Influence of Relative Age on Diagnosis and Treatment of Attention-Deficit Hyperactivity Disorder in Taiwanese Children.

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Abstract

OBJECTIVE:
To determine the potential influence of relative age on the diagnosis and treatment of attention-deficit hyperactivity disorder (ADHD), especially in reference to an Asian country.

STUDY DESIGN:
A total of 378 881 subjects aged 4-17 years during the study period (September 1, 1997 to August 31, 2011) were enrolled in our study from the Taiwan National Health Insurance Research Database. Logistic regression analysis was used to examine the likelihood of receiving ADHD diagnosis and treatment for those who were born in August (the youngest) compared with those who were born in September (the oldest).

RESULTS:
Both boys and girls born in August had a higher risk of being diagnosed with ADHD (OR 1.63, 95% CI 1.45-1.84; OR 1.71, 95% CI 1.36-2.15) and receiving ADHD medication (OR 1.76, 95% CI 1.53-2.02; OR 1.65, 95% CI 1.26-2.18) than those born in September. Sensitivity tests conducted over different periods revealed consistent findings.

CONCLUSIONS:
Relative age, as an indicator of neurocognitive maturity, is crucial in the risk of being diagnosed with ADHD and receiving ADHD medication among children and adolescents. Our findings emphasize the importance of considering the age of a child within a grade when diagnosing ADHD and prescribing medication for treating ADHD.