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Aim

The Movement Assessment Battery for Children-Second Edition (MABC-2) has not been standardized in Japan; therefore, we have faced difficulties in diagnosing children with developmental coordination disorders. The present study aimed to examine whether norms of the MABC-2 is also applicable to Japanese children in order to prepare for its standardization in Japan.

Participants

- 132 typically developing children
  - All native Japanese

Task

- Age Band 2 of the MABC-2
  - Raw scores were transformed into scaled scores (SSs) based on the original norms (UK data)

Comorbidity Assessment

- SNAP-IV for ADHD (Inattention), ADHD (Hyperactivity/Impulsivity), and ODD traits
- PARS for ASD traits

Subtests of Age Band 2

- MD1: Placing Pegs
- MD2: Threading Lace
- MD3: Drawing Trail 2
- AC1: Catching with Two Hands
- AC2: Throwing Beanbag onto Mat
- Bal1: One-Board Balance
- Bal2: Walking Heel-to-Toe Forwards
- Bal3: Hopping on Mats

Japanese children had better manual skills and were better at balancing compared to children in the UK.

Relationships between MABC-2 scores & traits of other developmental disorders

Healthy children did NOT show any significant correlations between MABC-2 scores and traits of possible comorbidities.

Conclusion

Present results suggest that Japanese children, particularly in girls, have better manual skills and are better at balancing and jumping compared to children in the UK. These findings also indicate necessity of setting a new norm for Japanese populations based on larger set of data collected from typically developing Japanese children.

Sex Differences

Girls scored higher than boys in MD, Bal, & Total (sex differences @sub-test: MD2, Bal1, & Bal3)

Rationale: The MABC-2 is used to assess the motor abilities of children aged 4 to 12 years. It consists of a series of tasks that evaluate different aspects of fine and gross motor skills. The scores are then transformed into scaled scores (SSs) that allow for comparisons across different age groups and populations. The study aimed to assess the applicability of the MABC-2 norms for Japanese children and to identify any sex differences in performance on the tasks.

Methodology:

The study included 132 typically developing children aged 7 to 10 years. All participants were native Japanese. The tasks included in the MABC-2 were divided into three domains: manual dexterity, aiming & catching, and balance. The raw scores of the participants were transformed into scaled scores based on the original norms provided by the test developers. The scaled scores were then compared between boys and girls across different age bands to identify any sex differences.

Results:

- Girls scored higher than boys in the MABC-2 total score and in the manual dexterity and balance subtests.
- No significant sex differences were found in the Aim and Catch subtests.

Conclusion:

The study found that Japanese children, particularly in girls, have better manual skills and are better at balancing and jumping compared to children in the UK. These findings also indicate the necessity of setting a new norm for Japanese populations based on larger sets of data collected from typically developing Japanese children.