Data from more than 17,000 teenagers show little evidence of a relationship between screen time and well-being in adolescents. The study, published in Psychological Science, a journal of the Association for Psychological Science, casts doubt on the widely accepted notion that spending time online, gaming, or watching TV, especially before bedtime, can damage young people's mental health.

“Implementing best practice statistical and methodological techniques we found little evidence for substantial negative associations between digital-screen engagement and adolescent well-being,” said Amy Orben, a Researcher at the Oxford Internet Institute (OII) and College Lecturer at the Queen’s College, University of Oxford.

“While psychological science can be a powerful tool for understanding the link between screen use and adolescent well-being, it still routinely fails to supply stakeholders and the public with high-quality, transparent, and objective investigations into growing concerns about digital technologies. Analyzing three different datasets, which include improved measurements of screen time, we found little clear-cut evidence that screen time decreases adolescent well-being, even if the use of digital technology occurs
directly before bedtime,” said Professor Andrew Przybylski, Director of Research at the OII and coauthor on the study.

The full research article is available online.

The research found that adolescents’ total screen time per day had little impact on their mental health, both on weekends and weekdays. It also found that the use of digital screens 2 hours, 1 hour, or 30 minutes before bedtime didn’t have clear associations with decreases in adolescent well-being, even though this is often taken as a fact by media reports and public debates.

Unlike other studies, the Oxford research analyzed data from Ireland, the US, and the UK to support its conclusions. The researchers used a rigorous methodology to gather how much time an adolescent spends on screens per day, including both self-reported measures and time-use diaries. This is important as many studies are based solely on self-reported digital technology use, even though recent work found only one third of participants give accurate accounts of how much time they spend online when asked after the fact.

The researchers were also able to create a comprehensive picture of teens’ well-being, examining measures of psychosocial functioning, depression symptoms, self-esteem, and mood, with data provided by both young people and their caregivers.

Additionally, the final of the three studies conducted was preregistered, meaning that the researchers publicly documented the analyses they would run before they analyzed the data. This prevents hypothesizing after the results are known, a challenge for controversial research topics.

“Because technologies are embedded in our social and professional lives, research concerning digital-screen use and its effects on adolescent well-being is under increasing scrutiny,” said Orben. “To retain influence and trust, robust and transparent research practices will need to become the norm—not the exception. We hope our approach will set a new baseline for new research on the psychological study of technology,” added Przybylski.

The insights come days ahead of the anticipated release of the UK government’s new White Paper on Online Harms, which is expected to set out plans for legislation governing social media companies. This new study builds on previous work by Orben and Przybylski that used novel and transparent statistical approaches to show that technology use has a minuscule influence on adolescent well-being.

The study used data from Ireland, the US, and the UK. In Ireland, it covered 5,363 young people tracked under the Growing Up in Ireland project. In the US, the data covered 709 subjects of a variety of ages compiled by the United States Panel Study of Income Dynamics. And in the UK, the dataset included responses from 11,884 adolescents and their caregivers surveyed as part of the Millennium Cohort Study.

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The analysis code for this study is publicly available and the design and analysis plans were preregistered, all via the Open Science Framework. This article has received the badges for OpenMaterials and Preregistration.