

## ABSTRACT

DISSERTATION/THESIS/RESEARCH PAPER/CREATIVE PROJECT: The Joint Confirmatory Factor Analysis of the Woodcock-Johnson Tests of Cognitive Abilities, Third Edition, and the Stanford-Binet Intelligence Scales, Fifth Edition, with a Preschool Population

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Significant evidence from the legislation, medical/clinical, or professional practice perspective all points to the advantages and necessity of conducting comprehensive assessment of cognitive abilities, especially in young children, to identify cognitive deficits, arrive at an accurate diagnosis, and establish bases for developing interventions and recommending services. Cross-battery assessment approach provides school psychologists a useful tool to strengthen their preferred cognitive battery by adopting and comparing subtests from other batteries to build up a comprehensive and theoretically sound evaluation of an individual's cognitive profile to increase the validity of test interpretation. Using joint confirmatory factor analysis, this study explored the combined underlying construct validity of the Woodcock-Johnson Tests of Cognitive Abilities, Third Edition (WJ-III COG) and the Stanford-Binet Intelligence Scales, Fifth Edition (SB5) with an independent sample of preschool children. Seven models were examined and the results showed that relatively, the underlying construct of the two tests was best represented by a three-stratum alternative CHC model in which the *Gf* factor and subtests had been removed. This indicates that not all the CHC constructs shared by both tests can be reliably identified among young children. Constructs of the CHC theory may be represented differently on preschool

cognitive batteries due to developmental influences. Although WJ-III COG and SB5 tests as a whole did not demonstrate good results for purposes of cross-battery assessment, certain subtests (e.g., subtests representing crystallized intelligence) from each battery offer interpretative value for individual broad ability factors, providing school psychologists an in-depth understanding of a preschooler's crystallized knowledge. Exploratory factor analyses were conducted with subtests from WJ-III COG and SB5 representing the four shared broad factors (*Gc*, *Gf*, *Gv*, and *Gsm*). Results revealed that a 4-factor solution is a better model fit to the data. Future research includes recruiting young children with disabilities or special needs to explore best representative underlying construct of combined WJ-III COG and SB5, allowing for cross-battery assessment.