

Study debunks theory linking autism to changes in brain's amygdala

September 4 2024, by Dennis Thompson



Credit: HealthDay

A new brain imaging study has concluded that autism likely isn't caused by faulty connections to the amygdala.

A prevailing hypothesis of [autism](#) spectrum disorder has held that people with the condition have poorer neural connections in certain [brain](#)

[regions](#), including the [amygdala](#).

However, researchers found no evidence that people with autism had amygdala connections that differed substantially to those found in people without autism.

The amygdala is a small, almond-shaped structure in the brain that plays a key role in processing emotions and social cues, researchers explained.

For the study, researchers analyzed high-quality MRI brain scans from 488 people, including 212 with autism.

The team focused on the [neural connections](#) emanating from the amygdala when the participants were not actively engaged in any tasks.

Average variation in connectivity to the amygdala was similar in people with and without autism, results showed.

The results were the same when researchers looked at specific subregions of the amygdala, researchers added.

The new study was published in the [American Journal of Psychiatry](#).

"It is important to note that we do not conclude that amygdala [connectivity] is generally typical in autism. Instead, we conclude that the evidence for atypical [connectivity] of the amygdala in autism is weak at best, and unreliable," concluded the researchers led by Dorit Kliemann, an assistant professor of psychological and brain sciences with the University of Iowa.

The researchers said in a news release from the American Psychiatric Association that more brain scan research should be done to further understand the differences in people with and without autism, calling it

"an investment worth prioritizing if we are to better understand and delineate the neurobiological substrates of autism."

More information: The University of California-Davis has more on the [amygdala and autism](#).

Dorit Kliemann et al, Resting-State Functional Connectivity of the Amygdala in Autism: A Preregistered Large-Scale Study, *American Journal of Psychiatry* (2024). [DOI: 10.1176/appi.ajp.20230249](https://doi.org/10.1176/appi.ajp.20230249)

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Citation: Study debunks theory linking autism to changes in brain's amygdala (2024, September 4) retrieved 4 September 2024 from <https://medicalxpress.com/news/2024-09-debunks-theory-linking-autism-brain.html>

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