

NATIONAL ACADEMY OF NEUROPSYCHOLOGY

7555 East Hampden Avenue, Suite 525 Denver, Colorado 80231 PH: 303-691-3694 • FX: 303-691-5983

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William Perry, Ph.D. Executive Director San Diego, CA To the Editor:

We are submitting this letter on behalf of the Board of Directors and the Past Presidents of the *National Academy of Neuropsychology*, a professional organization of scientist-practitioners, clinicians, and researchers dedicated to advancing the science of brain-behavior relationships. This letter is in response to recent inquiries we have received regarding the topic of "cognitive screening." Measures of cognitive abilities range from brief screening tools designed to help identify individuals who may be in need of further evaluation, to detailed assessments of multiple cognitive functions that aid in clinical diagnosis. Within this context, it is important to understand some of the issues and limitations involved in the use of cognitive screening tests.

The Patient Protection and Affordable Care Act of 2010 mandated cognitive screening as part of Medicare Annual Wellness visits to help healthcare professionals identify patients with cognitive impairment. Along these lines, the Alzheimer's Association recommended that a standardized, structured cognitive assessment be included because research has indicated that the use of such tests increases healthcare professionals' ability to identify those people with dementia (Cordell et al., 2013). Although there is no consensus as to which brief test is the "best," the use of cognitive screening is advisable and will no doubt aid physicians in the detection of dementia.

Screening tests are designed to be brief and to help raise the likelihood of detecting the presence of a true abnormality. They are *not designed to be diagnostic*; they only help identify whether someone *might* have a particular problem. A number of brief screening tests exist to aid clinicians in detecting gross abnormalities in cognition. In cases of severe dementia, a cognitive screening test may be all that is needed to document impairment, although in less severe cases, screening test results may be normal, when in fact an underlying cognitive disorder might be present that may only be detected through a more thorough neuropsychological evaluation.

Two popular cognitive screening tests are the Mini Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975) and the Montreal Cognitive Assessment (MoCA; Nasreddine et al., 2005). These tests, like other brief instruments, are rudimentary screening tests for assessing cognition. They include simple items designed to detect obvious abnormalities in orientation (time, place, person) and aspects of language, attention, and memory. Both tests have a maximum of 30 points, and although there are levels of impairment that are generally agreed upon (i.e., mild, moderate, severe), there really are no "above average" or "excellent" scores, because an average person with an average level of education would typically be expected to miss no more than a few items at most, with many obtaining "perfect" scores. Although these screening tests are sensitive to full-blown dementia, they are not sensitive to subtle impairment, and they do not evaluate all cognitive domains. For example, there is no real assessment of reasoning, thinking speed, or problem solving in these brief screening tests, and the memory tasks are cursory and simple. As such, it is not difficult for people to obtain scores in the "normal" range, even in the presence of brain dysfunction. In fact, it has been found that up to 14% of patients with Alzheimer's disease may have cognitive screening scores in the normal range (Cullum & Rosenberg, 1998). Thus, normal cognitive screening results cannot rule out an underlying problem, but screening is useful for identifying individuals who may need further evaluation.

In summary, the purpose of this letter is to provide information and to clarify the issue of appropriate uses, interpretation, and limitations of cognitive screening tests. For more information, please visit <u>NAN's Education</u> <u>Paper on Cognitive Screening Tests Versus Comprehensive Neuropsychological Test Batteries.</u>

Sincerely,

NAN Board of Directors Past Presidents of NAN