

Autistic subjects' facial expressions don't always mirror emotions

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Dr. Noah Sasson

New research by UT Dallas scientists suggests that individuals with autism spectrum disorder can have very expressive faces, but the

emotions conveyed can sometimes seem overly intense and unusual.

A recently published study in the *Journal of Autism and Developmental Disorders* reported that adults without [autism spectrum disorder](#) (ASD) could identify the emotions expressed by high-functioning adults with ASD, but they often rated the expressions as exaggerated and odd.

ASD presents a range of symptoms, but one defining characteristic is a difficulty with social interactions. People with ASD often have problems recognizing the emotions of others from physical cues, such as facial expression or body posture.

"Overwhelmingly, most research in autism focuses on impairments in the person's ability to understand social and [emotional](#) information about other people," said Dr. Noah Sasson, co-author of the study and assistant professor in the School of Behavioral and Brain Sciences. "Rarely do we think about others having difficulty understanding the emotions and the thought processes of people with autism, but social interaction is a two-way street."

Researchers took photographs of individuals with and without ASD while they posed their faces as emotionless or showing fear, sadness, anger or happiness. They also coached the participants to re-experience emotional stories from their past to evoke and capture their natural facial expressions. People without ASD then viewed the photos and identified what emotion the person was feeling and rated how intense and natural the expressions appeared. Raters were not told that some of the people in the photos had ASD.

"Previous ASD studies using similar methods have used posed photographs, which are not always realistic," said Daniel Faso, co-author of the study and psychological sciences doctoral student at UT Dallas.

"The posed condition was expected to be more intense overall and less

natural because that's how people pose. We found that to be true for both groups."

By evoking emotions, the researchers were better able to examine how emotional expressivity differs in ASD under more realistic conditions. Contrary to expectations, raters identified the evoked emotions of the people with ASD with greater accuracy than the emotions of those without ASD. However, the raters also identified the evoked expressions of the people with ASD as more intense and less natural than those without ASD.

"If the expressivity of a person with ASD is perceived as atypical, that can present challenges beyond their difficulties processing social information," Faso said. "If they are viewed as awkward, unnatural and overly intense, then people may respond inappropriately, which could impair [social interaction](#)."

The researchers also found that the individuals with ASD reported the same level of emotion during the photograph sessions as those without ASD. For Sasson, the results help to fight a misconception that adults with autism do not experience emotion to the same degree as others.

"Adults with [autism](#) can have just as emotionally rich experiences as anyone else." Sasson said. "They aren't emotionless, and they often don't lack for social desire. They can be incredibly social. They are just different socially."

"Most interventions try to improve social interactions in those with ASD by focusing on improving that person's social skills. This is important, but perhaps an under-recognized avenue for improving social functioning would involve coaching those with whom they interact to better understand their differences."

More information: "Evaluating Posed and Evoked Facial Expressions of Emotion from Adults with Autism Spectrum Disorder." *Journal of Autism and Developmental Disorders*, January 2015, Volume 45, Issue 1, pp 75-89. link.springer.com/article/10.1007/s10803-014-2194-7

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