



ECHO

Environmental influences
on Child Health Outcomes

A program supported by the NIH

Study Summary

How has the COVID-19 pandemic affected children's health behaviors?

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Who sponsored this study?

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

Why was this study needed?

For many children, public health measures to mitigate the spread of the COVID-19 pandemic disrupted their daily routines, and prevented them from using community resources, such as parks and organized sports. During the first few months of the pandemic, there were changes in children's health behaviors—such as diet, screen time, physical activity, and sleep habits. However, there are limited data on what happened to children's health behaviors after the earliest, most restrictive lockdown period. This is an important topic because children's health behaviors have been linked to their overall mental and physical health, academic achievement, and quality of life.

Who was involved?

The study included 347 children between the ages of 4 to 12 years and their caregivers recruited from ECHO cohorts in California, Colorado, North Dakota, and New Hampshire. Of those participants, 47% percent were female, and 62% were non-Hispanic White.

What happened during the study?

ECHO researchers collected data on children's diet, physical activity, screen time, and sleep habits before and during the pandemic. The researchers also surveyed caregivers on how they thought their children's health behaviors had changed during the pandemic. This study also explored how sociodemographic factors affected children's health behaviors to identify children who are more likely to experience less recommended changes in behaviors.

What were the study results?

The study found that overall children's screen time increased significantly during the pandemic with Hispanic children and non-Hispanic Black children having the most noticeable increase in screen time. The study didn't find any significant increase in the amounts of sugary drinks and unhealthy snack foods children consumed during the pandemic, but it did find a more noticeable increase among Hispanic children and older children. The amount of time children spent asleep increased but only among children whose sleep time was below the recommended range before the pandemic.

Footnote: 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.

Impact

This study shows how the disruptions caused by the COVID-19 pandemic affected children's daily lives. The results of this study suggest that the pandemic may have worsened sociodemographic disparities for some child health behaviors, particularly in relation to the amount of time children spent looking at screens. This research suggests that families may need more support to re-establish healthy routines and reduce the negative effects of the pandemic on their children's health behaviors.

What happens next?

This research may help us identify ways to support families with children in future public health emergencies. The ECHO Program is currently working to study changes in other related health behaviors. This includes changes in how well children follow national dietary guidelines, use of social media, and bedtimes/wake-up times.

Where can I learn more?

Access the full journal article, titled "Health Behavior Changes during the COVID-19 Pandemic: A Longitudinal Analysis among Children," in the [International Journal of Environmental Research and Public Health](#).

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