

Anxiety significantly raises risk for dementia

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People who experienced high anxiety any time in their lives had a 48 percent higher risk of developing dementia compared to those who had not, according to a new study led by USC researchers.

The findings were based on an examination of 28 years of data from the Swedish Adoption Twin Study of Aging, overseen by the Karolinska Institutet of Sweden. The study sample involved 1,082 participants—twins, fraternal and identical—who completed in-person tests every three years, answered several questionnaires and were screened for [dementia](#) throughout the study.

Many other studies have explored the link between dementia and psychological variables such as depression and neuroticism. However, this study established that the anxiety-dementia link was independent of the role of depression as a risk factor.

"Anxiety, especially in [older adults](#), has been relatively understudied compared to depression," said Andrew Petkus, the study's lead author and postdoctoral research associate of psychology in the USC Dornsife College of Letters, Arts and Sciences. "Depression seems more evident in adulthood, but it's usually episodic. Anxiety, though, tends to be a chronic lifelong problem, and that's why people tend to write off anxiety as part of someone's personality."

A final draft of the study was made available online last week in *Alzheimer's & Dementia*: The Journal of the Alzheimer's Association.

The researchers noted that the subjects had self-reported various levels of anxiety, which may or may not meet the clinical diagnostic threshold of a psychiatric anxiety disorder. Even so, the twin who developed dementia had a history of higher levels of anxiety compared to the twin who did not develop dementia.

How anxious?

The subjects with anxiety who later developed dementia "are people that experience more than usual symptoms of anxiety," said study co-author Margaret Gatz, a professor of psychology in the USC Dornsife College of Letters, Arts and Sciences, who holds joint appointments in the USC Davis School of Gerontology and the Keck School of Medicine of USC.

"They are people who you would say operate at a 'high level of anxiety,'" said Gatz, also a foreign adjunct professor for the Karolinska Institutet. She said they are fidgety. "They are frantic, frazzled people."

To determine whether anxiety levels correlated to dementia risk, researchers compared those who reported high anxiety with those who reported lower anxiety levels. "Those in the high anxiety group were about 1.5 times more likely to develop dementia," Petkus said.

Possible explanation

Petkus said people who have high levels of anxiety tend to have higher levels of stress hormones, including cortisol. Evidence shows that chronically high levels of cortisol damage parts of the brain such as the hippocampus, which stores memory, and the frontal cortex, which is responsible for high-level thinking.

The researchers also found that the anxiety-dementia relationship was

stronger among fraternal twins whom had only one develop dementia than among identical twins. The researchers said this finding indicates that there may be genetic factors shared by anxiety and dementia that account for the anxiety-dementia risk.

The USC team also hopes to determine whether individuals who have been treated for anxiety earlier in their lives show lower risk of dementia compared with those whose [anxiety](#) was not treated.

Provided by University of Southern California

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