



Exploring the Relationship between Cognitive and Adaptive Assessments

Bryan Harrison, M.A., Leona Oakes, M.A., & Tristram Smith, Ph.D.
University of Rochester Medical Center



BACKGROUND

- Standardized cognitive tests are reliable and valid for assessing individuals with autism spectrum disorder (ASD).
- However, test selection for individuals with ASD poses challenges because different tests may yield different results.

OBJECTIVE: To explore how two cognitive assessments *differentially* relate to a standardized measure of adaptive behavior in individuals with ASD.

METHOD

- Participants completed either the Stanford-Binet, 5th Edition (SB5) or the Wechsler Intelligence Scales for Children, 4th Edition (WISC-IV).
- Most participants had completed the Vineland Adaptive Behavior Scales, 2nd Edition (VABS-II); imputations were performed to address missing data.
- We examined the associations of the SB5 and WISC-IV with the VABS-II, with and without adjusting for covariates.

RESULTS

- Participants in the SB5 group had significantly lower full-scale IQ (FSIQ) and Adaptive Behavior Composite (ABC) scores than those in the WISC-IV group.
- The SB5 correlated more strongly with the VABS-II ABC than the WISC-IV. This difference was significant ($p < 0.01$).
- When IQ, Test Type, and their interaction term were entered into a regression, IQ predicted ABC scores, ($p < 0.001$), but Test Type and the interaction did not.

Test	n	Mean	SD	Correlation
Overall	359			$r = 0.55$
WISC-IV	151	91.7	19.6	$r = 0.389$
SB5	208	75.7	24.1	$r = 0.586$

	F	Sig	Partial Eta squared
Overall	2.288	$p < 0.001$	0.620
FSIQ	2.342	$p < 0.001$	0.517
Test Type	0.053	$p = 0.817$	0.00
Interaction	1.126	$p = 2.96$	0.220

DISCUSSION

- The SB5 and WISC-IV differed in their relationship with the VABS-II, but this difference was no longer statistically significant after adjusting for FSIQ.

Findings may indicate:

- (1) true group differences among children assessed with the SB5 or WISC-IV
- (2) differences in how the SB5 and WISC-IV assess cognitive skills in children.

- Further research on the associations among tests of cognitive skills and adaptive behavior is needed to inform test selection for children with ASD.

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