

ABCD Study Newsletter



Highlights From the 2023-2024 ABCD Study Webinars

The ABCD Study® is the largest long-term study of brain development and child health in the United States. Study participants have enabled researchers to learn about associations between youth experiences and health and behavior. In 2023-2024, scientists discussed some of these findings in webinars about screen use, sleep, and the COVID-19 pandemic.

Watch the webinars!

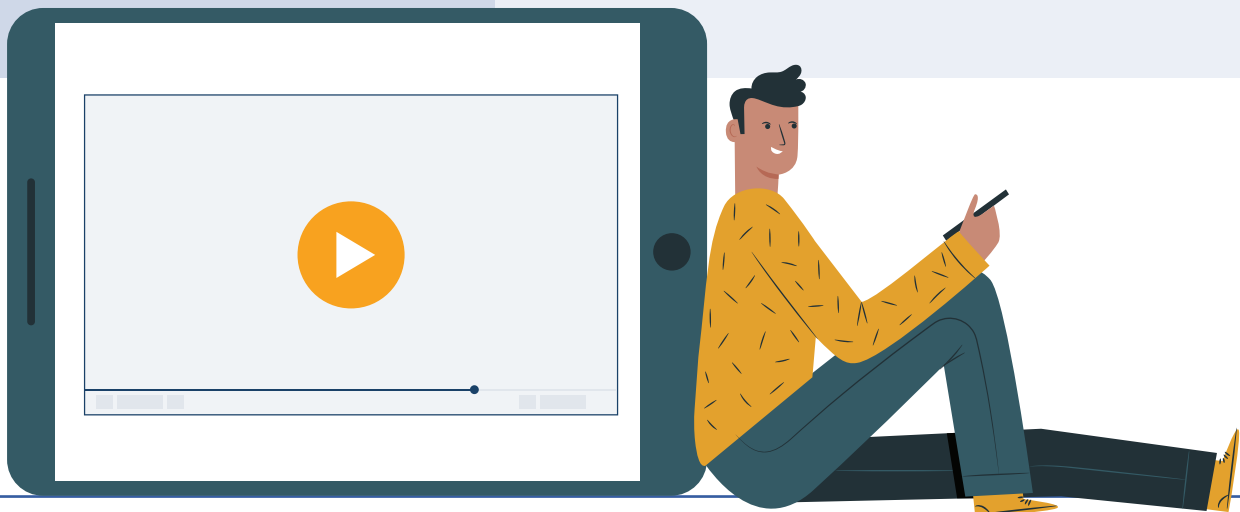
Each webinar included three 10-minute talks and a Q&A session.

Scan the code or click below to view the webinars.



abcdstudy.org/infographics

- “The Pros and Cons of Adolescent Screen Use,” May 4, 2023
- “ZZZs and Teens: The Science of Adolescent Sleep in the ABCD Study,” November 8, 2023
- “Youth Experiences During the COVID-19 Pandemic,” April 2, 2024



Inside This Newsletter:

The webinar presenters answer your questions about their research.

Youth Screen Use

What has the ABCD Study found about how youth's screen use affects their health?

DR. JASON NAGATA: Screen use, including social media activity, can promote healthy behaviors but also may have some negative impacts. Research has suggested that using social media may also be linked with body image and eating disorders.

If social media has negative associations, should we restrict how much time youth spend on it?

DR. ORSOLYA KISS: It can be very challenging to restrict teenagers' screen use. But you can focus both on the amount of time they're allowed to use screens and the types of content they see.



Meet the Scientists



Dr. Bader Chaarani
Assistant Professor
University of Vermont

Dr. Bader Chaarani

Dr. Chaarani is interested in understanding how screen use relates to how youth think and behave. He also studies substance use and mental health problems.



Dr. Orsolya Kiss
Postdoctoral Fellow
SRI International

Dr. Orsolya Kiss

Dr. Kiss is interested in screen use and sleep difficulties in youth. She focuses on large datasets relating to mental health and brain development.



Dr. Jason Nagata
Associate Professor
University of California,
San Francisco

Dr. Jason Nagata

Dr. Nagata focuses on youth and their screen use, eating behaviors, alcohol use, cardiovascular disease, HIV, and sexual minority health.

How was screen use associated with mental health?

NAGATA: During the pandemic, youth who spent more time on screens were more likely to have:

- Worse mental health
- Greater perceived stress
- Less social support
- Fewer coping behaviors

Do all forms of screen use, like watching videos and playing video games, have the same effect on youth?

DR. BADER CHAARANI: Unlike watching TV or videos, which are **passive** types of screen use, playing video games is an **active** type of screen use. Active use is associated with some benefits.

Youth who played video games 1-3 hours a day (compared to those who played for longer times or didn't play at all) scored higher in:

- Working memory
- Attention
- Vision
- Faster hand-movement responses



Do you see more mental health issues arise when screens, particularly phones, are taken away?

NAGATA: Yes. Without their phones, 11% of youth felt distressed. Some people get anxious if their phone is off. However, balance is key. It may be necessary at times to have the phone on, but stepping away can be just as important.



Next page: Read about youth and sleep

The Importance of Sleep Health for Youth

What are the impacts of screen use on sleep quality?

DR. FIONA BAKER: Using devices before going to bed can have a negative impact on how well someone sleeps, also called their sleep quality. It's important to have a routine. For example, using no screens for 30 minutes before bed teaches your body that it's bedtime.

DR. BRANT HASLER: Youth who spent more time on social media or playing games on a screen had a delayed bedtime. It also took them longer to fall asleep, meaning they got less sleep. This ultimately affects their mood.

Meet the Scientists



Dr. Fiona Baker
Director of the Center for Health Sciences and Human Sleep Research Program
SRI International

Dr. Fiona Baker

Dr. Baker's research focuses on the interplay between sleep and human health. She is particularly interested in associations among adolescent brain development, sleep, and behaviors.



Dr. Brant Hasler
Associate Professor of Psychiatry, Psychology, and Clinical and Translational Science
University of Pittsburgh Medical Center

Dr. Brant Hasler

Dr. Hasler's research focuses on sleep and circadian rhythms. He is also interested in mood disorders and substance use.



Dr. Amal Isaiah
Associate Professor of Otorhinolaryngology - Head and Neck Surgery
University of Maryland Medical Center

Dr. Amal Isaiah

Dr. Isaiah's research focuses on sleep and snoring in youth. He is also interested in the relationship between sleep health and brain development.

How can parents support youth's sleep health and social needs?

HASLER: I think parents should try to find a balance and link sleep to things that youth care about. For example, good sleep may help teens be more successful in sports or at school.

BAKER: Yes, and getting different amounts of sleep from night to night is linked with more symptoms like depression and anxiety.



SLEEP, LEARNING, AND MEMORY

What role does sleep play in learning and memory?

BAKER: Getting a good night's sleep has a lot of benefits. For example, during deep sleep, the brain processes your memories—making them stronger.

DR. AMAL ISAIAH: That's right, long-term and short-term memories get much more solidified when we have a good night's sleep.

Why do youth snore? What does it mean?

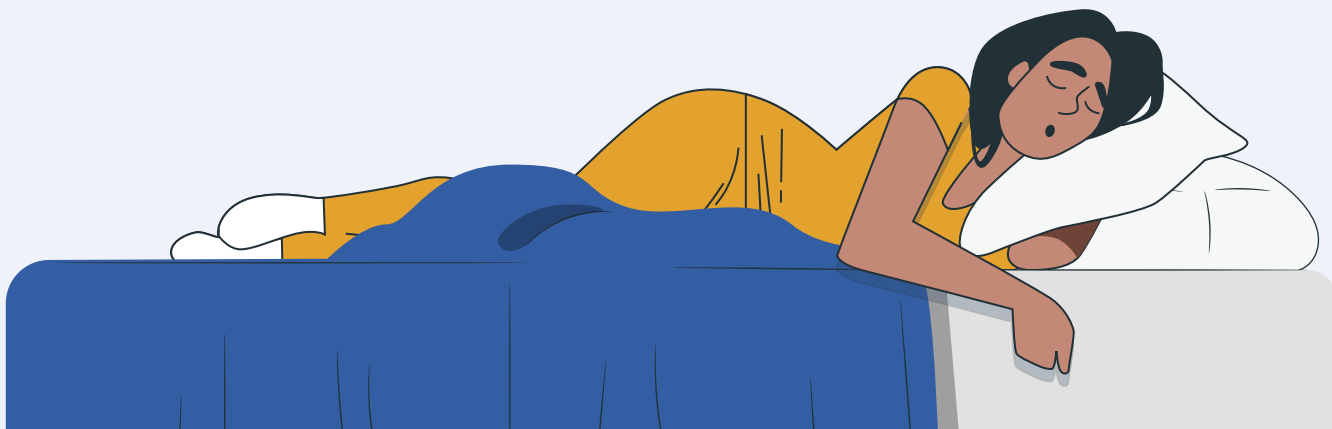
ISAIAH: One-third of youth had some amount of snoring. We found that 5% of youth had habitual snoring (they snored more than three times a week). Youth who demonstrated habitual snoring also had trouble paying attention.

When you snore, your brain appears to not be getting enough oxygen, especially in the prefrontal cortex (PFC), the part of the brain behind the forehead. The PFC is often described as the brain's control center, helping make decisions, solve problems, and manage social interactions.

Habitual snoring decreases as youth approach puberty. As their bodies develop and mature, we think their airways may get larger.

Next page: Read about the impact of COVID-19

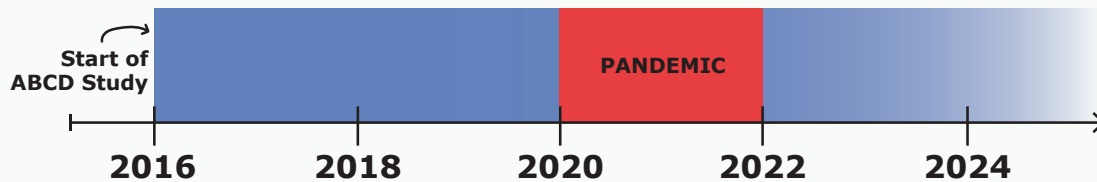
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How the COVID-19 Pandemic Affected Youth Behaviors and Mental Health

IMPACT OF THE PANDEMIC

How has the ABCD Study explored the impact of COVID-19?



DR. MARYBEL GONZALEZ: We looked at adolescent health before and during the pandemic. We'll continue to measure the impact of COVID-19 on participants' future health and behaviors.

DR. RAN BARZILAY: We found that most adolescents were resilient during the pandemic, and that they have remained resilient since then.

Meet the Scientists



Dr. Ran Barzilay

Assistant Professor of Psychiatry
Attending Child and
Adolescent Psychiatrist
Children's Hospital of
Philadelphia Penn Medicine

Dr. Ran Barzilay

Dr. Barzilay is interested in understanding youth brain development and behavior. He is focused on resilience and risk, especially as they relate to suicide risk.



Dr. Marybel Gonzalez

Assistant Professor of Psychiatry
and Behavioral Health
The Ohio State University College
of Medicine

Dr. Marybel Gonzalez

Dr. Gonzalez heads the SUN-E (Substance Use and Neurocognition Equity) Lab. She studies responsible use of information, like race and substance use, for understanding youth mental health and brain function.



SCHOOL

Did students who attended school in person have different attitudes about school, compared to students who learned remotely?

GONZALEZ: Between October 2020 and February 2021, students who went to school in person had a more positive attitude about school than remote learners did. Remote learners' attitudes about school improved if their parents or caregivers were more involved in their learning.

Did students feel the same about all subjects?

GONZALEZ: Remote-learning students had more negative feelings toward math and reading compared to in-person students.

MENTAL HEALTH

During the pandemic, many families experienced a loss of income. Did this have any impacts on youth's mental health?

BARZILAY: Youth were more likely to be depressed when they **thought** their household had a large financial loss. Interestingly, this was influenced by their perception of financial strain, not just their actual household financial situation.

Depression can lead to suicide. Did COVID-19 influence youth suicidal tendencies?

BARZILAY: There isn't any data linking COVID-19 to an increase in youth suicide. However, during the pandemic, there was an increase in depressive symptoms, which are a risk factor for suicide.

What can help improve youth's mental health?

GONZALEZ: Whenever possible, eating healthy food and getting enough sleep may improve mental health. There are resources available to help improve mental health.

SUBSTANCE USE

Did youth substance use change during the pandemic?

GONZALEZ: Substance use decreased during the pandemic, and we're seeing use remain lower when compared to pre-pandemic times.



Mental Health Resources:

- [I'm So Stressed Out! Infographic](#)
- [Improving Access to Children's Mental Health Care](#)
- [Supporting the Mental Health Needs of All Students With American Rescue Plan Funds \(PDF\)](#)



Next page: Learn how to contact the scientists and about our winter webinar



We Want to Hear From You!

Want to ask one of the scientists a question? Or do you have an idea for a future webinar? Please let us know! Email adolescentbrain@mail.nih.gov. Stay tuned for future webinars.



These studies included data from participants when they were 9-12 years old. These findings don't show if or how one thing causes another and if these relationships differ between population subgroups. Many things could affect these findings, which may also change over time. More research is needed to know for sure.

SAVE THE DATE FOR OUR NEXT WEBINAR:

“Adversity and Resilience: Key Findings on Adolescent Health From the ABCD Study®”

December 2nd at:

- 5:00 to 6:00 p.m. ET (2:00 to 3:00 p.m. PT)
- 8:00 to 9:00 p.m. ET (5:00 to 6:00 p.m. PT)

Two sessions are offered to accommodate time zones. You only need to attend one session. Spanish interpretation is available at both sessions.



Adolescent Brain Cognitive Development®
Teen Brains. Today's Science. Brighter Future.

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For more information about the ABCD Study, please visit: [ABCDStudy.org](https://www.ABCDStudy.org)

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*This project is supported by grants from the National Institutes of Health (NIH), but the content of this newsletter does not necessarily reflect the views of NIH. References or links in this newsletter to an external website or any specific commercial products, processes, services, manufacturers, or companies do not constitute endorsement or recommendation by the NIH or any of the [ABCD Study Sites](#).