



The Woodcock-Muñoz Foundation

RESEARCH BRIEF

DOCTORAL DISSERTATION ABSTRACT

THE DIAGNOSTIC VALIDITY OF A DEVELOPMENTAL NEUROPSYCHOLOGICAL ASSESSMENT (NEPSY) - WECHSLER INTELLIGENCE SCALE FOR CHILDREN-THIRD EDITION (WISC-III) BASED CROSS BATTERY ASSESSMENT

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The Woodcock-Muñoz Foundation (WMF) is a private non-profit operating foundation that supports the advancement of contemporary cognitive assessment practices. The Doctoral Dissertation Abstract Project is part of the Foundation's efforts to disseminate research findings that bridge the theory-to-practice gap in cognitive assessment.

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Abstract

Cognitive assessment has evolved from the focusing on global abilities (e.g., single factors) to focusing on specific abilities (e.g., multiple factors) as it became clear that there is no single cause or area of weakness responsible for a reading disability. It is the combination and interaction of intellectual abilities that allow for a comprehensive view of reading, which is best exemplified by the Cattell-Horn-Carroll (CHC) cross-battery assessment approach. According to the research conducted by McGrew and Flanagan, the CHC model suggests that deficiencies in crystallized intelligence (*Gc*), short-term memory (*Gsm*), processing speed (*Gs*), auditory processing (*Ga*), and long-term storage and retrieval (*Glr*) contribute to reading difficulties. This study investigated the diagnostic validity of a NEPSY and WISC-III based cross-battery assessment in its relation to reading difficulty. Twenty-five children were classified as reading disabled and twenty-five children were classified as non-reading disabled, prior to administration of this cross-battery assessment. A two group (Reading Disabled and Non-Reading Disabled) multivariate analysis of covariance (MANCOVA) was utilized to examine group differences on the five cognitive variables and to investigate the influence of age. Discriminant function analyses indicated that the CHC broad ability factors *Ga* and *Gc* were the strongest predictors of children who were receiving special education services for reading and children who were not receiving special education services for reading. These two broad ability factors were able to correctly classify reading and non-reading disabled students with 92% accuracy. The addition of *Glr*, *Gs*, and *Gsm* did not aid the discriminant function analysis. Age level was a non-significant variable, as no main effect or interaction effect was found. These results provide support for a NEPSY and WISC-III based cross-battery assessment for evaluating individuals with reading difficulties. These results also provide empirical support for classifying the NEPSY subtests used in this study as adequate representations of their respective narrow cognitive abilities.

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