

Problematic smartphone use linked to poorer grades, alcohol misuse and more sexual partners

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A survey of more than 3,400 university students in the U.S. has found that one in five respondents reported problematic smartphone use. Female students were more likely to be affected and problematic smartphone use was associated with lower grade averages, mental health problems and higher numbers of sexual partners.

Smartphones offer the potential of instant, round-the-clock access for making phone calls, playing games, gambling, chatting with friends, using messenger systems, accessing web services (e.g. websites, social networks and pornography), and searching for information. The number of users is rapidly increasing, with some estimates suggesting that there are now more than 2.7 billion users worldwide.

While most people using smartphones find them a helpful and positive part of life, a minority of users develop excessive [smartphone](#) use, meaning that smartphone use has significant negative effects on how people function in life. Previous research has linked excessive smartphone use to mental health issues such as anxiety, depression, post-[traumatic stress disorder](#) (PTSD), attention deficit

hyperactivity disorder (ADHD) and problems with self-esteem.

A collaborative team of researchers from the University of Chicago, University of Cambridge, and the University of Minnesota, developed the Health and Addictive Behaviours Survey to assess mental health and well-being in a large sample of university students. They used the survey to investigate the impact of smartphone use on university students. Just over a third (3,425) of students invited to take the test responded. The results are published today in the *Journal of Behavioral Addictions*.

The self-report survey consisted of 156 questions. Based on their responses, the students were given a score ranging from 10 to 60, with a score of 32 and above being defined as problematic smartphone use. This definition was based on a threshold recommended previously in clinical validation studies using the scale. Typical characteristics of problematic use include: excessive use; trouble concentrating in class or at work due to smartphone use; feeling fretful or impatient without their smartphone; missing work due to smartphone use; and experiencing physical consequences of excessive use, such as light-headedness or blurred vision.

The researchers found that one in five (20%) of respondents reported problematic smartphone use.

Problematic smartphone use was greater among female rather than male students—64% of problematic users were female. Importantly, the researchers found a link between problematic smartphone use and lower grade point averages (academic achievement).

"Although the effect of problematic smartphone use

on grade point averages was relatively small, it's worth noting that even a small negative impact could have a profound effect on an individual's academic achievement and then on their employment opportunities in later life," said Professor Jon Grant from the Department of Psychiatry & Behavioral Neuroscience at the University of Chicago.

While students reporting problematic smartphone use tended to be less sexually active than their peers (70.9% compared to 74%), the proportion of students reporting two or more sexual partners in the past 12 months was significantly higher among problem users: 37.4% of sexually-active problematic smartphone users compared with 27.2% sexually-active students who reported no problem use. The proportion with six or more sexual partners was more than double among sexually-active problematic smartphone users (6.8% compared to 3.0%).

"Smartphones can help connect people and help people feel less isolated, and our findings suggest that they may act as an avenue for sexual contact, whether through sustained partnerships or more casual sex," added Dr. Sam Chamberlain, Wellcome Trust Clinical Fellow and Honorary Consultant Psychiatrist from the Department of Psychiatry at the University of Cambridge and the Cambridge & Peterborough NHS Foundation Trust.

The researchers found that alcohol misuse was significantly higher in those with problematic smartphone use compared to the control group. To assess this, the team used a scale known as the Alcohol Use Disorders Identification Test: a score of eight or above indicates harmful alcohol use. 33.3% of problematic smartphone users scored eight or above compared to 22.5% of other smartphone users. The researchers found no significant link with any other form of substance abuse or addiction.

In terms of other [mental health problems](#), the researchers found that problematic smartphone use was significantly associated with lower self-esteem, ADHD, depression, anxiety, and PTSD, mirroring similar findings elsewhere.

"It's easy to think of problematic smartphone use as an addiction, but if it was that simple, we would expect it to be associated with a wide range of substance misuse problems, especially in such a large sample, but this does not seem to be the case," added Dr. Sam Chamberlain.

"One possible explanation for these results is that people develop excessive smartphone use because of other mental health difficulties. For example, people who are socially isolated, those who experience depression or anxiety, or those who have attention problems (as in ADHD) may be more prone to excessive smartphone use, as well as to using alcohol. Smartphone use likely develops earlier in life—on average—than alcohol use problems and so it is unlikely that alcohol use itself leads to smartphone use."

While the sample size for this study was relatively large, suggesting that the findings should be fairly robust, the researchers point out that as a cross-sectional study (one that takes a 'snapshot' at one particular time, rather than following people over a longer period), and so direction of causality cannot be established. In other words, the study cannot say that problematic smartphone use leads to mental health issues or vice versa.

The researchers point out the effect sizes were also generally small, and that more research is needed into positive and negative effects of smartphone use and mental health, including how this changes over time.

More information: Jon E. Grant et al. Problematic smartphone use associated with greater alcohol consumption, mental health issues, poorer academic performance, and impulsivity, *Journal of Behavioral Addictions* (2019). [DOI: 10.1556/2006.8.2019.32](https://doi.org/10.1556/2006.8.2019.32)

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