

An Introduction to the Wechsler Intelligence Tests: Revisiting Theory and Practice

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Abstract

This special issue focuses on two lead articles examining the factor structure of the fourth editions of the Wechsler Adult Intelligence Scales (WAIS-IV; Wechsler, 2003) and the Wechsler Intelligence Scales for Children (WISC-IV; Wechsler, 2008). These articles are followed by 9 commentaries and a final response by the authors of the lead articles. These diverse approaches critically assess the theoretical and practice implications of the structure of intelligence measured by the Wechsler scales.

Keywords

Wechsler scales, WISC-IV, WAIS-IV, factor analysis, intelligence testing

As an associate editor for *Journal of Psychoeducational Assessment (JPA)* during the summer of 2012, I had the good fortune of simultaneously reviewing two stimulating manuscripts on the factor structure of the fourth edition of the Wechsler Intelligence Scale for Children (WISC-IV; Wechsler, 2003) and the fourth edition of the Wechsler Adult Intelligence Scale (WAIS-IV; Wechsler, 2008), respectively, written by the authoring team of Lawrence Weiss, Timothy Keith, Jianjun Zhu, and Hsinyi Chen. In these papers, the authors present competing four- and five-factor models for these two Wechsler scales. Reviewers' reactions were strongly positive and included repeated suggestions that these submissions serve as the focus of a special issue. Based on these reactions, a panel of experts with diverse perspectives on the topic was invited to provide commentaries covering the controversies, debates, and discussion surrounding this topic and this special issue was born.

Contributors were asked to address the factor structure of the Wechsler intelligence scales specifically, and also more broadly to address the number and kind of intelligence factors that can be measured successfully and meaningfully to inform clinical practice related to cognitive abilities. Consistent with the goals of *JPA* and the interests of its readers, I solicited commentaries from international experts in both research/theory and practice. Four experts (Stephen Bowden, Gary Canivez, Dawn Flanagan, and Jacques Grégoire) were encouraged to address this topic from a science, theory, and empirical foundations perspective. Four additional experts (Joseph Claeys, Samuel Goldstein, Joel Schneider, and David Schwartz) were asked to address the

clinical utility of this work or how it can be used to inform clinical practice related to cognitive abilities. In addition to these experts, Alan Kaufman graciously agreed to provide an integrative paper reflecting on the full complement of commentaries while situating the lead articles within the larger literature on the Wechsler scales and the measurement of intelligence. Finally, the authors of the lead articles appropriately were offered the opportunity to provide the “final word” on the full complement of papers.

This special issue advances the field of intelligence measurement and assessment by connecting new research findings with related theoretical and empirical foundations underlying the description and measurement of intelligence and also with the knowledge and experience of practicing psychologists. Although the WISC-IV and the WAIS-IV were recently published, revisiting both their structure and interpretation continues. This special issue addresses the ongoing debate about the structure of abilities measured by the Wechsler scales from different perspectives. Weiss et al. (2013a, 2013b) provide two studies examining the factor structure of the WAIS-IV and the WISC-IV, respectively, and test the factor invariance of competing four- and five-factor models using normative and clinical samples. They describe a new fluid reasoning factor, its theoretical relation to other factors, and its clinical interpretation. These articles also serve as the focus of the following papers that address the historical roots, technical aspects, clinical utility, and application of the findings presented by Weiss and colleagues.

After a review of the philosophical and historical context of intelligence testing, Goldstein (2013) begins the commentaries by raising a number of questions about the meaning of the lead articles. Grégoire (2013) discusses what constitutes adequate measurement of theoretical constructs and reviews how this was accomplished with each revision of the Wechsler scales. He then evaluates how the findings of the lead articles update our understanding of what the Wechsler scales measure.

The commentaries also address the technical merits of the analyses in the lead articles. Bowden (2013) explores the complexities of confirmatory factor analysis and the evaluation of measurement invariance. He suggests some alternative presentations of the models suggested by the lead articles. Canivez and Kush (2013) call for a broader array of alternative models to be tested and for a greater role of theory in guiding model modification.

Several commentaries focus primarily on how the findings of Weiss and colleagues (2013) inform clinical practice. Claeys (2013) provides a reflective essay on how the current findings clarify some of the complexities that confront the practicing school psychologist. Schwartz (2013) describes the benefits and challenges of applying group-level analyses to individuals. Schneider (2013) presents a direct application of the lead articles by showing how the latent abilities implied by the models can be estimated in individuals.

Flanagan, Alfonso, and Reynolds (2013) look beyond the lead articles and call for joint or cross-battery approaches based on Cattell–Horn–Carroll theory that extend beyond the current use of Wechsler scales. The authors conclude that a combination of cognitive and other abilities will give psychologists a stronger foundation to describe academic performance and achievement.

Kaufman (2013) provides a clear and concise summary of the articles and highlights those points and perspectives he finds particularly relevant to the intent of this special issue of JPA. He reminds us that David Wechsler was not only a gifted test developer with measurement expertise but also the consummate clinician with broad humanist concerns, and that there is much to be lost by straying from his original vision. Finally, Weiss and colleagues (2013c) respond to the commentaries showing where they agree and disagree with their esteemed colleagues. Taken together, these thoughtful analyses and informed essays provide a stimulating read to guide researchers and practitioners in the use of the current Wechsler tests but further, in the assessment of intelligence in children and adults.

