

ARE NEUROPSYCHOLOGICAL TESTS REALLY HELPFUL IN DIAGNOSING DEMENTIA?

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We begin with a consideration of what constitutes a neuropsychological test. As a working definition we propose that they are measures of cognition used in the context of evaluating function in the aftermath of actual, or suspected, brain disease or injury. As an exemplar of this category, we consider the utility of a popular measure, the Mini-Mental State Examination (MMSE) in diagnosing dementia. A review of this measure reveals that it is used to assess a number of cognitive domains and especially orientation, registration, attention, recall and language. We review the use of the MMSE as a dementia screening test and identify that it typically yields sensitivity and specificity of c.90%. Many tests of dementia exhibit similar levels of sensitivity and specificity and like measures such as the MMSE, show reasonable levels of temporal reliability, but poor stability. This places limitations on the use of neuropsychological tests as repeatable measures of cognitive function. Our review thus reveals two key facts concerning the use of neuropsychological tests to diagnose dementia:

- Neuropsychology has helpfully identified the areas of cognition impaired in dementia
- Neuropsychological tests are often unstable measures of cognition

We conclude that neuropsychological tests are unlikely to ever be diagnostic of specific dementias. However, we propose that tests of cognitive change can be of significant utility in the detection of dementia, but that adopted measures must have the twin virtues of stability and sensitivity to decline.