable assessment tool identify and diagnosis this disorder in Brazilian children. The Assessment of Motor Coordination and Dexterity (AMCD) is being created as a resource to standardize motor coordination assessment for Brazilian children ages four to eight years old.

Objectives: To examine the sensitivity of the AMCD to identify children with DCD, to examine its concurrent validity and to verify the feasibility and clinical usefulness of the instrument.

Methods: Two-hundred seven and eight years-old Brazilian children from public and private elementary schools are being recruited to participate in the study. The Developmental Coordination Disorder Questionnaire (DCDQ-Brazil) will be used to select 100 children with probable DCD and 100 typically developing children. The participants will be evaluated with the AMCD and the Movement Assessment Battery for Children (MABC). Concurrent and predictive validity will be calculated.

Results: Since the items of the AMCD has been shown to differentiate the motor skills of Brazilian children ages 4 to 8 years old, it is expected that it will discriminate children with and without DCD. Preliminary data collection indicate the AMCD is well accepted by the children and the results seem compatible with the MABC

Conclusion: Although several motor development tests are available internationally, their use is limited in developing countries, like Brazil, due to their cost and the fact that they are not standardized for the local children. The creation of the AMCD represents an effort to develop standardized resources to be used by occupational therapists working in clinics and in the school system. Without proper assessment tools it is difficult to identify children in need for therapy and to document progress.

Contribution to the practice/evidence base of occupational therapy: The AMCD will contribute both to improve the clinical practice in Brazil and to allow the identification of children that could benefit from occupational therapy services.