ABSTRACT

DISSERTATION: Item Response Theory and Factor Analysis Applied to the Neuropsychological Symptom Scale (NSS)

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The Neuropsychological Symptom Inventory (NSI; Rattan, Dean, & Rattan, 1989), a self report measure of psychiatric and neurological symptoms, was revised to be presented in an electronic format. This revised instrument, the Neuropsychological Symptom Scale (Dean, 2010), was administered to 1,141 adult volunteers from a medium-sized Midwestern university. The collected data was subjected to exploratory factor analysis which suggested three primary factors related to emotional, cognitive, and somatosensory functioning. The items on the NSS were then organized into three subscales reflecting these areas of functioning. A fourth experimental subscale was also created to facilitate the collection of data on items that did not load on any of the three primary subscales. Item Response Theory (IRT) analysis and Classical Test Theory (CTT) approaches were then applied and compared as means of developing standard scores on the three primary subscales of the NSS. The results of these analyses are provided along with recommendations related to the further development of the NSS as an assessment tool.