Introduction

When conducting intellectual assessments practitioners are often encouraged (e.g., Groth-Marnat, 2009) to interpret an individual’s strengths and weaknesses via the obtained profile of factor scores provided by many contemporary cognitive measures. However interpretation of scores at this level ignores the fact that all cognitive measures are multidimensional (e.g., Carroll, 1993). Unfortunately, clinicians do not have a mechanism for disentangling these variances thus; they risk potential over-interpretation of measurement instruments (Glutting, Watkins, Konold, & McDermott, 2006).

Method

To illustrate the potential threats to clinical validity introduced as a result of the aforementioned multidimensionality, we examined the structure of the KABC-II Luria model. In order to examine sources of KABC-II score variance, the intercorrelation matrix of the 8 core subtests for the KABC-II normative sample was subject to exploratory factor analysis as described by Carroll (1995). That is principal axis extraction of four factors, followed by oblique rotation. Factors were then orthogonalized with the Schmid and Leiman (1957) procedure to correctly apportion subtest variance to higher order and lower order dimensions.

Discussion and Results

The present results demonstrated that variance for each of the core subtests can be decomposed into multiple components. The most important of these components was a higher order latent dimension akin to g. General cognitive ability accounted for more variance in each of the KABC-II subtests than any of the proposed first-order factors. Results from the present study raise questions about the appropriateness of conventional procedures for reporting model-based reliability estimates (Reise, Moore, & Haviland, 2010). Additionally, exploratory bifactor analyses (e.g., Jennrich & Bentler, 2011) indicate that the variance in the subtests that is attributable to the first-order abilities measured by those constructs is not sufficient for clinical interpretation.

Selected References


Acknowledgements

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