

# Levels of autism in China similar to the West, joint Chinese-UK study shows

March 20 2019

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The first large-scale study of autism in China has revealed that around one in a hundred people in the country has an autism spectrum condition—the same figure as found in the West.

The research was carried out by an international team of researchers from the University of Cambridge, UK, and the China Disabled Persons' Federation and Chinese University of Hong Kong. It is the result of an international partnership launched in 2013.

Autism spectrum conditions—which include autism and Asperger's syndrome—are characterised by impairments in social interaction and communication, alongside the presence of unusually repetitive behaviour and narrow interests, difficulties adjusting to unexpected change, and sensory hyper-sensitivity.

Autism was first described in Western cultures, and only later recognised in Asian countries. Around one in 100 school age children in the UK is autistic, but autism prevalence in China has been reported to be lower than in the West. The reasons for this difference are that most studies in China have only included the special school population, overlooking the mainstream school population; and that most studies in China have not used validated and reliable screening and diagnostic methods.

"Understanding the prevalence of autism is important because of its relevance to planning services to support those living with the condition, as well as their families," said Professor Carol Brayne from the

Cambridge Institute of Public Health.

Professor Simon Baron-Cohen, Director of the Autism Research Centre in Cambridge (ARC) added: "We need to study autism outside Western populations, since most of the research to date has only been carried out in the West. This collaboration with colleagues in China is so valuable to help us understand what is universal and what is culture-specific in autism research."

To address the gap in understanding autism in China, the researchers tested the total autism prevalence in mainstream and special schools in Jilin City, and mainstream school autism prevalence in Jiamusi and Shenzhen cities. They screened children aged 6 to 10 years old in the three cities using the Childhood Autism Screening Test (or CAST), a 37-item questionnaire, completed by parents, and developed and validated by the Cambridge team. The questionnaire gives a score of 0 to 31, and children scoring 15 or above were then given a clinical assessment. The results are published in the journal *Molecular Autism*.

In Jilin City, from a total population of 7,258, the team identified 77 cases of autism, equating to a prevalence of 108 per 10,000, very similar to that found in the West.

In Shenzhen and Jiamusi cities, only data for children in mainstream education was available; in Shenzhen City, 42 out of every 10,000 children in mainstream education had autism, and in Jiamusi City this figure was 19 per 10,000. In all three cities, the researchers identified new cases of autism in mainstream schools, confirming that there is under-diagnosis of autism in China.

"Contrary to previous studies, we have shown that the prevalence of autism spectrum conditions in China is in line with that found in the West," said Dr. Sophia Xiang Sun, who conducted this study as part of

her Ph.D. at Cambridge University and who is now based in the Star Kay Bridge Research Centre for Children with Autism in Xiamen, China.

Professor Patrick Leung, from the Chinese University of Hong Kong, said: "Previous research into the autism spectrum in China has mainly focused on the most severe subtype, childhood autism. We have been able to use a standardised screening methodology, allowing us to compare the results with Western countries to show that autism occurs broadly at the same rate, irrespective of culture."

Dr. Carrie Allison, from the Cambridge Autism Research Centre, commented: "Completing this study with colleagues in China has been nothing short of remarkable. It has involved translating Western autism screening instruments into Chinese, training Chinese clinicians in [autism](#) diagnosis, and working with national Chinese agencies, screening in three Chinese cities."

Professor Fiona Matthews, the statistician on the Cambridge team and now based in Newcastle University, noted: "A strength of this study is the near universal response rate that is possible in China, which we rarely achieve in the West, making the epidemiology far more representative."

**More information:** Xiang Sun et al, Autism prevalence in China is comparable to Western prevalence, *Molecular Autism* (2019). [DOI: 10.1186/s13229-018-0246-0](https://doi.org/10.1186/s13229-018-0246-0)

Provided by University of Cambridge

Citation: Levels of autism in China similar to the West, joint Chinese-UK study shows (2019, March 20) retrieved 5 May 2024 from <https://medicalxpress.com/news/2019-03-autism-china-similar-west-joint.html>

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