School year 'relative age' causing bias in ADHD diagnosis, says research

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Children with ADHD find it more difficult to focus and to complete their schoolwork. Credit: public domain image

Younger primary school children are more likely to be diagnosed with attention deficit hyperactivity disorder (ADHD) than their older peers within the same school year, new research has shown.

The study, led by a child psychiatrist at The University of Nottingham with researchers at the University of Turku in Finland, suggests that adults involved in raising concerns over a child's behaviour - such as parents and teachers - may be misattributing signs of relative immaturity as symptoms of the disorder.

In their research, published in *The Lancet Psychiatry*, the experts suggest that greater flexibility in school starting dates should be offered for those children who may be less mature than their same school-year peers.

Kapil Sayal, Professor of Child & Adolescent Psychiatry at the University's School of Medicine and the Centre for ADHD and Neurodevelopmental Disorders Across the Lifespan at the Institute of Mental Health in Nottingham, was the lead author on 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 referred for an assessment for ADHD.

"Parents and teachers as well as clinicians who are undertaking ADHD assessments should keep in mind the child's relative age. From an education perspective, there should be flexibility with an individualised approach to best meets the child's needs."

Evidence suggests that worldwide, the incidence of ADHD among school age children is, at around five per cent, fairly uniform. However, there are large differences internationally in the rates of clinical diagnosis and treatment.

Although this may partially reflect the availability of and access to services, the perceptions of parents and teachers also play an important

role in recognising children who may be affected by ADHD, as information they provide is used as part of the clinical assessment.

The study centred on whether the so-called 'relative age effect' - the perceived differences in abilities and development between the youngest and oldest children in the same year group - could affect the incidence of diagnosis of ADHD.

Adults may be benchmarking the development and abilities of younger children against their older peers in the same year group and inadvertently misinterpreting immaturity for more serious problems.

Previous studies have suggested that this effect plays an important role in diagnosis in countries where higher numbers of children are diagnosed and treated for ADHD, leading to concerns that clinicians may be over-diagnosing the disorder.

The latest study aimed to look at whether the effect also plays a significant role in the diagnosis of children in countries where the prescribing rates for ADHD are relatively low.

It used nationwide population data from all children in Finland born between 1991 and 2004 who were diagnosed with ADHD from the age of seven years - school starting age - onwards. In Finland, children start school during the calendar year they turn 7 years of age, with the school year starting in mid-August. Therefore, the eldest in a school year are born in January (aged 7 years and 7 months) and the youngest in December (6 years and 7 months).

The results showed that younger children were more likely to be diagnosed with ADHD than their older same-year peers - boys by 26 per cent and girls by 31 per cent.

For children under the age of 10 years, this association got stronger over time - in the more recent years 2004-2011, children born in May to August were 37 per cent more likely to be diagnosed and those born in September to December 64 per cent, compared to the oldest children born in January to April

The study found that this 'relative age affect' could not be explained by other behavioural or developmental disorders which may also have been affecting the children with an ADHD diagnosis.

However, the experts warn, the study did have some important limitations - the data did not reveal whether any of the young children were held back a year for educational reasons and potentially misclassified as the oldest in their year group when in fact they were the youngest of their original peers.

The flexibility in school starting date could explain why the rate of ADHD in December-born children (the relatively youngest) were slightly lower than those for children born in October and November.

And while the records of publicly-funded specialised services which are free at the point of access will capture most children who have received a diagnosis of ADHD, it will miss those who were diagnosed in private practice.

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