

Depressive symptoms in young adults linked to thinking, memory problems in midlife

June 12 2024



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People who experience prolonged depressive symptoms starting in young adulthood may have worse thinking and memory skills in middle age, according to a study published in the June 12, 2024, online issue of

Neurology. The study also found that depressive symptoms were experienced more often by Black adults than white adults.

"The processes that lead to dementia begin long before signs of the disease become apparent, and previous research has shown that Black adults have a higher risk of dementia than white adults," said study author Leslie Grasset, Ph.D., of University of Bordeaux in France. "Our study found that prolonged exposure to elevated depressive symptoms in young adulthood has a negative effect on thinking and memory in [middle age](#), especially for Black adults."

The study involved 3,117 people with an average age of 30 at the start of the study. Of the participants, 47% were Black and 53% were white.

Participants were evaluated for depressive symptoms every five years for 20 years. At each visit, they completed a questionnaire asking if they experienced changes in appetite or sleep, had problems with concentration or experienced feelings of worthlessness, sadness or loneliness. Higher scores represented more symptoms.

Researchers divided participants into four groups based on the progression of their symptoms over time: persistently low symptoms, medium decreasing, persistently medium or high increasing symptoms. There was a higher proportion of Black participants, 52%, in the persistently medium group, as well as the high increasing depressive symptoms group with 70%.

Five years later, when participants had an average age of 55, they were given three tests to examine thinking and [memory skills](#).

For example, on a test measuring processing speed and memory, participants were given a key showing numbers and corresponding symbols. They then had to draw those symbols on a separate list of

random numbers as quickly as possible. The score range was zero to 133 with lower scores representing worse cognition. Those in the low symptom group had an average score of 73, in the medium decreasing group, an average score of 71, persistently medium, a score of 66 and high increasing, an average score of 57.

After adjusting for factors such as age, [physical activity](#) and total cholesterol, among Black participants, those in the high symptom group had an average score that was 0.64 standard deviations below the average score for the low symptom group. Among white participants, those in the high symptom group had an average score that was 0.40 standard deviations below the average score for the low symptom group.

Researchers created a standardized score for each of the three cognitive tests. After adjusting for factors such as education, [blood pressure](#) and total cholesterol, researchers found among Black participants, those in the three groups with high and medium symptoms had worse verbal memory, processing speed and executive function scores when compared to those in the low group.

Researchers found among white participants, those in the high symptom group had worse verbal memory and processing speed scores when compared to those in the low symptom group.

"Our results suggest that Black adults are not only more likely to experience worse depressive symptom trajectories, but that these symptoms may lead to worse repercussions on thinking and memory as early as middle age," said Grasset. "This may help explain some of the disparities in dementia risk at older age."

Grasset said, "Having more [depressive symptoms](#) may be due to inequalities in socioeconomic resources such as housing and income, as well as access to health care and treatment. Racial inequalities should be

accounted for when designing interventions to reduce a person's risk of dementia."

A limitation of the study was that symptoms were self-reported and no clinical diagnosis of depression was available. It is possible that some participants may not have accurately reported their symptoms.

More information: Leslie Grasset et al, Long-Term Depressive Symptom Trajectories and Midlife Cognition, *Neurology* (2024). DOI: 10.1212/WNL.0000000000209510 , [dx.doi.org/10.1212/WNL.0000000000209510](https://doi.org/10.1212/WNL.0000000000209510)

Provided by American Academy of Neurology

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