

# How technology use affects at-risk adolescents

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More use of technology is linked to later increases in attention, behavior and self-regulation problems for adolescents already at risk for mental health issues, a new study from Duke University finds.

"Also, on days at-risk adolescents use technology more, they experience more conduct problems and higher ADHD symptoms compared to days they use technology less," said Madeleine J. George, a Duke Ph.D. candidate and the lead author of the study.

However, the study also found that using technology was linked to some positive outcomes: On days when adolescents spent more time using digital technologies they were less likely to report symptoms of depression and anxiety.

The research, published May 3 in a special issue of *Child Development*, looks at associations between adolescents' [mental health](#) symptoms and how much time they spent each day texting, using social media and using the Internet.

For the study, 151 [young adolescents](#) completed surveys on smartphones about their daily digital technology use. They were surveyed three times a day for a month and were assessed for mental [health](#) symptoms 18 months later. The youth participating were between 11 and 15 years old, were of a lower socioeconomic status and were at a heightened risk for mental health problems.

The adolescents spent an average of 2.3 hours a day using [digital technologies](#). More than an hour of that time was spent texting, with the adolescents sending an average of 41 texts a day.

The researchers found that on days when adolescents used their devices more—both when they exceeded their own normal use and when they exceeded average use by their peers—they were more likely to experience conduct problems such as lying, fighting and other behavioral problems.

In addition, on days when adolescents used digital devices more, they

had difficulty paying attention and exhibited attention deficit-hyperactivity disorder symptoms.

The study also found that young adolescents who spent more time online experienced increases in conduct problems and problems with self-regulation—the ability to control one's behavior and emotions—18 months later.

It's unclear whether high levels of technology use were simply a marker of elevated same-day mental health symptoms or if the use of technology exacerbated existing symptoms, said Candice Odgers, the senior author of the study and a professor in Duke's Sanford School of Public Policy.

On the positive side, the researchers found evidence that digital technology use may be helpful to adolescents experiencing depression and anxiety. More time spent texting was associated with fewer same-day symptoms of depression and anxiety.

"This finding makes sense when you think about how kids are commonly using devices to connect with their peers and social networks," said Odgers, a faculty fellow at the Duke Center for Child and Family Policy.

The findings suggest contemporary youth may be using digital technology to connect in positive ways versus isolating themselves, the authors said. In the past, some research found that teenagers using digital technology were socially isolated. But at that time, only a small minority of youth were frequently online.

Odgers noted that the adolescents in the study were already at an increased risk for mental health problems regardless of digital device use. It's therefore unclear if the findings would apply to all adolescents. Because this was a correlational study, it is possible factors other than technology use could have caused the increase in [mental health problems](#)

As rates of [adolescent technology](#) use continue to climb, more work is needed to investigate its effects, the researchers say. Odgers and George are now conducting a large study of more than 2,000 N.C. adolescents to determine how and why high digital device use predicts future problems among some adolescents. The study also looks at whether being constantly connected during adolescence could provide opportunities to improve mental health.

**More information:** "Concurrent and Subsequent Associations between Daily Digital Technology Use and High-Risk Adolescents' Mental Health Symptoms," Madeleine J. George, Michael A. Russell, Joy R. Piontak and Candice L. Odgers. *Child Development*, May 3, 2017. [DOI: 10.1111/cdev.12819](#)

Provided by Duke University

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