# Eczema linked to increased symptom severity in children with autism spectrum disorder

Autism spectrum disorder (ASD) is a developmental disorder that can cause a range of social, behavioral, and communication challenges. A recent study found that children with ASD who also have an atopic condition such as eczema are more likely to have worse symptoms. The findings have been published in *Translational Psychiatry*.

Eczema is a condition that causes the skin to become red, itchy, and inflamed. It is also known as atopic dermatitis. Eczema is a chronic condition that can be difficult to manage. The exact cause of atopic eczema is unknown, but it is thought to be caused by a combination of genetic and environmental factors.

"There is an interesting overlap between eczema and neurodevelopmental conditions that warrants further investigation," said study author Adam Guastella, the Michael Crouch Chair in Child and Youth Mental Health at the University of Sydney, Australia.

"We have long known that children with neurodevelopmental conditions often have a higher rate of eczema and allergies. There has been limited research to show whether having eczema and atopic diseases is also linked to more severe symptoms of neurodevelopmental conditions. Understanding this link better may provide leads into detection and intervention opportunities that can support both conditions."

"We have recently developed a model that highlights many of the co-occurring molecular features of autism and eczema and the evolutionary significance of the skin-brain connection. There is growing research about how the skin and brain co-develop and are subject to similar genetic and environmental factors that may drive development of both. This idea has been summarised in a paper published in *Molecular Psychiatry*. Interestingly, we argue that the skin may provide useful insights that can also tell us about brain development."

**Data from 140 children with ASD**

For their study, the researchers examined data from 140 children with ASD, who were about 6 years old on average. The children were recruited from the Clinic for Autism and Neurodevelopment (CAN) Research at the University of Sydney and the Child Development Unit at Westmead's Children's Hospital. The child's parent or caregiver completed an

assessment of atopic diseases, including asthma, allergies, eczema and hay fever. Atopic conditions were found in 47 children.

Guastella and his colleagues found that children presenting with an atopic comorbidity tended to have more severe autism symptoms, as measured via the Autism Diagnostic Observation Schedule. The findings provide evidence "that there is an interesting relationship with skin conditions and autism symptoms that requires further evaluation," he told PsyPost.

"It seems that those children with eczema in particular also have more severe symptoms of neurodevelopmental delay. We need to understand why. It may lead to opportunities for earlier detection and supports to improve outcomes for both developmental processes."

"Having an eczema (or atopic disease broadly) more than doubled a child's chance of scoring on the severe end of autism symptoms and social difficulty symptoms, as rated by clinicians," Guastella noted. "That was a big jump that warrants further investigation. While there has long been acknowledgement that kids with neurodevelopmental condition have a higher rate of skin conditions, this is one of the first to suggest a link with the severity of autism symptoms."

The main limitation of the study is the cross-sectional nature of the data. The link between atopic conditions and autism severity could be "incidental," Guastella said. "Research examining causal pathways are required."

The study, "Eczema and related atopic diseases are associated with increased symptom severity in children with autism spectrum disorder", was authored by C. Jameson, K. A. Boulton, N. Silove, and A. J. Guastella. -**www.psypost.org, November 6, 2022**