



ECHO

Environmental influences
on Child Health Outcomes

A program supported by the NIH

Study Summary

COVID-19 pandemic altered relationship between neighborhood environment and child well-being, ECHO study suggests

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Who sponsored this study?

The Environmental influences on Child Health Outcomes (ECHO) Program, Office of the Director, National Institutes of Health supported this research.

Why was this study needed?

Understanding how neighborhood characteristics affect child well-being is important. Prior studies have found an association between neighborhood characteristics and children's health and development. During the COVID-19 pandemic, stay-at-home policies limited people's interactions with their neighborhood environment. However, researchers have not considered how the pandemic might have changed these effects. ECHO researchers wanted to address this gap by exploring how the pandemic, as a natural experiment, may have changed the relationship between neighborhood characteristics and child well-being. Additionally, since COVID-19 has impacted racial and ethnic groups differently, this study examined these differences to identify potential disparities.

What were the study results?

The study found that the relationship between neighborhood characteristics and child well-being changed during the COVID-19 pandemic. It also revealed racial disparities, showing that the pandemic's impact on child well-being varied across different racial and ethnic groups.

For non-Hispanic White children, the number of people who lived in their homes and the diversity of their neighborhood were linked to lower well-being. For children of other races and ethnicities, living in areas with higher percentages of Hispanic residents and more adults working as essential workers were associated with lower well-being.

What was the study's impact?

These findings highlight how neighborhood characteristics, the pandemic, and child well-being interact, emphasizing the importance of addressing disparities during unique events like the pandemic.

Who was involved?

The study involved 1,039 children, mostly between the ages of 11 and 19, from more than 10 ECHO Cohort Study Sites across the U.S.

What happened during the study?

Researchers conducted an analysis of children who completed a well-being questionnaire called the Patient-Reported Outcomes Measurement Information System (PROMIS) before (2019 to March 1, 2020) and during (March 1, 2020 to August 31, 2021) the pandemic. The PROMIS survey measures children's mental and physical health and peer and family relationships.

The researchers then matched U.S. Census tract data with a child's residential address to examine the neighborhood characteristics. They looked at factors including the race, education, and occupation composition of residents, as well as house capacities and property features. They analyzed how these factors were associated with child well-being, considering the impacts of the pandemic, as well as differences across child racial groups.

Note: Results reported here are for a single study. Other or future studies may provide new information or different results. You should not make changes to your health without first consulting your healthcare professional.

What happens next?

Future research could explore how specific aspects of neighborhoods affect children's well-being, especially when these factors interact.

Where can I learn more?

Access the full journal article, titled "Associations between neighborhood characteristics and child well-being before and during the COVID-19 pandemic: A repeated cross-sectional study in the Environmental influences on Child Health Outcomes (ECHO) program," in [Environmental Research](#).

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