

Video Game Playing and Related Problems Among Ontario Students

This *eBulletin* presents findings about video game playing (either on a computer, a TV, or at an arcade) and related problems among Ontario students in grades 7 to 12. Data are from the 2007 cycle of the Ontario Student Drug Use and Health Survey (OSDUHS), which is an anonymous, in-class survey of 7th- to 12th-graders conducted every two years in Ontario schools.

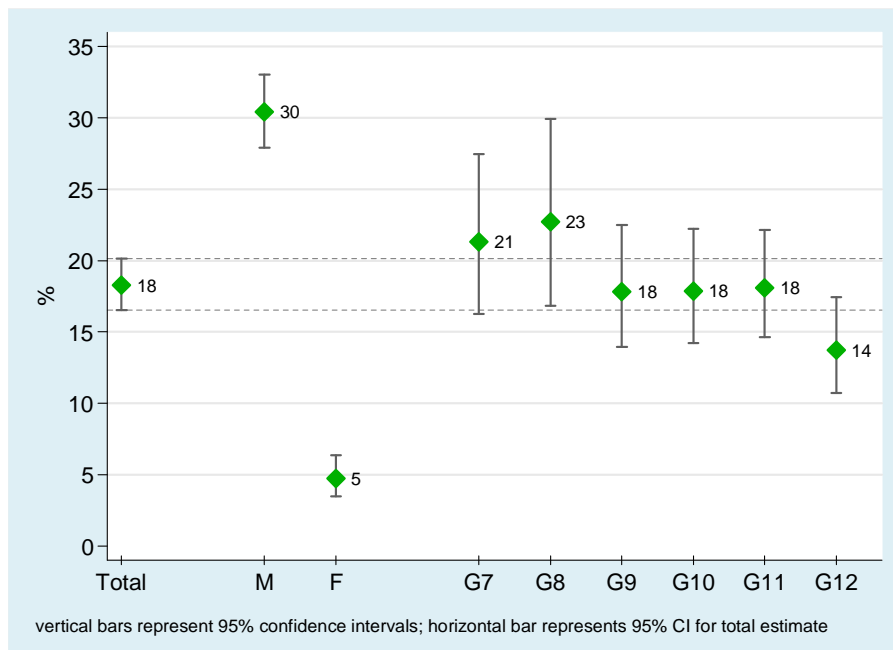
Frequency of Video Game Playing

Students were asked how often they played video games during the 12 months prior to the survey. About 14% reported that they did not play video

games; 30% usually played about 3 times a month or less often; 9% played once a week; 17% played 2 to 3 times a week; 12% played 4 to 5 times a week; and 18% usually played daily or almost daily.

While 18% (95% CI: 17%-20%) of the total sample reported daily video game playing, there was a significant sex difference. As seen in Figure 1, males were significantly more likely to play daily compared to females (30% vs. 5%, respectively). Although there was some variation in daily video game playing according to grade, these differences were not statistically significant.

Figure 1.
Percentage of Ontario Students in Grades 7 to 12 Reporting Playing Video Games Daily or Almost Daily During the Past Year, by Sex and Grade, 2007 OSDUHS (N=2,848)



Indicators of a Potential Video Game Playing Problem

The OSDUHS sought to measure problem video game use in the student population. To this end, the Problem Video Game Playing (PVP) scale was used.¹ The PVP scale measures dimensions derived from the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for substance dependence and pathological gambling.

As seen in Figure 2, the most commonly reported problem indicator was playing again to achieve one's target after losing or not getting the desired results (47% of the total sample), followed by a preoccupation with gaming (either planning the next game or thinking about past games) reported by 20% of the total sample. About 19% reported ignoring homework or spending less time with family and friends due to gaming (family/school disruption). The least common indicator, reported by 5% of students, was disregard for consequences, such as skipping school, lying, stealing, or arguing in order to play video games. Not surprisingly, males were significantly more likely to report each indicator compared to females.

A sum of five or more affirmative answers of the eight indicators was used to measure a potential video game playing problem. Based on this definition, about 9% (95% CI: 8%-11%) of all students may have a video gaming problem (Figure 3). This estimate represents about 86,000 Ontario students in grades 7 to 12. Males were significantly more likely than females to be at risk (15% vs. 3%, respectively). There were no significant differences among the grades.

If we restrict our analyses to only those who played video games daily, the results showed that about one-third (32%; 95% CI: 28%-37%) of these frequent players may have a potential video gaming problem.

A Note of Caution

These estimates of potential video gaming problems among students should be considered with caution because the PVP scale is a relatively new method of assessment, and, further, not all experts agree that video gaming should be considered similar to substance use or gambling. However, the results highlight the fact that young people, especially males, are experiencing problems from their video gaming that may be comparable to those experienced by people with substance use or gambling problems.

Figure 2. Percentage of Ontario Students Reporting Indicators of a Video Game Playing Problem, for the Total Sample and by Sex, 2007 OSDUHS (N=2,832)

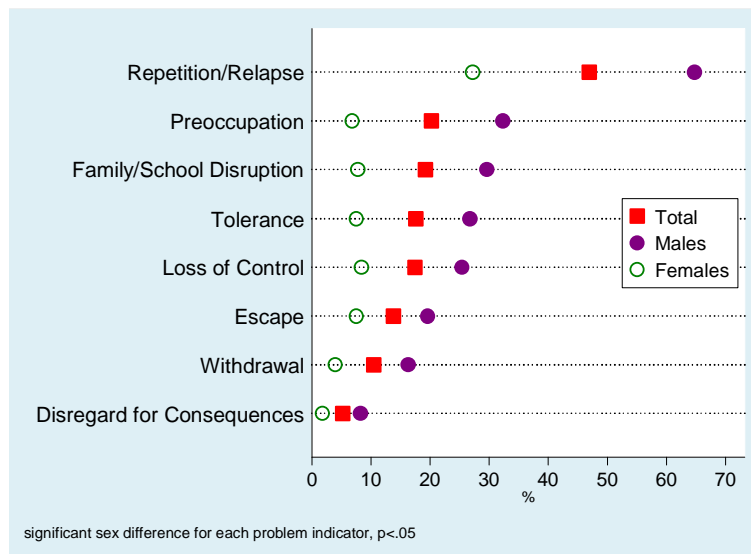
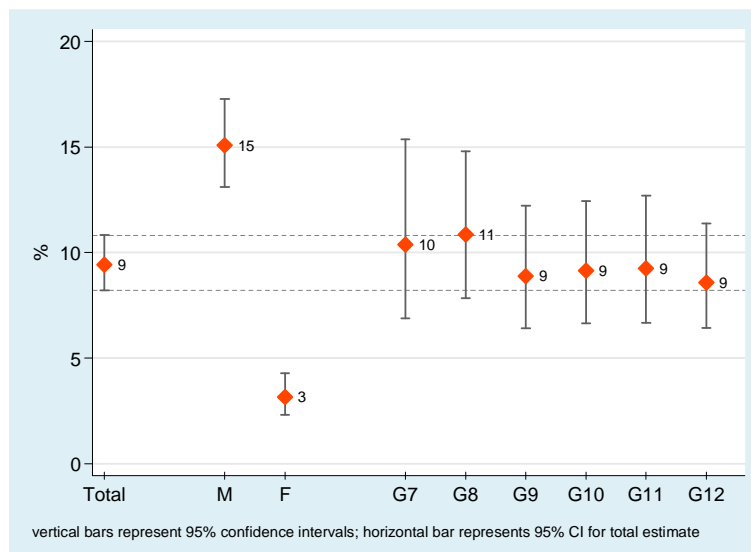


Figure 3. Percentage of Ontario Students Indicating a Potential Video Game Playing Problem, by Sex and Grade, 2007 OSDUHS (N=2,832)



Methods:

The *Ontario Student Drug Use and Health Survey (OSDUHS)* is an Ontario-wide survey of elementary (grades 7 and 8) and secondary (grades 9-12) school students conducted every two years since 1977. The survey uses a stratified (region, school type) two-stage cluster design (school, class). The 2007 total sample size was 6,323 students in grades 7 to 12 from 43 school boards, 119 schools, and 385 classes. The student participation rate was 68%. The 2007 sample represents about 1,011,000 students in grades 7 to 12 in public and Catholic schools across the province. Self-administered questionnaires, which promote anonymity, were administered by staff from the Institute for Social Research, York University on a classroom basis between November 2006 and June 2007. The present analysis is based on a random half-sample of 2,935 students that received the questionnaire form which included the questions about video game playing. All estimates were weighted, and variance and statistical tests were corrected for the sampling design.

Terminology:

- **Frequency of Video Game Playing** was measured with the question "In the last 12 months, how often did you play video games? [either on a computer or TV, or at an arcade]" Response options were: every day/almost every day; 4 or 5 times a week; 2 or 3 times a week, once a week, 2 or 3 times a month, once a month or less often, did not play in the last 12 months, never played video games in lifetime.
 - **Video Game Playing Problems:** Eight problems related to video game playing were asked about using the Problem Video Game Playing (PVP) scale. The scale measures the dimensions of preoccupation, tolerance, loss of control, repetition/relapse, withdrawal, escape, disregard for consequences, and disruption to family and/or school. The following questions were asked:
 - When you were not playing video games, did you keep thinking about them (such as planning your next game, remembering past games)? [*Preoccupation*]
 - Did you spend an increasing amount of time playing video games? [*Tolerance*]
 - Did you try to control, cut back, or stop playing video games, or play for longer than you planned to? [*Loss of Control*]
 - When you lost in a game or did not get the results you wanted, did you play again to achieve your target? [*Repetition/Relapse*]
 - Did you get restless or irritated when you could not play video games? [*Withdrawal*]
 - Did you play video games more often when you felt bad (sad, angry or nervous) or had problems? [*Escape*]
 - Did you skip school or work, or lie or steal, or argue with someone so that you could play video games? [*Disregard for Consequences*]
 - Did you ignore homework, or go to bed late, or spend less time with family and friends because of your video game playing? [*Family/School Disruption*]
- Each question referred to the past 12 month time period, and each had the response options: yes, no, don't play video games. A sum score of 5 or more affirmative answers to the 8 questions was used to indicate a potential video game playing problem.
- **95% Confidence Interval (CI)** can be crudely interpreted as being 95% likely to include the "true" value if every student in grades 7 to 12 in Ontario was surveyed.
 - **Statistically Significant Difference** refers to a difference between two percentages that is not likely due to chance. For example, a difference found at the $p < .05$ level of statistical significance is one that is less than 5% likely to occur by chance alone.

Source:

Adlaf, E.M. & Paglia-Boak, A, Beitchman, J.H., & Wolfe, D. (2008). *The Mental health and Well-Being of Ontario Students, 1991-2007: Detailed OSDUHS Findings*. CAMH Research Document Series, No. 22. Toronto: Centre for Addiction and Mental Health. (The report is available in PDF format at <http://www.camh.net/research/osdus.html>.)

References:

1. Tejeiro Salguero, R.A., & Bersabé-Morán, R.M. (2002). Measuring problem video game playing in adolescents. *Addiction*, 97(12), 1601-1606.

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