

# THE GLOBE AND MAIL

## ADHD symptoms linked to children who have more than two hours of screen time a day, study says

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Amber Bracken/The Globe and Mail

New Canadian research has found that excessive screen time is a stronger predictor of behavioural problems in five-year-olds than any of the other risk factors the study considered, including parental stress, socioeconomic woes and how long children slept at night.

Kindergarten-aged children who spend more than two hours a day in front of screens are at least five times more likely to be inattentive and seven times more likely to display the symptoms of ADHD than their peers who spend 30 minutes a day or less entranced by tablets, TVs and video games, according to a new study published Wednesday in the journal PLOS One.

“Screens are ubiquitous in our environment today and they do have an impact, even on our youngest children,” said Piush Mandhane, an associate professor of pediatrics at the University of Alberta and one of the authors of the new paper.

“Our data supports the [Canadian] guidelines of less than two hours a day at five years of age, but actually, our data supports that even less is better.”

The study of about 2,300 children in Vancouver, Edmonton, Winnipeg and Toronto, is one of the few to examine how all types of screens – as opposed to just televisions – might affect the behaviour of very young children, but its conclusions are in line with other research that has found associations between long hours parked in front of a screen and inattention and hyperactivity.

Associations, however, are not causes. Disentangling screen time from other factors that might contribute to behavioural problems is tricky business, as is answering the question that prompted Dr. Mandhane and his colleagues to conduct their analysis in the first place: How much screen time is too much?

For Karla Bergstrom, the finding that young children seemed to behave best if exposed to 30 minutes or less a day of screen time was somewhat sobering. Her son, Colby, now 8, participated in the study.

“It was incredibly surprising when they said, ‘maximum 30 minutes,’ ” Ms. Bergstrom, 42, said with a laugh in an interview from her home in St. Albert, northwest of Edmonton. “I’m like, ‘Holy cow, you can blink and 30 minutes has gone by on the iPad.’”

Colby, the youngest of Ms. Bergstrom's three boys, does not have any of the behavioural problems that were the focus of the new analysis.

He generally spends between one and two hours a day in front of a screen, most often watching YouTube videos on the new iPad he received for Christmas.

But Colby and his brothers, Carter, 11, and Cameron, 13, are usually not allowed screen time until they complete the tasks listed on the family whiteboard, including emptying their backpacks, putting away their dishes, finishing their homework and, in the winter, shovelling the driveway.

They also balance their screen time with hectic competitive hockey schedules in the winter and baseball in the summer, said Ms. Bergstrom, a manager of government and industry affairs for the Alberta Canola Producers Commission.

The study also found that participating in organized physical activity for two hours or more every week seemed to protect against some of the ill effects of too much screen time.

"We've always kind of taken the approach of moderation [with screen time]," Ms. Bergstrom said. "But really, how much is too much?"

The data for the PLOS One study were drawn from a project called Canadian Healthy Infant Longitudinal Development, or CHILD, a population-based study initially designed to examine how genes and the environment affected the development of asthma and allergies.

The overarching CHILD study, which follows 3,455 children born between 2009 and 2012, asked parents about their children's average daily screen-time exposure at the ages of 3 and 5, and asked parents to fill out the Child Behavior Checklist, a 99-item questionnaire, when their children were five years old.

Both screen-time data and checklists were filled out by the parents of 2,322 participants.

Dr. Mandhane and his colleagues crunched the numbers and found that parents of five-year-old children who logged two or more hours of screen time daily were five times more likely to report "clinically relevant externalizing behaviour problems," such as inattention, compared with the parents of children who spent 30 minutes or less in thrall to a screen every day.

Those in the two-hours-or-more group were also seven times more likely to report symptoms of attention deficit hyperactivity disorder (ADHD), the analysis found.

The study found no association between excessive screen time and aggression or "internalizing" problems such as depression and anxiety.

Michelle Ponti, a London, Ont., pediatrician who chairs the Canadian Paediatric Society's digital health task force and was not involved in the new study, said some of its findings should be taken with a grain of salt.

Only 317 participants – about 13 per cent of the total – reported allowing more than two hours of screen time a day, the conclusions were based on parental self-reporting and the study did not differentiate between types of screens or how children used them.

“A child that's left to their own devices on a mobile device to click, click, click through inappropriate types of websites is different than a child sitting with a parent and working through an educational app,” Dr. Ponti said.