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# **AN INVESTIGATION OF TWO BRIEF COGNITIVE TESTS (M@T AND TYM) FOR IDENTIFYING AMNESTIC MILD COGNITIVE IMPAIRMENT (aMCI)**

S Ozer<sup>1,2</sup>, K Noonan<sup>3</sup>, M Burke<sup>2</sup>, J Young<sup>1</sup>, S Barber<sup>1</sup>, A Forster<sup>1</sup>, R Jones<sup>3</sup>

*1 Bradford Institute for Health Research, 2 School of Psychology, University of Leeds, 3 Research Institute for the Care of Older People, Bath*

## **Introduction**

Mild cognitive impairment (MCI), a term used to describe the transitional state between normal aging and established dementia, has been identified as a potentially effective time point at which to target interventions to prevent or slow the decline into dementia. People with amnesic MCI (aMCI), where the predominant symptom is memory impairment, have been found to be at a particularly high risk of developing Alzheimer's disease, the most common form of dementia, and are therefore a primary focus for clinical and research interest. However, aMCI is largely unrecognised in primary care since its diagnosis depends on complex neuropsychological assessment methods not usually available in this setting. There is a need for simple and brief cognitive tests that will provide a more efficient way of identifying people with aMCI. This study investigated the validity of two candidate brief tests (the Memory Alteration Test (M@T) and Test Your Memory (TYM) test), in comparison with the widely used reference standard (based on the Petersen criteria), for identifying people with aMCI in the community.

## **Methods**

Older people (aged  $\geq 70$  years) without a history of dementia were invited to participate by a study information leaflet sent by post from their general practitioner (GP) practice. Eligible participants were assessed for aMCI using a standardised, operationalised approach to the Petersen criteria, and the M@T and TYM.

## **Results**

Both tests were quick to administer (taking less than 10 minutes) and demonstrated significant ability in discriminating between people with aMCI and controls (AUC = 0.91 for M@T and 0.80 for TYM (both at  $p < 0.001$ )). M@T performed with higher sensitivity than TYM (85% vs. 63%) and similar specificity (84% vs. 87%).

## **Conclusions**

The M@T demonstrated higher diagnostic test accuracy than TYM and could provide an efficient method for identifying people with aMCI in clinical or research settings.