

Youngest children within their school year are more likely to be treated for ADHD, says new study

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New research involving experts from the University of Nottingham shows that children younger than their classmates within a school year

are more likely to be treated for Attention Deficit Hyperactivity Disorder (ADHD), suggesting immaturity may influence diagnosis.

The study, which is published in *BMC Public Health*, looked at the association between age and ADHD, with experts linking health and education data from over 1 million [children](#) in Scotland and Wales.

The study was led by experts at Swansea University and the University of Glasgow, along with colleagues from the University of Nottingham.

Evidence suggests that worldwide, the prevalence of ADHD among school-age children is at around three to five percent, fairly uniform. However, there are large differences internationally in the rates of clinical diagnosis and treatment.

Previous studies have found an association between age within school year and ADHD, particularly in countries where higher numbers of children are diagnosed with ADHD. This latest study aimed to look at whether this is also the case in the UK, where prescribing rates are relatively low. Another important aim was to look at whether allowing greater flexibility around school starting dates might reduce the impact of this so-called "relative age effect"—whereby adults might benchmark the youngest children against their oldest peers in the same year group and misattribute immaturity for more serious difficulties.

Scotland and Wales have different school entry cutoff dates (which are six months apart) and policies on holding children back an academic year. Comparison of the two countries therefore allows for a useful natural experiment for investigating the relationship between age within the school year and ADHD, and whether it is influenced by policies on holding back children.

The team of experts linked the education and health records of

1,063,256 primary and secondary school children in Scotland (between 2009 and 2013) and Wales (between 2009 and 2016), to examine the relationships between age within the school year and treated ADHD (i.e., receipt of [medication](#) for ADHD).

Overall, 0.87% of children in the study were treated for ADHD. The team found that in Wales, children who were the youngest in their class were more likely to be prescribed medication for ADHD. However, this effect was masked in Scotland as there appeared to be greater flexibility, whereby younger children in the school year with attention or [behavior problems](#) are more likely to be held back a year.

Kapil Sayal, Professor of Child & Adolescent Psychiatry in the University of Nottingham's School of Medicine and the Centre for ADHD and Neurodevelopmental Disorders Across the Lifespan at the Institute of Mental Health, is a joint senior author of the study.

He said, "The findings of this research have a range of implications for teachers, parents and clinicians. With an age variation of up to 12 months in the same class, teachers and parents may misattribute a child's [immaturity](#). This might lead to younger children in the class being more likely to be diagnosed with and receive medication treatment for ADHD.

"Irrespective of the date of cutoff for school entry, your month of birth should not influence whether you get a diagnosis or are prescribed medication for ADHD. Parents and teachers as well as clinicians who are undertaking ADHD assessments should keep in mind the child's age within the school year. From an education perspective, there should be flexibility with an individualized approach to [what] best meets the child's educational and behavioral needs. Our research has shown that when there is greater flexibility, the youngest within the [school year](#) were no longer more likely to be treated for ADHD."

More information: Michael Fleming et al, Age within schoolyear and attention-deficit hyperactivity disorder in Scotland and Wales, *BMC Public Health* (2022). [DOI: 10.1186/s12889-022-13453-w](https://doi.org/10.1186/s12889-022-13453-w)

Provided by University of Nottingham

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