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Introduction: An aging world population provides challenges for diagnostics within the field of geriatric psychiatry.

Objectives: The Memory Diagnostic System(MDS) is a computerized cognitive test instrument developed for the detection of amnesic mild cognitive impairment(aMCI) in Korea. In current study, its diagnostic utility for application within Korean clinical practice was evaluated.

Aims: This study was conducted to evaluate the concurrent and discriminant validity of computerized verbal and visuospatial memory tests of the MDS.

Methods: To determine the concurrent validity, we recruited normally aging individuals and conducted a correlation analysis between these participants' MDS scores and their scores on well-known measures used to assess each component construct: the Korean Auditory Verbal Learning Test (K-AVLT) and the Korean Rey Complex Figure Test (K-CFT). We also evaluated aMCI patients in comparison to healthy controls using the MDS as a screening instrument.

Results: Correlations between immediate recall, delayed recall, and delayed recognition scores on the computerized verbal memory test and the corresponding scores on the K-AVLT were 0.74, 0.61, and 0.50, respectively ($p < 0.01$, $n = 30$). The correlation between recognition scores (as measured by the computerized visuospatial memory test) and recall scores (as measured by the K-CFT) was 0.48 (immediate), 0.48 (delayed; $p < 0.01$, $n = 30$). The MDS was also useful for determining differential diagnoses between aMCI patients and healthy controls, suggesting the discriminant validity of the MDS.

Conclusions: The MDS is a useful instrument for discriminating between aMCI cases and healthy controls within clinical practice.