

ABSTRACT

DISSERTATION: Evaluating the Relationship between CHC Factors and Executive Functioning

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In this study, the relationship was explored between the CHC factors of intelligence, as measured by the *Woodcock-Johnson III Tests of Cognitive Abilities* (WJ-III-Cog), and executive functioning, as measured by the Tower Test and Color-Word Interference Test from the *Delis-Kaplan Executive Function System* (D-KEFS). Participants were 64 undergraduate students (female, $n = 38$; male, $n = 26$), with a mean age of 19.88 years. Results of canonical correlation analysis, including subtests of the WJ-III-Cog and scores from the D-KEFS, indicated a significant model with a canonical correlation value of .57 and a canonical R^2 of 0.33. All WJ-III-Cog and D-KEFS variables were associated with their canonical variates. Numbers Reversed from the WJ-III-Cog and Color-Word Interference Test Condition 3 (Inhibition) from the D-KEFS had the highest correlations with their canonical variates, implicating these tests as important contributors to the relationship. Linear regression analysis indicated a significant model in which Verbal Comprehension, Numbers Reversed, Sound Blending, Visual-Auditory Learning, Visual Matching, Spatial Relations, and Concept Formation as predictor variables account for approximately 23.4% of the variance in the Color-Word

Interference Test Condition 3 (Inhibition) score. The results overall suggest that despite a clear relationship between executive function and cognitive ability, much variance between the D-KEFS and WJ-III-Cog remains unaccounted for. This study may be considered an appropriate preliminary analysis of the relationship between intelligence and executive functioning using these measures, though future research with additional populations is suggested. These findings have implications for evaluation and intervention planning within the educational setting.