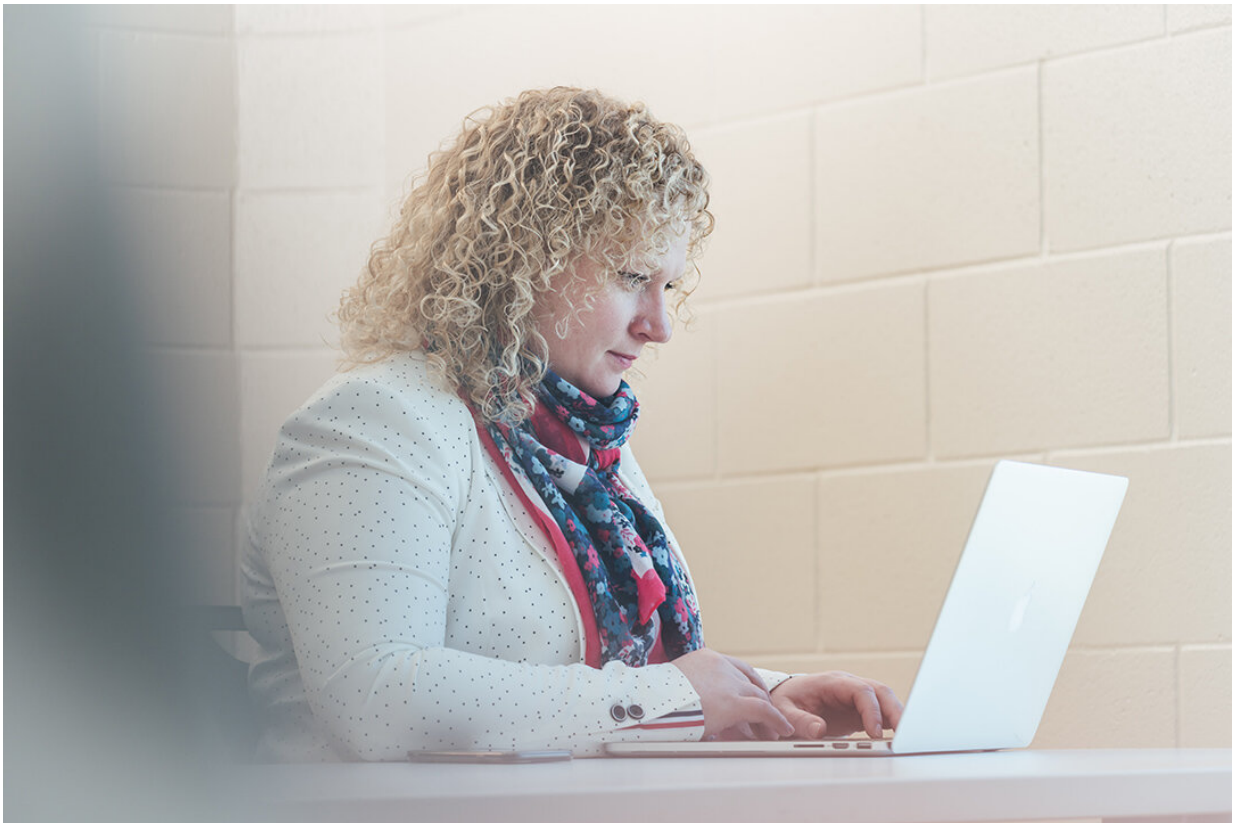


Feeling COVID-19 stress? Video games could be the cure, says computer scientist

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USask computer scientist Regan Mandryk at her computer. Credit: Martin Lipman/NSERC

Landing silently on a roof in the middle of hostile territory, your team—a rag-tag band of friends from across the globe—weaves through

a complex maze to slip undetected into the opposing team's base. Quickened footsteps nearby. A radio crackles. Have you been detected?

For a brief moment, all thoughts of quarantine, COVID-19 infection, and unrelenting uncertainty melt into the background noise of the [video game](#).

Playing [video](#) games may be the salve we need for our [mental health](#) during the pandemic, according to University of Saskatchewan (USask) computer scientist Dr. Regan Mandryk (Ph.D.), who studies how video games can promote mental wellness.

"We have no control over what is going on in the world right now, and that's causing people stress," said Mandryk. "Right now as people are socially isolated, they are turning to games to self-manage their need for [social contact](#). It's about taking back control of our own well-being."

Coinciding with National Mental Health Week (May 4-11), a [pan-Canadian survey](#) released by Mental Health Research Canada has found that since the start of the pandemic, the number of Canadians experiencing high levels of anxiety has quadrupled, and the percentage feeling highly depressed has more than doubled.

Video games can promote mental wellness by connecting people over a distance, providing communities where people feel a sense of belonging, and helping people recover from stress and anxiety, Mandryk said.

With funding from the prestigious E.W.R. Steacie Memorial Fellowship from Canada's Natural Sciences and Engineering Research Council (NSERC), Mandryk studies use of video games to assess, prevent, and treat anxiety and depression.

"When we're feeling 'down,' we can use video games to make us feel

well enough to tackle things," she said.

In a paper just published at CHI '20, a major human-computer interaction conference, Mandryk and other USask computer scientists developed a new in-[game](#) social anxiety measure for multi-player online role-playing games.

Mandryk's team found that video gamers with social anxiety showed substantial mental health benefits from playing this inherently social genre of game—connecting more easily with others, feeling more socially competent, and perceiving the game world as less broken than the physical world.

Whether a particular game will be helpful depends on the gamers and context as much as on the game itself, she said.

"The same game can be helpful or harmful," said Mandryk. "Playing a single-player game and exploring a world can make you feel socially isolated and not provide you with a sense of accomplishment. When playing with others, those other players can be supportive or they can be toxic."

[In another study just published](#) by Mandryk and USask colleagues, she used computer modeling to help determine when games can help contribute to well-being and when they can lead to the "problematic gaming" that can cause mental harm.

Players' in-game behaviour—including communicating with shorter pauses between speakers, switching speakers more frequently, and making some particular in-game moves—can predict with nearly 80 percent accuracy whether a particular social interaction is likely to be positive or negative.

"Traditionally, games like first-person shooters have been studied extensively, and have been shown to have cognitive benefits and provide feelings of competence. Often you can play in modes that allow you to communicate with others—that's often a very good choice," said Mandryk.

"If you're feeling guilty about the amount of time you are spending playing—don't be. It can be very beneficial for you and for your kids."

More information: In-game and Out-of-game Social Anxiety Influences Player Motivations, Activities, and Experiences in MMORPGs. *ACM Digital Library*. DOI: doi.org/10.1145/3313831.3376734

Recognizing Affiliation: Using Behavioural Traces to Predict the Quality of Social Interactions in Online Games. *ACM Digital Library*. DOI: doi.org/10.1145/3313831.3376446

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