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## Harvard Health Newsletters

### Are rates of autism spectrum disorders increasing?

*Expanded diagnostic criteria and greater public awareness may explain why.*

Results from a large study have reignited the debate about whether autism spectrum disorders have become more common — or whether expanded diagnostic criteria and increased awareness are fueling the increase in the number of cases identified.

Researchers at the U.S. Maternal and Child Health Bureau (part of the Department of Health and Human Services) analyzed data from the 2007 National Survey of Children's Health. This telephone survey collected information from 78,037 parents of children ages 3 to 17, selected through random digit dialing (a standard technique to produce a representative sample). During the survey, parents were asked whether they had ever been told by a health care provider that their child had autism, Asperger's disorder, pervasive developmental disorder, or another autism spectrum disorder.

In the survey, 913 parents said their child was currently diagnosed with an autism spectrum disorder, and another 453 said their child once had such a diagnosis but no longer did. Based on the responses, the investigators estimated that 110 U.S. children out of 10,000 currently have an autism spectrum disorder — or roughly one in every 91. If confirmed by other studies, this would mean that autism spectrum disorders are now slightly more common than schizophrenia (which affects about one in 100 Americans).

#### Key points

- The prevalence of autism spectrum disorders has been increasing since the 1960s.
- A new survey of parents found that roughly one in 91 U.S. children currently has an autism spectrum disorder.
- Most parents said their children had mild to moderate symptoms; only 17% described them as severe.

### Expanded definitions

Multiple studies have shown that the prevalence of autism spectrum disorders has been increasing since the 1960s. Studies published before 1990 found prevalence rates ranging from two to five children per 10,000 (or one in every 2,000–5,000 children). By the turn of the century, the prevalence rate had increased to 30 to 60 children in every 10,000 (or one in every 167–333 children). The most recent studies have reported prevalence rates ranging from 50 to 90 children in every 10,000 (or one in 111–200 children).

Certainly, expanded diagnostic criteria have helped fuel this trend. The earliest studies focused only on autism, while those conducted since the 1990s have usually broadened the diagnostic criteria to include Asperger's disorder, pervasive developmental disorder, and other types of autism spectrum disorders.

Moreover, parents, clinicians, and teachers have become much more aware of autism spectrum disorders in recent years. Finally, in 2007 — the same year that the National Survey of Children's Health was conducted — the American Academy of Pediatrics issued two reports recommending that pediatricians increase screening efforts to detect developmental disorders as early as possible, in the hopes that early intervention might help.

One of the more interesting findings of the current study, sometimes obscured in the debate over its findings about prevalence, was that nearly half of the parents who said they had a child with an autism spectrum disorder described the symptoms as mild. Nearly 34% said that symptoms were moderate; only about 17% described them as severe. This is an important point to convey to worried parents, who may assume that the rising prevalence rates reflect an epidemic of the most severe types of autism spectrum disorders.

Also surprising was the number of parents who said their children had been diagnosed with an autism spectrum disorder at some point in the past, but no longer had the

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condition. The investigators speculate that this reflects misdiagnoses early in life that were corrected later on, as well as the chance that, in some children, mild symptoms receded, perhaps in response to early intervention efforts.

## Limitations and future questions

The investigators of this most recent analysis acknowledge several limitations of their study, which might undercut some of its findings. Perhaps most important, the survey relied on reports from parents that were not verified through examination of medical or school records. Another possible limitation is that it relied on phone surveys conducted the old-fashioned way, by calling numbers listed in a phone book — at a time when increasing numbers of Americans have given up land lines and rely on cell phones that are not listed in public directories.

The study raises questions about over-diagnosis, but confirms that autism spectrum disorders represent a significant mental health issue.

Johnson CP, et al. "Identification and Evaluation of Children with Autism Spectrum Disorders," *Pediatrics* (Nov. 2007): Vol. 120, No. 5, pp. 1183–215.

Kogan MD, et al. "Prevalence of Parent-Reported Diagnosis of Autism Spectrum Disorder Among Children in the U.S., 2007," *Pediatrics* (Oct. 5, 2009): Electronic publication ahead of print.

Myers SM, et al. "Management of Children with Autism Spectrum Disorders," *Pediatrics* (Nov. 2007): Vol. 120, No. 5, pp. 1162–82.

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