

Most ADHD medicine used by December-born children

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Credit: colourbox.com

Children born at the end of the year are more likely to receive ADHD medication or an ADHD diagnosis than children born early in the year. This is according to a new study from the Norwegian Institute of Public Health.

The researchers have examined ADHD diagnoses and ADHD medication use among 510,000 Norwegian children aged 6-14 years (born in the period 1998-2006).

The analyses show that both medication and diagnosis of ADHD are more frequent among children born at the end of the calendar year than among children born early in the year. The association with birth month continued through childhood and into adolescence.

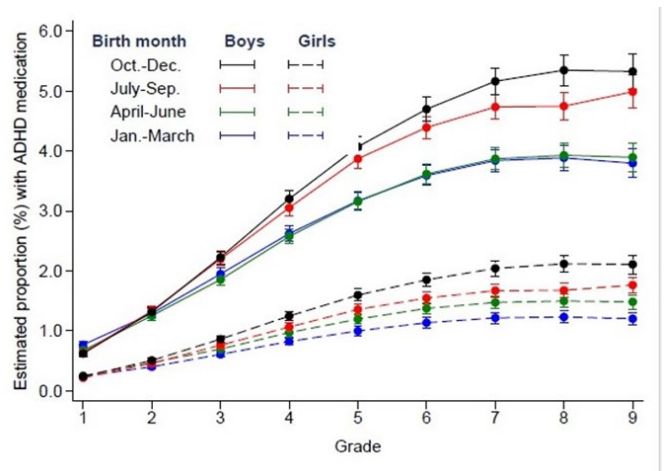
By the ninth grade, 3.6 per cent of the boys who were born in January to March received ADHD medication.

"Medication use increased with birth month. Among ninth grade boys born in October to December, 5.1 per cent received such

medications", says Kari Furu, senior researcher at the Norwegian Institute of Public Health.

"For girls we found the same pattern. Among ninth grade girls born in January to March, 1.1 per cent received ADHD medications, while among those born in October to December, 2.1 per cent received such medications", she adds.

The likelihood of receiving ADHD medication or a diagnosis was 1.4 times higher for boys born late in the year than those born early in the year. The corresponding figure for girls was 1.8.



Proportion of boys and girls (percentage with 95 per cent confidence intervals) within each grade who received ADHD medication. Credit: *Scandinavian Journal of Public Health*

Studies from other countries have found a similar association before but this is the first time this has been shown in Norway. The new finding from this study is that differences by birth month increased as the children became older (see figure).

Difficult to explain

Furu points out that there is no reason to believe that children born late in the year are more exposed to [environmental risk factors](#) for ADHD, compared to other children.

"There is a significant difference in [medication](#) and diagnosis between those born early in the year and late in the year. Why, we do not know," says Furu.

A possible explanation can be found in the diagnostic criteria for ADHD in the International Classification of Diseases (ICD10). The criteria, which are included in the guidelines from the Norwegian Directorate of Health, indicate that symptoms of inattention, hyperactivity and impulsivity should be more pronounced than expected in relation to the child's age.

Thus, the decision to refer children to the specialist health service, together with the diagnostic examinations, may be partly based on assessments of the child's behaviour and performance relative to older [children](#) – that is, those born earlier in the year yet are in the same class.

More information: Øystein Karlstad et al. ADHD treatment and diagnosis in relation to children's birth month: Nationwide cohort study from Norway, *Scandinavian Journal of Public Health* (2017). [DOI: 10.1177/1403494817708080](#)

Provided by Norwegian Institute of Public Health

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