Evaluating the Predictive Validity of the Nine-Hole-Peg Test for Older Adults

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The Nine Hole Peg Test (9-HPT), the gold-standard for assessing manual dexterity (Feys, et al. 2017), is an assessment commonly used by occupational therapists to assess manual dexterity. Manual dexterity is crucial for independence during activities of daily living (ADLs). There is a lack of research to support the use of the 9-HPT to predict relative success in ADLs or instrumental activities of daily living (IADLs) for older adults. This study evaluated the predictive validity for 87 participants by administering the 9HPT and three standardized ADL/IADL tasks in a non-experimental correlational design (Creswell & Creswell, 2018). Inclusion criteria consisted of being 65 or older and the ability to open and close hands bilaterally. No participants were excluded due to self-reported medical conditions. Participants were obtained from outpatient clinics, inpatient rehabilitation facilities, and community settings. Three standardized ADL/IADL tasks (Medication Manipulation, Buttoning, Tying) were utilized in data collection along with scores on the 9-HPT. Inter-rater reliability amongst the five researchers was established for the 9-HPT (ICC = .983), Medication Manipulation (ICC = .944), Buttoning (ICC =.993), and Tying (ICC = .990). Adjusted R-Squared values were calculated to determine the performance percentage of the dependent variables (ADL/IADL tasks) that can be explained by the performance on the independent variable (9-HPT); Medication Management (48%), Buttoning (22%), and Tying (14%). Research findings do not provide strong support for the predictive validity of the 9-HPT on these three ADL/IADL tasks for this sample of older adults. Results provide evidence aiding occupational therapists in decision making regarding assessment choices with older adults. Further research is required to determine the efficacy of this assessment in predicting functional independence for manual dexterity in the older adult population.

References

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