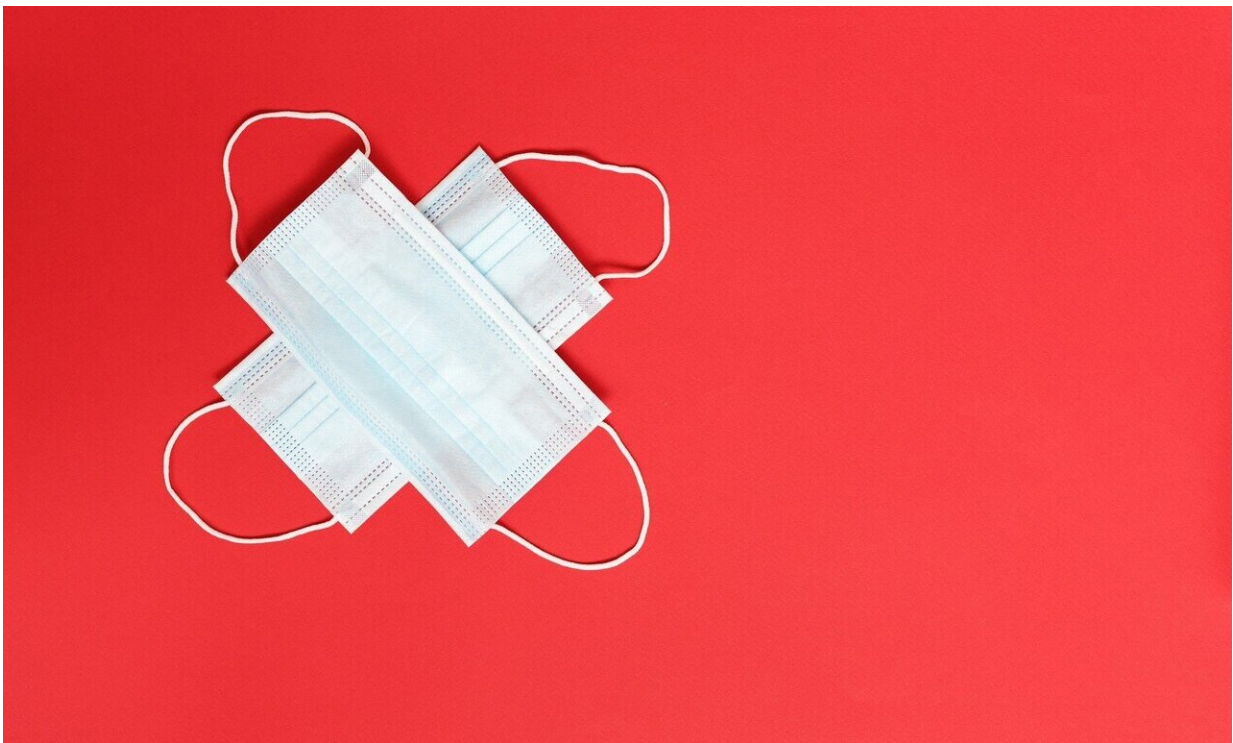


# Study finds COVID-19 pandemic led to some, but not many, developmental milestone delays in infants and young children

April 22 2024

---



Credit: Pixabay/CC0 Public Domain

Infants and children 5 years old and younger experienced only "modest" delays in developmental milestones due to the COVID-19 pandemic disruptions and restrictions, a study led by Johns Hopkins Children's

Center finds.

In a report on the study [published](#) in *JAMA Pediatrics*, investigators evaluated possible links between pandemic-related disruptions to everyday life and changes in developmental milestone screening scores.

The data were from the Comprehensive Health and Decision Information System (CHADIS), a web-based screening platform caregivers use to complete surveys about their children's development. It is used by more than 5,000 pediatric practices in 48 U.S. states.

Using the Ages and Stages Questionnaire-3 (ASQ-3), a caregiver-completed measure of child development routinely collected as part of pediatric care, researchers say they found only small decreases in communication, problem-solving, and personal-social skills and no changes in fine or gross motor skills among children in the study.

"We found, overall, that while there are some changes, the sky is not falling, and that is a really important and reassuring finding," says Sara Johnson, Ph.D., M.P.H., corresponding author of the study, director of the Rales Center for the Integration of Health and Education at Johns Hopkins Children's Center, and Blanket Fort Foundation professor of pediatrics at the Johns Hopkins University School of Medicine.

Numerous studies, the researchers say, found the COVID-19 pandemic and related lockdown restrictions disrupted the lives of many people, including families with young children. Everyday life and [daily routines](#) were upended as schools and child care centers closed, many people began working from home, and social contacts diminished. Many experienced increased stress, anxiety, and social isolation due to these changes and activity cancellations.

Research has also shown the pandemic is linked to lower child health-

related [quality of life](#), increased [mental health concerns](#), decreased sleep and increased risk of [obesity](#).

However, the impact of the pandemic on [developmental milestones](#) among young children in the U.S. remained unclear, in part because studies designed to address them were done outside the United States or in small samples.

In the new study, Children's Center researchers looked at the developmental milestone status of 50,205 children, ages 0 to 5 years, drawn from a sample of more than half a million children whose parents or caregivers completed the ASQ-3. The ASQ-3 assesses children's developmental milestones in five skill domains: communication, gross motor, fine motor, problem-solving, and personal-social.

Researchers compared the children before and during the pandemic from 2018 to 2022 and found ASQ-3 score decreases in the communication (about 3%), problem-solving (about 2%) and personal-social (about 2%) skill domains. They found no changes in fine or gross motor skill domains.

When looking specifically at infants 0–12 months old, similarly modest effects were observed, and there were only decreases in the communication domain (about 3%) and problem-solving domain (about 2%).

"We thought it was possible infants might experience less impact than the older kids, given that many caregivers may have spent more time at home with their very [young children](#)," says Johnson. "But we saw generally the same things in infants as we did for older kids."

Also, given an increase in parent and caregiver worry and stress, researchers investigated whether parents and caregivers reported more

worries about their child during the pandemic, regardless of milestone achievement, and found worries about their child only increased slightly during the pandemic, compared to before the pandemic.

While the researchers say the findings are reassuring, they add that the implications for children's long-term development remain unclear.

"It is important for us to continue to keep an eye on kids of all ages in terms of development, so we can understand whether these changes have longer-term implications for children or if new challenges emerge as children age," says Johnson.

Johnson and her team of investigators believe their study findings will aid in planning for future public health crises and also demonstrate the importance of shoring up the clinical infrastructure of overburdened health systems in the U.S., particularly developmental-behavioral pediatricians, who are specially trained to evaluate and treat developmental concerns. These resources will be essential to respond to the developmental needs of children now and in the future.

The investigators cautioned that the study did not factor in some variables that might have changed the findings, such as prenatal substance abuse and other health conditions. In addition, infants born preterm were excluded from the study, which may underestimate developmental impacts for this subgroup.

Researchers also cannot rule out "selection bias" among [health care providers](#) participating in CHADIS, and there was no comparison group of children who weren't exposed to COVID-19 [pandemic](#) restrictions.

**More information:** Sara B. Johnson et al, Developmental Milestone

Attainment in US Children Before and During the COVID-19  
Pandemic, *JAMA Pediatrics* (2024). [DOI:  
10.1001/jamapediatrics.2024.0683](https://doi.org/10.1001/jamapediatrics.2024.0683)

Provided by Johns Hopkins University School of Medicine

Citation: Study finds COVID-19 pandemic led to some, but not many, developmental milestone delays in infants and young children (2024, April 22) retrieved 8 May 2024 from <https://medicalxpress.com/news/2024-04-covid-pandemic-developmental-milestone-delays.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.