

Subjective memory may be marker for cognitive decline

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Psychological sciences doctoral student Marci Horn (left) conducts a name-face memory test as part of a study at the Center for Vital Longevity. Credit: University of Texas at Dallas

New research from the Center for Vital Longevity (CVL) at The University of Texas at Dallas suggests that subjective complaints about poor memory performance, especially in people over 60, could be a useful early marker for the onset of mild cognitive decline, which sometimes foreshadows Alzheimer's disease.

Subjective [memory](#) is a person's unscientific self-evaluation of how good his or her memory is, and whether, in that person's opinion, there has been any worsening of memory through age. While some changes may be undetectable to others and are often too subtle to register on cognitive tests, the person subjectively believes that memory is slipping.

Published recently in *Psychology and Aging*, the research from Dr. Karen Rodrigue's lab at CVL examined subjective memory complaints in nearly 200 healthy adults, ages 20 to 94. Previous studies

suggest that subjective memory complaints are not necessarily indicative of cognitive decline, and may stem from underlying conditions such as anxiety and depression, which have been shown to impede memory.

The current study measured mood and screened out depressed individuals. Researchers also measured participants for known [risk factors](#) for [memory loss](#) and Alzheimer's, such as higher levels of beta-amyloid in the brain and the presence of a gene variant called ApoE4. These factors were taken into account to examine whether subjective memory alone was a reliable correlate of actual memory ability.

The study focused on associative memory—for example, remembering word pairs and name-face pairs. This type of memory is particularly sensitive to age-related decline, and the most common [complaint](#) of aging individuals.

The study found that a person's intuitive or intrinsic assessment of his or her own memory was actually a reliable predictor of performance on the laboratory memory assessment. This result was particularly true for individuals with genetic risk for memory loss.

"Our findings show that subjective memory can be a reliable indicator of memory performance, even in cognitively healthy adults," said psychological sciences doctoral student Marci Horn, the lead author of the study. "The same people who self-report memory problems may also have other risk factors associated with increased risk of Alzheimer's disease."

The researchers also found that men who had higher amyloid levels reported the most subjective memory complaints in the study. Previous studies had not uncovered a sex-specific relationship, nor did they account for the genetic and amyloid risk factors in these associations, the researchers said.

The strongest correlation of subjective memory complaints with actual cognitive performance was in study participants older than 60, when people are generally at greater risk for Alzheimer's disease.

"It seems that awareness of memory changes may be a reliable indicator of one's current memory ability, and may serve as another harbinger of future loss, as this relationship was strongest in those with known risk factors for Alzheimer's disease, namely ApoE4 genotype and beta-amyloid burden in the brain," said Rodrigue, the senior author of the study and assistant professor in the School of Behavioral and Brain Sciences (BBS). "We are following these individuals over time to further test this idea."

More information: Marci M. Horn et al. Association between subjective memory assessment and associative memory performance: Role of ad risk factors., *Psychology and Aging* (2018). DOI: [10.1037/pag0000217](https://doi.org/10.1037/pag0000217)

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