The rapidly evolving nature of digital media presents a challenge for those who study digital addiction—social networks like TikTok and
video games like Fortnite might be popular now, but they could be irrelevant in a matter of years. A new tool developed by researchers from Binghamton University, State University of New York will make it easier for clinicians and researchers to measure digital media addiction as new technologies emerge.

"We wanted to create a tool that was immediately useful in the clinic and lab, that reflects current understandings about how digital addiction works, that wouldn't go obsolete once the next big tech change hits," said Daniel Hipp, who co-led the study. Hipp graduated with his Ph.D. from Binghamton University's Infant and Child Studies lab in 2015 and has continued collaborating with his former Ph.D. advisor and Professor of Psychology, Peter Gerhardstein, ever since.

Current tools for measuring the relationship between psychology and technology are not only outdated in the way they speak about tech; they are also often written with specific antiquated technology questions in mind.

To address this shortcoming, Hipp and Gerhardstein, together with the Digital Media Treatment and Education Center in Boulder, Colo., developed the Digital Media Overuse Scale, or dMOS. Clinicians and researchers who use the tool can be free to make their investigations as broad (i.e., social media) or as granular (i.e., Instagram) as they want for their particular use.

"Rather than focusing on the tech, we built into the scale a set of 'skeletal' questions that focus on psychology," said Hipp, now a research consultant at the Digital Media Treatment and Education Center.

"For example, one question type is 'I have trouble stopping myself from using X even when I know I should.' Replacing X with a tech domain, such as social media or gaming, we can ask the same question about
several different tech domains. And we can replace X in future studies with new technology domains (i.e., TikTok-style 'shorts') as they emerge."

To test the Digital Media Overuse Scale, the researchers conducted an anonymous survey with over 1,000 college students to investigate clinically relevant behaviors and attitudes as they relate to five digital media domains: general smartphone use, internet video consumption, social media use, gaming, and pornography use.

They found the following:

- A majority of students demonstrate few indicators of addiction or overuse
- Use patterns were highly targeted to specific domains for specific users
- A select set of students' responses indicated attitudes and behaviors around digital media use that, if they were derived from drug use or sex, would be deemed clinically problematic.

"Overall, the outcome reveals that overuse is not a general thing: respondents typically reported overuse in one or a few domains only, such as social media," said Gerhardstein. "More broadly, the data paint a picture of a population using digital media substantially, and social media in particular, to a level that increases concern regarding overuse issues."

Initial indications are that the Digital Media Overuse Scale is a reliable, valid, and extendible clinical instrument capable of providing clinically relevant scores within and across digital media domains, wrote the researchers.

The team is currently extending the scale to two new tech domains in a
follow-up study Gerhardstein's lab is conducting in continued collaboration with the Digital Media Treatment and Education Center. They are also initiating collaborations with other researchers with an eye to improving our collective understanding of how human psychology relates to the rapidly changing landscape of digital media.

The paper, "The Digital Media Overuse Scale (dMOS): A Modular and Extendible Questionnaire for Indexing Digital Media Overuse," was published in a special edition of Technology, Mind, and Behavior.


Provided by Binghamton University


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