



# Do ADHD and ASD symptoms have similar characteristics in childhood and young adulthood?

By Dr. Jessica Edwards

Attention-deficit/hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) are generally considered early-onset disorders. As a result, most research has focused on children, although it is now widely recognised that adults are also affected.<sup>1</sup> Previous studies comparing ADHD and ASD symptoms in adulthood to childhood have observed some differences, such as less of a male excess<sup>2</sup>. However, this finding could reflect methodological issues including changing the informant from parent to self, different 'child' and 'adult' measures, delayed detection in females, or referral bias in adult clinic-based studies.

Now, Lucy Riglin and colleagues in the UK have investigated whether ADHD and ASD traits in young adulthood show similar characteristics to those reported in childhood. To do so, they harnessed data from a longitudinal study (ALSPAC) that followed the same individuals during childhood into young adulthood and used many of the same measures across this timeframe. They examined associations with other neurodevelopmental problems (IQ, reading and spelling ability, pragmatic language and communication) and examined the pattern of associations with neuropsychiatric polygenic risk scores (focussing on disorders where previous research suggests genetic overlap in childhood: ADHD, ASD, schizophrenia, depression and anxiety). The researchers also explored whether the patterns of association differed when using self-reports compared to parent-reports.

“We found that ADHD/ASD symptoms at age 25 years had similar characteristics to earlier in development”, describes Riglin. “Specifically, they showed similar associations with cognitive, learning and communication problems and with genetic risk for neuropsychiatric disorders, although somewhat less so when the symptoms were rated by the individuals themselves compared to when rated by parents”.

The researchers propose that these findings support the validity of ADHD and ASD symptoms in adulthood. “These similarities across childhood and adulthood highlight that mental health problems do not fit neatly into ‘child/adolescent’ or ‘adult’ in the way that services are often organised”, explains Riglin. “Therefore, services and research that bridge different developmental periods could potentially improve our understanding of patients’ symptoms across the lifespan”.

Riglin *et al.* also suggest that even at age 25, available parent-reports could be clinically useful. “Further investigation into the possible advantages of including additional raters of young-adult ADHD and ASD symptoms, as well as how and why other people might rate these symptoms differently from the individuals themselves, is now warranted”, says Riglin. “In addition, we should also be asking how neurodevelopmental services could be configured to bridge across development”.

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#### Referring to:

Riglin, L., Leppert, B., Langley, K., Thapar, A.K., O'Donovan, M.C., Davey Smith, G., Stergiakouli, E., Tilling, K. & Thapar, A. (2020), *Investigating attention-deficit hyperactivity disorder and autism spectrum disorder traits in the general population: What happens in adult life?. J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.13297.

#### References:

- <sup>1</sup> Thapar, A., & Cooper, M. (2016). Attention deficit hyperactivity disorder. *Lancet*. 387, 1240–1250. doi: 10.1016/S0140-6736(15)00238-X.
- <sup>2</sup> Biederman, J. et al. (1994). Gender differences in a sample of adults with attention deficit hyperactivity disorder. *Psychiatry Res.* 53, 13–29. doi: 10.1016/0165-1781(94)90092-2.

#### Glossary:

**Polygenic risk score:** An index of genetic liability to a trait or condition, calculated according to an individual's genetic profile and relevant genome-wide association study (GWAS) data.