

Five-Fold Increase in National Prevalence Rates of Attention-Deficit/Hyperactivity Disorder Medications for Children and Adolescents with Autism Spectrum Disorder, Attention-Deficit/Hyperactivity Disorder, and other Psychiatric Disorders: A Danish Register-Based Study

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Objective: The purpose of this study was to estimate the prevalence and time trends in prescriptions of methylphenidate, dexamphetamine, and atomoxetine in children and adolescents, within three diagnostic groups: 1) autism spectrum disorder (ASD), 2) attention-deficit/hyperactivity disorder (ADHD), and 3) other psychiatric disorders.

Methods: Data from six different national registers were used and merged to identify a cohort of all children and adolescents born in Denmark between 1990 and 2001 (n=852,711). Sociodemographic covariates on cohort members and their parents and lifetime prescriptions of methylphenidate, dexamphetamine, and atomoxetine were extracted from the registers. Prescriptions were also stratified by duration (<6 months. vs.≥6 months).

Results: Sixteen percent of 9698 children and adolescents with ASD (n=1577), 61% of 11,553 children and adolescents with ADHD (n=7021) and 3% of 48,468 children and adolescents with other psychiatric disorders (n=1537) were treated with one or more ADHD medications. There was a significant increase in prescription rates of these medications for all three groups. From 2003 to 2010, youth 6–13 years of age with ASD, ADHD, and other psychiatric disorders had 4.7-fold (4.4–4.9), 6.3-fold (6.0–6.4), and 5.5-fold (5.0–5.9) increases, respectively, in prescription rates of ADHD medications.

Conclusion: This is the largest study to date assessing stimulant treatment in children and adolescents with ASD, and is the first prospective study quantifying the change over time in the prevalence of treatment with ADHD medications in a population-based national cohort of children and adolescents with ASD. The prevalence of stimulant treatment in youth with ASD of 16% is consistent with earlier studies. The past decade has witnessed a clear and progressive increase in the prescription rates of medications typically used to treat ADHD in children and adolescents in Denmark. This increase is not limited to only those with ADHD, but includes others with neuropsychiatric disorders, including ASD. The risks and benefits of this practice await further study.