

# US seniors 'smarter' than their English peers: study

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U.S. seniors performed significantly better than their counterparts in England on standard tests of memory and cognitive function, according to a new study.

The study is the first known international comparison of cognitive function in nationally representative samples of older adults in the United States and England. The report is published in the June 25 peer-reviewed journal *BMC Geriatrics*.

"The better cognitive performance of U.S. adults was surprising since U.S. adults had a higher prevalence of cardiovascular risk factors, which are generally associated with [cognitive decline](#) and poorer mental function," says University of Michigan researcher Kenneth Langa, lead author of the study.

For the study, Langa and colleagues compared data on 8,299 Americans age 65 and older with 5,276 British seniors. The same cognitive tests were administered to the two groups in the same year.

The U.S. advantage in "brain health" was greatest for the oldest old---those age 85 and older. On a population level, the overall difference in cognitive performance between the two countries was quite large---approaching the magnitude associated with about 10 years of aging.

In other words, the cognitive performance of 75-year-olds in the U.S.

was as good, on average, as that of 65-year-olds in England.

Data on the U.S. population came from the Health and Retirement Study, conducted by the U-M Institute for Social Research (ISR) and funded by the National Institute on Aging (NIA). Data on the U.K. study was from the English [Longitudinal Study](#) of Ageing. Both are nationally representative, population based studies designed to facilitate direct comparisons of health, wealth and well-being among older men and women.

"This study is an important step in helping to define national differences in aging and cognition," said Richard Suzman, director of the NIA's Division of Behavioral and Social Research. "Additional research is needed among these and other national surveys to identify the factors that interact to affect cognitive change in older people."

Older adults in both countries took tests of immediate and delayed recall of 10 common nouns. These included: hotel, river, tree, skin, gold, village, baby and table. Participants in the study heard the words spoken and were asked to repeat as many as possible immediately. Then they completed other survey questions and five minutes later, were asked to repeat as many of the words as possible. During the interview, participants were asked for the current day, date, month and year. Taken together, their answers (10 points for immediate recall, 10 for delayed recall, and four for orientation) made up a 24-point scale of cognitive function.

The researchers compared scores stratified by age, gender and education as well as country. The mean score for the combined cognitive scale was 12.5 (out of 24) for the youngest group of English adults (ages 65-74) and 8.3 for the oldest group (age 85 and older). The mean scores for the youngest and oldest groups in the United States were 13.8 and 10.1, respectively.

Higher levels of education and net worth in the United States accounted for some of the better cognitive performance of U.S. adults, according to Langa, a professor of medicine at the U-M Medical School, a research investigator at the VA Ann Arbor Healthcare System, and a faculty associate at the U-M ISR.

The research team also examined data on participant health conditions, risk factors and treatments for stroke, diabetes, heart disease, hypertension, lung disease and cancer. They also collected data on recent symptoms of depression, and on smoking status, alcohol consumption, and limitations in performing common activities of daily living, including dressing, bathing, taking medications and managing money.

U.S. adults reported significantly lower levels of depressive symptoms than English adults, and according to Langa, this may have accounted for some of the U.S. advantage in brain health since depression is linked with worse cognitive function.

"Other studies conducted in the mid-1990s have found that fewer than 15 percent of depressed adults in English samples received medication to treat their depression, compared to nearly 75 percent of depressed U.S. adults," Langa said. "Future research should explore whether more widespread use of anti-depressant medication in the U.S. may be one reason for the lower level of depressive symptoms, and in turn, the better [cognitive performance](#) of older U.S. adults compared to older English adults."

Langa and colleagues also found significant differences in alcohol consumption between the U.S. and English seniors. More than 50 percent of U.S. seniors reported no alcohol use, compared to only 15.5 percent of English seniors. Previous research has shown that moderate alcohol consumption, compared to abstinence, is linked with better cognition among those aged 50 and over.

ISR economist David Weir, director of the Health and Retirement Study and a co-author of the analysis, noted that other ongoing research by ISR economist Robert Willis suggests there may be a connection between early retirement and early onset of cognitive decline. This provides another possible explanation for lower cognition at older ages in England where retirement occurs earlier than in the United States.

Finally, Langa noted, while U.S. adults reported a higher prevalence of hypertension, they also were more likely to be taking medications to treat the condition. A number of studies have shown a link between untreated hypertension and an increased risk for cognitive impairment.

"The fact that the greatest cognitive advantage for U.S. adults was among the oldest-old may support the hypothesis that more aggressive diagnosis and treatment of hypertension, and possibly other cardiovascular risks, leads to less cognitive decline," Langa said.

"Given the growing number of older adults worldwide, future cross-national studies aimed at identifying the medical and social factors that might prevent or delay cognitive decline in older adults would make important and valuable contributions to public health."

More information: Cognitive health among older adults in the United States and in England, Kenneth M Langa, David J Llewellyn, Iain A Lang, David R Weir, Robert B Wallace, Mohammed U Kabeto and Felicia A Huppert, *BMC Geriatrics* (in press), [www.biomedcentral.com/bmcgeriatr/](http://www.biomedcentral.com/bmcgeriatr/)

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