

New criterion may improve identification of dementia risk in highly educated older adults

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A different cutoff point on an existing mental function assessment may more effectively assess the risk of dementia in highly educated older adults, according to a report in the July issue of *Archives of Neurology*.

The most commonly administered screening test of cognitive (thinking, learning and memory) function is known as the mini-mental state examination (MMSE), according to background information in the article.

"The MMSE is used to screen patients for cognitive impairment, track changes in cognitive functioning over time and often to assess the effects of therapeutic agents on cognitive function," the authors write. "Performance on the MMSE is moderated by demographic variables, with scores decreasing with advanced age and less education." The maximum MMSE score is 30; a score of 24 or less is typically used to detect individuals with cognitive dysfunction.

Sid E. O'Bryant, Ph.D., of the Texas Tech University Health Sciences Center, and colleagues reviewed the MMSE scores of 1,141 participants (93 percent white, average age 75.9 years) in the Mayo Clinic Alzheimer Disease Research Center and Alzheimer Disease Patient Registry who reported having 16 or more years of education. These included 307 patients with dementia, 176 patients with mild cognitive impairment and 658 control patients without dementia.

With the traditional cut score of 24 on the MMSE, 89 percent of the participants were accurately classified by dementia status. This score had a sensitivity of 66 percent and a specificity of 99 percent for the detection of dementia, meaning that an individual with a score of 23 or lower would be correctly identified as having dementia 66 percent

of the time and an individual with score of 24 or higher would be correctly diagnosed as not having dementia 99 percent of the time. Raising the cut score to 27 changed the sensitivity to 89 percent and the specificity to 78 percent, correctly classifying 90 percent of the participants.

"The current findings are not intended to encourage the diagnosis of cognitive impairment or dementia based on total MMSE scores alone," the authors write. "Instead, these results provide practitioners with revised criteria for appropriate management of highly educated older white patients.

Specifically, older patients who present with memory complaints (reported by themselves or others) who have attained a college degree or higher level of education and who score below 27 on the MMSE are at increased risk of cognitive dysfunction and dementia and should be referred for a comprehensive evaluation, including formal neuropsychological studies."

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