The First National Prevalence of Autism Spectrum Disorder in China

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Autism spectrum disorder (ASD) is a complex developmental disability characterized by impaired social interaction and communication, restricted interests, and stereotypical behaviors [1, 2]. In addition to these core diagnostic features, children with ASD frequently present with a host of associated behavioral issues, such as intellectual disability and epilepsy, as well as feeding and sleep problems. The prevalence of ASD in the United States is about 1/59, with a significantly higher proportion in males [3]. Therefore, ASD is no longer a rare disorder.

An estimate of national or local ASD prevalence rates is critical for governments to determine the financial and health services provided to support ASD patients and their families. Moreover, it also helps to identify geographical and environmental risk factors in ASD [4, 5]. The prevalence of ASD in different countries or areas varies from 0.019% to 1.16% [6–12]. These variations mostly come from methodological differences in the case definition and case-finding procedures [13, 14]. So far, the national prevalence of ASD in China is still not available. Several small-scale studies have estimated the prevalence of ASD in particular regions in China [15–18]. For example, an ASD assessment performed in 2014 in toddlers (3.8–4.8 years of age) who attended mainstream kindergarten in Shenzhen estimated the ASD prevalence at 2.62% [16]. In 2015, another evaluation in children aged 6 to 11 years from two mainstream schools in Beijing estimated the prevalence at 1.19% [15]. The sample size

and catchment area may also affect prevalence estimation [19]. In the current work by Zhou *et al.*, the first national prevalence of ASD in Chinese children was estimated at 0.70%, close to those in western countries.

The prevalence of ASD estimated by Zhou *et al.* is of considerable reliability for several reasons. First, they used a total of 125,806 samples, which is much larger than other ASD prevalence studies conducted in China. Second, they chose children aged 6–12 years from eight main cities in China. The multicenter epidemiological study largely reduced the effects of catchment areas, ensured a high participation rate, and enhanced maneuverability. Third, this study's sampling strategy was based on households and used the most comprehensive registration system. Compared with the sampling framework of a school population, the sampling scheme used in this study ensured the maximal coverage of the target population. Finally, this study used a combination of tools, including MC-ASRS (Modified Chinese Autism Spectrum Rating Scale) for screening, DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) for diagnosis, and ADOS (Autism Diagnostic Observation Schedule) and ADI-R (Autism Diagnostic Interview-Revised) for in-depth diagnostic evaluation. Taken together, these significant strengths in design and execution enhanced the accuracy of ASD prevalence.

The study by Zhou *et al.* has estimated a true national-wide prevalence of ASD in China. The last decade has witnessed a substantial increase in ASD prevalence, which necessitates growth in the availability of relevant services. Continual monitoring of the national-wide prevalence of ASD will be essential for the proper adjustment of service inputs in the future.

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