

Using a video game to measure children's well-being: Before and after COVID-19

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A scene from the Rumble's Quest game used to assess children's well-being.
Credit: Rumble's Quest, RealWell

A video game featuring a mystical character named Rumble has helped Griffith University researchers investigate how school kids fared following lockdown disruption.

Dr. Jacqueline Allen from Griffith's School of Criminology and

Criminal Justice headed up the team looking at self-reported well-being in a sample of primary [school](#)-aged children in Queensland, Tasmania and Western Australia.

The team used an innovative [video game](#) called [Rumble's Quest](#), developed wholly within Griffith University, which measures the four key facets of well-being, as well as three [executive functions](#) by allowing children to respond to questions and stimuli in a very natural way. The paper, titled "Child well-being before and after the 2020 COVID-19 lockdowns in three Australian states," has been published in the *Australian Journal of Social Issues*.

While it appears to be a simple, fun game, it is in fact a sophisticated and reliable assessment tool specifically tailored to the primary school-age group.

Player's characters are transported to a mystical land, where they meet friendly villagers and join the curious creature Rumble on a quest to save the village.

Along the way, they respond to a range of questions about social and emotional well-being, giving insight into how well they get along with their peers, how things are going at home and how comfortable and engaged they feel at school.

The study was originally just focused on children's overall well-being, however the advent of COVID presented a new assessment window, with one cohort having played the game twice before any disruption, and another playing once before and once after the lockdowns.

Dr. Allen said the results showed there was a drop in feelings of family support in the lockdown-affected group, with students suggesting things weren't quite as good at home post-COVID as they had been before.

"We did find the change was more pronounced for girls, which could just come down to the fact that some girls tend to be a little better at picking up on stressful family dynamics than boys," she said.

"We know families were stressed trying to do home schooling and deal with work closing down and maybe losing jobs, so the kids were likely picking up on a degree of family stress happening at the time."

Perhaps surprisingly, boys tended to fare better than girls upon their return to the [school environment](#).

"We looked at reports of a supportive family environment, such as feeling safe at home, getting along with parents; emotional well-being, which includes feelings of worry and anxiety; and behavioral well-being, including problematic behaviors like aggression, acting out and getting in trouble at school," Dr. Allen said.

"Boys seemed to have derived some positive benefit from a break from the school environment, particularly if they'd been having problems with peers or their teachers.

"The thing to remember with the gender difference is that overall, girls do tend to fare better than boys in terms of well-being, so when we say boys improved a bit, girls are still doing better."

Sadly, children who had lower [family](#) support scores in the first sitting scored even lower following the lockdown, suggesting the experience exacerbated pre-existing problems for those families.

Dr. Allen emphasized the results certainly weren't a bad news story.

"There were lots of ways in which well-being really didn't change all that much and I think that's testament to how hard schools and families

worked to support children during the pandemic," she said.

"They moved mountains to keep kids engaged and I think that's showing up in our data and that's amazing.

"The key takeaway here is, to support children, we need to support families."

More information: Jacqueline B. H. Allen et al, Child well-being before and after the 2020 COVID -19 lockdowns in three Australian states, *Australian Journal of Social Issues* (2023). [DOI: 10.1002/ajs4.258](https://doi.org/10.1002/ajs4.258)

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