

# Study of first-graders shows fetal alcohol spectrum disorders prevalent in US communities

February 6 2018

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A study of more than 6,000 first-graders across four U.S. communities has found that a significant number of the children have fetal alcohol spectrum disorders (FASD), with conservative rates ranging from 1 to 5 percent in community samples. The new findings represent more accurate prevalence estimates of FASD among general U.S. communities than prior research. Previous FASD estimates were based on smaller study populations and did not reflect the overall U.S. population. The study was funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA), part of the National Institutes of Health.

FASD is an umbrella term for a range of health effects caused by prenatal alcohol exposure. Individuals with FASD may experience growth deficiencies, facial abnormalities, and organ damage, including to the brain. The effects of [prenatal alcohol exposure](#) on the brain can result in a range of neurobiological deficits that contribute to physical, cognitive, behavioral, and social challenges throughout life.

"Prenatal alcohol exposure is a leading preventable cause of developmental disabilities worldwide," said NIAAA Director George F. Koob, Ph.D. "Estimating the prevalence of FASD in the United States has been complex due to the challenges in identifying prenatally exposed children. The findings of this study confirm that FASD is a significant public health problem, and strategies to expand screening, diagnosis,

prevention, and treatment are needed to address it."

The study was conducted by the Collaboration on Fetal Alcohol Spectrum Disorders Prevalence (CoFASP) consortium, which studies the prevalence of FASD among U.S. school children. Before the study began, consortium members established standardized classification criteria for FASD based on facial features, growth, and neurodevelopmental performance. Co-led by Philip May, Ph.D., of the University of North Carolina Nutrition Research Institute, Kannapolis, and Christina Chambers, Ph.D., of the University of California San Diego School of Medicine, the findings are reported online in the *Journal of the American Medical Association*.

Researchers collected data between 2010 and 2016 on 6,639 children in four communities in the Midwest, Rocky Mountain, Southeast and Pacific Southwest, sites that were selected to be more reflective of U.S. community populations than previous studies. At each site, first-graders in public and private schools were recruited across two academic years and evaluated based on the FASD criteria. Prenatal [alcohol](#) exposure was assessed by interviewing mothers or other close relatives.

The researchers found that the prevalence estimates for FASD among the selected sites ranged from 1.1 to 5 percent. This was the most conservative estimate and assumed that no additional cases of FASD would be found in first-graders who did not participate in the study. Using a "weighted prevalence" approach that assumed that the rate of FASD in children who were evaluated would be the same in all eligible first-grade children in each community, the estimated prevalence of FASD was higher—ranging from 3.1 to 9.8 percent among the study sites. Of the 222 children diagnosed with FASD in the study, only two had been previously diagnosed with FASD, although many parents and guardians were aware of the children's learning and behavioral challenges. This finding suggests that children with FASD often go

undiagnosed or misdiagnosed.

"We believe our study is the first to use school-based assessments, a common methodology and classification system, and expert in-person evaluations for the full range of FASD on many [children](#) from communities across the United States," said May.

"This comprehensive approach should reflect estimates that more closely resemble the prevalence of FASD in the United States, and further highlights the public health burden of FASD," added Chambers.

**More information:** May, P.A., et al. Prevalence of Fetal Alcohol Spectrum Disorders in 4 US Communities. *JAMA*. Online February 6, 2018. [jamanetwork.com/journals/jama/ ... 1001/jama.2017.21896](https://jamanetwork.com/journals/jama/.../1001/jama.2017.21896)

Provided by National Institutes of Health

Citation: Study of first-graders shows fetal alcohol spectrum disorders prevalent in US communities (2018, February 6) retrieved 28 April 2024 from <https://medicalxpress.com/news/2018-02-first-graders-fetal-alcohol-spectrum-disorders.html>

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