
VALIDITY OF A COMPUTERIZED KOREAN VERSION OF THE TRAIL MAKING TEST (TMT)

M.S. Shin¹, C.R. Hong², D.Y. Lee¹, J.S. Kwon¹

¹Psychiatry, Seoul National University College of Medicine, Seoul, Korea ; ²Psychiatry, Seoul National University Hospital, Seoul, Korea

Introduction: Executive function is a comprehensive measure encompassing attention shifting and processing speed; the effect of aging on memory appears to be mediated by executive function.

Objectives: The computerized Korean version of the Trail Making Test(TMT) is a recently developed cognitive test instrument. Its diagnostic utility for application within clinical practice was evaluated in this study.

Aims: This study was conducted to evaluate the concurrent and discriminant validity of the computerized Korean version of the TMT.

Method: The original version of the TMT was modified for the computerized version. In the computerized version of the TMT-B, letters from the Korean alphabet (the original targets) were replaced by lyrics from the Korean national anthem. To determine the concurrent validity of the new measure, we recruited normally aging individuals and conducted a correlation analysis between these participants' scores on the computerized version of the TMT and their scores on the original version. To determine the discriminant validity of the computerized version of the TMT, we recruited subjects from an inpatient memory clinic who showed executive function decline.

Results: The correlations between participants' scores on the new measures and those obtained from original versions of the TMT-A and TMT-B were 0.58 and 0.64, respectively ($p < 0.01$, $n = 30$). The computerized version of the TMT was also useful for determining differential diagnoses between patients with executive functioning problems and healthy controls.

Conclusions: The computerized version of the TMT is a useful instrument for discriminating between patients with executive functioning problems and healthy controls within clinical practice.