Prevalence rates of youths diagnosed with and medicated for ADHD in a nationwide survey in Taiwan from 2000 to 2011.


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Abstract

AIMS:
Public controversy regarding the potential overdiagnosis and overmedication of children with attention-deficit/hyperactivity disorder (ADHD) has continued for decades. This study used the National Health Insurance Research Database of Taiwan (NHIRD-TW) to explore trends in ADHD diagnosis in youths and the proportion of those receiving medication, with the aim of determining whether ADHD is overdiagnosed and overmedicated in Taiwan.

METHOD:
Youths (age ≤18 years) who had at least two NHIRD-TW claims records with ADHD diagnosis between January 2000 and December 2011 were selected as the subject cohort. In total, the study sample comprised 145,018 patients with ADHD (mean age at a diagnosis of ADHD: 7.7 ± 3.1 years; 21.4% females). The number of cases of ADHD were calculated annually for each year (from 2000 to 2011), and the number of cases per year who received medication was determined as those with at least one record of pharmacotherapy (immediate-release methylphenidate, osmotic controlled-release formulation of methylphenidate, and atomoxetine) in each year.

RESULTS:
The prevalence rates of a diagnosis of ADHD in the youths ranged from 0.11% in 2000 to 1.24% in 2011. Compared with children under 6 years of age, the ADHD diagnosis rates in children aged between 7 and 12 years (ratio of prevalence rates = 4.36) and in those aged between 13 and 18 years (ratio of prevalence rates = 1.42) were significantly higher during the study period. The prevalence in males was higher than that in females (ratio of prevalence rates = 4.09). Among the youths with ADHD, 50.2% received medications in 2000 compared with 61.0% in 2011. The probability of receiving ADHD medication increased with age. More male ADHD patients received medications than females patients (ratio of prevalence rates = 1.16).

CONCLUSIONS:
The rate of ADHD diagnosis was far lower than the prevalence rate (7.5%) identified in a previous community study using face-to-face interviews. Approximately 40-50% of the youths with ADHD did not receive any medications. These findings are not consistent with a systematic public opinion about overdiagnosis or overmedication of ADHD in Taiwan.