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Development of the Preschool Occupational Therapy Assessment

Heather Miller

ABSTRACT. Initial reliability and validity studies were completed for a newly created assessment tool called the Preschool Occupational Therapy Assessment (POTA). The POTA was designed to examine fine motor and sensory motor skills relevant to preschool academic function. Forty-five children, both typically developing and developmentally delayed, participated in the initial research. Results of data analysis support further development of this tool.

PURPOSE OF RESEARCH

The Preschool Occupational Therapy Assessment (POTA) is an assessment tool currently being developed to provide a standardized and educationally relevant measure of the fine motor skills of preschoolers. The POTA items measure functional and academic performance in preschool with an emphasis on sensory-motor skills. The test is meant to be used with minimally involved children, ages 3-6. Its purpose is to assist in determining the need for therapy services, and developing therapy goals and plans. A secondary purpose is to evaluate progress or monitor performance over time.

Items were selected based on their educational relevance and their ability to provide important qualitative information about the preschooler's fine motor performance. The POTA also provides items that specifically examine sensory processing and sensory motor skills in order to determine if motor delays may be related to poor sensory processing. The research version of the POTA consists of items divided into 4 subsections; manipulatives, pen/paper, scissors, and sensory motor. POTA scores for each item range from 0 to 4, with specific criteria for each score. Items also have specific scoring criteria for appropriate performance of the qualitative aspects of the task.

RESULTS TO DATE

Following peer and expert review, and item revisions, initial studies of the POTA were completed with 45 preschool age children. These children included 32 boys and 13 girls. Of the 45, 25 were rated as typically developing by their teachers, and 20 were rated as developmentally delayed. The POTA demonstrated internal consistency scores of .85 to .90 for the subsection totals using Chronbach's alpha. Test-retest reliability was determined using ICC's to be .88 for the total score. Inter-rater reliability of 4 raters observing 4 children complete the POTA was .91 for the total score. Discriminant analysis was also completed. The POTA was able to accurately classify 93.3% of the total group of children as either typically developing or developmentally delayed (as the children had been rated by their teachers).

Additional results were related to correlations between certain items, subsections, and performance areas. Grip and pinch strength item were correlated with functional tasks such as buttoning, snapping, and cutting. Gross grasp strength was unrelated to in many of these functional abilities and only moderately related to scissors grasp and use of one consistent hand for fine motor tasks (correlations of .45 and .39). Pinch strength was moderately correlated with the ability to use a true pincer grasp vs. a lateral pincer with fine motor tasks (correlations in the .50-.58 range depending on the specific task), and with buttoning (.44), snapping (.35) and scissors grasp (.63). Correlations were also found between the draw-a-person item of the POTA and visual motor item (.60 and .79) and sensory processing items (sensory motor subsection score .61).

DURATION

Development of the POTA began in 1995, and is ongoing. Further validation studies and item revisions will continue. Anyone interested in assisting with future data collection and research is encouraged to contact the author.

REFERENCE

1. Miller HE. *The Reliability and Content Validity of the Preschool Occupational Therapy Assessment*. Columbus, OH: Ohio State University, 1996. Thesis.

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