Suitability of the Movement Assessment Battery for Children in Greece: Comparison between a Greek sample and the North-American normative sample of 9 and 11 year old children

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ABSTRACT

Background
Movement Assessment Battery for Children (MABC) is currently recognized as one of the most widely used diagnostic instruments regarding developmental coordination disorders. The purpose of the present study is to investigate the suitability of the MABC in regard to the assessment of Greek children. Given that Greek children are engaged in a different school environment compared to American children, the aim of the present study was to take a preliminary look at the suitability of the MABC.

Methods
Two hundred Greek children between the ages 9 years and 11 years were compared with 247 children of the same age, from USA, who took part in the standardisation process of the MABC. All Greek sample children were of a common ethnic origin and were randomly recruited from 32 public schools located in nine different areas of Greece.

Results
The analysis of the individual test items revealed significant differences in eight out of 21 comparisons. Five of these were obtained for the items of Age Band 3 and three for the items at Age Band 4. American children performed significantly better in manual dexterity and static balance items, whereas Greek children were better in dynamic balance items.

Conclusions
The above cross-cultural differences suggest that either the norms or some of the items of the MABC may need some adjustment in order to be usable within Greek school population. Given the fact that the present study regarded Age Bands 3 and 4, further research seems essential for Age Bands 1 and 2 to complete the evaluation of the MABC test items and published norms in Greece.

Keywords:
motor activity, motor skills, motor skills disorders, child, Greece, cross cultural comparisons

INTRODUCTION
Movement Assessment Battery for Children (MABC)¹ is a norm-referenced battery especially designed to assess movement difficulties that determine, in a large degree, the child’s social integration, mainly in school. The specific instrument is being used widely in the international literature that focuses in Developmental Coordination Disorder. Developmental Coordination Disorder (DCD) has been defined as a marked impairment in the development of motor coordination interferes with academic achievement or activities of daily living in DSM-IV. The poor coordination is present in the absence of a known medical condition such as cerebral palsy or muscular dystrophy. The condition has attracted the interest of scientists, not only because of its negative effects on motor performance of children, but also because of its direct relation to various learning disabilities, academic failure and emotional problems. It is estimated that the percentage of children exhibiting DCD is about 5% of the total school population. This percentage though could reach up to 15%. Therefore, there is an agreement regarding the urgent need for early and accurate identification, as there is scientific evidence that early and specific intervention has positive outcomes.

MABC has been developed to serve two main purposes. First, the test has a diagnostic function, offering a detailed picture of the child’s motor weaknesses and strengths. Second, it can be used in evaluating the efficacy of intervention programmes. The battery has been implemented in many countries worldwide, such as Sweden, China, Belgium, Japan, U.K., Thailand, Netherlands, as well as in Greece. Furthermore, it has been translated into Danish, Dutch, Italian, Swedish and Japanese.

During the efforts to standardize MABC in the above countries, several researchers have been presenting cross-cultural comparisons between the original sample from North America and various samples from their own countries. Despite the fact that the above findings seem to be rather controversial, researchers acknowledge that MABC still constitutes a quite useful tool for identification, assessment and intervention. However, other