

Researchers design self-test for memory disorders

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A self-administered test to screen for early dementia could help speed the diagnosis and subsequent treatment of memory disorders, including Alzheimer's disease. It could also provide health care providers and caregivers an earlier indication of life-changing events that could lie ahead.

The handwritten self-assessment, which can take less than 15 minutes to complete, is a reliable tool for evaluating [cognitive abilities](#). Findings confirming the validity of the tool are reported in the current issue of the journal *Alzheimer Disease and Associated Disorders*.

Douglas Scharre, a neurologist at the Ohio State University Medical Center, developed the Self-Administered Gerocognitive Examination (SAGE) to help identify individuals with mild thinking and memory impairments at an early stage. The research shows four out of five people (80 percent) with mild thinking and memory (cognitive) issues will be detected by this test, and 95% of people who are normal thinking will have normal SAGE scores.

Scharre, who specializes in treating Alzheimer's disease, said treatments for Alzheimer's and dementia are more effective when they are introduced in the earliest stage of the disease. Unfortunately, he said he often sees patients more than three to four years after the first symptoms of a [cognitive impairment](#) began to appear.

"It's a recurring problem," said Scharre. "People don't come in early

enough for a diagnosis, or families generally resist making the appointment because they don't want confirmation of their worst fears. Whatever the reason, it's unfortunate because the drugs we're using now work better the earlier they are started."

Many of the assessment tools for cognitive disorders being used today, while accurate, have aspects that deter their use. "Seldom are physicians reimbursed for the time and effort it takes to give such tests, or they tie up personnel to physically administer the test," said Scharre, who advocates the use of routine screening for cognitive disorders in the primary care setting. Other diagnostic tests require the patient to use a computer, which can add heightened anxiety to some older adults who may be infrequent users of technology.

The SAGE self-assessment is a practical tool for a busy primary care office," added Scharre, who makes the tests available free of charge to healthcare personnel at www.sagetest.osu.edu. It only takes a paper, pen and a few minutes to take the test and because it's self-administered, it doesn't necessarily take time away from the appointment. "They can take the test in the waiting room while waiting for the doctor," said Scharre.

Missing six or more points on the 22-point SAGE test usually warrants additional follow-up by the physician. Abnormal results can also prompt an early search for reversible and treatable conditions that may be causing the patient's thinking and [memory impairment](#). Many conditions besides [Alzheimer's disease](#), such as strokes and some thyroid conditions, can also impact memory, according to Scharre.

Scharre said there are potential cost savings to using the tests in a primary care setting. He reasons that a person who fares poorly on the self-exam will likely be less compliant taking medications on time, taking them in the proper dosages or following other recommendations such as maintaining healthy diets.

"Abnormal test results can serve as an early warning to the patient's family," added Scharre. "The results can be a signal that caregivers may need to begin closer monitoring of the patient to ensure their safety and good health is not compromised and that they are protected from financial predators."

Results of the new test compare favorably with current standard cognitive assessments that are not self-administered. To validate the exam's findings and accuracy, Scharre and other researchers at Ohio State evaluated study participants using SAGE, and then evaluated the same subjects with a battery of other established and well-documented assessment tools.

The study involved 254 study participants, 59 years of age or older, who took the SAGE self-assessment. Sixty-three (63) individuals were randomly selected to have a one-day clinical evaluation utilizing a battery of physical, neurological and cognitive tests.

SAGE scores compared favorably with the mini-mental state examination (MMSE), a brief questionnaire test that is commonly used in medicine to screen for cognitive impairments and dementia.

Both tests were able to differentiate clinically defined normal and mild cognitive improvement from subjects with [dementia](#). However, SAGE, but not MMSE, was also able to distinguish between clinically defined normal from the mild cognitive improvement group.

Provided by The Ohio State University

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