



# What are autistic signs that give a clinician the sense of certainty

that they are dealing with an autistic child?

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## Introduction

When clinicians diagnose an autistic child, they use tools and criteria acquired during their professional training. Over time, their clinical experience, forged by encountering many similar cases, enriches their mastery of these tools. This expertise, although elusive directly, enables them to form a diagnostic opinion even in the presence of incomplete presentations or missing signs. The clinician's expertise cannot be replaced by laboratory tests, as there are no biological markers for diagnosing autism. Similarly, diagnostic instruments, which aim to establish whether a person has enough signs to be considered autistic, are based

on thresholds, and do not always match clinical expertise. In the study that we are presenting, the researchers examined the relationship between the signs detected by an instrument widely used to diagnose autism throughout the world: the ADOS (Autism Diagnostic Observation Schedule), the clinician's certainty of a person being autistic, and other certain markers such as head circumference.

## Methodology

The researchers used a database of 1,511 autistic individuals aged 4 to 18 years old and analysed separately the factors contributing to clinician certainty.

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## Results

The signs most related to clinician certainty varied according to the child's profile and age. In non-verbal children, the most significant signs included the absence of demonstration or direction of facial expressions towards others, repetitive interests or stereotyped behaviours, abnormal intonation, and lack of imitation. For children beginning to talk, it was the absence of joint attention, shared joy, social overtures, and facial expressions directed towards others which became the most associated with clinical certainty. However, the total score of the diagnostic instrument, in other words, the sum of all the signs observed in the child, is only modestly correlated with the clinician's certainty. Moreover, the signs associated with clinical certainty vary according to the child's language level. In non-verbal children, the symptoms producing this certainty belong to the social and repetitive behaviour domains. When children began to speak and become slightly older, the five signs most associated with certainty belong to the social and communicative domains.

Another significant finding in this research is that having a larger head circumference than expected based on the child's height is associated with autistic signs, which are in turn associated with greater clinical certainty. Finally, the greater the gap in performance between a child's non-verbal skills (what an autistic child can do without using language) and verbal skills, the greater the presence of these same signs and the greater the chance that the child will be recognised as autistic with certainty by the clinician.

## Discussion

The association between clinical certainty and a larger head circumference than most non-autistic people of the same height and age was observed by the doctor who discovered autism, Leo Kanner. The reason why having a larger head predisposes an individual to autism remains unknown. The study also confirms that the discrepancy between non-verbal and verbal skills is truly characteristic of autism, or at least of autism recognised with certainty (also known as prototypical autism).

Finally, it is important not to confuse the presence of distinctive signs with the severity of autism. An expert clinician will more easily identify someone as autistic if they show highly characteristic signs, especially when they are combined. This suggests that new diagnostic instruments should give more weight to certain signs, or the combination of signs, rather than putting them all on an equal footing, as is currently the case with instruments such as the ADOS. Our research group is working with experts on five continents to determine precisely how much weight the different signs of autism should be given, when they become visible, and when they are at their clearest. The aim of this ongoing research is to develop instruments that take into account the importance of each sign for diagnosis, but also take into account the other signs that are present (or absent), and the child's age. 🌱

### Original Article:

Rødgaard, E.M., Rodríguez-Herreros, B., Zeribi, A., Jensen, K., Courchesne, V., Douard, E., Gagnon, D., Huguet, G., Jacquemont, S. and Motttron, L., 2024. Clinical correlates of diagnostic certainty in children and youths with Autistic Disorder. *Molecular Autism*, 15(1), p.15.