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Normative data collection and the predictive validity of the Occupational Therapy Driving Maze Test

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Introduction: Driving is a complex instrumental activity of daily living, requiring many visual, cognitive, and psychomotor skills (Bohr, 2008). Licensing decisions for functionally impaired adults rest with licensing authorities and licensing practices vary widely across provinces, states and countries. In Victoria, Australia, the purpose of the off-road assessment is to screen the client's physical, sensory, cognitive and perceptual abilities in order to identify any factors that may affect driving performance during the on-road assessment (OT Australia- Victoria, 1998). A review of tests contributing to the occupational therapy off-road driver assessment revealed that there is a need for development in the area of the off-road assessment in Victoria (Unsworth, Lovell, Terrington, & Thomas, 2005).

Objectives: This study gathered normative data for a newly developed maze test, as well as examined its construct and predictive validity, for inclusion in the off-road assessment.

Methods: Using convenience sampling, 223 subjects in Melbourne, Australia and Singapore aged 18 years and over, with a current driver's licence contributed normative data for this study. Data from a clinical sample of 42 clients undergoing driver assessment were used to ascertain predictive validity for on-road driving testing.

Results: The normative data indicated that time taken and number of errors on the maze increases with age. Performance on this test was strongly indicative of driver assessment outcome using the regression model: $\ln(\text{Odds of failing on road}) = -5.9451 + 2.7047(\log_{10} \text{time taken to complete the maze})$.

Conclusion: This research provides useful information as part of an off-road assessment battery, and has collected normative data to support interpretation of client results on this test. Time taken to complete this test is indicative of the outcome of an on-road driver assessment, however, on-road assessment is recommended.

Contribution to the practice/evidence base of occupational therapy: The results of this study contribute to the development of a standardised off-road driver assessment, with potential for international use.

References

Bohr, P. C. (2008). Critical review and analysis of the impact of the physical infrastructure on the driving ability, performance, and safety of older adults. *American Journal of Occupational Therapy*, 62(2), 159-172.

OT Australia- Victoria (1998). Competency standards for occupational therapy driver assessors. Melbourne: Author.

Unsworth, C. A., Lovell, R. K., Terrington, N. S., & Thomas, S. A. (2005). Review of tests contributing to the occupational therapy off-road driver assessment. *Australian Occupational Therapy Journal*, 52, 57-74.