

Study examines brain activity and anxiety symptoms in youth with autism spectrum disorder

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The error-related negativity (ERN) is a brain signal response to errors that is thought to reflect threat sensitivity and has been implicated in anxiety disorders in individuals without autism spectrum disorder (ASD). A new *Autism Research* study has revealed that the ERN is related to social anxiety symptoms—specifically performance fears—in youth with ASD.

The findings suggest that heightened threat sensitivity may be characteristic of people with ASD who exhibit social fearfulness. Those with more severe ASD symptoms and/or lower verbal abilities may have difficulty identifying or communicating their performance anxieties. Therefore, the ERN may provide important and perhaps otherwise inaccessible information on how these individuals experience internal sources of threat.

"This study, led by my graduate student, Tamara Rosen, clarifies and focuses inconsistencies in previous research on the unique way error processing manifests and can impact anxiety symptoms in individuals with ASD," said senior author Dr. Matthew Lerner, of Stony Brook University. "These findings can help guide and pinpoint efforts to diagnose and treat the substantial co-occurring [anxiety](#) experienced by many people with ASD."

More information: Tamara E. Rosen et al, Error-related brain activity

and anxiety symptoms in youth with autism spectrum disorder, *Autism Research* (2017). [DOI: 10.1002/aur.1898](https://doi.org/10.1002/aur.1898)

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