

Prevalence

About 3 in every 1000 US children in large metropolitan areas may have autism or related developmental disorders

Yeargin-Allsopp M, Rice C, Karapurkar T *et al.* Prevalence of autism in a US metropolitan area. *JAMA* 2003 Jan;289:49–55.

QUESTION: What is the prevalence of autism among children in Atlanta, Georgia?

Design

Database and documentary analysis.

Setting

Metropolitan Atlanta, Georgia, USA; 1996.

Participants

The records of all children aged 3–10 years in Atlanta in 1996 were screened (n=289,456; 51% male; 58% white, 38% black).

Main outcome measures

Prevalence of autism stratified by demographic factors, cognitive functioning, previous autism diagnoses, and source of information. Multiple medical and educational records were screened to identify children with autism. Case status was determined by expert review.

Main results

987 children displayed behaviours consistent with autistic disorder, pervasive developmental disorder - not otherwise specified, or Asperger disorder according to the Diagnostic and Statistical Manual of Mental Disorders (4th edition). The prevalence of autism was 3.4 per 1000 (95% CI 3.2 to 3.6). The male to female ratio was 4:1. The prevalence of autism was comparable for black and white children. 40% of children with autism were identified only at educational sources. Schools were the most important means of identifying children with autism who were black, had younger mothers, or had mothers with less than 12 years of education.

Conclusions

The prevalence of autism among children in Atlanta, Georgia is more than 3 in 1000. In this study, the prevalence of autism was higher than that identified in studies conducted in the United States during the 1980s and early 1990s.

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COMMENTARY

Currently, there are few data about the prevalence of autism and related disorders (hereafter autism) in the United States. This study was conducted within the context of ongoing surveillance of autism, recently initiated through the Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP) of the US Centers for Disease Control and Prevention. The authors should be commended for their careful attempt to identify cases within the context of existing records and to document demographic and other characteristics associated with autism. This is the largest cohort reported to date. The authors address several important issues, including whether the prevalence of autism differs by race, and the sources through which cases were most likely to be identified.

As the authors note, the identification of cases is limited by the methods employed. Cases were identified through expert review of abstracted educational and medical or other diagnostic records, pre-selected for either a diagnosis or suspicion of autism, or for special educational services or placement. There was no independent evaluation of possible cases, nor any validation of cases included or excluded (ie children whose records implicated other, non-autistic disorders or problems). The majority of identified cases had been previously diagnosed with autism (62%), or autism had been suspected (19%). It is therefore unsurprising that the prevalence estimate is lower than that reported in recent studies using independent and standardised methods of diagnosis. For instance, Chakrabarti and Fombonne reported prevalence of 6 to 7 per 1000.¹

The data reported by Yeargin-Allsopp *et al* might be more accurately viewed as representing current diagnostic and educational service rates for autism. As would be expected based on this view, the data suggest that rates are lower in younger children, some of whom have yet to be diagnosed, and in older children, who may have been diagnosed using a more restrictive definition of autism.

Evidence of cognitive impairment in the majority (68%) of identified cases suggests that diagnostic and service rates are not currently capturing the relatively large, more cognitively capable subgroup with autism. Another potentially important finding is the less frequent use of medical and diagnostic services by black families and less educated mothers. This raises concern about the possibility of differential access to appropriate services. It might also be important to assess whether the mean age at diagnosis (3.9 years) changes over time, particularly given evidence of the effectiveness of early autism-specific intervention.² MADDSP provides a rich population-based database on autism that appears particularly well suited to addressing these and related diagnostic and service issues.

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- 1 Chakrabarti S, Fombonne E. Pervasive developmental disorders. *JAMA* 2001; **285**: 3093–9.
- 2 Rogers SJ. Empirically supported comprehensive treatments for young children with autism. *J Clin Child Psychology* 1998; **27**: 168–179.