

research snapshot

summarize | mobilize



Are There Subgroups Within the Newly Defined Autism Spectrum Disorder?

What is this research about?

The Diagnostic Statistical Manual (DSM) 5 includes many changes in the criteria for mental health disorders. In past versions of the DSM autism spectrum disorder (ASD) had 3 subtypes. In the DSM 5 severity of ASD is set upon 2 continuous scales:

- Social communication (SC).
- Fixed interest and repetitive behaviors (FIRB).

Each scale ranges from 1 to 3. A rating of 1 means little help is needed; a rating of 3 means that a great deal of help is needed.

There has been much discussion on whether the new scaled severity in the new diagnostic criteria for ASD could be used to create subgroups for ASD. Identifying subgroups within symptom domains could help with diagnosis and treatment planning.

What did the researchers do?

To find ASD subgroups factor mixture modeling (FMM) was used to analyze data on 391 cases of newly diagnosed children with ASD. FFM was chosen as it explores potential variations in severity within the proposed ASD subgroups.

What you need to know:

New criteria for autism spectrum disorder (ASD) have affected how ASD is diagnosed and treated. This has affected how discussions of ASD happen between professionals, patients and family members. The new criteria do not negate research that suggests subgroups exist within the ASD diagnosis.

Clinical tests were used to assess for ASD symptom severity, language problems, and level of intelligence.

What did the researchers find?

Results suggest there are 3 distinct subgroups within the autism spectrum:

- Group 1, has moderate SC impairment, and lowest FIRB scores
- Group 2, has low SC impairment, and moderate FIRB scores
- Group 3, has high SC impairment, and high FIRB scores

Past research suggests that SC and FIRB symptoms of ASD arise from separate risk

factors. Detection of the distinct subgroups supported the idea that symptoms of ASD arise from isolated risk factors. It should be noted that there was variability of severity even within the identified subgroups. More research is needed before these subgroups could be used in a clinical setting. The subgroups could inform discussions between doctors, parents, and treatment providers.

How can you use this research?

Policy makers will learn the importance of funding tailored intervention programs that meet the different needs of children with ASD.

Practitioners will find that even if there are subgroups in ASD there is still variability within these groups. Thus, individual needs must be taken into account when developing treatment plans.

About the Researchers

Dr. Stelios Georgiades is an Assistant Professor in the Department of Psychiatry and Behavioural Neurosciences at McMaster University, and a core member of the Offord Centre for Child Studies.

georgis@mcmaster.ca

Citation

Georgiades, S., Szatmari, P., Boyle, M., Hanna, S., Duku, E., Zwaigenbaum, L., Bryson, S., Fombonne, E., Volden, J., Mirenda, P., Smith, I., Roberts, W., Vaillancourt, T., Waddell, C., Bennett, T., Thompson, A. and Pathways in ASD Study Team, 2013. Investigating Phenotypic Heterogeneity in Children With Autism Spectrum Disorder: A Factor Mixture Modeling Approach. *The Journal of Child Psychology and Psychiatry*, 54 (2), pp. 206-215.

Available online at bit.ly/1h6J5lr

Keywords

Symptomatology, Autistic disorder, Classification, Diagnosis, Diagnostic Statistical Manual

Knowledge Translation at NeuroDevNet

This is a NeuroDevNet product. NeuroDevNet is a Network of Centres of Excellence dedicated to helping children with neurodevelopmental disorders. The Knowledge Translation Core at NeuroDevNet helps to maximize the impact of research and training in neurodevelopmental disorders. The KT Core serves NeuroDevNet researchers, students and their partners by providing services such as: knowledge brokering, support for KT events, support for KT products, KT capacity building, KT evaluation and support for KT planning.

www.neurodevnet.ca/kt/researchsnapshots
KT@neurodevnet.ca

