Project 1: Extending the Applications of the WMS-III-A

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Research Purpose: To extend the uses of the WMS-III-A to allow for evaluation of premorbid functioning and discrepancies between memory and intellectual ability

Research Description: The WMS-III was co-standardised with the WAIS-III to allow the clinician to compare memory and intellectual functioning to determine when discrepancies between these two cognitive abilities are significant and/or meaningful. Additionally, both batteries can be compared to reading performance on the WTAR to evaluate for any decline in function from estimated premorbid abilities. While all IQ and Factor scores are utilised from the WAIS-III/WTAR analyses, only the two global memory Indices for immediate and delayed memory (IM and GM) are utilised for the WMS-III when compared to the WTAR.

The abbreviated version of the WMS-III (WMS-III-A) generates only two global memory Indices-IM (Immediate Memory) and DM (Delayed Memory). While this short form has obvious appeal to the clinician who wishes to quickly screen for possible memory dysfunction, what gains there may be in shortening the administration time for the clinician and examinee are weakened by the inability of the WMS-III-A to be compared to the WTAR (for premorbid indices) or the WAIS-III (for evaluation of cognitive discrepancies).

The aim of this project is to determine if performance on the abbreviated version of the WMS-III, the WMS-III-A, can be utilised in the same way that performance on the WMS-III is to

(a) evaluate premorbid memory functioning (through comparison of the IM and GM Indices with WTAR estimates), and

(b) compare with current intellectual functioning (through WAIS-III comparative analyses).

Participants: This is an archival study utilizing test data from the supervisor's medicolegal/forensic private practice.

Methodology: The data is from a medicolegal private practice run by the supervisor. The cases are adults (16-80 years) who have been referred by either Insurance companies, Legal Firms, Workcover, the Mental Health Court, or Health Practitioners Board for assessment. It is anticipated that there would be approximately 300 cases in the database. The student would not be required to gather any additional data (as in administer any tests) but they would be expected to enter data into a workable database so that WMS-III-A Indices could be generated from completed WMS-III data.

Data Analysis: Data analysis will be quantitative employing correlation, regression, and Reliable Approach to Psychological Testing (RAPT) analyses. Model WMS-III-A normative transformations will be computed using RAPT methodology to compare theoretical and tabled values in the WMS-III-A manual. Reliability and Standard errors will also be evaluated using this methodology to evaluate the psychometric basis of computing short-form composites from full-form data. This will determine if the global indices generated by both the WMS-III and WMS-III-A batteries are in fact equivalent. Analyses will then be conducted with both the WAIS-III and WTAR to evaluate the effectiveness of employing the WMS-III-A to determine Memory/IQ discrepancies and memory/premorbid functioning

discrepancies.
The analytical procedures are a standard part of psychometrics and can generally be performed with a basic knowledge of algebra and spreadsheet software such as Microsoft Excel.
The student will be taught the necessary psychometric analyses if they have not been taught them in their undergraduate program.

Student friendliness: This study is suitable for either an on-campus or external student as long as they are prepared to travel to the Springfield campus for supervision. The study is particularly suitable for part-time students who have already completed the Advanced Assessment course, given that there is an intensive focus on the Wechsler batteries and the necessary psychometric knowledge has been reviewed in that course. Initially supervision would be weekly/fortnightly (during the data transcription phase of the study) but once the data has been analysed this would likely decline to meeting fortnightly/monthly depending on the needs of the student. Students must be available for supervision primarily on Fridays and occasional Mondays.

Expected research outcomes: APS Conference Presentation if student wished to submit would be a reasonable expectation for this type of research study

Further reading: Initial reading requirements would be both the WMS-III and WMS-III-A Manuals, and the WAIS-III/WMS-III Technical Manual

Ethics: Utilisation of this data has already received ethics approval in previous years. Continuation of ethics approval will be sought.

Resources: X -Project able to be funded within $150 departmental limit

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