



Autism Spectrum Conditions (ASC) are characterised by difficulties in social interaction, communication, and adapting to change, alongside unusually narrow interests and strongly repetitive behaviour. Diagnosis of ASC can be a lengthy process because it varies greatly across individuals, and the age at which symptoms first appear differs. Diagnosis is often delayed because it can be difficult to detect in very young children or in later life when ASC can be masked. Parents may raise concerns about their child as early as 18 months, but there is frequently a delay between the point of first concern and an eventual diagnosis. The average age of a diagnosis for individuals with Asperger Syndrome (AS) is 11 years, however, it is clear that there are many individuals with ASC in the population who go undetected even into adulthood and who are struggling and would benefit from support. In addition, awareness and expertise about how to recognise ASC within primary care is highly variable. This research study by CLAHRC researchers led by Professor Simon Baron-Cohen, addresses the need for a 'red flag' tool for primary care professionals and specialist diagnostic services to aid their decision-making about whether to make a referral for a full diagnostic assessment for ASC.

The research

The aim was to identify 10 items on each of 4 screening instruments [the Autism Spectrum Quotient (AQ)¹ (Adult, Adolescent, and Child versions) and on the Quantitative Checklist for Autism in Toddlers (Q-CHAT)²] with good test accuracy. A case sample of more than 1,000 individuals with ASC and a control sample of 3,000 controls with no ASC diagnosis participated. Participants completed full-length versions of the measures. The 10 best items were selected on each instrument to produce short versions.

Findings

At a cut-point of 6 on the AQ-10 adult, sensitivity was 0.88, specificity was 0.91, and positive predictive value (PPV) was 0.85. At a cut-point of 6 on the AQ-10 adolescent, sensitivity was 0.93, specificity was 0.95, and PPV was 0.86. At a cut-point of 6 on the AQ-10 child, sensitivity was 0.95, specificity was 0.97, and PPV was 0.94. At a cut-point of 3 on the Q-CHAT-10, sensitivity was 0.91, specificity was 0.89, and PPV was 0.58. Internal consistency was > 0.85 on all measures.

Conclusion

These short measures have potential to aid referral decision-making for specialist assessment and should be further evaluated in the context in which they are intended to be used.

Impact

This piece of research has provided a much needed screening measure where one has not been previously available. The AQ-10 will be available for front line clinicians, and adults with possible ASC will have a faster route to assessment, and consequently obtaining the support they require.



At national policy level, the National Institute for Health and Clinical Excellence (NICE) has recommended the short Autism Spectrum Quotient (AQ-10) in their guidelines for the management of ASC in adults, which was published in June 2012.³

This research was published in Journal of the American Academy of Child & Adolescent Psychiatry.⁴

References

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3. Autism: recognition, referral, diagnosis and management of adults on the autism spectrum. NICE clinical guidelines CG142. National Institute of Health and Clinical Excellence. June 2012.
4. C. Allison, B. Auyeung, S. Baron-Cohen (2012) Toward Brief "Red Flags" for Autism Screening: The Short Autism Spectrum Quotient and the Short Quantitative Checklist in 1,000 Cases and 3,000 Controls *Journal of the American Acad of Child & Adolescent Psychiatry,* 51 (2) 202 - 212.