

# Long-term effects of childhood asthma influenced by socioeconomic status

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Children with asthma use inhalers to relieve some of their symptoms, which include coughing, wheezing, chest tightness and shortness of breath. Credit: Tradimus / Wikimedia commons / [CC BY-SA 3.0](#)

According to the Centers for Disease Control and Prevention (CDC), approximately 6 percent of children younger than five have been diagnosed with asthma, the fastest-growing and most common chronic illness affecting children in the United States. Studies have shown that asthma is associated with attention and behavioral issues in children, yet

little existing research examines how socioeconomic status may influence the ultimate effects of these difficulties. Now, an MU researcher has found that the overall outcomes for children with asthma are influenced by socioeconomic inequalities.

"As with all chronic illnesses, there is a biological mechanism behind asthma, but asthmatic [children](#)'s prognoses depend heavily on parental management, and successful management often relies on social circumstances," said Jen-Hao Chen, an assistant professor in the MU School of Health Professions. "My research indicated that there is a profound socioeconomic difference in these outcomes, with the poor consequences of asthma concentrated among children from economically disadvantaged backgrounds."

Chen's study used data from the Early Childhood Longitudinal Study-Birth Cohort, which includes 5,750 children in the United States and documents changes in their behavioral skills during important developmental periods in early childhood. Chen looked at behavioral measures affected by asthma, including attention levels, social skills and aggressiveness, and found that—although all asthmatic children are at risk for difficulties in these areas—the negative consequences disappeared for children who had never experienced poverty and had highly educated parents.

"Family environment, which is affected by factors including [parental stress](#) and [positive parenting](#) behaviors, plays a huge role in the effective management of asthma," Chen said. "Poverty results in great additional strain for parents who are trying to manage an already stressful illness, often with inadequate access to resources. No matter what indicators were used to define poverty, children of lower [socioeconomic status](#) consistently performed worse than other children on behavioral development measures, and these differences already were apparent by very critical stages of early development."

Chen said that in order to help parents provide the best care for their asthmatic children, programs should offer information on positive parenting techniques and include assistance with managing parental stress and depression, which are common in individuals struggling with poverty.

"All children, those who have asthma and those who do not, live in a stratified society," Chen said. "Many interventions are designed to help manage physical asthmatic symptoms, but rarely do they address the social and behavioral consequences of asthma. To effectively prepare [asthmatic children](#) for later successes in life, existing programs also must treat the non-medical consequences of [asthma](#) through social, emotional and educational supports for families from disadvantaged socioeconomic backgrounds."

**More information:** "Asthma and child behavioral skills: Does family socioeconomic status matter?" *Social Science and Medicine*, 2014.

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