

Videogame addiction: Sleep loss, obesity, and cardiovascular risk for some gamers

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Credit: Cristie Guevara/public domain

Some children and youth with high videogame addiction tendencies may be at risk of sleep deprivation and disorders associated with obesity and poor cardio-metabolic health, Hamilton researchers have found.

The study, published in the scientific journal *PLOS One*, examines the growing global gaming phenomenon and its impact on youth health.

Dr. Katherine Morrison, co-author of the study,

worked with researchers from McMaster and California State University, Fullerton. She is an associate professor of pediatrics for McMaster University's Michael G. DeGroot School of Medicine and a pediatric endocrinologist with the McMaster Children's Hospital.

Her team's findings are serious, given the rise in videogame addictions, she said.

"This is an important phenomenon to understand. We are seeing that some children and teens develop serious addiction-like symptoms to video games," said Morrison. "It affects a vulnerable population of children and youth, can impact social interactions amongst youth and, as our research shows, can drive health issues."

For their research, the team studied a group of children and teens ages 10 to 17 who were in lifestyle management programs - either for weight management or lipid disorders. The study looked at whether the videogame habits of the group had an impact on [sleep](#) habits, obesity and cardio-metabolic health.

Using fitness trackers, the team monitored the sleep duration and compared that to the youth's videogame usage. The data showed that videogame addiction symptoms resulted in shorter sleep which, in turn, was related to elevated blood pressure, low high-density lipoprotein cholesterol, high triglycerides, and high insulin resistance.

It is important to note that this was a specific group of children and teens, added Morrison, and it is unknown if this information applies to the general population.

"That said, we were amazed that amongst gamers, videogame addiction scores explained one third of the differences in [sleep duration](#)," said Morrison. "Sleep is emerging as a critical behavior for cardio-metabolic health, and this data shows that gaming

addictions can cause numerous health issues in at least a segment of the population."

"Childhood obesity tracks into adulthood and obese children face a greater risk of cardiovascular and coronary diseases as well as type-2 diabetes as adults. It is urgent to target early lifestyle behaviours such as videogame addictive tendencies that could lead to major future health consequences."

Morrison said the research team is in the early days of evaluating videogame addiction in [children](#) and teens. They plan on studying the effects in general populations while also analyzing video game usage and addiction tendencies of gamers over time.

More information: Ofir Turel et al. Health Outcomes of Information System Use Lifestyles among Adolescents: Videogame Addiction, Sleep Curtailment and Cardio-Metabolic Deficiencies, *PLOS ONE* (2016). DOI: [10.1371/journal.pone.0154764](https://doi.org/10.1371/journal.pone.0154764)

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