

Anxious, moody older adults are vulnerable to worse cognitive function

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Our aging brains collect tangles and sticky plaques that can interfere in our cognition and memory. But some older adults with this neuropathology have more cognitive resilience than others, reports a new



Northwestern Medicine study.

The reason: their personalities.

Personality traits were associated with cognitive resilience, which is the ability to better live with the neuropathology in the brain that causes dementia. Individuals with a greater tendency toward <u>self-discipline</u>, organization, diligence, high achievement and motivation—a trait known as higher conscientiousness—was associated with greater resilience.

Individuals with higher neuroticism—a greater tendency towards anxiety, worry, moodiness and impulsivity—were more likely to have worse cognitive function than expected given the amount of neuropathology detected at autopsy.

The study was published Sept. 24 in *Journal of Gerontology: Psychological Sciences*.

"These findings provide evidence that it is possible for <u>older adults</u> to live with the neuropathology associated with Alzheimer's disease and related dementias while maintaining relatively healthy levels of cognitive function," said lead study author Eileen Graham, a research assistant professor of medical social sciences at Northwestern University Feinberg School of Medicine.

"Our study shows personality traits are related to how well people are able to maintain their cognitive function in spite of developing <u>neuropathology</u>," Graham said. "Since it is possible for personality to change, both volitionally and through interventions, it's possible that personality could be used to identify those who are at risk and implement early interventions to help optimize function throughout old age."



Personality and other factors that promote cognitive <u>resilience</u> may be particularly important in the context of stress (like the COVID-19 pandemic) and this is an important area of future research, Graham noted.

This is believed to be one of the first studies showing an individual's personality traits are linked to how well they are able to sustain their cognitive function as they age. These findings lend credence to the idea that personality can be leveraged to help individuals maintain their cognitive function when they may otherwise be vulnerable to neurodegeneration.

The data was collected at Rush University Alzheimer's Disease Research Center. Individuals contributed annual psychosocial self-report survey and clinical data. At study enrollment they also consented to donating their brains for post-mortem autopsy. Study participants contributed years of rich data on their psychological and cognitive functioning while they were living, as well as autopsy data after they died.

More information: Eileen K Graham et al, Associations Between Personality Traits and Cognitive Resilience in Older Adults, *The Journals of Gerontology: Series B* (2020). DOI: 10.1093/geronb/gbaa135

Provided by Northwestern University

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