Naglieri Nonverbal Ability Test

The Naglieri Nonverbal Ability Test (Naglieri, 1997) is an individually administered measure that uses shapes and designs in a progressive matrix format to assess the nonverbal ability of students from kindergarten through grade 12. The test is an extension and revision of the Matrix Analogies Test (Naglieri, 1985). The test is organized into seven levels, each level for use in specific grades. The test includes pattern completion, analogy, sequencing, and spatial visualization items. The NNAT is suggested as a measure of general ability and a predictor of scholastic achievement. The author says it is appropriate for students from diverse cultural and language backgrounds, and in identification of students with learning disabilities. It is said to be fair for use with students with hearing, language, or motor impairments.

Scores

Scaled scores, normal-curve equivalents, nonverbal ability indexes (mean = 100; standard deviation = 15), stanines, and grade-based percentiles are available for the NNAT. In addition, users can obtain content cluster scores for student performance on pattern completion, analogy, sequencing, and spatial visualization clusters of items.

Norms
The NNAT was standardized on 22,600 children in grades K–12 in the fall of 1995, and on 67,000 children in K–12 in the spring of 1996. Demographic characteristics of the NNAT standardization are shown in comparison to national proportions. Students from urban environments and African American students look underrepresented in the sample. Students from rural environments are overrepresented. No cross-tabulations (indications, for example, of the numbers of African American students from the northeast) are shown in the manual.

Reliability

Internal-consistency reliability coefficients for the total raw score on the NNAT range from .81 to .89. Reliability coefficients for cluster scores are much lower, ranging from .24 to .80. The test meets reliability criteria for making decisions about groups of students, but not for making decisions about individuals. Most of the cluster coefficients are too low to be used for any purpose.

Validity

One index of validity is provided. The author correlated scores on the NNAT with scores on the SAT-9 and APRENDA2 (a Spanish-speaking edition of SAT-9) for unspecified kinds of students who participated in the standardization of the three tests. The correlations were moderate for both measures, with the exception of APRENDA2 for kindergarten and beyond grade 9. Very low correlations were obtained. There are no
studies of the relationship of NNAT scores to other measures of either verbal or nonverbal ability. The author identifies a number of purposes for the NNAT and indicates its usefulness with many different populations of students. However, evidence of validity for the many purposes, and for use with the many groups, is not provided.

Summary

The NNAT, a derivative of the earlier-published Matrix Analogies Test, is a measure of nonverbal intellectual ability presented entirely in matrix analogy format. The test was standardized on a very large group of students who are not well described. Evidence for reliability of the scale is limited, and the evidence reported indicates low reliability, especially for cluster scores. Evidence for validity is restricted to correlations with achievement tests.