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Evaluation for differential item functioning (DIF) within the School Version of the Assessment of Motor and Process Skills (School AMPS) among world regions

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Introduction and objectives

How educational systems are organized differ among world regions. There are also different cultural norms within school systems that may impact whether selected items or tasks in the School AMPS are easier for students in some world regions than others. If differences exist, there is evidence for DIF. The purpose of this study was to evaluate if the School AMPS is free from DIF among world regions.

Research questions

1. Do the school motor and school process skill item difficulty calibrations remain stable among world regions?
2. If differences do exist between world regions, are these differences large enough to have an impact on the school quality of performance measures derived from the School AMPS computer scoring program?

Method

Participants will include all students in the School AMPS database 3 to 12 years of age tested in North America, Australasia, United Kingdom, and the Nordic countries. Students were chosen independent of diagnoses or being typically-developing. All students have been evaluated by occupational therapists according to the procedures outlined in the School AMPS manual. Data will be subjected to many-facet Rasch (MFR) analyses using FACETS computer program, and functions within FACETS will be used to determine if the School AMPS skill items exhibit DIF among world regions. If DIF is found, we will implement further analyses to determine if the DIF is large enough to disrupt calculation of School AMPS quality of performance measures.

Results

We anticipate that there will be no evidence of DIF, or if some DIF is present, it will not be of sufficient magnitude to disrupt valid cross-world region measurement using the School AMPS.

Contribution to practice

It is important to investigate if the School AMPS items work in a consistent manner among world regions to ensure valid assessment of children internationally.

Key references

Fisher, A. G., Bryze, K., & Griswold, L. A. (2007). School AMPS: School Version of the Assessment of Motor and Process Skills (2nd ed.). Fort Collins, CO: Three Star Press.